



Cisco ONS 15454 and Cisco ONS 15327 TL1 Command Guide

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Corporate Headquarters

Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
<http://www.cisco.com>
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 526-4100

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- Move the equipment farther away from the television or radio.
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About this Guide

This section explains the objectives, intended audience, and organization of this publication and describes the conventions that convey instructions and other information.



Note

The terms "Unidirectional Path Switched Ring" and "UPSR" may appear in Cisco literature. These terms do not refer to using Cisco ONS 15xxx products in a unidirectional path switched ring configuration. Rather, these terms, as well as "Path Protected Mesh Network" and "PPMN," refer generally to Cisco's path protection feature, which may be used in any topological network configuration. Cisco does not recommend using its path protection feature in any particular topological network configuration.

Revision History

Date	Notes
03/30/2007	Revision History Table added for the first time
08/23/2007	Updated About this Guide
07/23/2008	Removed G1000 card name from the RTRV-PM-<MOD2> command.

This section provides the following information:

- [Document Objectives](#)
- [Audience](#)
- [Document Organization](#)
- [Related Documentation](#)
- [Document Conventions](#)
- [Where to Find Safety and Warning Information](#)
- [Obtaining Documentation](#)
- [Obtaining Technical Assistance](#)
- [Obtaining Additional Publications and Information](#)

Document Objectives

This guide explains the use of Transaction Language 1 (TL1) for the Cisco ONS 15454 and Cisco ONS 15327 systems. Use this guide in conjunction with the appropriate publications listed in the [Related Documentation](#) section.

Audience

To use this publication, you should be familiar with Cisco or equivalent optical transmission hardware and cabling, telecommunications hardware and cabling, electronic circuitry and wiring practices, and preferably have experience as a telecommunications technician.

Document Organization

This Cisco ONS 15454 and Cisco ONS 15327 TL1 Command Guide, R4.6 is organized into the following chapters:

- [Chapter 1, “Getting Started”](#) explains how to gain access to TL1, command syntax, autonomous messages, provision a DS3E card in CTC using TL1, CTC interoperability, security level privileges associated with each command, command completion behavior, test access configurations, PCA provisioning and FTP software download.
- [Chapter 2, “TL1 Gateway”](#) describes the TL1 Gateway and provides procedures and examples for implementing TL1 Gateway on a four node ring.
- [Chapter 3, “TL1 Command Descriptions”](#) lists TL1 commands by category and then lists each command and autonomous message supported by the ONS 15454 and the ONS 15327.
- [Chapter 4, “TL1 Command Components”](#) describes the components of TL1 commands including, default values, access identifiers (AIDs), and parameter types.
- [Chapter 5, “Ring Provisioning”](#) provides sample procedures for setting up STS or VT circuits over existing path protection and bidirectional line switch ring (BLSR) configurations.
- [Chapter 6, “TL1 Performance Monitoring”](#) provides TL1 performance monitoring (PM) information and scheduled PM report provisioning.
- [Chapter 7, “TL1 Alarms and Errors”](#) lists TL1 alarms and errors supported by the ONS 15454 and the ONS 15327 including descriptions and severity.

Related Documentation

Use this Cisco ONS 15454 and Cisco ONS 15327 TL1 Command Guide, R4.6 in conjunction with the following referenced publications:

- *Cisco ONS 15454 Procedure Guide, R4.6*
Provides installation and turn up procedures.
- *Cisco ONS 15454 Troubleshooting Guide, R4.6*
Provides general troubleshooting, alarm troubleshooting and hardware replacement procedures.
- *Cisco ONS 15454 Reference Manual, R4.6*
Provides detailed reference information.

- *Cisco ONS 15327 Procedure Guide, R4.6*
Provides installation and turn up procedures.
- *Cisco ONS 15327 Troubleshooting Guide, R4.6*
Provides general troubleshooting and alarm troubleshooting procedures.
- *Cisco ONS 15327 Reference Manual, R4.6*
Provides detailed reference information.
- Cisco ONS 15454 and Cisco ONS 15327 TL1 Command Quick Reference Guide, R4.6
Provides input formats and output formats (where applicable) for all R4.6 TL1 commands and autonomous messages.
- *Cisco ONS 15454 and Cisco ONS 15327 TL1 for Beginners*
Provides basic beginning instruction for using TL1.
- Cisco ONS 15454 SDH TL1 Test Access
Provides ONS 15454 SDH test access commands.

Document Conventions

This publication uses the following conventions:

Convention	Application
boldface	Commands and keywords in body text.
[]	Keywords or arguments that appear within square brackets are optional.
{ x x x }	A choice of keywords (represented by x) appears in braces separated by vertical bars. The user must select one.
Ctrl	The control key. For example, where Ctrl + D is written, hold down the Control key while pressing the D key.
screen font	Examples of information displayed on the screen.
< >	Command parameters that must be replaced by module-specific codes.



Note

Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the document.



Caution

Means *reader be careful*. In this situation, the user might do something that could result in equipment damage or loss of data.

**Warning**

IMPORTANT SAFETY INSTRUCTIONS

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. To see translations of the warnings that appear in this publication, refer to the translated safety warnings that accompanied this device.

Note: SAVE THESE INSTRUCTIONS

Note: This documentation is to be used in conjunction with the specific product installation guide that shipped with the product. Please refer to the Installation Guide, Configuration Guide, or other enclosed additional documentation for further details.

Where to Find Safety and Warning Information

For safety and warning information, refer to the *Cisco ONS 15454 Safety and Compliance Guide* that accompanied the product. This publication describes the international agency compliance and safety information for the Cisco ONS 15xxx systems. It also includes translations of the safety warnings that appear in the ONS 15xxx system documentation.

Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

Cisco.com

You can access the most current Cisco documentation on the World Wide Web at this URL:

<http://www.cisco.com/univercd/home/home.htm>

You can access the Cisco website at this URL:

<http://www.cisco.com>

International Cisco websites can be accessed from this URL:

http://www.cisco.com/public/countries_languages.shtml

Ordering Documentation

You can find instructions for ordering documentation at this URL:

http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Ordering tool:

<http://www.cisco.com/en/US/partner/ordering/index.shtml>

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

Cisco Optical Networking Product Documentation CD-ROM

Optical networking-related documentation, including Cisco ONS 15454 product documentation, is available in a CD-ROM package that ships with your product. The Optical Networking Product Documentation CD-ROM is updated periodically and may be more current than printed documentation.

Documentation Feedback

You can submit e-mail comments about technical documentation to bug-doc@cisco.com.

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems
Attn: Customer Document Ordering
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, the Cisco Technical Assistance Center (TAC) provides 24-hour-a-day, award-winning technical support services, online and over the phone. Cisco.com features the Cisco TAC website as an online starting point for technical assistance. If you do not hold a valid Cisco service contract, please contact your reseller.

Cisco TAC Website

The Cisco TAC website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The Cisco TAC website is available 24 hours a day, 365 days a year. The Cisco TAC website is located at this URL:

<http://www.cisco.com/tac>

Accessing all the tools on the Cisco TAC website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a login ID or password, register at this URL:

<http://tools.cisco.com/RPF/register/register.do>

Opening a TAC Case

Using the online TAC Case Open Tool is the fastest way to open P3 and P4 cases. (P3 and P4 cases are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Case Open Tool automatically recommends resources for an immediate solution. If your issue is not resolved using the recommended resources, your case will be assigned to a Cisco TAC engineer. The online TAC Case Open Tool is located at this URL:

<http://www.cisco.com/tac/caseopen>

For P1 or P2 cases (P1 and P2 cases are those in which your production network is down or severely degraded) or if you do not have Internet access, contact Cisco TAC by telephone. Cisco TAC engineers are assigned immediately to P1 and P2 cases to help keep your business operations running smoothly.

To open a case by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete listing of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

TAC Case Priority Definitions

To ensure that all cases are reported in a standard format, Cisco has established case priority definitions.

Priority 1 (P1)—Your network is “down” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Priority 2 (P2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Priority 3 (P3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Priority 4 (P4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- Cisco Marketplace provides a variety of Cisco books, reference guides, and logo merchandise. Go to this URL to visit the company store:

<http://www.cisco.com/go/marketplace/>

- The *Cisco Product Catalog* describes the networking products offered by Cisco Systems, as well as ordering and customer support services. Access the Cisco Product Catalog at this URL:

<http://cisco.com/univercd/cc/td/doc/pcat/>

- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press online at this URL:

<http://www.ciscopress.com>

- *Packet* magazine is the Cisco quarterly publication that provides the latest networking trends, technology breakthroughs, and Cisco products and solutions to help industry professionals get the most from their networking investment. Included are networking deployment and troubleshooting tips, configuration examples, customer case studies, tutorials and training, certification information, and links to numerous in-depth online resources. You can access Packet magazine at this URL:

<http://www.cisco.com/packet>

- *iQ Magazine* is the Cisco bimonthly publication that delivers the latest information about Internet business strategies for executives. You can access iQ Magazine at this URL:

<http://www.cisco.com/go/iqmagazine>

- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

<http://www.cisco.com/ipj>

- Training—Cisco offers world-class networking training. Current offerings in network training are listed at this URL:

<http://www.cisco.com/en/US/learning/index.html>



Getting Started



Note

The terms "Unidirectional Path Switched Ring" and "UPSR" may appear in Cisco literature. These terms do not refer to using Cisco ONS 15xxx products in a unidirectional path switched ring configuration. Rather, these terms, as well as "Path Protected Mesh Network" and "PPMN," refer generally to Cisco's path protection feature, which may be used in any topological network configuration. Cisco does not recommend using its path protection feature in any particular topological network configuration.

Transaction Language 1 (TL1) is a subset of the input and output messages contained in the International Telecommunications Union (ITU) Mpath protection an-Machine Language (MML). TL1 provides a standard set of messages that can be used for communicating between operating systems and network elements, and personnel and network elements. The Cisco ONS 15454 and Cisco ONS 15327 can support up to 20 concurrent TL1 sessions in this release. For more information about TL1, refer to Telcordia document GR-833-CORE, *Network Maintenance: Network Element and Transport Surveillance Messages*.

This chapter provides information and procedures for getting started with TL1:

- Setting up TL1 communication
- TL1 command syntax
- Autonomous messages
- TL1 commands by user security
- Provisioning a DS3E card in CTC using TL1
- Provisioning rules for MXP_2.5G_10G and TXP_MR_10G cards
- Provisioning rules for TXP_MR_2.5G and TXPP_MR_2.5G cards
- CTC interoperability
- Mixed mode timing support
- TL1 command completion behavior
- Test access
- TL1 PCA provisioning
- FTP software download

1.1 Setting up TL1 Communication

The period during which a user is logged into the ONS 15454 or ONS 15327 is called a session. There are three options you can use to open a session (login):

- Cisco Transport Controller (CTC)
- Telnet
- Craft interface

The TL1 password (PID) is masked when accessing a TL1 session using any of these options. When you logout of any of these options, you are closing a session. The ONS 15454 and ONS 15327 allow a maximum of 20 (19 telnet sessions and one craft session) concurrent TL1 sessions using any one or any combination of the options listed above. For information on issuing commands to multiple nodes, see [Chapter 2, “TL1 Gateway.”](#)

1.1.1 Open a TL1 session

Use the following procedures to open a TL1 session via the CTC, telnet, or craft interface. In the procedures the Activate and Cancel User commands are shown in their input format. For more information about these and other commands and messages, see [Chapter 3, “TL1 Command Descriptions.”](#)

Open a TL1 Session Via CTC

-
- Step 1** From the PC connected to the ONS 15454, start Netscape or Internet Explorer.
- Step 2** Enter the ONS 15454 IP address of the node you want to communicate with in the Netscape or Internet Explorer Web address (URL) field.
- Step 3** Log into the CTC. The IP address at the title bar should match the IP address of the node you entered in [Step 2](#).
- Step 4** Once logged into the CTC, click **Tools > Open TL1 Connection**.
- Step 5** Choose the node you want to communicate with from the Select Node dialog box.
- Step 6** Click **OK**.

A TL1 interface window opens. There are three sub-windows in the TL1 interface window: Request history, Message log, and TL1 request. Type commands in the TL1 request window. You will see responses in the Message log window. The Request history window allows you to recall previous commands by clicking on them.

- Step 7** Verify that the Connect button is selected (grayed out).
- Step 8** Type the Activate User command in the TL1 request window to open a TL1 session:
ACT-USER:[<TID>]:<UID>:<CTAG>::<PID>; and press **Enter**.



Note You must press Enter after the semicolon in each TL1 command, or the command will not be issued.

- Step 9** Type the Cancel User command in the TL1 request window or press the **Disconnect** button to close a TL1 session:

CANC-USER:[<TID>]:<USERID>:<CTAG>; and press **Enter**.

Open a TL1 Session Via Telnet

To access TL1 commands in a telnet session over a craft interface or a LAN connection (TCC2 card front panel or backplane pins) you can choose from several ports. Port number 3082 is a raw TCP/IP port; it will not echo and it will not prompt the user. Port number 3083 is a telnet port that uses the telnet protocol and associated telnet escape sequences. Port number 2361 is supported for backward compatibility with earlier releases and has the same behavior as Port 3083 (telnet port). Use the following procedure with PCs running Windows operating systems.

Step 1 At the DOS prompt, type **cmd** and press **Enter**. (The same steps can also be done from a Unix prompt).

Step 2 At the DOS command prompt type:

TELNET <NODE IP ADDRESS OR NODE NAME> <PORT NUMBER> and press **Enter**.

The Node IP address or Node Name refers to the IP address or Node Name of the node you want to communicate with. Port number is the port (2361, 3082, or 3083) where TL1 commands are understood. If the connection is successful, a screen opens with a prompt.

Step 3 Type the Activate User command to open a TL1 session:

ACT-USER:[<TID>]:<UID>:<CTAG>::<PID>;



Note When the semicolon is typed, the command is issued immediately.

Step 4 Type the Cancel User command to close a TL1 session:

CANC-USER:[<TID>]:<USERID>:<CTAG>;

Open a TL1 Session Via Craft Interface

The TCC2 and XTC cards have two built-in interface ports for accessing the ONS 15454 and ONS 15327. With one RJ-45 LAN connection you can access the system using a standard browser interface. In the browser interface, you can perform local and remote Operations, Administration, Maintenance, and Provisioning (OAM&P) functions and open a VT100 emulation window to enter TL1 commands. If a browser is not available, you can access the system using a nine-pin RS-232 port. The RS-232 port supports VT100 emulation such that TL1 commands may be entered directly without a browser. For instructions on how to install the TL1 craft interface, refer to the *Cisco ONS 15454 Procedure Guide* or the *Cisco ONS 15327 Procedure Guide*.

Step 1 Connect the serial cable to the RS-232 port on the active TCC2 or XTC card.

Step 2 Configure the terminal emulation software (Hyperterminal):

- a. Terminal emulation = vt100
- b. Bits per second = 9600
- c. Parity = None
- d. Stop BITS = 1

e. Flow control = None

Step 3 Press **Enter**. An angle bracket prompt (>) appears.

Step 4 At the > prompt, type the Activate User command to open a TL1 session:

```
ACT-USER:[<TID>]:<UID>:<CTAG>::<PID>;
```



Note When the semicolon is typed, the TL1 command is issued immediately.

Step 5 Type the Cancel User command to close a TL1 session:

```
CANC-USER:[<TID>]:<USERID>:<CTAG>;
```

1.2 TL1 Command Syntax

TL1 commands conform to the following syntax:

```
a:b:c:d:e: ... z;
```

where:

“a” is the command code

“b” is the target identifier (TID)

“c” is the access identifier (AID) or the user identifier (UID)

“d” is the correlation tag (CTAG)

“e: ... z;” are other positions required for various commands

The TID, AID, and CTAG route and control the TL1 command. Other parameters provide additional information required to complete the action requested by the command. TL1 command codes, parameter names and parameter values can be either uppercase or lowercase exclusively or any combination of the two, unless specifically noted in the command description.

The TID is a unique name given to each system when it is installed. The name identifies the particular NE (in this case, the ONS 15454 or ONS 15327), to which each command is directed. The value of TID can be any TL1 identifier or text string, but it is limited to 20 characters. An identifier contains any number of letters or digits but must start with a letter. A text string is any alphanumeric or punctuation character enclosed in double-quotes. The presence of the TID is required in all input commands, but its value can be null (represented by two successive colons). The TID can be null when the operating system directly communicates with the target NE. The recommended value for the TID, when it is used, is the target’s CLI code. To establish the TID for an ONS 15454/15327 node, use the Provisioning > General tabs in CTC.

The AID is an access code used to identify and address specific objects within the ONS 15454 and the ONS 15327. These objects include individual pieces of equipment, transport spans, access tributaries, and other objects.

The CTAG is a unique identifier given to each input command by the user. When the ONS 15454/ONS 15327 system responds to a specific command, it includes the command’s CTAG in the reply. Including the CTAG eliminates discrepancies about which response corresponds to which command. Valid CTAG values include strings of up to six characters comprised of identifiers (alphanumeric, beginning with a letter) or decimal numerals (a string of decimal digits with an optional non-trailing “.”).

The following specification characters are used throughout this document as vehicles for defining the syntax:

- < > enclose a symbol specifier, for example <CTAG>.
- [] enclose an optional symbol, for example [<TID>].
- “ ” enclose a literal character, for example an output format “SLOT-7:PLUGIN,TC,,,,,:\“EQUIPMENT PLUG-IN\”,TCC”
- ^ is a space, a literal blank character used only in examples of messages.

1.3 Autonomous Messages

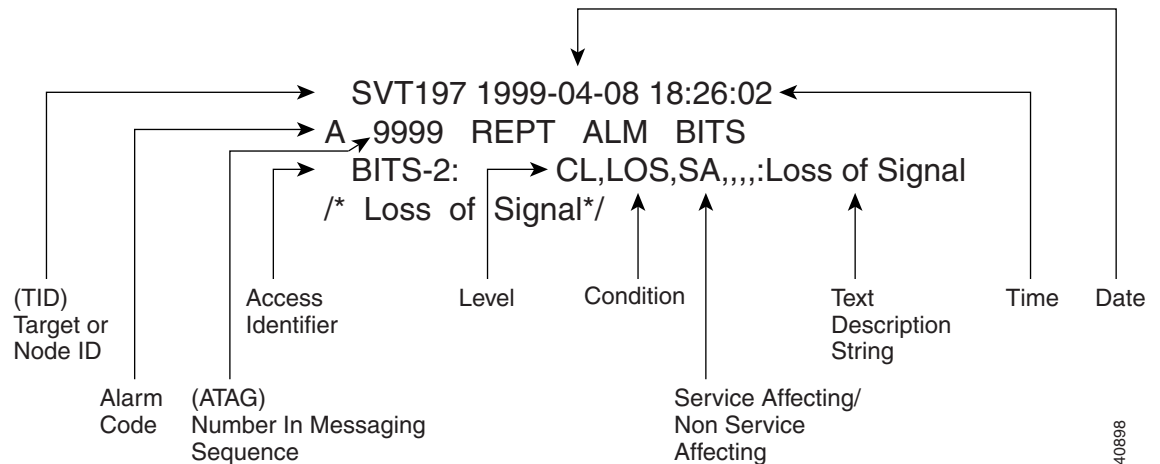
The autonomous TL1 messages are included in [Chapter 3, “TL1 Command Descriptions”](#) and listed alphabetically. [Figure 1-1](#) shows the autonomous message format. The autonomous message tag (ATAG) is used for message sequencing. The number is incremented by one for each autonomous message sent by the ONS 15454 or ONS 15327. The ONS 15454 and ONS 15327 use whole numbers 0000 to 9999.



Note

Some autonomous messages (REPT DBCHG and REPT EVT SESSION, for example) differ slightly from the format shown in the third line of [Figure 1-1](#).

Figure 1-1 Autonomous message format



1.3.1 Alarm Codes

The alarm code indicates the severity of the autonomous message. Valid values for alarm codes in decreasing order of severity are as follows:

- *C Critical alarm
- ** Major alarm
- *^ Minor alarm
- A^ Non-alarm message

Critical, Major, and Minor correspond to the reporting of alarmed events. The Non-alarm message designation is used when the NE is reporting non-alarmed events, periodic measurements, or results of previously-scheduled diagnostics or audits. If multiple alarms are reported in the same message, the alarm code is the highest severity of those being reported.

The following is an example of an output message that includes the Critical alarm code:

```
AB7-56 1970-01-01 16:02:10
*C 100.100 REPT ALM EQPT
  "SYSTEM:CR,HITEMP,NSA,,,,;\“High Temperature\”,TCC”
```

For more information about alarms, see [Chapter 7, “TL1 Alarms and Errors.”](#)

1.4 TL1 Commands by User Security

The following table specifies command access privileges for each user security level.

Table 1-1 Command Access

Command	Superuser	Provisioning	Maintenance	Retrieve
ALW-MSG-SECU	X			
ALW-USER-SECU	X			
APPLY	X			
CANC-USER-SECU	X			
CLR-COND-SECU	X			
COPY-RFILE	X			
DLT-USER-SECU	X			
ED-DAT	X			
ED-USER-SECU	X			
ENT-USER-SECU	X			
INH-MSG-SECU	X			
INH-USER-SECU	X			
REPT EVT SECU	X			
RTRV-DFLT-SECU	X			
RTRV-USER-SECU	X			
SET-ATTR-SECUDFLT	X			
DLT-*_*	X	X		
ED-*_*	X	X		
ENT-*_*	X	X		
SET-*_*	X	X		
SET-TOD	X	X		
INIT-*_*	X	X	X	
OPR-*_*	X	X	X	
RLS-*_*	X	X	X	

Table 1-1 Command Access (continued)

Command	Superuser	Provisioning	Maintenance	Retrieve
RMV-*-*	X	X	X	
RST-*-*	X	X	X	
SW-*-*	X	X	X	
ACT-*-*	X	X	X	X
ALW-*-*	X	X	X	X
CANC-*-*	X	X	X	X
ED-PID	X	X	X	X
INH-*-*	X	X	X	X
REPT * * ¹	X	X	X	X
RTRV-*-*	X	X	X	X

1. Except for REPT EVT SECU which is Superuser only as shown above.

User security levels limit the amount of time a user can leave the system idle before the TL1 session is locked to prevent unauthorized users from making changes. Higher security levels have shorter time outs. Starting with Release 4.0, time outs can be provisioned (by a Superuser) from CTC. If provisioned, it only affects users who are not currently logged in. A user that is logged in has to log out and log back in before the new timeouts will take affect. A Superuser can provision security levels via TL1 with the SET-ATTR-SECUDFLT command.

Table 1-2 shows security levels and their default time outs.

Table 1-2 Security Default Time Outs

Security Level	Default Time Outs
Retrieve	Unlimited
Maintenance	60 minutes
Provisioning	30 minutes
Superuser	15 minutes

1.5 Provisioning Rules for a DS3E Card in CTC Versus TL1

The DS3E card can autosense the framing and set the format accordingly; however, this framing autosense feature can only be set using CTC. Use CTC to set the FMT attribute on a DS3E card to autoprovision. The FMT field will blank out for a few seconds while the DS3E card is determining the framing mode received by that particular port. The FMT field is then set accordingly to unframed, M23, or CBit. If the DS3E card is not present (pre-provisioned), setting the FMT field to autoprovision will result in the FMT field defaulting to unframed.

The TL1 interface does not support the autoprovision option for the DS3E card; the TL1 interface only supports unframed, M23, or CBit. If autoprovision is selected from CTC and at the same time the TL1 command RTRV-T3 is issued, the TL1 output will indicate the FMT field as unframed during the time

period that the DS3E card (if present) is autosensing the frame format. If the DS3E card is not present (pre-provisioned), the response of the RTRV-T3 command (after CTC sets the FMT to autoprovision) will indicate the FMT field as unframed.

1.6 Provisioning Rules for MXP_2.5G_10G and TXP_MR_10G Cards

The following sections provide rules necessary when performing provisioning with the MXP_2.5G_10G and TXP_MR_10G (MXP/TXP) cards.

1.6.1 Payload Provisioning Rules for MXP/TXP Cards

1. You are allowed to change the payload type only if all ports are in OOS state.
2. If the slot is in a regeneration group, changing the payload type affects both cards.
3. Changing the payload is a card-level operation (i.e. all client ports are affected).
4. There should be no DCC enabled on any ports.
5. Only the TXP_MR_10G card can be used for a 10GE payload.
6. To set the 10GE payload for a TXP_MR_10G card, the termination mode must be set to transparent.
7. The payload cannot be changed if any of the ports are a part of any Y cable protection group or are used as the timing source.
8. The TL1 commands to provision are:

```
ED-DWDM:[<TID>]:<AID>:<CTAG>:::[PEERID=<PEERID>],[NAME=<NAME>],[
TERMMODE=<TERMMODE>],[PAYLOAD=<PAYLOAD>],[PWL=<PWL>];RTRV-DWDM:[<TID
>]:<AID>:<CTAG>;
```

1.6.2 Termination Mode Provisioning Rules for MXP/TXP Cards

1. Only applicable to payload type of SONET/SDH for MXP_2.5G_10G and TXP_MR_10G cards.
2. Changing termination mode is a card-level operation (i.e. client and trunk must have the same termination mode selection).
3. There should be no DCC enabled on any ports.
4. All ports need to be in OOS state.
5. For transparent termination mode, the trunk port should not be a timing source.
6. Section termination mode is not supported for both the MXP and TXP cards.
7. The trace mode should be set to OFF for the J0 Section trace level on all ports, prior to a change of the termination mode.
8. The TL1 commands to provision are:
 - ED-DWDM:[<TID>]:<AID>:<CTAG>:::[PEERID=<PEERID>],[NAME=<NAME>],[
TERMMODE=<TERMMODE>],[PAYLOAD=<PAYLOAD>],[PWL=<PWL>];
 - RTRV-DWDM:[<TID>]:<AID>:<CTAG>;

1.6.3 Wavelength Provisioning Rules for MXP/TXP Cards

1. The DWDM (trunk) port should be placed in OOS state because this change is traffic affecting. This is enforced in CTC. TL1 does not enforce this restriction.
2. Setting the wavelength to the first tunable wavelength will cause the first wavelength from the card manufacturing data to be used as the operational wavelength.
3. If the provisioned wavelength is set to the first tunable wavelength, any removal of an operational card and the subsequent replacement with a card of a different wavelength will not cause a mismatch alarm to be raised.
4. In order to receive the mismatch alarm notification, you need to explicitly provision the wavelength and not use the first tunable wavelength.
5. The TL1 commands to provision are:
 - ED-DWDM:[<TID>]:<AID>:<CTAG>:::[PEERID=<PEERID>],[NAME=<NAME>],[TERMMODE=<TERMMODE>],[PAYLOAD=<PAYLOAD>],[PWL=<PWL>];
 - RTRV-DWDM:[<TID>]:<AID>:<CTAG>;

1.6.4 DCC/GCC Provisioning Rules for MXP/TXP Cards

1. The DCC can be provisioned for the MXP and TXP cards.
2. The DCC can be provisioned only if the card payload is set to SONET/SDH and the termination mode is set to line terminated.
3. The client ports can only support DCC.
4. The trunk port can only support either DCC or GCC.
5. To enable the GCC on the trunk port, the G.709 should be enabled.
6. To enable the DCC on the trunk port, the G.709 should be disabled.
7. Only the working port (not the protect) in a Y cable protection scheme is allowed to be provisioned as DCC and timing reference.
8. The TL1 commands to provision are:
 - ED-CLNT:[<TID>]:<AID>:<CTAG>:::[NAME=<PORTNAME>],[SFBER=<SFBER>],[SDBER=<SDBER>],[ALSMODE=<ALSMODE>],[ALSRCINT=<ALSRCINT>],[ALSRCPW=<ALSRCPW>],[COMM=<COMM>],[MACADDR=<MACADDR>],[SYNCSMSG=<SYNCSMSG>],[SENDDUS=<SENDDUS>],[RLASER=<RLASER>],[SOAK=<SOAK>],[OSPF=<OSPF>]:[<PST>],[<SST>];
 - ED-OCH:[<TID>]:<AID>:<CTAG>:::[RDIRN=<RDIRN>],[EXPWLEN=<EXPWLEN>],[VOAATTN=<VOAATTN>],[VOAPWR=<VOAPWR>],[CALOPWR=<CALOPWR>],[CHPOWER=<CHPOWER>],[NAME=<PORTNAME>],[SFBER=<SFBER>],[SDBER=<SDBER>],[ALSMODE=<ALSMODE>],[ALSRCINT=<ALSRCINT>],[ALSRCPW=<ALSRCPW>],[COMM=<COMM>],[GCCRATE=<GCCRATE>],[OSDBER=<OSDBER>],[DWRAP=<DWRAP>],[FEC=<FEC>],[MACADDR=<MACADDR>],[SYNCSMSG=<SYNCSMSG>],[SENDDUS=<SENDDUS>],[RLASER=<RLASER>],[SOAK=<SOAK>],[OSPF=<OSPF>]:[<PST>],[<SST>];
 - RTRV-CLNT:[<TID>]:<AID>:<CTAG>;
 - RTRV-OCH:[<TID>]:<AID>:<CTAG>;

1.6.5 G.709 Provisioning Rules for MXP/TXP Cards

1. The G.709 can only be provisioned on the trunk (DWDM) port.
2. In order to disable G.709, the FEC, if enabled, should be disabled first.
3. In order to disable G.709, the GCC if provisioned, should be removed.
4. In order to change G.709 setting, the trunk port needs to be OOS.
5. The TL1 commands to provision are:
 - ED-CLNT:[<TID>]:<AID>:<CTAG>:::[NAME=<PORTNAME>],[SFBER=<SFBER>],[SDBER=<SDBER>],[ALSMODE=<ALSMODE>],[ALSRCINT=<ALSRCINT>],[ALSRCPW=<ALSRCPW>],[COMM=<COMM>],[MACADDR=<MACADDR>],[SYNCSMSG=<SYNCSMSG>],[SENDDUS=<SENDDUS>],[RLASER=<RLASER>],[SOAK=<SOAK>],[OSPF=<OSPF>]:[<PST>],[<SST>];
 - ED-OCH:[<TID>]:<AID>:<CTAG>:::[RDIRN=<RDIRN>],[EXPWLEN=<EXPWLEN>],[VOAATTN=<VOAATTN>],[VOAPWR=<VOAPWR>],[CALOPWR=<CALOPWR>],[CHPOWER=<CHPOWER>],[NAME=<PORTNAME>],[SFBER=<SFBER>],[SDBER=<SDBER>],[ALSMODE=<ALSMODE>],[ALSRCINT=<ALSRCINT>],[ALSRCPW=<ALSRCPW>],[COMM=<COMM>],[GCCRATE=<GCCRATE>],[OSDBER=<OSDBER>],[DWRAP=<DWRAP>],[FEC=<FEC>],[MACADDR=<MACADDR>],[SYNCSMSG=<SYNCSMSG>],[SENDDUS=<SENDDUS>],[RLASER=<RLASER>],[SOAK=<SOAK>],[OSPF=<OSPF>]:[<PST>],[<SST>];
 - RTRV-CLNT:[<TID>]:<AID>:<CTAG>;
 - RTRV-OCH:[<TID>]:<AID>:<CTAG>;

1.6.6 FEC Provisioning Rules for MXP/TXP Cards

1. The FEC can only be provisioned if the G.709 is enabled.
2. Trunk port needs to be OOS.
3. The TL1 commands to provision are:
 - ED-CLNT:[<TID>]:<AID>:<CTAG>:::[NAME=<PORTNAME>],[SFBER=<SFBER>],[SDBER=<SDBER>],[ALSMODE=<ALSMODE>],[ALSRCINT=<ALSRCINT>],[ALSRCPW=<ALSRCPW>],[COMM=<COMM>],[MACADDR=<MACADDR>],[SYNCSMSG=<SYNCSMSG>],[SENDDUS=<SENDDUS>],[RLASER=<RLASER>],[SOAK=<SOAK>],[OSPF=<OSPF>]:[<PST>],[<SST>];
 - ED-OCH:[<TID>]:<AID>:<CTAG>:::[RDIRN=<RDIRN>],[EXPWLEN=<EXPWLEN>],[VOAATTN=<VOAATTN>],[VOAPWR=<VOAPWR>],[CALOPWR=<CALOPWR>],[CHPOWER=<CHPOWER>],[NAME=<PORTNAME>],[SFBER=<SFBER>],[SDBER=<SDBER>],[ALSMODE=<ALSMODE>],[ALSRCINT=<ALSRCINT>],[ALSRCPW=<ALSRCPW>],[COMM=<COMM>],[GCCRATE=<GCCRATE>],[OSDBER=<OSDBER>],[DWRAP=<DWRAP>],[FEC=<FEC>],[MACADDR=<MACADDR>],[SYNCSMSG=<SYNCSMSG>],[SENDDUS=<SENDDUS>],[RLASER=<RLASER>],[SOAK=<SOAK>],[OSPF=<OSPF>]:[<PST>],[<SST>];
 - RTRV-CLNT:[<TID>]:<AID>:<CTAG>;
 - RTRV-OCH:[<TID>]:<AID>:<CTAG>;

1.6.7 Synchronization Provisioning Rules for MXP/TXP Cards

1. Only the MXP card ports can be used for a timing source.
2. For the MXP card, all client ports are available for timing irrespective of the termination mode.
3. For the MXP card, the trunk port is only allowed for a timing reference if G.709 is off and the termination mode is set to line.
4. The TL1 commands to provision are:
 - ED-CLNT:[<TID>]:<AID>:<CTAG>:::[NAME=<PORTNAME>],[SFBER=<SFBER>],[SDBER=<SDBER>],[ALSMODE=<ALSMODE>],[ALSRCINT=<ALSRCINT>],[ALSRCPW=<ALSRCPW>],[COMM=<COMM>],[MACADDR=<MACADDR>],[SYNCSMSG=<SYNCSMSG>],[SENDDUS=<SENDDUS>],[RLASER=<RLASER>],[SOAK=<SOAK>],[OSPF=<OSPF>]:[<PST>],[<SST>];
 - ED-OCH:[<TID>]:<AID>:<CTAG>:::[RDIRN=<RDIRN>],[EXPWLEN=<EXPWLEN>],[VOAATTN=<VOAATTN>],[VOAPWR=<VOAPWR>],[CALOPWR=<CALOPWR>],[CHPOWER=<CHPOWER>],[NAME=<PORTNAME>],[SFBER=<SFBER>],[SDBER=<SDBER>],[ALSMODE=<ALSMODE>],[ALSRCINT=<ALSRCINT>],[ALSRCPW=<ALSRCPW>],[COMM=<COMM>],[GCCRATE=<GCCRATE>],[OSDBER=<OSDBER>],[DWRAP=<DWRAP>],[FEC=<FEC>],[MACADDR=<MACADDR>],[SYNCSMSG=<SYNCSMSG>],[SENDDUS=<SENDDUS>],[RLASER=<RLASER>],[SOAK=<SOAK>],[OSPF=<OSPF>]:[<PST>],[<SST>];
 - RTRV-CLNT:[<TID>]:<AID>:<CTAG>;
 - RTRV-OCH:[<TID>]:<AID>:<CTAG>;

1.6.8 Trace Provisioning Rules for MXP/TXP Cards

1. The client ports only support the SONET/SDH J0 section trace.
2. The client ports support the J0 Section trace only in line terminated mode.
3. The trunk (DWDM) port supports the J0 Section trace mode only in line terminated mode.
4. For the trunk port, if G.709 is enabled, TTI level trace can be provisioned for section and path monitoring.
5. In line termination, the J0 Section trace supports MANUAL and MANUAL_NO_AIS trace mode.
6. The J0 Section trace level supports 1 or 16-byte length trace format.
7. The OTN level trace supports only the Manual and MANUAL-NO-AIS trace modes.
8. The OTN level trace supports only 64-byte length trace format
9. The trace mode of AUTO and AUTO-NO-AIS are not supported.
10. The TL1 commands to provision are:
 - ED-TRC-CLNT:[<TID>]:<SRC>:<CTAG>:::[EXPTRC=<EXPTRC>],[TRC=<TRC>],[TRCMODE=<TRCMODE>],[TRCLEVEL=<TRCLEVEL>],[TRCFORMAT=<TRCFORMAT>][:];
 - ED-TRC-OCH:[<TID>]:<SRC>:<CTAG>:::[EXPTRC=<EXPTRC>],[TRC=<TRC>],[TRCMODE=<TRCMODE>],[TRCLEVEL=<TRCLEVEL>],[TRCFORMAT=<TRCFORMAT>][:];
 - RTRV-TRC-CLNT:[<TID>]:<SRC>:<CTAG>:::[<MSGTYPE>],[<TRCLEVEL>][:];

- RTRV-TRC-OCH:[<TID>]:<SRC>:<CTAG>::[<MSGTYPE>],[<TRCLEVEL>][:];

1.6.9 PM and Alarm Threshold Provisioning Rules for MXP/TXP Cards

1. The OTN thresholds are only applicable if the G.709 is enabled.
2. The FEC thresholds are only applicable if the G.709 and FEC are enabled.
3. The Optics TCA & Alarm Thresholds apply to the local node only.
4. The TL1 commands to provision are:
 - SET-TH-<MOD2>:[<TID>]:<AID>:<CTAG>::<MONTYPE>,<THLEV>,[<LOCN>],,<TMPER>];
 - RTRV-TH-<MOD2>:[<TID>]:<AID>:<CTAG>::[<MONTYPE>],[<LOCN>],<TMPER>[:];

1.6.10 Regeneration Group Provisioning Rules for MXP/TXP Cards

1. Only a TXP card can be used in a regeneration group.
2. A regeneration group enables the continuation of the client signal across multiple spans.
3. Regeneration group rules are as follows:
 - a. peer-slot must not be itself
 - b. peer-slot must at least be preprovisioned
 - c. same card type
 - d. same payload type
 - e. termination mode has to be set to transparent mode
 - f. peer slot cannot be part of another Y cable or regeneration group
4. Once two cards are in regeneration group, any payload changes will be reflected on both cards.
5. The TL1 commands to provision are:
 - ED-DWDM:[<TID>]:<AID>:<CTAG>:::[PEERID=<PEERID>],[NAME=<NAME>],[TERMMODE=<TERMMODE>],[PAYLOAD=<PAYLOAD>],[PWL=<PWL>];
 - RTRV-DWDM:[<TID>]:<AID>:<CTAG>;

1.6.11 Y Cable Protection Group Provisioning Rules for MXP/TXP Cards

1. A Y cable protection group can be created between the client ports of either two TXP cards or two MXP cards.
2. Y cable protection cannot be part of a regeneration group.
3. Only the working ports (not the protect) can be provisioned with DCC and timing reference.
4. The TL1 commands to provision are:
 - ENT-FFP-CLNT:[<TID>]:<WORKAID>,<PROTAID>:<CTAG>:::[PROTOTYPE=<PROTOTYPE>],[PROTID=<PROTID>],[RVRTV=<RVRTV>],[RVTM=<RVTM>],[PSDIRN=<PSDIRN>][:];

- ED-FFP-CLNT:[<TID>]:<AID>:<CTAG>:::[PROTID=<PROTID>,,][RVRTV=<RVRTV>,,][RVTM=<RVTM>,,][PSDIRN=<PSDIRN>][:];
- RTRV-FFP-CLNT:[<TID>]:<AID>:<CTAG>[::::];

1.7 Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards

The following sections provide rules necessary when performing provisioning with the TXP_MR_2.5G and TXPP_MR_2.5G cards.

1.7.1 Payload Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards

1. Changing payload data type requires:
 - a. All ports must be in OOS state because the payload change is traffic-affecting.
 - b. All ports must not have any DCC termination.
 - c. All ports must not be part of any timing source.
 - d. All ports Section Trace Mode must be OFF>
 - e. For all 2R payload types trunk ports must not have GCC termination or OTN enabled.
 - f. If the card is part of a regeneration group, rules a. through d. also apply to the peer's ports.
 - g. If any port is Y cable protected rules a. through d. are applied to the peer's slot.
2. If the slot is in a regeneration group, changing payload type affects both cards.
3. Changing payload is a card-level operation (all client ports are affected).
4. To set the payload to other than OC3/OC12/OC48/STM1/STM4/STM16, the termination mode must be set to Transparent.

1.7.2 Termination Mode Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards

1. Only applicable to payload type OC3/OC12/OC48/STM1/STM4/STM16.
2. Changing termination mode is a card level operation. Client and trunk must have the same termination mode selection.
3. Changing termination mode requires:
 - a. All ports must be in OOS state because termination mode change is traffic-affecting.
 - b. All ports must not have any DCC termination.
 - c. The Section Trace Mode on all ports must be OFF.
 - d. If any port is Y cable-protected rules a. through d. are applied to the peer's slot.
4. Section and Line termination mode is supported for payload OC3/OC12/OC48/STM1/STM4/STM16.

1.7.3 Wavelength Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards

1. Changing trunk wavelength requires:
 - a. All trunk ports must be in OOS state because trunk wavelength change is traffic-affecting.
2. Setting the wavelength to the first tunable wavelength will cause the first wavelength from the card manufacturing data to be used as the operational wavelength.
3. If the provisioned wavelength is set to the first tunable wavelength any removal of an operational card and the subsequent replacement with a card for a different wavelength will not cause a mismatch alarm to be raised.
4. In order to receive the mismatch alarm notification you must explicitly provision the wavelength and not use the first tunable wavelength.

1.7.4 Regeneration Group Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards

1. The TXP_MR_2.5G and TXPP_MR_2.5G cards can be used in a regeneration group.
2. When the TXPP_MR_2.5G card is used as a regeneration group, a LOCKOUT_OF_PROTECTION Inhibit Switching command on the working trunk port will be issued.
3. A user cannot unlock the Inhibit Switching command until the regeneration group is un-provisioned for the protect TXPP_MR_2.5G card.
4. Regeneration group provisioning will be denied if there is a FORCE or MANUAL switching command already provisioned on the trunk ports for the TXPP_MR_2.5G card.
5. A Regeneration group enables the continuation of the client signal across multiple spans.
6. Provisioning a regeneration group requires:
 - a. Peer-slot must not be itself.
 - b. Peer-slot must at least be preprovisioned.
 - c. Peer-slot must not be part of another regeneration group.
 - d. Peer-slot must not be part of a Y Cable protection group.
 - e. Same card type
 - f. Same payload type and data rate
 - g. Same G.709 OTN status
 - h. Same FEC status
 - i. Termination mode has to be set to Transparent mode
7. Once two cards are in regeneration group:
 - a. Any payload data type changes will be reflected on both cards.
 - b. Any changes for G.709 OTN and FEC status will be reflected on both cards.

1.7.5 DCC/GCC Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards

1. SDCC can be provisioned on the client port.
2. All 2R payload types do not support GCC.
3. Provisioning an SDCC requires:
 - a. Payload Data Type is set to OC3/OC12/OC48/STM1/STM4/STM16 (or SONET/SDH framing type).
 - b. Termination mode is set to Line/Section terminated.
4. DCC can be provisioned on the trunk line provided that G.709 OTN status is turned off:
 - a. To provision a GCC on the trunk port, the G.709 should be enabled.
 - b. To provision a SDCC on the trunk port, the G.709 should be disabled.
5. Only the working client port in a Y Cable protection scheme is allowed to be provisioned with SDCC.
6. Only the working trunk port in a splitter protection scheme can be provisioned with SDCC or GCC.

1.7.6 G.709 OTN, FEC, and OTN SD/SDBER Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards

1. The G.709 OTN, FEC, and OTN SD/SFBER can only be provisioned on the trunk port.
2. All 2R payload types do not support G.709 OTN or FEC.
3. To enable the G.709 OTN status:
 - a. All trunk ports must be in OOS state.
 - b. All trunk ports must not have any SDCC provisioned.
4. In order to disable G.709:
 - a. All trunk ports must be in OOS state.
 - b. All trunk ports must not have any GCC or active TTI mode provisioned.
5. FEC status cannot be enabled if G.709 is not enabled.
6. To change FEC status all trunk ports must be in OOS state.
7. Only G.709 OTN, FEC status, SD/SFBER setting on the working trunk port can be changed in the TXPP_MR_2.5G card. The value provisioned on the working trunk port will be reflected on the protect trunk port.
8. G.709 OTN pane is only provisionable in non-2R (or unframed) payload type.
9. When G.709 is turned on OTN SFBER value is always set to 1E-5 and no other BER values are provisionable.

1.7.7 Synchronization Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards

1. The TXP_MR_2.5G and TXPP_MR_2.5G cards are through-timed and cannot be used for a timing source.

1.7.8 Section Trace Provisioning (J0) Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards

1. The client and the trunk ports only support the section trace if the payload is OC3/OC12/OC48/STM1/STM4/STM16.
2. The client and trunk ports support the section trace only in Line/Section terminated mode.
3. In Line Termination mode, the supported trace modes are MANUAL and MANUAL_NO_AIS trace modes.
4. In Section Termination mode, the supported trace mode is only MANUAL_NO_AIS trace mode.
5. The Section trace supports 1 or 16 bytes length trace format.
6. The trace mode of AUTO and AUTO-NO-AIS are not supported.
7. No trace is applicable for 2R (or unframed) payload types, for example; DV-6000, HDTV, and ESCON.
8. The Section trace received string should be displayed when the card is in transparent termination mode and the payload is OC3/OC12/OC48/STM1/STM4/STM16.
9. When the client port is configured in a Y cable protection group the received string is always retrieved from the active client port.
10. If the line is Y cable protected trace can only be provisioned on the working, however; the provisioning will be duplicated between the two ports. Both ports will contain the same values. This rule applies to these parameters: Mode, Format, Send String, and Expected String.

1.7.9 Trail Trace Identification Provisioning (TTI) Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards

1. For the TXPP_MR_2.5G card TTI can be provisioned on both the working trunk ports only, however: the provisioning will be duplicated between two ports. Both ports will contain the same values. This rule applies to these parameters: Mode, Format, Send String, and Expected String.
2. The TTI level trace supports only 64-byte length trace format.
3. The TTI level trace supports only the MANUAL and MANUAL_NO_AIS trace modes.
4. The TTI received string is always retrieved from the active trunk port.
5. The TTI level trace can be provisioned for the section and path monitoring.

1.7.10 PM and Alarm Threshold Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards

1. When framing type is UNFRAMED, for example; HDTV or DV6000:
 - a. Only optics threshold provisioning and PM are applicable.
 - b. ESCON SFP does not support optics threshold provisioning and PM.
2. Optics PM supports only Near End, 15Min, and 1Day interval buckets.
3. When framing type is FIBER CHANNEL and ETHERNET, for example; 1G FC and 1G Ethernet:
 - a. Only 8B10B and optics threshold provisioning and PM are available.

- b. 2G Fiber Channel does not support 8B10B threshold provisioning and PM.
4. 8B10B applies to both Tx and Rx directions.
5. 8B10B PM supports only Near End, 15Min and 1Day interval buckets.
6. When framing type is SONET/SDH all monitored PM parameter terminology will follow the current chassis type.
7. The OTN thresholds are only applicable if G.709 OTN status is enabled.
8. The FEC thresholds are only applicable if the G.709 and FEC are enabled.
9. If the line is configured in a Y cable or Splitter protection group, only the working line thresholds can be provisioned. The working line thresholds will be reflected on the protect line thresholds. This rule applies for all threshold types including G.709 OTN and FEC thresholds.
10. Payload PM can be independently retrieved for both the working and protect port.

1.7.11 Y Cable Protection Group Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards

1. A Y cable protection group can be created between the client ports of two TXP_MR_2.5G cards only.
2. While in Y cable protection, a TXP_MR_2.5G/TXPP_MR_2.5G card cannot be part of a regeneration group.
3. Only the working client port can be provisioned with SDCC.
4. Y cable cannot be provisioned for the TXPP_MR_2.5G card.

1.7.12 Loopback Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards

1. Loopback can be provisioned on the client and trunk ports.
2. Both Terminal and Facility loopback types can be provisioned.
3. Loopback is not applicable when framing type is UNFRAMED.
4. For the TXPP_MR_2.5G card, the following loopback rules apply to the trunk ports:
 - a. Only one loopback is allowed to be provisioned at the trunk ports at any given time.
 - b. Loopback is allowed if the sibling trunk port is not IS.
 - c. Provisioning a loopback on a trunk port will trigger the Inhibit Switching command LOCKOUT_OF_PROTECTION or LOCKOUT_OF_WORKING depending on whether the working or the protect is placed in a loopback.
 - d. Once a loopback is provisioned on a trunk port both the trunk ports will transmit the signal of the loopback port.
 - e. Loopback will be denied if there is a FORCE or MANUAL switching command in place on the trunk ports.
 - f. You cannot remove the Inhibit Switching command issued as a result of the loopback. This Inhibit Switching command will be removed only when the loopback is removed.

1.7.13 ALS Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards

1. ALS can be provisioned on the client and trunk ports.
2. If the trunk port is configured in a Splitter protection group, only the working trunk port can be provisioned for ALS, however; ALS provisioning on the working trunk port will be reflected on the protect port.
3. For the protected TXPP_MR_2.5G card, ALS mode will only take effect when both ports receive LOS.

1.7.14 Port State Model Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards

1. The Enhanced state model port state of primary state=OOS and secondary state=AINS is not supported for the 1GigE/2GigE payload type.
2. The working and protect port can be put in IS/OOS independently.
3. For the TXPP_MR_2.5G card:
 - a. Setting the protect trunk port to OOS will enable the suppression of alarms on that port and will enable the card to be used like an unprotected card but the card still cannot be used for a Y cable protection group.
 - b. Setting the protect trunk port to OOS will not switch off the transmit laser unless both trunk ports are OOS.
 - c. The protect trunk port cannot be IS if there is a loopback or a regeneration group provisioned.

1.7.15 SONET-Related Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards

1. The SD/SFBER can only be provisioned on the working trunk port for the TXPP_MR_2.5G card. Values set at the working port will be reflected on the trunk port.

1.7.16 Overhead Circuit Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards


Note

Applicable for provisioning from CTC only.

1. LOW/EOW is possible between the AIC-I, OCn and TXP/MXP cards in any combination in line-terminated mode.
2. F1/D4-D12 UDC:
 - a. Not possible between TXP/TXPP and AIC-I cards in line-terminated mode.
 - b. Not possible between TXP/TXPP and OCn cards in line-terminated mode.
 - c. Possible between OCn ports.
3. All OH bytes are passed across client and DWDM ports in transparent mode.
4. SDCC/LDCC tunneling is not possible in line-terminated mode.

5. No end-to-end OH circuit provisioning. In R4.6 you can stitch them at each node.

1.7.17 Hardware Limitation Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards

1. ESCON SFP does not support any monitoring.
2. Optics thresholds and PM are not shown on client ports.
3. HI/LO-TXPOWER is not supported for TXP_MR_2.5G and TXPP_MR_2.5G Cards.

1.8 CTC Interoperability

A TL1 cross-connect that has been upgraded to a CTC circuit can no longer be managed by TL1. For example, if you issue a `DLT-CRS-<STS_PATH>` command to delete a circuit, you will see that the circuit still appears in CTC as “incomplete.” The reason for this is because in addition to creating cross-connects (as TL1 does), CTC creates another object on the source node that stores network-level circuit attributes. CTC will continue to see that object after the cross-connect is deleted which is why it shows an incomplete circuit.

Starting with R3.4, there is a *Create cross connects only (TL1-like)* check box that appears in CTC when creating circuits. If applicable, you can check this box to create one or more cross-connects to complete a signal path for TL1-generated circuits. If this box is checked, you cannot assign a name to the circuit; and VT tunnels, Ethergroup sources, and drops are unavailable. Refer to the *Cisco ONS 15454 Procedure Guide* or the *Cisco ONS 15327 Procedure Guide* for information about CTC circuit creation.

1.9 Mixed Mode Timing Support

Although TL1 supports mixed mode timing, Cisco strongly advises against its implementation. Mixed mode timing is not a recommended timing mode because of the inherent risk of creating timing loops. Refer to Telcordia document GR-436-CORE, *Digital Network Synchronization Plan* for recommended synchronization planning. Refer to the *Cisco ONS 15454 Procedure Guide* or the *Cisco ONS 15327 User Documentation* for information about setting up ONS 15454/15327 timing. For further assistance contact the Cisco Technical Assistance Center (TAC) at www.cisco.com or call (800) 553-2447 for unresolved problems.

1.10 TL1 Command Completion Behavior

When you enter a TL1 command, one of three completion codes will be returned. The completion codes are: completed (COMPLD), partial (PRTL), and deny (DENY). You can specify an explicit, implicit, or explicit with implicit list as explained in the following sections.

1.10.1 General Rules

**Note**

The command completion behavior does not apply to `RTRV-CRS`, `RTRV-ALM`, and `RTVR-COND` commands.

1.10.1.1 Explicit List of AIDs - No Wildcards

If a set of AIDs is explicitly listed, including a set of just one AID, then each AID must complete successfully to return a COMPLD message. If more than one AID is in the set and at least one AID succeeds but all do not, then a PRTL with errors for each failed AID is returned. If all AIDs in the set fail, a DENY with errors for each failed AID is returned.

```
SLOT-1
FAC-2-1&FAC-3-3&FAC-4-2
```

1.10.1.2 Implicit List of AIDs - Single AID With Wildcard

If a set of AIDs is implied by the use of the ALL modifier on a single AID, then follow the same rules as in the [“Explicit List of AIDs - No Wildcards” section on page 1-20](#). The caveat is that the implicit list only includes AIDs that apply to the command:

```
SLOT-ALL
FAC-1-ALL
STS-3-ALL
```

where Slot 3 contains an OC-12 and the command is ED-STS1 but STS-3-4 and STS-3-7 are STS3C. The set implied by STS-3-ALL then only contains STS-3- $\{1,2,3,10,11,12\}$ and will not return an error for STS-3- $\{4,5,6,7,8,9\}$. Disregard the STS3C in this case because the modifier of the command specifies that the user is only interested in STS-1 paths. The rule specified in this section then applies to the implicit set of $\{1,2,3,10,11,12\}$.

1.10.1.3 Explicit List Grouped With Implicit List

If the set of AIDs is comprised of two subsets, one set including explicitly stated AIDs and the other set implied by one or more AID(s) with the ALL modifier, then follow the rules of the [“Explicit List of AIDs - No Wildcards” section on page 1-20](#) and the [“Implicit List of AIDs - Single AID With Wildcard” section on page 1-20](#), respectively.

```
FAC-1-1&FAC-2-ALL
FAC-3-ALL&FAC-7-ALL
STS-2-ALL&STS-12-1&STS-13-2&STS-14-ALL
```

1.10.2 Command Completion Behavior for Retrieval of Cross-Connections

When you enter a RTRV-CRS command, one of three completion codes will be returned. The completion codes are: completed (COMPLD), partial (PRTL), and deny (DENY). You can specify an explicit, implicit, or explicit with implicit list as explained in the following sections.

1.10.2.1 Explicit List of AIDs - No Wildcards

For an explicit list of AIDs on a RTRV-CRS command, an error code will be returned for each AID that fails validation (e.g. the user specifies STS-N-13 when SLOT-N only contains an OC-12) or for each AID where no matching cross-connection is found. To determine the completion code, follow the rules from the [“Explicit List of AIDs - No Wildcards” section on page 1-20](#). If the result is either PRTL or COMPLD, then a list of matching cross-connections will accompany the response.

1.10.2.2 Implicit List of AIDs - Single AID With Wildcard

If a set of AIDs is implied by the use of the ALL modifier on a single AID, then follow the same AID expansion rule as defined in the example from the [“Implicit List of AIDs - Single AID With Wildcard” section on page 1-20](#). Then apply the following rules to the set:

1. If all valid AIDs match, COMPLD is returned with a matching list of cross-connections.
2. If some valid AIDs match but not all, COMPLD is returned with a matching list of cross-connections.
3. If all valid AIDs fail to match, DENY is returned.

RTRV-CRS-ST51:[<TID>]:STS-9-ALL:<CTAG>; where STS-9-ALL maps to STS-9-{1,2,3,10,11,12} because there is a single-port OC-12 card in Slot 3 with STS-3C defined for STS-9-4 and STS-9-7. You then traverse the set and return only the STS1 cross-connections that exist using end points in that set. If no cross-connections are retrieved, COMPLD is returned.

1.10.2.3 Explicit List Grouped With Implicit List

When you have determined the implicit list, apply the rules from the [“Implicit List of AIDs - Single AID With Wildcard” section on page 1-21](#) to the implicit list and the rules from the [“Explicit List of AIDs - No Wildcards” section on page 1-20](#) to the explicit list. Apply the following logic to the results from the two subsets:

1. Explicit list returns COMPLD, implicit list returns COMPLD, return COMPLD plus matching list
2. Explicit list returns COMPLD, implicit list returns DENY, return PRTL with errors plus matching list
3. Explicit list returns PRTL, implicit list returns COMPLD, return PRTL with errors plus matching lists
4. Explicit list returns PRTL, implicit list returns DENY, return PRTL with errors plus matching list
5. Explicit list returns DENY, implicit list returns COMPLD, return PRTL with errors plus matching list
6. Explicit list returns DENY, implicit list returns DENY, return DENY with errors

1.11 Test Access

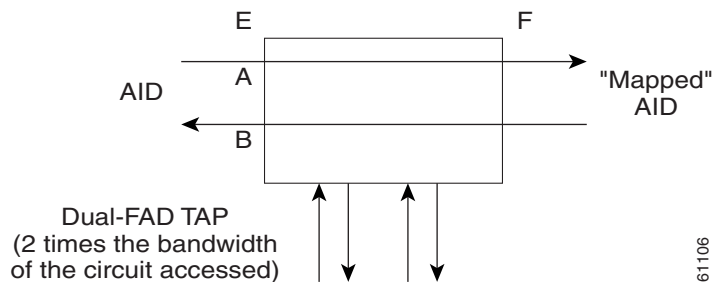
The test access (TACC) feature allows a third-party Broadband Remote Test Unit (BRTU) to create non-intrusive test access points (TAPs) to monitor the circuits on the ONS 15454/15327 for errors. The test access feature also allows the circuit to be split (intrusive), so that the transmission paths can be tested for bit errors via the use of various bit test patterns. The two BRTUs supported by the ONS 15454/15327 are the Hekimian/Spirent BRTU-93 (6750) and the TTC/Acterna Centest 650.

The test access functionality provides TL1 commands for creating and deleting TAPs, connecting or disconnecting TAPs to circuit cross-connects and changing the mode of test access on the ONS 15454/15327. You can view test access information in CTC; in node view click the **Maintenance > Test Access** tabs.

Refer to Telcordia document GR-834-CORE, *Network Maintenance: Access and Testing* and GR-1402-CORE, *Network Maintenance: Access Testing - DS3 HCDS TSC/RTU and DTAU Functional Requirements* for more information about Test Access. See [Chapter 3, “TL1 Command Descriptions”](#) for TL1 command information.

A TAP provides the capability of connecting the circuit under test to a BRTU. This connection initially provides in-service monitoring capability to permit the tester to determine that the circuit under test is idle. The monitor connection should not disturb the circuit under test. The access point and remote test unit (RTU) also provide the capability of splitting a circuit under test. A split consists of breaking the transmission path of the circuit under test. This is done out of service. The two sides of the access point are called the Equipment (E) and Facility (F) directions. For a 4-wire or 6-wire circuit, the transmission pairs within the access point are defined as the A and B pairs. The circuit under test should be wired into the access point so the direction of transmission on the A pair is from E to F, and the transmission direction for the B pair is from F to E (Figure 1-2).

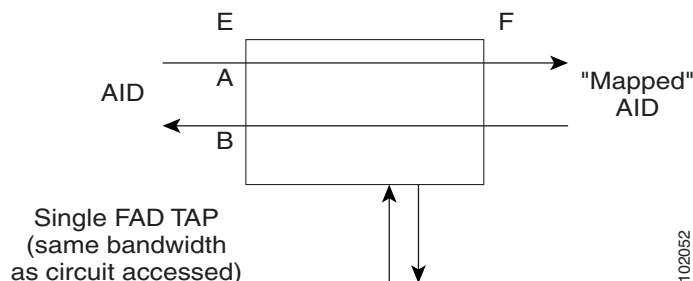
Figure 1-2 Circuit with no access dual FAD TAP



A dual FAD (facility access digroup) TAP uses twice the bandwidth of the circuit under test. This can be specified by the TAPTYPE parameter as shown in ED-<MOD2> command syntax in the “[TAP Creation and Deletion](#)” section on page 1-23. The values are SINGLE/DUAL. It defaults to DUAL.

A single FAD TAP uses half the bandwidth as that of the dual FAD i.e., it will use the same bandwidth as the circuit accessed for the TAP creation. This can be specified by the TAPTYPE parameter as shown in the “[TAP Creation and Deletion](#)” section on page 1-23. The values are SINGLE/DUAL. The MONEF, SPLTEF, LOOPEF modes are not supported by Single FAD TAPs (Figure 1-3).

Figure 1-3 Circuit with no access single FAD TAP



1.11.1 Test Access Terminology

- BRTU—Broadband remote test unit
- DFAD—Dual facility access digroup
- FAD—Facility access digroup
- FAP—Facility access path

LOOPE—Split/loop access on A and B paths equipment side
 LOOPF—Split/loop access on A and B paths facility side
 MONE—Monitor access with signal detector on A path
 MONF—Monitor access with signal detector on B path
 MONEF—Monitor access with signal detector on A and B paths
 QRS—Quasi-random signal (bit test pattern)
 SPLTA—Split access on A path with signal detector from equipment, QRS on facility side
 SPLTB—Split access on B path with signal detector from equipment, QRS on equipment side
 SPLTE—Split access on A and B paths with signal detector from equipment, QRS on equipment side
 SPLTF—Split access on A and B paths with signal detector from equipment, QRS on facility side
 SPLTEF—Split access on A and B paths for testing in both equipment and facility directions
 TACC—Test access
 TAP—Test access path/point
 Path Naming Conventions:
 E—Equipment test access point direction
 F—Facility test access point direction
 A—Transmission path (the direction of transmission on the A pair is from E to F)
 B—Transmission path (the transmission direction for the B pair is from F to E)

1.11.2 TAP Creation and Deletion

The edit command (ED-<rr>) is used to change an existing port, STS, or VT to a TAP.

Input Format:

```
ED- (T1, T3, STS1, STS3c, STS6c, STS9c, STS12c, STS24c, STS48c, VT1,
DS1):[<TID>]:<AID>:<CTAG>[::TACC=<TACC>][TAPTYPE=<TAPTYPE>];
```

Edit an existing port, STS, or VT and change it to a TAP so it can be used when requesting TACC connections. Includes a new optical parameter TACC=n that defines the port, STS, or VT as a TAP with a selected unique TAP number. This TAP number will be used when requesting test access connections to circuit cross-connections under test. The TAP creation will fail if there is a cross-connection already on the port, STS, or VT.

Notes:

1. This command generates a REPT DBCHG message.
2. The alarms and conditions on test access paths can be retrieved by the RTRV-ALM-ALL or RTRV-ALM-<MOD2> commands
3. The TAP is a persistent object. It will exist after the user has logged out of the TL1 session.

The following list applies to TAP numbers:

1. The TAP number is an integer within the range of 1–999. When TACC=0 is specified, the TAP is deleted (if already present).
2. The TAP number is unique across T1/T3/STS/VT/DS1 TAPs in the system.
3. The TAP number is not editable.

1.11.2.1 ED-T1

When the ED-T1 command is issued with a specified TACC value for a given T1 port/facility, a dual facility access group (DFAD) is created by using the specified port/facility and the consecutive port/facility.

The command in [Example 1-1](#) creates a DFAD on FAC-1-1 and FAC-1-2.

Example 1-1 *ED-T1::FAC-1-1:12::TACC=1;*

```
DV9-99 1970-01-02 03:16:11
M 12 COMPLD
;
```



Note

These ports/facilities cannot be used for the creation of cross-connects until the TAP is deleted.

1.11.2.2 ED-T3

When the ED-T3 command is issued with a specified TACC value for a given T3 port/facility, a DFAD is created by using the specified port/facility and the consecutive port/facility.

The command in [Example 1-2](#) creates a T3 DFAD on FAC-2-1 and FAC-2-2.

Example 1-2 *ED-T3::FAC-2-1:12::TACC=2;*

```
DV9-99 1970-01-02 03:16:11
M 12 COMPLD
;
```



Note

These ports/facilities cannot be used for the creation of cross-connects until the TAP is deleted.

1.11.2.3 ED-DS1

When the ED-DS1 command is issued with a specified TACC value for a given DS1 facility on a DS3XM, a DFAD is created by using the specified facility and the consecutive port/facility.

The command in [Example 1-3](#) creates DFAD on DS1-2-1-1 and DS1-2-1-2.

Example 1-3 *ED-DS1::DS1-2-1-1:12::TACC=3;*

```
DV9-99 1970-01-02 03:16:11
M 12 COMPLD
;
```



Note

These ports/facilities cannot be used for the creation of cross-connects until the TAP is deleted.

1.11.2.4 ED-STSn

When the ED-STSn command is issued for a TACC it assigns the STS for the first two-way test access connection and STS+1 as the second 2-way connection. For STS3c, STS9c, STS12c, STS24c, and STS48c the next consecutive STS of same width is chosen. The TAP creation will fail if either of the consecutive STSs are not available.

The command in [Example 1-4](#) creates a TAP on STS-5-1 and STS-5-2.

Example 1-4 *ED-STSn::STS-5-1:12::TACC=4*

```
DV9-99 1970-01-02 03:16:11
M 12 COMPLD
;
```


Note

These STSs cannot be used for the creation of cross-connects until the TAP is deleted.

The command in [Example 1-5](#) creates an STS24C dual TAP on STS-6-1 and STS-6-25.

Example 1-5 *ED-STSn::STS-6-1:12::TACC=5:*

```
DV9-99 1970-01-02 03:16:11
M 12 COMPLD
;
```


Note

These STSs cannot be used for the creation of cross-connects until the TAP is deleted.

1.11.2.5 ED-VT1

When the ED-VT1 command is issued for a TACC, a VT TAP is created. The specified VT AID is taken as the first VT connection, the second VT connection is made by incrementing the VT group and keeping the VT number the same.

The command in [Example 1-6](#) creates a VT TAP on VT1-1-1-1-1 and VT1-1-1-2-1.

Example 1-6 *ED-VT1-1-1-1-1:12::TACC=6;*

```
DV9-99 1970-01-02 03:16:11
M 12 COMPLD
;
```


Note

These VTs cannot be used for the creation of cross-connects until the TAP is deleted.

1.11.3 Connect Test Access Points

The CONN-TACC command (CONN-TACC-<rr>) is used to make a connection between the TAP and the circuit or cross-connect under test.

Input Format: CONN-TACC-(T1, T3, STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, VT1, DS1):[<TID>]:<AID>:<CTAG>::<TAP>:MD=<MD>;

Connect the port/STS/VT defined by <AID> to the port/STS/VT defined by the <TAP> number. The mode of test access to the circuit/cross-connect is specified by <MD>. The modes can be either of monitor (non-intrusive), split or loop (intrusive) modes. The various modes are described in the “[Test Access Mode Definitions](#)” section on page 1-31.

**Note**

The connection is maintained only for the duration of the TL1 session (non-persistent).

**Note**

The TAP number is displayed at the output if the CONN-TACC command completes successfully.

Error Codes Supported:

RTBY—Requested TAP busy

RTEN—Requested TAP does not exist

SCAT—Circuit is already connected to another TAP

SRCN—Requested condition already exists

IIAC—Invalid access identifier (AID)

EANS—Access not supported

SRAC—Requested access configuration is invalid

The command in [Example 1-7](#) creates a connection between TAP with number one and the port/facility FAC-1-3 with access mode as MONE. The various modes are described in the “[Test Access Mode Definitions](#)” section on page 1-31.

Example 1-7 *CONN-TACC-T1::FAC-1-3:12::1:MD=MONE;*

```
DV9-99 1970-01-02 02:51:54
M 12 COMPLD
1
;
```

1.11.4 Change Access Mode

The CHG-ACCMD command (CHG-ACCMD-<rr>) is used to change the access mode.

Input Format: CHG-ACCMD-(T1, T3, STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, VT1, DS1):[<TID>]:<TAP>:<CTAG>::<MD>;

Change the type of test access. This may be a change from monitoring the data to inserting data into the STS. This command can only be applied to an existing TAP connection. If a TAP connection does not exist, a RTEN error is returned.

Error codes supported:

SRCN—Requested condition already exists

SRAC—Requested access configuration is invalid

RTEN—Requested TAP does not exist

The command in [Example 1-8](#) changes the access mode of TAP 1 to LOOPE.

Example 1-8 *CHG-ACCMD-T1::1:12::LOOPE;*

```
DV9-9 1970-01-02 02:59:43
M 12 COMPLD
;
```



Note

The access mode cannot be changed if the TAP is not connected.



Note

This command generates a REPT DBCHG message.

1.11.5 Disconnect Test Access Points

TAPs can be disconnected in the following ways:

- Issue the DISC-TACC command
- Delete or modify accessed connection
- Drop the TL1 session for any reason, including logout or a dropped telnet session
- Switch or reset a TCC2 or XTC

The DISC-TACC command disconnects the <TAP> and puts the connection back to its original state (no access). To issue the DISC-TACC command, follow the input format and examples shown below:

Input Format: DISC-TACC:[<TID>]:<TAP>:<CTAG>;

The command in [Example 1-9](#) disconnects TAP 1 from the circuit/cross-connect under test.

Example 1-9 *DISC-TACC::1:12;*

```
DV9-99 1970-01-02 02:59:43
M 12 COMPLD
;
```



Note

This command generates a REPT DBCHG message.

Error codes supported:

SADC—Already disconnected

SRTN—Unable to release TAP

1.11.6 Delete Test Access Points

The command in [Example 1-10](#) deletes a TAP.

Example 1-10 `ED-<STS_PATH>:[<TID>]:<AID>:<CTAG>::TACC=0;`

**Note**

The TACC number must be set to zero in order to delete a TAP.

**Note**

If a TAP is not removed the STS bandwidth will be stranded.

1.11.7 Retrieve Test Access Point Information

1.11.7.1 RTRV-<rr>

The RTRV-<rr> command retrieves TAP information. See the “[RTRV-TACC: Retrieve Test Access](#)” section on page 3-296 for more information.

Input Format: `RTRV-(T1, T3, STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, VT1, DS1):[<TID>]:<AID>:<CTAG>;`

This command is modified to include the return of a TAP number if the requested <AID> is defined as a TAP. An optional `TACC=<TAPNUMBER>` will be displayed in the output list if the requested <AID> is defined as a TAP.

Example 1-11 `RTRV-T1::FAC-1-1:12;`

```
dv9-99 1970-01-02 02:49:16
M 12 COMPLD
"FAC-1-1::LINECDE=AMI,FMT=D4,LBO=0-131,TACC=1,TAPTYPE=DUAL:OOS"
;
```

Parameter definitions:

- <TID> the node name which is optional
- <TAP> number from 1–999 identifying the TAP. Returned by the CONN-TACC command. If a TAP is 0, the TAP is deleted. <TAP> is an integer
- <CTAG> required identifier or number limited to six ASCII characters that correlates a response with a command
- <AID> can be a TL1 identifier such as STS-<slot>-<starting sts> VT-<slot>-<sts>-<group>-<vt>. For T1 and T3 the facility <AIDs> are used. See the “[Access Identifiers](#)” section on page 4-9 for a list of all AIDs
- <MD> defines the monitor or split mode: MONE, MONF, MONEF, SPLTE, SPLTF, LOOPE, LOOPF, SPLTA, SPLTB, SPLTEF (SPLTE, SPLTF, LOOPE, and LOOPF require an external QRS input signal)
- <TACC> specific block should be set to `TACC=n` where n is the desired TAP number. <TACC> marks the STS or VT as used for test access

1.11.7.2 RTRV-TACC

`RTRV-TACC:[<TID>]:<TAP>:<CTAG>;`

This command can also be used to retrieve details associated with a TAP. The TAP is identified by the TAP number. The ALL input TAP value means that the command will return all the configured TACCs in the NE.

Example 1-12 *RTRV-TACC:CISCO:241:CTAG;*

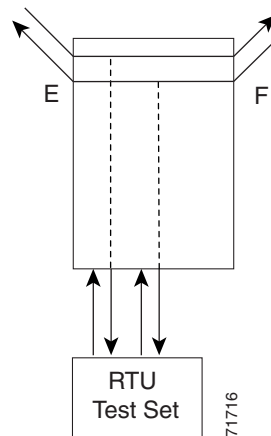
```
TID-000 1998-06-20 14:30:00
M 001 COMPLD
"241:STS-2-1-1.STS-2-2,MONE,STS-12-1-1,STS-13-1-1"
;
```

Parameter Definitions:

- <TAP> the assigned number for the AID being used as a TAP. TAP is an integer.
- <TACC_AIDA> the A path of the TAP, i.e., the first STS/VT path of the TAP
- <TACC_AIDB> the B path of the TAP, i.e., the second STS/VT path of the TAP. For a single FAD TAP this path will be empty.
- <MD> the test access mode. It identifies the mode of access between the TAP and the circuit connected to the TAP. MD is optional.
- <CrossConnectId1> the E path of the cross-connect. CrossConnectId1 is optional.
- <CrossConnectId2> the F path of the cross-connect. CrossConnectId2 is optional.

1.11.8 Test Access Configurations

Figure 1-4 *Single node view (Node 1)*



Example 1-13 *ED-ST51::STS-1-1:90::TACC=1;*

This command changes STS1 and STS2 on Slot 1 to a TAP. The <CTAG> is 90. Sets the TAP number to 1.

Example 1-14 *CONN-TACC-ST51::<AID for E or F depending on MD>:91::TAP-1:MONE*

This command connects the <AID> to the TACC defined by TAP 1 on the E side. <CTAG> is 91.

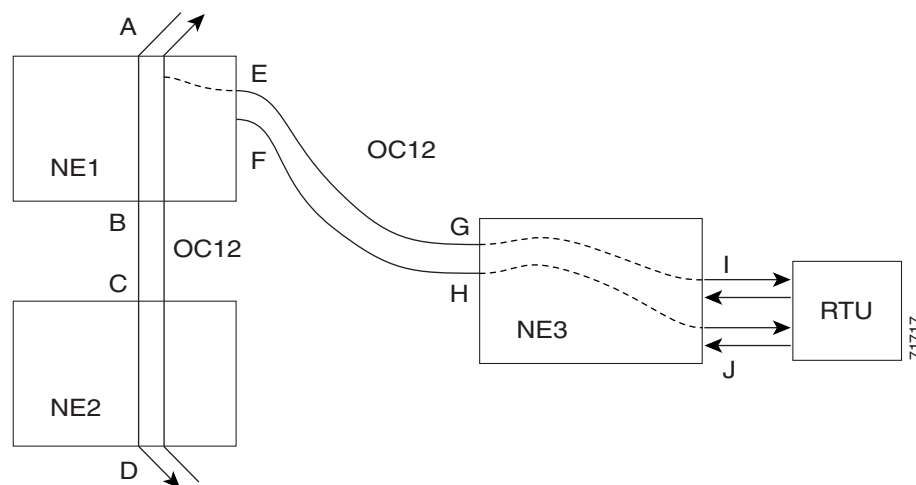
**Note**

The connection made in the CONN-TACC command can use MONE to connect to the F side <AID>. The <AID> provided designates the E side and the other automatically becomes the F side. For example, if an <AID F> is supplied to a MONE connection the top line would be connected to the side of the path, or what is shown in the diagram as the F side. Once a CONN-TACC is set up, these designations cannot change until a DISC-TACC or another CONN-TACC command is issued. The connection is based on the <AID> supplied.

**Note**

In the [Figure 1-4](#) configuration there may be a single DS3 port wired-up but configured as 14 dual FADs (28 VTs).

Figure 1-5 Multi-node view (MONE example)



On NE3:

Example 1-15 `ENT-CRS-STIS1::<AID I-G>:100::2WAY;` A connection, not a TAP. CTAG is 100.
`ENT-CRS-STIS1::<AID J-H>:101::2WAY;` Second connection, not a TAP.

On NE1:

Assuming the path from A to B is already entered; the A and B points in the diagram refer to entry and exit points on the node or different cards. The E/F designators refer to the two 2-way connections from NE3.

Example 1-16 `ED-STIS1::STS-1-1:TACC=4;` Creates TAP with STS-1-1 and STS-1-2 through NE1. TAP number assigned is 4.

Example 1-17 `CONN-TACC-STIS1::<AID A or B>:102::4:<MD>` Connects TAP 4 to the circuit.

**Note**

The I and J connections above are TAPs in [Figure 1-4](#), but normal connections in the [Figure 1-5](#) configuration.

1.11.9 Test Access Mode Definitions

The following diagrams show what the different test access modes <MD> refer to. [Figure 1-6](#) shows a circuit with no access (dual FAD TAP) and [Figure 1-7](#) shows a circuit with no access (single FAD TAP), followed by all the modes. The QRS may be generated by an outside source, i.e. the empty connection of the BRTU.

MONE, MONF, and MONEF access modes are non-service effecting and can be applied to an IS (in service) port state.

LOOPE, LOOPF, SPLTE, SPLTF, SPLTEF, SPLTA, SPLTB, and SPLTAB access modes are intrusive and only be applied to a circuit/port that is in the OOS_MT (out of service, maintenance) port state. The NE will change the state of the circuit under test to OOS_MT during the period of TACC and restore it to the original state once the connection between the TAP and the circuit is dropped.

Figure 1-6 *Circuit with no access (dual FAD TAP)*

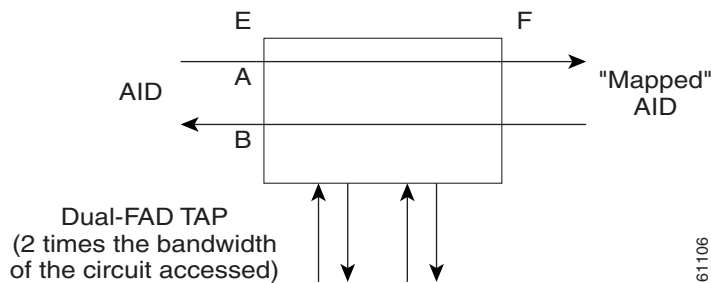
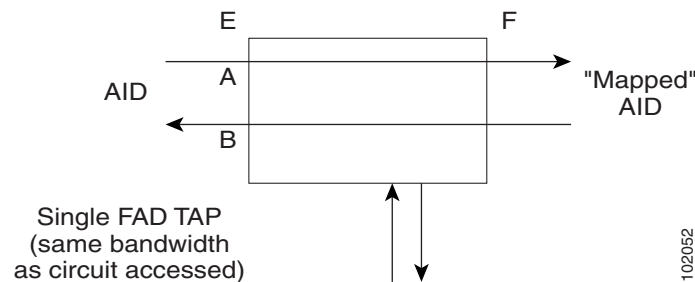
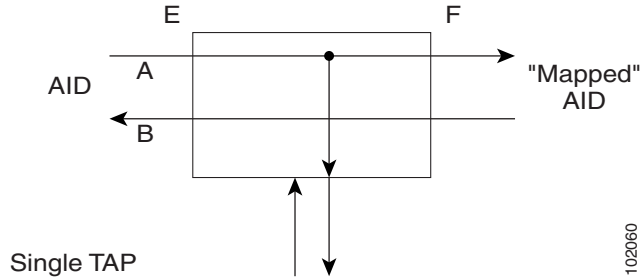
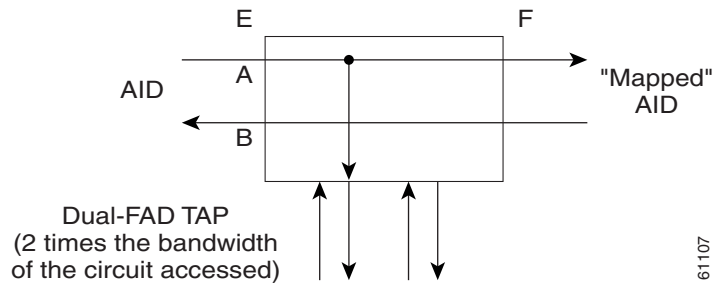


Figure 1-7 *Circuit with no access (single FAD TAP)*



1.11.9.1 MONE

Monitor E (MONE) indicates a monitor connection provided from the facility access digroup (FAD) to the A transmission path of the accessed circuit ([Figure 1-8](#) and [Figure 1-9](#)). This is a non-intrusive mode.

Figure 1-8 *MONE access single TAP***Figure 1-9** *MONE access dual TAP*

1.11.9.2 MONF

Monitor F (MONF) indicates that the FAD is providing a monitor connection to the B transmission path of the accessed circuit (Figure 1-10 and Figure 1-11). This is a non-intrusive mode.

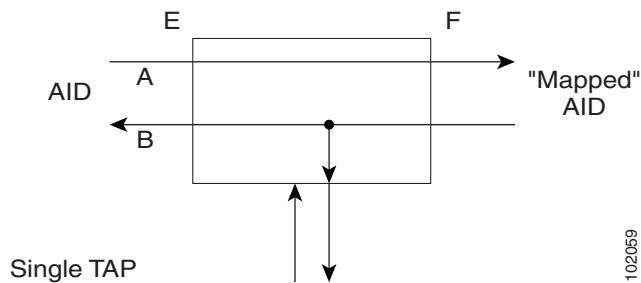
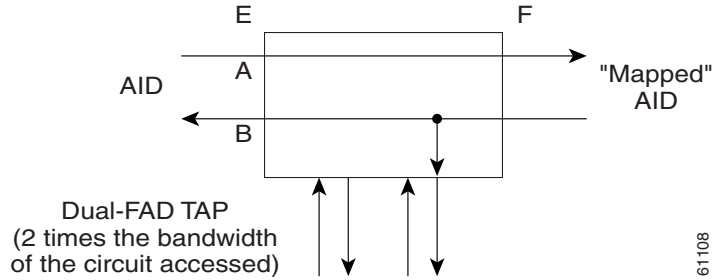
Figure 1-10 *MONF access single TAP*

Figure 1-11 MONF access dual TAP



Note

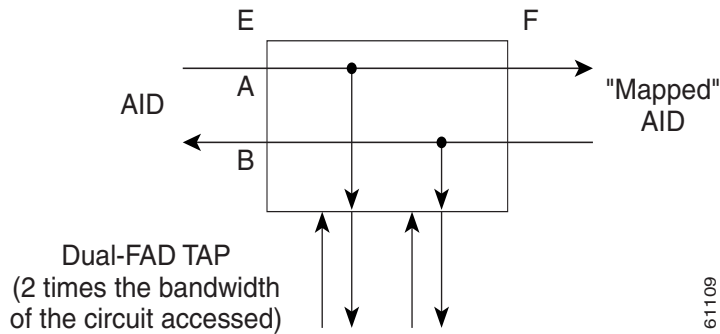
The MONE and SPLTA modes are applicable to unidirectional circuits from E to F. The MONF and SPLTB modes are applicable to unidirectional circuits from F to E.

1.11.9.3 MONEF

Monitor EF (MONEF) is a monitor connection provided from the FAD1 (odd pair) to a DFAD, to the A transmission path and from FAD2 (even pair) of the same DFAD, to the B transmission path of the accessed circuit. This is a non-intrusive mode (Figure 1-12).

MONEF for T3 (DS3 HCDS) indicates that the odd pair of a FAP is providing a monitor connection to the A transmission path and from the even pair of a facility access path (FAP) to the B transmission path of the accessed circuit.

Figure 1-12 MONEF access dual TAP



1.11.9.4 SPLTE

Split E (SPLTE) indicates to split both the A and B paths and connect the E side of the accessed circuit to the FAD (Figure 1-13 and Figure 1-14)

Figure 1-13 *SPLTE access single TAP*

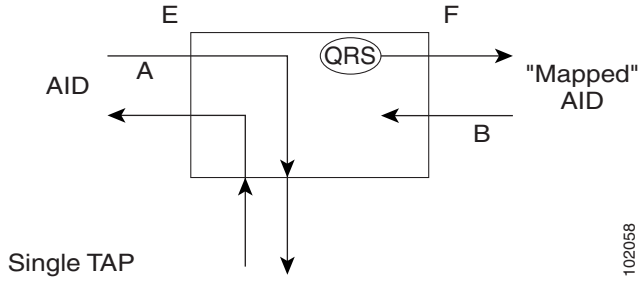
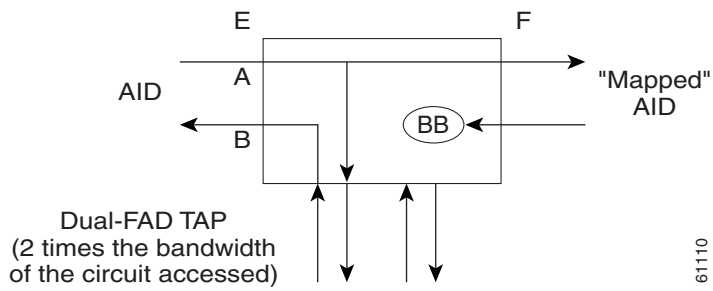


Figure 1-14 *SPLTE access dual TAP*



1.11.9.5 SPLTF

Split F (SPLTF) indicates to split both the A and B paths and connect the F side of the accessed circuit to the FAD (Figure 1-15 and Figure 1-16).

Figure 1-15 *SPLTF access single TAP*

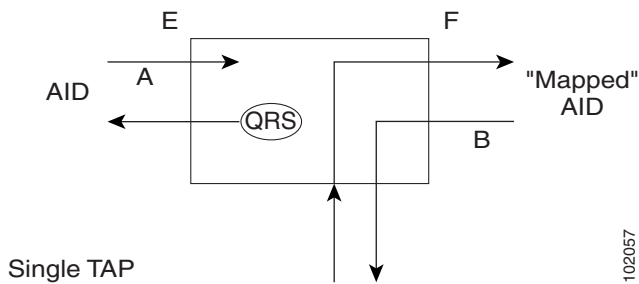
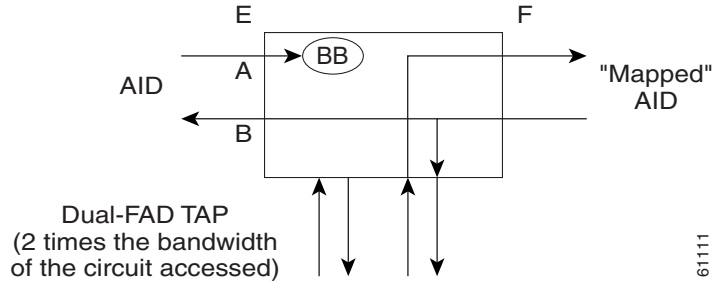
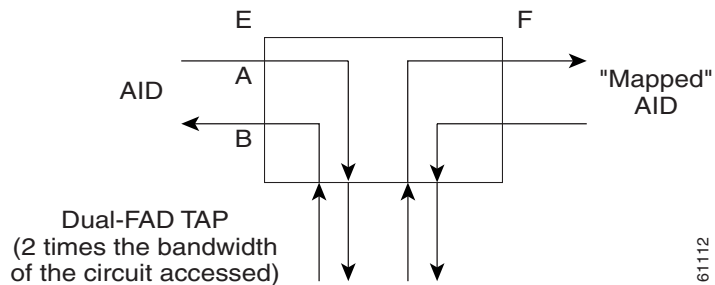


Figure 1-16 *SPLTF access dual TAP*

1.11.9.6 SPLTEF

Split EF (SPLTEF) for T1 (DS1 HCDS) indicates to split both the A and B paths, connect the E side of the accessed circuit to FAD1 and the dual facility access digroup (DFAD) pair, and connect the F side to the FAD2 of the same DFAD pair (Figure 1-17).

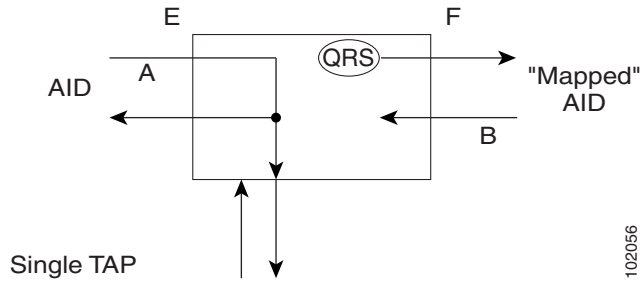
SPLTEF for T3 (DS3 HCDS) indicates to split both the A and B paths and connect the E side of the accessed circuit to the odd pair of the FAP and the F side to the even pair of the FAP.

Figure 1-17 *SPLTEF access dual TAP*

1.11.9.7 LOOPE

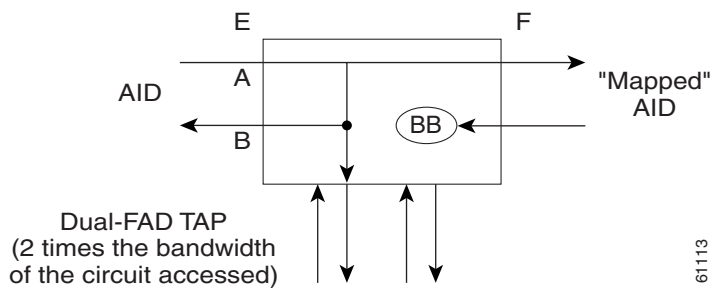
Loop E (LOOPE) indicates to split both the A and B paths, connect the incoming line from the E direction to the outgoing line in the E direction, and connect this looped configuration to the FAD (Figure 1-18 and Figure 1-19). Loop E and F modes are basically identical to the SPLT E and F modes except that the outgoing signal is the incoming signal and not the signal from the remote test unit (RTU).

Figure 1-18 LOOPE access single TAP



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Figure 1-19 LOOPE access dual TAP

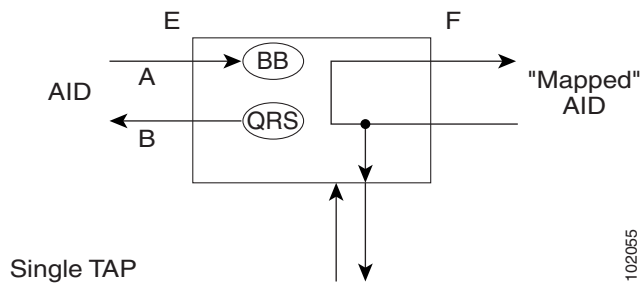


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1.11.9.8 LOOPF

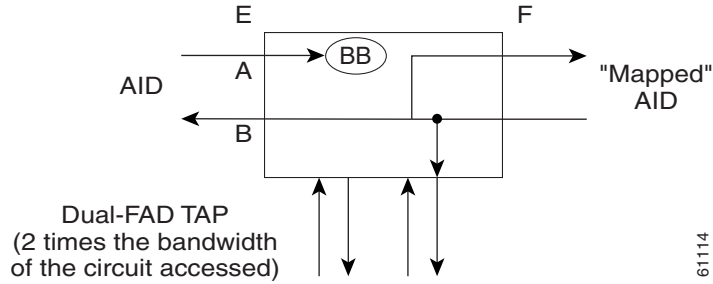
Loop F (LOOPF) indicates to split both the A and B paths, connect the incoming line from the F direction to the outgoing line in the F direction and connect this looped configuration to the FAD (Figure 1-20 and Figure 1-21).

Figure 1-20 LOOPF access single TAP



102055

Figure 1-21 LOOPF access dual TAP



1.11.9.9 SPLTA

Split A (SPLTA) indicates that a connection is provided from both the E and F sides of the A transmission path of the circuit under test to the FAD and split the A transmission path (Figure 1-22 and Figure 1-23). These modes are similar to the Split E and F modes, except the signals are sent to the RTU, not the NE signal configuration.

Figure 1-22 SPLTA access single TAP

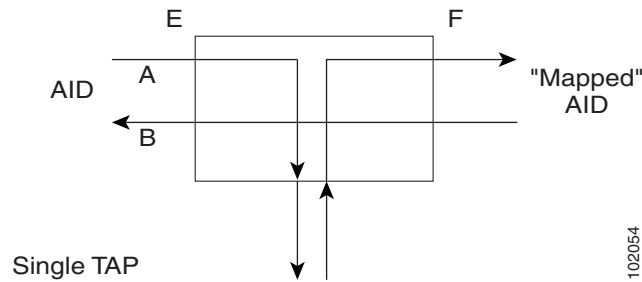
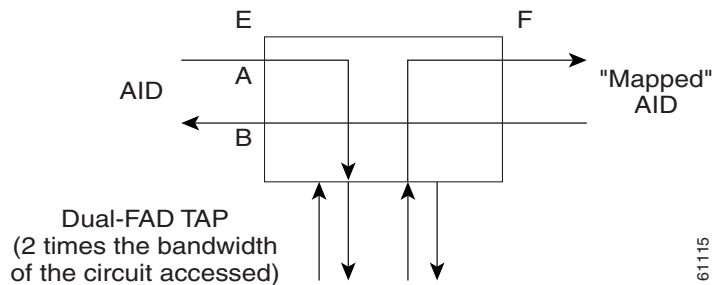


Figure 1-23 SPLTA access dual TAP



1.11.9.10 SPLTB

Split B (SPLTB) indicates that a connection is provided from both the E and F sides of the B transmission path of the circuit under test to the FAD and split the B transmission path (Figure 1-24 and Figure 1-25).

Figure 1-24 SPLTB access single TAP

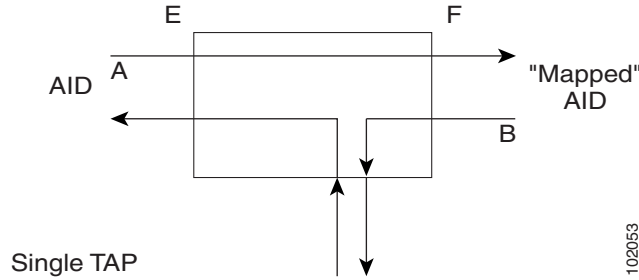
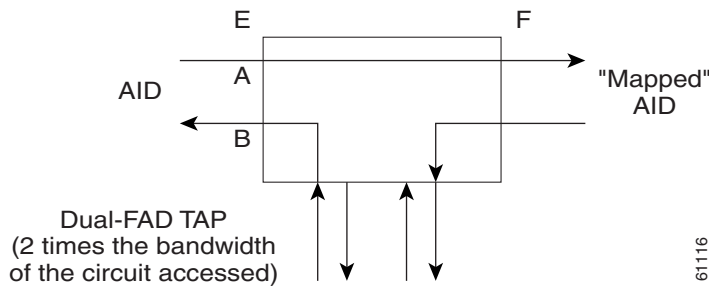


Figure 1-25 SPLTB access dual TAP



1.11.10 Unmapped AID Test Access Point Connections

The ONS 15454/15327 supports connections to unmapped AIDs (unmapped circuits). The TAPs can be connected to an unmapped AID, i.e. an AID that does not have a cross-connect on it. The access modes supported are: MONE, SPLTE, and LOOPE.

[Example 1-18](#) creates a TAP on STS-5-1 and STS-5-2.

Example 1-18 *ED-STS1::STS-5-1:12::TACC=1;*

```
DV9-99 1970-01-02 03:16:11
M 12 COMPLD
;
```

[Example 1-19](#) creates an unmapped AID connection with the MONE access mode.

Example 1-19 *CONN-TACC-STS1::STS-5-3:12::1:MD=MONE;*

```
DV9-99 1970-01-02 02:51:54
M 12 COMPLD
1
;
```



Note

STS-5-3 does not have a cross-connect on it. STS-5-3 becomes unusable until the connection is disconnected by the DISC-TACC command.

**Note**

The <AID> provided in the CONN-TACC command designates the E side and the other automatically becomes the F side.

**Note**

In the case of all 1-way circuits (1-way, UPSR_HEAD, UPSR_DROP, UPSR_DC, UPSR_EN): If the <AID> specified is the source AID, the direction is designated as From E in the above table. If the <AID> specified is the destination AID or the drop side, the direction is designated as From F in the above table.

Examples:

The following examples assume an STS TAP is already created with TAP number = 1.

1.11.10.1 1-Way Circuit

Example 1-20 *ENT-CRS-STTS1::STS-5-1,STS-5-2:12::1WAY;
DV9-99 1970-07-01 20:29:06
M 12 COMPLD;*

Example 1-21 *CONN-TACC-STTS1::STS-5-1:12::1:MD=MONF;
DV9-99 1970-01-01 20:29:47
M 12 DENY
EANS
STS-5-1
/*INCORRECT TAP MODE*/*

The <AID> specified in the above CONN-TACC command is the source AID for the 1-way circuit. In this case only MONE and SPLTA modes are allowed because there is no B path in the case of a 1-way circuit (see [Table 1-3 on page 1-40](#)).

Example 1-22 *CONN-TACC-STTS1::STS-5-1:12::1:MD=MONE;
DV9-99 1970-01-01 20:30:09
M 12 COMPLD*

Example 1-23 *DISC-TACC::1:12;
DV9-99 1970-01-01 20:30:20
M 12 COMPLD
;*

However if the <AID> specified is the destination AID as shown below, the modes allowed are MONF and SPLTB.

Example 1-24 *CONN-TACC-STTS1::STS-5-2:12::1:MD=MONF;
DV9-99 1970-01-01 20:30:32
M 12 COMPLD*

Notes:

1. The same examples apply for UPSR_HEAD, UPSR_DROP, UPSR_DC and UPSR_EN which are all 1-way circuits.
2. The connections are made only to the working path irrespective of which path is currently active.

1.11.10.2 2-Way Circuits

For 2-way circuits all the modes are allowed as shown in [Table 1-3](#) and the same applies for UPSR_UPSR and path protection circuit types. In the case of UPSR_UPSR and path protection circuits the working path is connected irrespective of which path is currently active.

1.11.10.3 Unmapped AID

As explained in the “[Unmapped AID Test Access Point Connections](#)” section on page 1-38, connections can be made to an <AID> without a cross-connect on it. The modes supported are MONE, SPLTE and LOOPE as shown in [Table 1-3](#).

Table 1-3 Modes Supported by Circuit Type

	MONE	MONF	MONEF	SPLTE	SPLTF	SPLTEF	LOOPE	LOOPF	SPLTA	SPLTB
1-way (from E)	X								X	
1-way (from F)		X								X
2-way	X	X	X	X	X	X	X	X	X	X
Path Protection	X	X	X	X	X	X	X	X	X	X
UPSR_HEAD (from E)	X								X	
UPSR_HEAD (from F)		X								X
UPSR_DROP UPSR_DC UPSR_EN (from E)	X								X	
UPSR_DROP UPSR_DC UPSR_EN (from F)		X								X
UPSR_UPSR	X	X	X	X	X	X	X	X	X	X
Unmapped AID	X			X			X			

Notes:

1. The <AID> provided in the CONN-TACC command designates the E side and the other automatically becomes the F side.
2. In the case of all 1-way circuits (1-way, UPSR_HEAD, UPSR_DROP, UPSR_DC, UPSR_EN):
 - a. If the AID specified is the source AID, the direction is designated as from E in the above table.
 - b. If the AID specified is the destination AID or the drop side, the direction is designated as from F in the above table.

1.12 TL1 PCA Provisioning

You can provision or retrieve protection channel access (PCA) cross-connections on two-fiber and four-fiber BLSR topologies at these supported OC rates: OC12 (two-fiber only), OC48, and OC192. The traffic on the protection channel is referred to as extra-traffic and has the lowest priority level.

Extra-traffic will be preempted by any working traffic that requires the use of the protection channel.

In a two-fiber BLSR the extra traffic is provisioned on the upper half of the bandwidth path. In a four-fiber BLSR the extra traffic is provisioned on the protect fiber. The PCA provisioning feature allows you to establish the PCA cross-connection on the protection path of the two-fiber BLSR and protection channel of the four-fiber BLSR only when the query is an explicit request.

There are two PCA connection types: 1WAYPCA and 2WAYPCA. The PCA cross-connection is provisioned only when the user provides an explicit request using the ENT-CRS-STSp/VT1 commands. If the cross-connection is a PCA cross-connection, either 1WAYPCA or 2WAYPCA is shown in the CCT field of the RTRV-CRS-STSp/VT1 command output.

1WAYPCA and 2WAYPCA are only used in the TL1 user interface to provide usability and visibility for the user to specify a PCA cross-connection type in the TL1 cross-connection commands.



Note

The network must be configured as either a two-fiber or four-fiber OC-12, OC-48, or OC-192 BLSR.



Note

The STS or VT1 path cross-connection can be established with TL1 commands (ENT-CRS-xxx).



Note

Because the RTRV-CRS-xxx command does not include the optional CTYPE field to specify a connection type, the output result reports the matched cross-connections based on the queried AID(s); therefore, the retrieved cross-connection inventory can be both PCA and non-PCA cross-connections.

1.12.1 Provision a PCA Cross-Connection

Input format for provisioning a PCA cross-connection:

Example 1-25 *ENT-CRS-<PATH>:[<TID>]:<FROM>,<TO>:<CTAG>::[<CCT>][:];*
<PATH>::={STS_PATH | VT1}
[<CCT>]::={1WAY, 1WAYDC, 1WAYEN, 2WAY, 1WAYPCA, 2WAYPCA}, it defaults to 2WAY.
{STS_PATH}::={STS1 | STS3C | STS6C | STS9C | STS12C | STS24C | STS48C | STS192C}

STS= all the STS bandwidth cross-connections.

VT1=VT1_5 cross-connection.

Input example of provisioning an STS3C PCA cross-connection:

Example 1-26 *ENT-CRS-ST3C::STS-1-1,STS-2-1:123::2WAYPCA;*



Note

If the [<CCT>] of this cross-connection provisioning command is either 1WAYPCA or 2WAYPCA, and the NONE of both <FROM> and <TO> AID is PCA AID, an IIAC (Input, Invalid PCA AIDs) error message is returned.

**Note**

If sending this command with a non-PCA connection type (CCT), and one (or two) AIDs is/are the PCA AIDs, an IIAC (The PCA AID Is Not Allowed for the Queried CCT Type) error message is returned.

1.12.2 Retrieve a PCA Cross-Connection

Input Format for retrieving a PCA cross-connection:

Example 1-27 *RTRV-CRS-[<PATH>]:[<TID>]:<AID>:<CTAG>[:::];<PATH>::=
{STS_PATH | VT1 | STS}*

If PATH is STS, it will retrieve all the STS cross-connections based on the queried AIDs.

<AID>={FacilityAIDs, STSAIDs, VTAIDs, ALL}

Output format of the PCA STSp cross-connection retrieval command:

Example 1-28 “<FROM>,<TO>:2WAYPCA,STS3C”

Output format of the PCA VT cross-connection retrieval command:

Example 1-29 “<FROM>,<TO>:2WAYPCA”

1.13 FTP Software Download

The file transfer protocol (FTP) software download feature downloads a software package to the inactive flash partition residing on either the TCC2 or XTC card. FTP software download provides for simplex and duplex TCC2 or XTC card downloads, success and failure status, and in-progress status at 20% increments.

1.13.1 COPY-RFILE

The COPY-RFILE command downloads a new software package from the location specified by the FTP URL into the inactive flash partition residing on either the TCC2 or XTC card.

Input format:

Example 1-30 *COPY-RFILE:[<TID>]:[<SRC>]:<CTAG>::TYPE=<XFERTYPE>,[SRC=<SRC1>],[
DEST=<DEST>],[OVWRT=<OVWRT>];*

where:

- SRC is the type of file being transferred and is from the [“RFILE” section on page 4-31](#)
- <XFERTYPE> is the file transfer protocol; valid values can be found in the [“TX_TYPE” section on page 4-95](#)
- <SRC1> specifies the source of the file to be transferred. Only the FTP URL is supported. In a non-firewall environment the format for the URL is:
“FTP://FTTPUSER[:FTP_PASSWORD]]@FTP_HOST_IP[:21]/PACKAGE_PATH[:TYPE=I]”

where:

- FTP_USER is the userid to connect to the computer with the package file
- FTP_PASSWORD is the password used to connect to the computer with the package file
- FTP_HOST_IP is the IP address of the computer with the package file, DNS lookup of hostnames is not supported
- PACKAGE_PATH is the long path name to the package file



Note Userid and password are optional if the user does not need to log into the host computer. The password may be optional if the user does not need to log in. All other portions of the URL are required, including the initial “FTP://” string.

In a firewall environment the hostname should be replaced with a list of IP addresses each separated by a “@” character. The first IP address should be for the computer where the package file is stored. Subsequent IP addresses are for firewall computers moving outward toward the edge of the network until the final IP address listed is the computer that outside users use to first access the network.

For example, if your topology is:

```
“FTPHOST <-> GNE3 <->GNE2 <-> GNE1 <-> ENE”
```

the FTP URL is:

```
FTP://FTP_USER:FTP_PASSWORD@FTP_HOST_IP@GNE3@GNE2@GNE1/  
PACKAGE_PATH
```

SRC1 is a String

- DEST specifies the destination of the file to be transferred. The comments for the SRC parameter are also valid here. DEST is a string
- If OVWRT is YES, then files are overwritten. Currently only YES is supported. Using a NO value for OVWRT will result in an error message. Valid values are shown in the [4.5.140 YES_NO, page 4-99](#)

Notes:

1. SWDL is the only allowable <XFERTYPE>.
2. FTP is the only allowed file transfer method.
3. The use of the SWDL and the extended FTP URL syntax are required by the COPY-RFILE syntax.

1.13.2 APPLY

The APPLY command can activate or revert software depending on the version of software loaded on the active and protect flash. An error is returned if attempting to activate to an older software load or trying to revert to a newer software load. If this command is successful the appropriate flash is selected and the TCC2 or XTC card will reboot.

Input format:

Example 1-31 *APPLY:[<TID>]::<CTAG>[::<MEM_SW_TYPE>]:*

where:

- <MEM_SW_TYPE> indicates memory switch action during the software upgrade. Valid values are shown in the [4.5.31 DL_TYPE, page 4-57](#)

1.13.3 REPT EVT FXFR

REPT EVT FXFR is an autonomous message used to report the start, completion, and completed percentage status of the FTP software download. REPT EVT FXFR also reports any failure during the software upgrade including invalid package, invalid path, invalid userid/password, and loss of network connection.

Note:

1. The “FXFR_RSLT” is only sent when the “FXFR_STATUS” is COMPLD.
2. The “BYTES_XFRD” is only sent when the “FXFR_STATUS” is IP or COMPLD.

Output format:

```
Example 1-32  SID DATE TIME
                A ATAG REPT EVT FXFR
                "<FILENAME>,<FXFR_STATUS>,<FXFR_RSLT>,<BYTES_XFRD>]"
                ;
```

where:

- <FILENAME> indicates the transferred file path name and is a string. When a package is being transferred between the FTP server and the controller cards, the filename field will contain the string “active”. Following this transfer, if there is a second controller card on the node, the file will be copied over to the second card. While this is happening, REPT EVT FXFR messages will be generated with a filename of “standby”.
- <FXFR_STATUS> indicates the file transferred status: Start, IP (in progress), or COMPLD. Valid values are shown in the [4.5.123 TX_STATUS, page 4-94](#)
- <FXFR_RSLT> indicates the file transferred result: success or failure. <FXFR_RSLT> is optional and valid values are shown in the [4.5.122 TX_RSLT, page 4-94](#)
- <BYTES_XFRD> indicates the transferred byte count. <BYTES_XFRD> is a string and is optional

1.13.4 Downloading New Software

The following procedure downloads new software to the TCC2 or XTC card using TL1.

Download New Software



Note Only Superusers can download and activate software.

- Step 1** Copy the new software package (15454-0340-X02E-2804.pkg) to an FTP host.
- Step 2** Establish a TL1 session with the target NE.
- Step 3** Login with the ACT-USER command.
- Step 4** Check the working and protect software on the NE by issuing the RTRV-NE-GEN command.

Input example:

Example 1-33 RTRV-NE-GEN:::1;

Output example:

```
Example 1-34 VA454-94 1970-01-06 22:22:12
M 1 COMPLD
"IPADDR=1.82.87.94,IPMASK=255.255.254.0,DEFRTR=10.82.86.1,
ETHIPADDR=10.82.87.94,ETHIPMASK=255.255.254.0,NAME=VA454-94,
SWER=3.40.00,LOAD=03.40-002G-14.21,PROTSWVER=4.00.00,
PROTLOAD=04.00-X02G-25.07,DEFDESC=\\FACTORY DEFAULTS\\"
;
```

Step 5 Issue the COPY-RFILE command. This command will initiate the download process. Refer to the “COPY-RFILE” section on page 1-42 for command syntax.

In the following example the package is located in “/USR/CET/VINTARA” in the host 10.77.22.199. The userid and passwords are TL1 and CISCO454. The directory path of the package is similar to what you will see during an FTP session.

```
Example 1-35 COPY-RFILE::RFILE-
PKG:CTAG::TYPE=SWDL,SRC="FTP://TL1:CISCO454@10.77.29.199
/USR/CET/VINTARA/15454-0340-X02E-2804.PKG";
  

DEV208 1970-01-10 11:51:57
M CTAG COMPLD
;
```

Step 6 If any of the parameters are wrong or if the host is not accessible, a REPT EVT FXFR message will report from the following list. A download failure may be due to one or more of the following:

- Directory path of the package is invalid or not found
- Package is invalid (i.e., ONS 15454 package on an ONS 15327, vice-versa, or an invalid file type)
- Package not found on specified path
- Userid/password or hostname is invalid
- Host is not accessible
- Firewall userid/password or host in invalid
- Node rebooted/lost connection during download
- If software download is already in progress
- If the node or the host timed out during FTP protocol

```
Example 1-36 DEV208 1970-01-10 11:52:02
A 2816.2816 REPT EVT EQPT
"SLOT-11:SFTWDOWN-FAIL,TC,,,,,,,,:\\SOFTWARE DOWNLOAD FAILED\\;TCC
;
```

Step 7 If the download is successful the REPT EVT FXFR message will report an active start:

Example 1-37 *DEV208 1970-01-10 11:52:15*
A 2818,2818 REPT EVT FXFR
"ACTIVE START"
 ;

- Step 8** A SFTDOWN minor alarm is raised to indicate that the software download is in progress. The SFTDOWN alarm will clear when the download is complete.

Example 1-38 *DEV208 1970-01--10 11:52:15*
** 2817,2817 REPT ALM EQPT*
"SLOT-7:MN,SFTWDOWN,NSA,,,,:\SOFTWARE DOWNLOAD IN PROGRESS\;TCC"
 ;

Use the in-progress status at any time during the software download to verify the RTRV-NE-GEN command.

Example 1-39 *RTRV-NE-GEN*

VA454-94 1970-01-06 22:22;12
M 1 COMPLD
"IPADDR=10.82.87.94,IPMASK=255.255.245.0,DEFRTR=10.82.86.1,
ETHIPADDR=10.82.87.94,EHTIPMASK=255.255.254.0,NAME=VA454-94,
SWVER=3.40.00,LOAD=03.40-002G-14-21,PROTSWVER=NONE,
PROTLOAD=DOWNLOADINPROGRESS,DEFDESC=\FACTORY DEFAULTS\"
 ;

- Step 9** The download progress is reported by the REPT EVT FXFR message which will report a message after every 20% of download is complete as shown:

Example 1-40 *DEV208 1970-01-10 11:53:12*
A 2820,2820 REPT EVT FXFR
"ACTIVE,IP,20"
 ;

DEV208 1970-01-10 11:53:12
A 2820,2820 REPT EVT FXFR
"ACTIVE,IP,40"
 ;

DEV208 1970-01-10 11:53:12
A 2820,2820 REPT EVT FXFR
"ACTIVE,IP,60"
 ;

DEV208 1970-01-10 11:53:12
A 2820,2820 REPT EVT FXFR
"ACTIVE,IP,80"
 ;

- Step 10** If the TL1 session times out during download or if the user terminates the TL1 session the download will continue. The download completion can be confirmed by issuing the RTRV-NE-GEN command and verifying the PROTLOAD.

Example 1-41 *RTRV-NE-GEN:::1;*

VA454-94 1970-01-06 22:22:12

```

M 1 COMPLD
"IPADDR=10.82.87.94,IPMASK=255.255.245.0,DEFRTR=10.82.86.1,
ETHIPADDR=10.82.87.94,EHTIPMASK=255.255.254.0,NAME=VA454-94,
SWVER=3.40.00,LOAD=03.40-002G-14-21,PROTSWVER=4.00.00,
PROTLOAD=03.40-X02E-28.04,DEFDESC=\\FACTORY DEFAULTS\\"
;

```

Step 11 REPT EVT FXFR confirms the completion of the software download.

```

Example 1-42 DEV208 1970-01-10 12:01:16
A 2825,2825 REPT EVT FXFR
"ACTIVE,COMPLD,SUCCESS"
;

```

Step 12 The SFTDOWN alarm clears when the download is complete.

```

Example 1-43 DEV208 1970-01-10 11:52:15
* 2826,2817 REPT ALM EQPT
"SLOT-7:CL,SFTWDOWN,NSA,,,,:\SOFTWARE DOWNLOAD IN PROGRESS\;TCC"
;

```

1.13.5 Activating New Software

After the software is successfully downloaded, the new software which resides in the protect load must be activated to run on the NE. The APPLY command can be used to activate and revert depending on the version of the protect software and the newly downloaded software (refer to the [“APPLY” section on page 1-43](#) for correct APPLY syntax).

Activate New Software

Step 1 If the protect software is newer than the working software, activate it as shown:

```

Example 1-44 APPLY::1::ACT;

DEV208 1970-01-10 13:40:53
M 1 COMPLD
;

```

An error is reported if a revert is attempted with a newer protect software.

Step 2 If the APPLY command is successful, logout of the TL1 session using the CANC-USER command:

Example 1-45 *CANC-USER::CISCO15:1;*

```

VA454-94 1970-01-07 01:18:18
M 1 COMPLD
;

```

After a successful completion of the APPLY command the NE will reboot and the TL1 session will disconnect. When the NE comes up after the reboot it will be running the new software. Traffic switches are possible during activation.

1.13.6 Remote Software Download/Activation Using the GNE

In a network with SDCC-connected ONS 15454 and ONS 15327s, remote download and activation are possible using the GNE/ENE feature supported in TL1. The GNE must be connected by a LAN and the remaining ENEs can download the new software package through fiber from the GNE.

For remote software downloading, complete the steps in the [“Download New Software” procedure on page 1-44](#) and the [“Activate New Software” procedure on page 1-47](#), but ensure that the TID in each command is filled with the ENE node name.

Each GNE can support 11 (TCC2) or 6 (XTC) concurrent communication gateway sessions and up to a maximum of 176 (TCC2) or 96 (XTC) ENEs/GNE. For more information on TL1 Gateway, see [Chapter 2, “TL1 Gateway.”](#)

Example 1-46 *ACT-USER:NODE1:CISCO15:1;*
ACT-USER:NODE2:CISCO15:1;
ACT-USER:NODE3:CISCO15:1;
ACT-USER:NODE4:CISCO15:1;
ACT-USER:NODE5:CISCO15:1;

Five simultaneous software downloads can be initiated using the COPY-RFILE command with appropriate TIDs. All downloads will be independent of each other and download speeds may differ.

Example 1-47 *COPY-RFILE:NODE1:RFILE-PKG:CTAG::TYPE=SWDL, SRC="FTP://TL1:
CISCO454@10.77.29.199/USR/CET/VINTARA/15454-0340-X02E-2804.PKG";*

```

COPY-RFILE:NODE2:RFILE-PKG...
COPY-RFILE:NODE3:RFILE-PKG...
COPY-RFILE:NODE4:RFILE-PKG...
COPY-RFILE:NODE5:RFILE-PKG...

```

Individual REPT EVT FXFR messages can be isolated using the node names. RTRV-NE-GEN also requires the individual node names entered in the TID to see a specific download status.

You can activate the software on all of the nodes using the GNE node.



Note

Activate the GNE last, after activating all the ENEs or else ENE connectivity will be lost when the GNE starts to reboot for activation.

Example 1-48 *APPLY:NODE1::1::ACT;*
APPLY:NODE2::1::ACT;
APPLY:NODE3::1::ACT;
APPLY:NODE4::1::ACT;
APPLY:NODE5::1::ACT;



TL1 Gateway

This chapter describes the TL1 Gateway and provides procedures and examples for implementing TL1 Gateway on the Cisco ONS 15454 or Cisco ONS 15327.



Note

The terms "Unidirectional Path Switched Ring" and "UPSR" may appear in Cisco literature. These terms do not refer to using Cisco ONS 15xxx products in a unidirectional path switched ring configuration. Rather, these terms, as well as "Path Protected Mesh Network" and "PPMN," refer generally to Cisco's path protection feature, which may be used in any topological network configuration. Cisco does not recommend using its path protection feature in any particular topological network configuration.

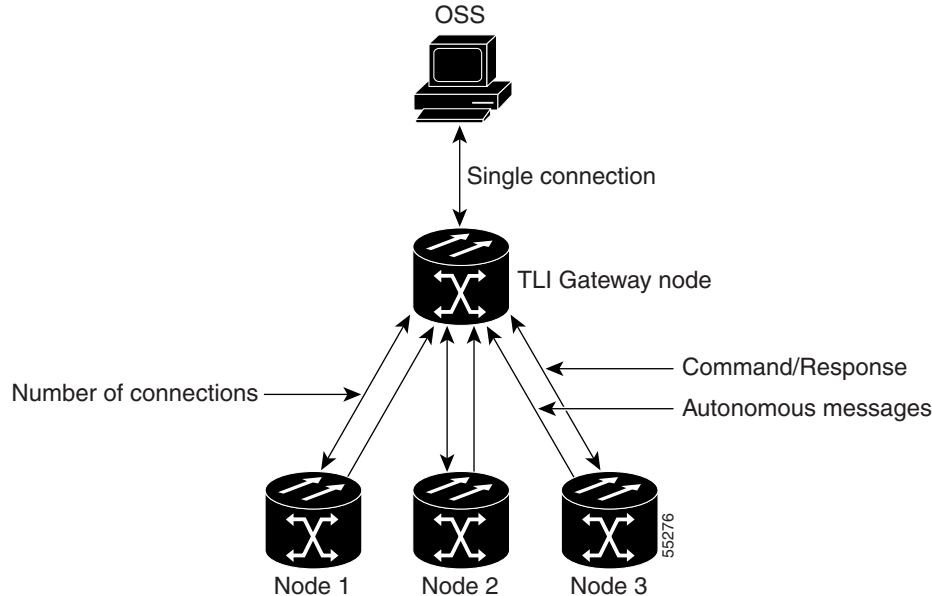
2.1 Gateway Network Element Topology

You can issue TL1 commands to multiple nodes via a single connection through the TL1 Gateway. Any node can serve as a Gateway Network Element (GNE), End-Point Network Element (ENE), or Intermediate Network Element (INE). A node becomes a GNE when a TL1 user connects to it and enters a command destined for another node. An ENE is an end node because it processes a TL1 command that is passed to it from another node. An INE is an intermediate node because of topology; it has no special hardware, software, or provisioning.

To implement the TL1 Gateway, use the desired ENE's TID in the ACT-USER command to initiate a session between the GNE and the ENE. Once a session is established you need to enter the ENE's TID in all of the subsequent commands that are destined for the ENE. From the GNE, you can access several remote nodes which become the ENEs. The ENEs are the message destinations or origins. The INE handles the DCC TCP/IP packet exchange.

The GNE Session is the connection that multiplexes TL1 messages between the OSS/craftsperson and the GNE. The GNE demultiplexes incoming operations support system (OSS) TL1 commands and forwards them to the remote ENE. The GNE also multiplexes incoming responses and autonomous messages to the GNE Session. The ENE Session is the connection that exchanges messages between the GNE and the remote ENE. [Figure 2-1](#) shows the GNE topology.

Figure 2-1 Example of a GNE topology



With the TCC2 card on an ONS 15454, each GNE can support eleven (10+1) concurrent gateway communication sessions (connections from an OS to the GNE). Ten of these sessions are via the LAN (wire-wrap, active TCC2 LAN port, or DCC) and the eleventh session is reserved for the active TCC2 serial port. With the XTC card on an ONS 15327, each GNE can support six (5+1) concurrent gateway communication sessions. Five of these sessions are via the LAN (wire wrap, active XTC LAN port or DCC) and the sixth session is reserved for the active XTC serial port.

Each GNE can support 11 (TCC2) or 6 (XTC) concurrent communication gateway sessions and up to a maximum of 176 (TCC2) or 96 (XTC) ENEs/GNE. You can dynamically distribute the ENEs to balance the number of concurrent gateway communication sessions versus the number of NEs on the DCC. The GNE treats the 11 (10+1 for TCC2) or 6 (5+1 for XTC) concurrent gateway communication sessions and 176 (TCC2) or 96 (XTC) ENEs/GNE limit as a resource pool (Table 2-1) and continues to allocate resources until the pool is exhausted (see Table 2-2 for allocation examples). When the pool is exhausted the GNE returns an “All Gateways in Use” message or an “All ENE Connections in Use” message.

Table 2-1 Gateway Resource Pool

Number of GNEs	Number of GNE Sessions	Number of ENEs
1 (Cisco ONS 15454)	11 (10+1) TCC2	176 (dynamically allocated)
1 (Cisco ONS 15327)	6 (5+1) XTC	96 (dynamically allocated)

Table 2-2 Examples of a Single GNE Topology Showing How the GNE/ENE Resources can be Allocated

Number of GNE Communication Sessions	Number of ENEs
Values 1 through 6 apply to the TCC2 card and XTC card	
1	16
2	32

Table 2-2 *Examples of a Single GNE Topology Showing How the GNE/ENE Resources can be Allocated*

3	48
4	64
5	80
6	96
Values 7 through 11 apply to the TCC2 card only	
7	112
8	128
9	144
10	160
11	176

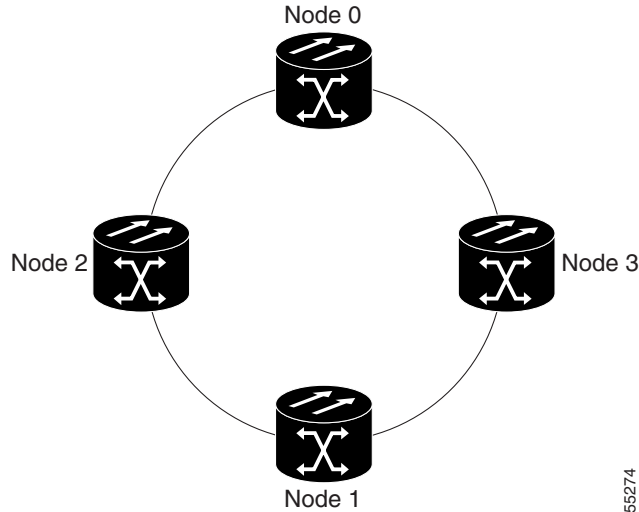
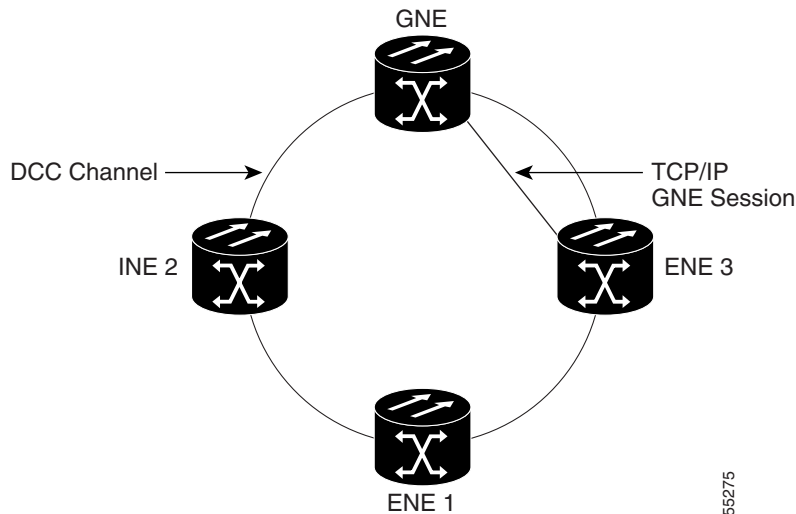
**Note**

Issuing commands to specific nodes in the network is accomplished by entering a unique node name in the TID field in each TL1 message. The TID field is synonymous with the name of the node and is the second token in a TL1 command.

2.2 Implementing TL1 Gateway

The following procedures demonstrate TL1 Gateway on a four-node ring (without TL1 Gateway in [Figure 2-2](#) and with TL1 Gateway in [Figure 2-3](#)), where:

- Node 0 is the GNE.
- Node 1 is the ENE 1.
- Node 2 is the INE 2.
- Node 3 is the ENE 3.

Figure 2-2 Four-node ring without TL1 Gateway**Figure 2-3** Four-node ring with TL1 Gateway

Log Into a Remote ENE

-
- Step 1** Telnet or serial port to Node 0, which will become the GNE.
- Step 2** To connect to the ENE 1 node, enter the TL1 login command using the following input example:
 ACT-USER:NODE1:USERNAME:1234:PASSWORD;
 The GNE forwards the login to ENE 1. After successful login, ENE 1 sends a COMPLD response.
- Step 3** When you are logged into ENE 1, enter the following TL1 login command to connect to ENE 3:
 ACT-USER:NODE3:USERNAME:1234:PASSWORD;

The GNE forwards the login to ENE 3. After successful login, the ENE 3 sends a COMPLD response.

Forward Commands by Specifying the ENE TID (Node 1 or Node 3)

When you are logged into ENE 1 and ENE 3, enter a command and designate a specific TID, as shown in the following example:

RTRV-HDR:NODE1::1; will retrieve the header of Node 1 and

RTRV-HDR:NODE3::3; will retrieve the header of Node 3.

Receive Autonomous Messages from the Remote ENE

To receive autonomous messages from the remote ENE, you must log into the remote ENE. When you are logged in, you will start receiving autonomous messages. The source of the message is identified in the header of the message.

Log Out of a Remote ENE

To disconnect from a remote ENE, you must use the CANC-USER command as follows:

CANC-USER:NODE1:USERNAME:1; will disconnect ENE 1 and

CANC-USER:NODE3:USERNAME:3; will disconnect ENE 3.

The GNE forwards the logout to the remote ENEs. The GNE/ENE TCP session is closed.



TL1 Command Descriptions

This chapter provides specific information on TL1 commands and autonomous messages for the Cisco ONS 15454 and Cisco ONS 15327, Release 4.6, including:

- TL1 commands by category
- TL1 commands by card
- TL1 commands

For information on command components, such as parameters, see [Chapter 4, “TL1 Command Components.”](#)



Note

The terms "Unidirectional Path Switched Ring" and "UPSR" may appear in Cisco literature. These terms do not refer to using Cisco ONS 15xxx products in a unidirectional path switched ring configuration. Rather, these terms, as well as "Path Protected Mesh Network" and "PPMN," refer generally to Cisco's path protection feature, which may be used in any topological network configuration. Cisco does not recommend using its path protection feature in any particular topological network configuration.

3.1 TL1 Commands by Category

Table 3-1 TL1 Commands by Category

Category	Command or Autonomous Message
BLSR	DLT-<MOD_RING> ED-<MOD_RING> ENT-<MOD_RING> EX-SW-<OCN_BLSR> RTRV-<MOD_RING> RTRV-TRC-<OCN_BLSR>
Cross Connections	DLT-CRS-<PATH> ED-CRS-<PATH> ENT-CRS-<PATH> RTRV-CRS RTRV-CRS-<PATH>

Table 3-1 TL1 Commands by Category (continued)

Category	Command or Autonomous Message	
DWDM (Cisco ONS 15454 only)	DLT-FFP-CLNT DLT-LNK-<MOD2O> DLT-OSC DLT-WLEN ED-CLNT ED-DWDM ED-FFP-CLNT ED-FFP-OCH ED-LNK-<MOD2O> ED-OCH ED-OMS ED-OSC ED-OTS ED-TRC-CLNT ED-TRC-OCH ED-WDMANS ED-WLEN ENT-FFP-CLNT ENT-LNK-<MOD2O> ENT-OSC ENT-WLEN OPR-LASER-OTS OPR-LNK OPR-PROTNSW-CLNT	OPR-PROTNSW-OCH OPR-WDMANS RLS-LASER-OTS RLS-PROTNSW-CLNT RLS-PROTNSW-OCH RTRV-ALMTH-<MOD2> RTRV-CLNT RTRV-DWDM RTRV-FFP-CLNT RTRV-FFP-OCH RTRV-LNK RTRV-LNK-<MOD2O> RTRV-NE-WDMANS RTRV-OCH RTRV-OMS RTRV-OSC RTRV-OTS RTRV-PROTNSW-CLNT RTRV-PROTNSW-OCH RTRV-TRC-CLNT RTRV-TRC-OCH RTRV-WDMANS RTRV-WLEN SET-ALMTH-<MOD2>
Environment	RTRV-ATTR-CONT RTRV-ATTR-ENV	SET-ATTR-CONT SET-ATTR-ENV
Environment Alarms and Controls	OPR-ACO-ALL OPR-EXT-CONT REPT ALM ENV REPT EVT ENV	RLS-EXT-CONT RTRV-ALM-ENV RTRV-COND-ENV RTRV-EXT-CONT
Equipment	ALW-SWDX-EQPT ALW-SWTOPROTN-EQPT ALW-SWTOWKG-EQPT DLT-EQPT ED-EQPT ENT-EQPT INH-SWDX-EQPT INH-SWTOPROTN-EQPT INH-SWTOWKG-EQPT REPT ALM EQPT	REPT EVT EQPT RTRV-ALM-EQPT RTRV-ALMTH-EQPT RTRV-COND-EQPT RTRV-EQPT SET-ALMTH-EQPT SW-DX-EQPT SW-TOPROTN-EQPT SW-TOWKG-EQPT
Fault	REPT ALM <MOD2ALM> REPT ALM COM REPT EVT <MOD2ALM> REPT EVT COM	RTRV-ALM-ALL RTRV-COND-<MOD2ALM> RTRV-COND-ALL
File Transfer	APPLY COPY-RFILE REPT EVT FXFR	

Table 3-1 TL1 Commands by Category (continued)

Category	Command or Autonomous Message	
IOS	COPY-IOSCFG REPT EVT IOSCFG	
Log	ALW-MSG-DBCHG INH-MSG-DBCHG	REPT DBCHG RTRV-LOG
Network	RTRV-MAP-NETWORK RTRV-NE-IPMAP	
Paths	ED-<MOD_PATH> RTRV-<PATH>	RTRV-ST5
Performance	ALW-PMREPT-ALL INH-PMREPT-ALL INIT-REG-<MOD2> REPT PM <MOD2> RTRV-PM-<MOD2> RTRV-PMMODE-<STS_PATH>	RTRV-PMSCHED-<MOD2> RTRV-PMSCHED-ALL RTRV-TH-<MOD2> RTRV-TH-ALL SCHED-PMREPT-<MOD2> SET-TH-<MOD2>
Ports	ED-<OCN_TYPE> ED-DS1 ED-EC1 ED-FC ED-G1000 ED-T1 ED-T3 RMV-<MOD2_IO> RST-<MOD2_IO> RTRV-<OCN_TYPE>	RTRV-DS1 RTRV-EC1 RTRV-FC RTRV-FSTE RTRV-G1000 RTRV-GIGE RTRV-POS RTRV-T1 RTRV-T3
Security	ACT-USER ALW-MSG-SECU ALW-USER-SECU CANC CANC-USER-SECU DLT-USER-SECU ED-CMD-SECU ED-PID ED-USER-SECU ENT-USER-SECU	INH-MSG-SECU INH-USER-SECU REPT ALM SECU REPT EVT SECU REPT EVT SESSION RTRV-CMD-SECU RTRV-DFLT-SECU RTRV-USER-SECU SET-ATTR-SECUDFLT
SONET Line Protection	DLT-FFP-<OCN_TYPE> ED-FFP-<OCN_TYPE> ENT-FFP-<OCN_TYPE> OPR-PROTNSW-<OCN_TYPE>	RLS-PROTNSW-<OCN_TYPE> RTRV-FFP-<OCN_TYPE> RTRV-PROTNSW-<OCN_TYPE>
Switch	RTRV-PROTNSW-<PATH>	

Table 3-1 TL1 Commands by Category (continued)

Category	Command or Autonomous Message	
Synchronization	ED-BITS ED-NE-SYCN ED-SYCN OPR-SYCN REPT ALM BITS REPT ALM SYCN REPT EVT BITS REPT EVT SYCN	RLS-SYCN RTRV-ALM-BITS RTRV-ALM-SYCN RTRV-BITS RTRV-COND-BITS RTRV-COND-SYCN RTRV-NE-SYCN RTRV-SYCN
System	ALW-MSG-ALL ED-DAT ED-NE-GEN ED-NE-PATH INH-MSG-ALL INIT-SYS	RTRV-HDR RTRV-INV RTRV-NE-GEN RTRV-NE-PATH RTRV-TOD SET-TOD
Test Access	CHG-ACCMD-<MOD_TACC> CONN-TACC-<MOD_TACC>	DISC-TACC RTRV-TACC
Testing	OPR-LPBK-<MOD2> RLS-LPBK-<MOD2>	
Trace	RTRV-PTHTRC-<STS_PATH>	
UCP	DLT-UCP-CC DLT-UCP-IF DLT-UCP-NBR ED-UCP-CC ED-UCP-IF ED-UCP-NBR ED-UCP-NODE ENT-UCP-CC ENT-UCP-IF	ENT-UCP-NBR REPT ALM UCP REPT EVT UCP RTRV-ALM-UCP RTRV-COND-UCP RTRV-UCP-CC RTRV-UCP-IF RTRV-UCP-NBR RTRV-UCP-NODE
Path Protection Switching	REPT SW	
VCAT	DLT-VCG ENT-VCG	RTRV-VCG

3.2 TL1 Commands by Card (Cisco ONS 15454)

Table 3-2 TL1 Commands by Card (Cisco ONS 15454)

Card	Applicable Commands
AD-1B, AD-4B, AD-1C, AD-2C, AD-4C, MD-4, MUX-32, DMUX-32	DLT-EQPT DLT-LNK-<MOD20> DLT-WLEN ED-EQPT ED-OCH (not for AD-1B, AD-4B) ED-LNK-<MOD20> ED-OMS (AD-1B, AD-4B, MD-4) ED-OTS (not for MD-4) ED-WDMANS ED-WLEN ENT-EQPT ENT-LNK-<MOD20> ENT-WLEN INIT-REG-<MOD2> OPR-LNK OPR-WDMANS REPT ALM WLEN REPT ALM <MOD2ALM> REPT EVT WLEN REPT EVT <MOD2ALM> REPT PM <MOD2> RMV-<MOD2_IO> RST-<MOD2_IO> RTRV-ALM-ALL RTRV-ALM-EQPT RTRV-ALM-WLEN RTRV-ALMTH-<MOD2ALM> RTRV-COND-ALL RTRV-COND-EQPT RTRV-COND-WLEN RTRV-EQPT RTRV-INV RTRV-OCH (not for AD-1B, AD-4B) RTRV-LNK-<MOD20> RTRV-OMS (AD-1B, AD-4B, MD-4) RTRV-OTS (not for MD-4) RTRV-PM-<MOD2> RTRV-PMMODE-<STS_PATH> RTRV-PMSCHED-<MOD2> RTRV-PMSCHED-ALL RTRV-TH-<MOD2> RTRV-WDMANS RTRV-WLEN SCHED-PMREPT-<MOD2> SET-ALMTH-<MOD2> SET-ALMTH-EQPT SET-TH-<MOD2>
AIC, AIC-I	DLT-EQPT ENT-EQPT INIT-SYS OPR-ACO-ALL OPR-EXT-CONT REPT ALM ENV REPT ALM EQPT REPT ALM <MOD2ALM> REPT DBCHG REPT EVT ENV REPT EVT EQPT REPT EVT <MOD2ALM> RLS-EXT-CONT RTRV-ALM-ALL RTRV-ALM-ENV RTRV-ALM-EQPT RTRV-ALM-<MOD2ALM> RTRV-ATTR-CONT RTRV-ATTR-ENV RTRV-COND-ALL RTRV-COND-ENV RTRV-COND-EQPT RTRV-COND-<MOD2ALM> RTRV-EQPT RTRV-EXT-CONT RTRV-INV SET-ATTR-CONT SET-ATTR-ENV

Table 3-2 TL1 Commands by Card (Cisco ONS 15454) (continued)

Card	Applicable Commands
DS1, DS1N, DS3, DS3N, DS3E, DS3NE	ALW-SWTOPROTN-EQPT ALW-SWTOWKG-EQPT CHG-ACCMD-<MOD_TACC> CONN-TACC-<MOD_TACC> DISC-TACC DLT-CRS-<PATH> DLT-EQPT ED-<MOD_PATH> ED-CRS-<PATH> ED-EQPT ED-NE-PATH ED-T1 (DS1) ED-T3 (DS1N,DS3, DS3N, DS3E, DS3NE) ED-VT1 (DS1) ENT-CRS-<PATH> ENT-EQPT INH-SWTOPROTN-EQPT INH-SWTOWKG-EQPT INIT-REG-<MOD2> INIT-SYS OPR-LPBK-<MOD2_IO> REPT ALM EQPT REPT ALM <MOD2ALM> REPT DBCHG REPT EVT EQPT REPT EVT <MOD2ALM> REPT PM <MOD2> RLS-LPBK-<MOD2_IO> RMV-<MOD2_IO>
	RST-<MOD2_IO> RTRV-ALM-ALL RTRV-ALM-EQPT RTRV-ALM-<MOD2ALM> RTRV-COND-ALL RTRV-COND-EQPT RTRV-COND-<MOD2ALM> RTRV-CRS RTRV-CRS-VT1 (DS1) RTRV-CRS-<PATH> RTRV-EQPT RTRV-INV RTRV-NE-PATH RTRV-PM-<MOD2> RTRV-PMMODE-<STS_PATH> RTRV-PMSCHED-<MOD2> RTRV-PTHTRC-<STS_PATH> RTRV-TACC RTRV-T1 (DS1) RTRV-T3 RTRV-TH-<MOD2> RTRV-TH-ALL (except DS1, DS1N) RTRV-<PATH> SCHED-PM REPT-<MOD2> SET-PMMODE-<STS_PATH> SET-TH-<MOD2> SW-TOPROTN-EQPT SW-TOWKG-EQPT

Table 3-2 TL1 Commands by Card (Cisco ONS 15454) (continued)

Card	Applicable Commands
DS3XM	ALW-SWTOPROTN-EQPT RMV-<MOD2_IO> ALW-SWTOWKG-EQPT RST-<MOD2_IO> CHG-ACCMD-<MOD_TACC> RTRV-ALM-ALL CONN-TACC-<MOD_TACC> RTRV-ALM-EQPT DISC-TACC RTRV-ALM-<MOD2ALM> DLT-CRS-<PATH> RTRV-COND-ALL DLT-EQPT RTRV-COND-EQPT ED-<MOD_PATH> RTRV-COND-<MOD2ALM> ED-CRS-<PATH> RTRV-CRS ED-DS1 RTRV-CRS-<PATH> ED-EQPT RTRV-DS1 ED-NE-PATH RTRV-EQPT ED-T1 RTRV-INV ED-T3 RTRV-NE-PATH ED-VT1 RTRV-PM-<MOD2> ENT-CRS-<PATH> RTRV-PMMODE-<STS_PATH> ENT-EQPT RTRV-PMSCHED-<MOD2> ENT-CRS-VT1 RTRV-PTHTRC-<STS_PATH> INH-SWTOPROTN-EQPT RTRV-TACC INH-SWTOWKG-EQPT RTRV-T1 INIT-REG-<MOD2> RTRV-T3 INIT-SYS RTRV-TH-<MOD2> OPR-LPBK-<MOD2_IO> RTRV-TH-ALL REPT ALM EQPT RTRV-VT REPT ALM <MOD2ALM> RTRV-<PATH> REPT DBCHG SCHED-PMREPT-<MOD2> REPT EVT EQPT SET-PMMODE-<STS_PATH> REPT EVT <MOD2ALM> SET-TH-<MOD2> REPT PM <MOD2> SW-TOPROTN-EQPT RLS-LPBK-<MOD2_IO> SW-TOWKG-EQPT
E100T, E1000T	DLT-EQPT RTRV-ALM-ALL ENT-EQPT RTRV-ALM-EQPT INIT-SYS RTRV-ALM-<MOD2ALM> REPT ALM EQPT RTRV-COND-ALL REPT ALM <MOD2ALM> RTRV-COND-EQPT REPT DBCHG RTRV-COND-<MOD2ALM> REPT EVT EQPT RTRV-EQPT REPT EVT <MOD2ALM> RTRV-INV

Table 3-2 TL1 Commands by Card (Cisco ONS 15454) (continued)

Card	Applicable Commands
EC1	ALW-SWTOPROTN-EQPT RST-<MOD2_IO> ALW-SWTOWKG-EQPT RTRV-<PATH> CHG-ACCMD-<MOD_TACC> RTRV-ALM-ALL CONN-TACC-<MOD_TACC> RTRV-ALM-EQPT DISC-TACC RTRV-ALM-<MOD2ALM> DLT-CRS-<PATH> RTRV-COND-ALL DLT-EQPT RTRV-COND-EQPT ED-<MOD_PATH> RTRV-COND-<MOD2ALM> ED-CRS-<PATH> RTRV-CRS ED-EC1 RTRV-CRS-<PATH> ED-EQPT RTRV-EC1 ED-NE-PATH RTRV-EQPT ED-VT1 RTRV-INV ENT-CRS-<PATH> RTRV-NE-PATH ENT-EQPT RTRV-PM-<MOD2> INH-SWTOPROTN-EQPT RTRV-PMMODE-<STS_PATH> INH-SWTOWKG-EQPT RTRV-PMSCHED-<MOD2> INIT-REG-<MOD2> RTRV-PTHTRC-<STS_PATH> INIT-SYS RTRV-TACC OPR-LPBK-<MOD2_IO> RTRV-TH-<MOD2> REPT ALM EQPT RTRV-TH-ALL REPT ALM <MOD2ALM> RTRV-VT REPT DBCHG SCHED-PMREPT-<MOD2> REPT EVT EQPT SET-PMMODE-<STS_PATH> REPT EVT <MOD2ALM> SET-TH-<MOD2> REPT PM <MOD2> SW-TOPROTN-EQPT RLS-LPBK-<MOD2_IO> SW-TOWKG-EQPT RMV-<MOD2_IO>

Table 3-2 TL1 Commands by Card (Cisco ONS 15454) (continued)

Card	Applicable Commands	
FC-MR-4	DLT-CRS-<PATH> DLT-EQPT DLT-VCG ED-<MOD_PATH> ED-CRS-<PATH> ED-FC ED-NE-PATH ENT-CRS-<PATH> ENT-EQPT ENT-VCG INIT-REG-FC INIT-SYS REPT ALM <MOD2ALM> REPT ALM EQPT REPT DBCHG REPT EVT <MOD2ALM> REPT EVT EQPT RMV-<MOD2_IO> RST-<MOD2_IO> RTRV-<PATH> RTRV-ALM-<MOD2ALM>	RTRV-ALM-ALL RTRV-ALM-EQPT RTRV-ALM-FC RTRV-COND-<MOD2ALM> RTRV-COND-ALL RTRV-COND-EQPT RTRV-COND-FC RTRV-CRS RTRV-CRS-<PATH> RTRV-EQPT RTRV-FC RTRV-INV RTRV-NE-PATH RTRV-POS RTRV-PROTNSW-<PATH> RTRV-PTHTRC-<STS_PATH> RTRV-STS RTRV-TH-ALL RTRV-VCG SET-TH-<MOD2>
G1000-4	DLT-CRS-<PATH> DLT-EQPT ED-<MOD_PATH> ED-CRS-<PATH> ED-G1000 ED-NE-PATH ENT-CRS-<PATH> ENT-EQPT INIT-REG-G1000 INIT-SYS OPR-LPBK-<MOD2_IO> REPT ALM EQPT REPT ALM <MOD2ALM> REPT DBCHG REPT EVT EQPT REPT EVT <MOD2ALM> RLS-LPBK-<MOD2_IO> RLS-PROTNSW-<PATH> RMV-<MOD2_IO>	RST-<MOD2_IO> RTRV-<PATH> RTRV-ALM-ALL RTRV-ALM-EQPT RTRV-ALM-<MOD2ALM> RTRV-COND-ALL RTRV-COND-EQPT RTRV-COND-<MOD2ALM> RTRV-CRS RTRV-CRS-<PATH> RTRV-EQPT RTRV-G1000 RTRV-INV RTRV-NE-PATH RTRV-PROTNSW-<PATH> RTRV-PTHTRC-<STS_PATH> RTRV-STS RTRV-TH-ALL

Table 3-2 TL1 Commands by Card (Cisco ONS 15454) (continued)

Card	Applicable Commands
ML1000-2, ML100T-12	COPY-IOSCFG DLT-CRS-<PATH> DLT-EQPT ED-<MOD_PATH> ED-CRS-<PATH> ED-NE-PATH ENT-CRS-<PATH> ENT-EQPT INIT-SYS REPT ALM EQPT REPT ALM <MOD2ALM> REPT ALM <MOD2ALM> REPT DBCHG REPT EVT EQPT REPT EVT IOSCFG REPT EVT <MOD2ALM> RMV-<MOD2_IO> RST-<MOD2_IO> RTRV-<PATH>
MXP_2.5G_10G, TXP_MR_10G	RTRV-ALM-ALL RTRV-ALM-EQPT RTRV-ALM-<MOD2ALM> RTRV-COND-ALL RTRV-COND-EQPT RTRV-COND-<MOD2ALM> RTRV-CRS RTRV-CRS-<PATH> RTRV-EQPT RTRV-FSTE RTRV-GIGE RTRV-INV RTRV-NE-PATH RTRV-POS RTRV-PROTNSW-<PATH> RTRV-PTHTRC-<STS_PATH> RTRV-STS RTRV-TH-ALL RTRV-ALM-EQPT RTRV-ALM-<MOD2ALM> RTRV-ALMTH-<MOD2ALM> RTRV-CLNT RTRV-COND-ALL RTRV-COND-EQPT RTRV-COND-<MOD2ALM> RTRV-DWDM RTRV-EQPT RTRV-FFP-CLNT RTRV-INV RTRV-OCH RTRV-PM-<MOD2> RTRV-PMSCHED-<MOD2> RTRV-PMSCHED-ALL RTRV-PROTNSW-CLNT RTRV-SYCN (MXP) RTRV-TH-<MOD2> RTRV-TRC-CLNT RTRV-TRC-OCH SCHED-PMREPT-<MOD2> SET-ALMTH-<MOD2> SET-ALMTH-EQPT SET-TH-<MOD2>

Table 3-2 TL1 Commands by Card (Cisco ONS 15454) (continued)

Card	Applicable Commands
OC12, OC12-4, OC48, OC48AS, OC192	CHG-ACCMD-<MOD_TACC> CONN-TACC-<MOD_TACC> DISC-TACC DLT-<MOD_RING> DLT-CRS-<PATH> DLT-EQPT DLT-FFP-<OCN_TYPE> DLT-UCP-CC DLT-UCP-IF ED-<MOD_PATH> ED-<MOD_RING> ED-CRS-<PATH> ED-FFP-<OCN_TYPE> ED-NE-PATH ED-UCP-CC ED-UCP-IF ED-VT1 ED-<OCN_TYPE> ENT-CRS-VT1 ENT-CRS-<PATH> ENT-EQPT ENT-FFP-<OCN_TYPE> ENT-UCP-CC ENT-UCP-IF EX-SW-<OCN_BLSR> INIT-REG-<MOD2> INIT-SYS OPR-LPBK-<MOD2_IO> OPR-PROTNSW-VT1 OPR-PROTNSW-<OCN_TYPE> OPR-PROTNSW-<PATH> OPR-SYNCNSW REPT ALM EQPT REPT ALM RING REPT ALM SYNCN REPT ALM <MOD2ALM> REPT DBCHG REPT EVT EQPT REPT EVT RING REPT EVT SYNCN REPT EVT <MOD2ALM> REPT PM <MOD2> RLS-LPBK-<MOD2_IO> RLS-PROTNSW-<OCN_TYPE> RLS-PROTNSW-<PATH> RLS-SYNCNSW RMV-<MOD2_IO> RST-<MOD2_IO> RTRV-ALM-ALL RTRV-ALM-EQPT RTRV-ALM-RING RTRV-ALM-SYNCN RTRV-ALM-<MOD2ALM> RTRV-<MOD_RING> RTRV-COND-ALL RTRV-COND-EQPT RTRV-COND-<MOD2ALM> RTRV-COND-RING RTRV-CRS RTRV-CRS-<PATH> RTRV-EQPT RTRV-FFP-<OCN_TYPE> RTRV-INV RTRV-NE-IPMAP RTRV-NE-PATH RTRV-PM-<MOD2> RTRV-PMMODE-<STS_PATH> RTRV-PMSCHED-<MOD2> RTRV-PROTNSW-<OCN_TYPE> RTRV-PROTNSW-<PATH> RTRV-PROTNSW-VT1 RTRV-PTHTRC-<STS_PATH> (OC48 AS, OC192) RTRV-TACC RTRV-TH-<MOD2> RTRV-TH-ALL RTRV-VT1 (OC48, OC48AS, OC192) RTRV-<OCN_TYPE> RTRV-<PATH> RTRV-TRC-<OCN_BLSR> RTRV-UCP-CC RTRV-UCP-IF SCHED-PMREPT-<MOD2> SET-PMMODE-<STS_PATH> SET-TH-<MOD2>

Table 3-2 TL1 Commands by Card (Cisco ONS 15454) (continued)

Card	Applicable Commands
OC3, OC3-8	CHG-ACCMD-<MOD_TACC> RLS-PROTNSW-<OCN_TYPE> CONN-TACC-<MOD_TACC> RLS-PROTNSW-<PATH> DISC-TACC RLS-SYNCNSW DLT-CRS-VT1 RMV-<MOD2_IO> DLT-CRS-<PATH> RST-<MOD2_IO> (OC3, OC3-8) DLT-EQPT RTRV-TACCRTRV-ALM-ALL DLT-FFP-<OCN_TYPE> RTRV-ALM-EQPT DLT-UCP-CC RTRV-ALM-SYNCN DLT-UCP-IF RTRV-ALM-<MOD2ALM> ED-<MOD_PATH> RTRV-COND-ALL ED-<MOD_RING> RTRV-COND-EQPT ED-<OCN_TYPE> RTRV-COND-<MOD2ALM> ED-CRS-<PATH> RTRV-CRS ED-FFP-<OCN_TYPE> RTRV-CRS-VT1 ED-NE-PATH RTRV-CRS-<PATH> ED-UCP-CC RTRV-EQPT ED-UCP-IF RTRV-FFP-<OCN_TYPE> ENT-CRS-<PATH> RTRV-INV ENT-EQPT RTRV-NE-IPMAP ENT-FFP-<OCN_TYPE> RTRV-NE-PATH ENT-UCP-CC RTRV-PM-<MOD2> ENT-UCP-IF RTRV-PMMODE-<STS_PATH> EX-SW-<OCN_BLSR> (OC3-8) RTRV-PMSCHED-<MOD2> INIT-REG-<MOD2> RTRV-PROTNSW-<OCN_TYPE> INIT-SYS RTRV-PROTNSW-<PATH> OPR-LPBK-<MOD2_IO> RTRV-PTHTRC-<STS_PATH> OPR-PROTNSW-<OCN_TYPE> RTRV-TH-<MOD2> OPR-PROTNSW-<PATH> RTRV-TH-ALL OPR-SYNCNSW RTRV-VT REPT ALM EQPT RTRV-<OCN_TYPE> REPT ALM SYNCN RTRV-<PATH> REPT ALM <MOD2ALM> RTRV-UCP-CC REPT DBCHG RTRV-UCP-IF REPT EVT EQPT SCHED-PMREPT-<MOD2> REPT EVT SYNCN SET-PMMODE-<STS_PATH> REPT EVT <MOD2ALM> SET-TH-<MOD2> REPT PM <MOD2> RLS-LPBK-<MOD2_IO>

Table 3-2 TL1 Commands by Card (Cisco ONS 15454) (continued)

Card	Applicable Commands
OPT-BST, OPT-PRE	DLT-EQPT DLT-LNK-<MOD20> DLT-OSC (OPT-BST) DLT-WLEN ED-EQPT ED-LNK-<MOD20> ED-OSC (OPT-BST) ED-OTS ED-WDMANS ED-WLEN ENT-EQPT ENT-LNK-<MOD20> ENT-WLEN INIT-REG-<MOD2> OPR-LASER-OTS OPR-LNK OPR-WDMANS REPT ALM RING (OPT-PRE) REPT ALM WLEN REPT ALM <MOD2ALM> REPT EVT OSC (OPT-PRE) REPT EVT WLEN REPT EVT <MOD2ALM> REPT PM <MOD2> RLS-LASER-OTS RMV-<MOD2_IO> RST-<MOD2_IO>
	RTRV-ALM-ALL RTRV-ALM-EQPT RTRV-ALM-OSC (OPT-PRE) RTRV-ALM-WLEN RTRV-ALMTH-<MOD2ALM> RTRV-COND-ALL RTRV-COND-EQPT RTRV-COND-OSC (OPT-PRE) RTRV-COND-WLEN RTRV-EQPT RTRV-INV RTRV-LNK-<MOD20> RTRV-OSC (OPT-PRE) RTRV-OTS RTRV-PM-<MOD2> RTRV-PMMODE-<STS_PATH> RTRV-PMSCHED-<MOD2> RTRV-PMSCHED-ALL RTRV-TH-<MOD2> RTRV-WDMANS RTRV-WLEN SCHED-PMREPT-<MOD2> SET-ALMTH-<MOD2> SET-ALMTH-EQPT SET-TH-<MOD2>

Table 3-2 TL1 Commands by Card (Cisco ONS 15454) (continued)

Card	Applicable Commands
OSCM, OSCMS	DLT-EQPT DLT-LNK-<MOD20> DLT-OSC DLT-WLEN ED-EQPT ED-LNK-<MOD20> ED-OSC ED-OTS ED-SYNCN ED-WDMANS ED-WLEN ED-<OCN_TYPE> ENT-EQPT ENT-LNK-<MOD20> ENT-WLEN INIT-REG-<MOD2> OPR-LNK OPR-WDMANS REPT ALM RING REPT ALM WLEN REPT ALM <MOD2ALM> REPT EVT OSC REPT EVT WLEN REPT EVT <MOD2ALM> REPT PM <MOD2> RMV-<MOD2_IO> RST-<MOD2_IO>
	RTRV-ALM-ALL RTRV-ALM-EQPT RTRV-ALM-OSC RTRV-ALM-WLEN RTRV-ALMTH-<MOD2ALM> RTRV-COND-ALL RTRV-COND-EQPT RTRV-COND-OSC RTRV-COND-WLEN RTRV-EQPT RTRV-INV RTRV-LNK-<MOD20> RTRV-OSC RTRV-OTS RTRV-PM-<MOD2> RTRV-PMMODE-<STS_PATH> RTRV-PMSCHED-<MOD2> RTRV-PMSCHED-ALL RTRV-SYNCN RTRV-TH-<MOD2> RTRV-<OCN_TYPE> RTRV-WDMANS RTRV-WLEN SCHED-PMREPT-<MOD2> SET-ALMTH-<MOD2> SET-ALMTH-EQPT SET-TH-<MOD2>
TCC2	APPLY COPY-RFILE REPT DBCHG REPT EVT FXFR

Table 3-2 TL1 Commands by Card (Cisco ONS 15454) (continued)

Card	Applicable Commands
TXP_MR_2.5G, TXPP_MR_2.5G	DLT-EQPT DLT-FFP-CLNT (TXP) ED-CLNT ED-DWDM ED-FFP-CLNT (TXP) ED-FFP-OCH (TXP-P) ED-OCH ED-TRC-OCH ENT-EQPT ENT-FFP-CLNT (TXP) INIT-REG-CLNT INIT-SYS OPR-LPBK-<MOD2_IO> OPR-PROTNSW-CLNT (TXP) OPR-PROTNSW-OCH (TXP-P) REPT ALM EQPT REPT ALM <MOD2ALM> REPT DBCHG REPT EVT EQPT REPT EVT <MOD2ALM> REPT PM <MOD2> RLS-PROTNSW-CLNT (TXP) RLS-PROTNSW-OCH (TXP-P) RMV-<MOD2_IO> RST-<MOD2_IO> RTRV-ALM-ALL RTRV-ALM-EQPT RTRV-ALM-<MOD2ALM> RTRV-ALMTH-<MOD2ALM> RTRV-CLNT RTRV-COND-ALL RTRV-COND-EQPT RTRV-COND-<MOD2ALM> RTRV-DWDM RTRV-EQPT RTRV-FFP-CLNT (TXP) RTRV-FFP-OCH (TXP-P) RTRV-INV RTRV-OCH RTRV-PM-<MOD2> RTRV-PMSCHED-<MOD2> RTRV-PMSCHED-ALL RTRV-PROTNSW-CLNT (TXP) RTRV-PROTNSW-OCH (TXP-P) RTRV-TH-<MOD2> RTRV-TRC-CLNT RTRV-TRC-OCH SCHED-PMREPT-<MOD2> SET-ALMTH-<MOD2> SET-ALMTH-EQPT SET-TH-<MOD2>
XC, XCVT, XC192	ALW-SWDX-EQPT DLT-EQPT ENT-EQPT INH-SWDX-EQPT INIT-SYS REPT ALM EQPT REPT ALM <MOD2ALM> REPT DBCHG REPT EVT EQPT REPT EVT <MOD2ALM> REPT SW RTRV-ALM-ALL RTRV-ALM-EQPT RTRV-ALM-<MOD2ALM> RTRV-COND-ALL RTRV-COND-EQPT RTRV-COND-<MOD2ALM> RTRV-EQPT RTRV-INV SW-DX-EQPT
XCVXL	REPT DBCHG

3.3 TL1 Commands by Card (ONS 15327)

Table 3-3 TL1 Commands by Card (Cisco ONS 15327)

Card	Applicable Commands
XTC/DS1	CHG-ACCMD-<MOD_TACC> RTRV-<PATH> CONN-TACC-<MOD_TACC> RTRV-ALM-ALL DISC-TACC RTRV-ALM-EQPT DLT-CRS-<PATH> RTRV-ALM-<MOD2ALM> ED-<MOD_PATH> RTRV-COND-ALL ED-CRS-<PATH> RTRV-COND-EQPT ED-EQPT RTRV-COND-<MOD2ALM> ED-T1 RTRV-CRS ENT-CRS-<PATH> RTRV-CRS-<PATH> ENT-EQPT RTRV-EQPT INH-SWTOPROTN-EQPT RTRV-INV INH-SWTOWKG-EQPT RTRV-PM-<MOD2> INIT-REG-<MOD2> RTRV-PMSCHED-ALL INIT-SYS RTRV-PMSCHED-<MOD2> OPR-LPBK-<MOD2_IO> RTRV-PTHTRC-<STS_PATH> REPT ALM EQPT RTRV-T1 REPT ALM <MOD2ALM> RTRV-TACC REPT EVT EQPT RTRV-TH-<MOD2> REPT EVT <MOD2ALM> RTRV-VT REPT PM SET-PMMODE-<STS_PATH> RLS-LPBK-<MOD2_IO> SET-TH-<MOD2> RMV-<MOD2_IO> SW-TOPROTN-EQPT RST-<MOD2_IO> SW-TOWKG-EQPT

Table 3-3 TL1 Commands by Card (Cisco ONS 15327) (continued)

Card	Applicable Commands
XTC/DS3	CHG-ACCMD-<MOD_TACC>
	CONN-TACC-<MOD_TACC>
	DISC-TACC
	DLT-CRS-<PATH>
	ED-<MOD_PATH>
	ED-CRS-<PATH>
	ED-EQPT
	ED-T3
	ENT-CRS-<PATH>
	ENT-EQPT
	INH-SWTOPTN-EQPT
	INH-SWTOWKG-EQPT
	INIT-REG-<MOD2>
	INIT-SYS
	OPR-LPBK-<MOD2_IO>
	REPT ALM EQPT
	REPT ALM <MOD2ALM>
	REPT EVT EQPT
	REPT EVT <MOD2ALM>
	REPT PM
	RLS-LPBK-<MOD2_IO>
	RMV-<MOD2_IO>
	RST-<MOD2_IO>
	RTRV-<PATH>
	RTRV-ALM-ALL
	RTRV-ALM-EQPT
	RTRV-ALM-<MOD2ALM>
	RTRV-COND-ALL
	RTRV-COND-EQPT
	RTRV-COND-<MOD2ALM>
RTRV-CRS	
RTRV-CRS-<PATH>	
RTRV-EQPT	
RTRV-INV	
RTRV-PM-<MOD2>	
RTRV-PMMODE-<STS_PATH>	
RTRV-PMSCHED-ALL	
RTRV-PMSCHED-<MOD2>	
RTRV-PTHTRC-<STS_PATH>	
RTRV-T3	
RTRV-TACC	
RTRV-TH-<MOD2>	
SET-PMMODE-<STS_PATH>	
SET-TH-<MOD2>	

Table 3-3 TL1 Commands by Card (Cisco ONS 15327) (continued)

Card	Applicable Commands
OC3, OC12, OC48	CHG-ACCMD-<MOD_TACC> CONN-TACC-<MOD_TACC> DISC-TACC DLT-<MOD_RING> (OC12, OC48) DLT-CRS-<PATH> DLT-EQPT DLT-FFP-<OCN_TYPE> ED-<MOD_PATH> ED-<MOD_RING> (OC12, OC48) ED-<OCN_TYPE> ED-CRS-<PATH> ED-FFP-<OCN_TYPE> ENT-<MOD_RING> (OC12, OC48) ENT-CRS-<PATH> ENT-EQPT ENT-FFP-<OCN_TYPE> EX-SW-<OCN_BLSR> (OC12, OC48) INIT-REG-<MOD2> INIT-SYS OPR-LPBK-<MOD2_IO> OPR-PROTNSW-<OCN_TYPE> OPR-PROTNSW-<PATH> OPR-SYNCNSW REPT ALM EQPT REPT ALM RING (OC12, OC48) REPT ALM SYNCN REPT ALM <MOD2ALM> REPT EVT EQPT REPT EVT RING (OC12, OC48) REPT EVT SYNCN REPT EVT <MOD2ALM> REPT PM RLS-LPBK-<MOD2_IO> RLS-PROTNSW-<OCN_TYPE> RLS-PROTNSW-<PATH> RLS-SYNCNSW RMV-<MOD2_IO> RST-<MOD2_IO> RTRV-<PATH> RTRV-ALM-ALL RTRV-ALM-EQPT RTRV-ALM-SYNCN RTRV-ALM-<MOD2ALM> RTRV-<MOD_RING> (OC12, OC48) RTRV-COND-ALL RTRV-COND-EQPT RTRV-COND-<MOD2ALM> RTRV-CRS RTRV-CRS-<PATH> RTRV-EQPT RTRV-FFP-<OCN_TYPE> RTRV-INV RTRV-NE-IPMAP RTRV-PM-<MOD2> RTRV-PMMODE-<STS_PATH> RTRV-PMSCHED-ALL RTRV-PMSCHED-<MOD2> RTRV-PROTNSW-VT1 RTRV-PROTNSW-<OCN_TYPE> RTRV-PROTNSW-<PATH> RTRV-PTHTRC-<STS_PATH> (OC3) RTRV-TACC RTRV-TH-<MOD2> RTRV-TRC-<OCN_BLSR> (OC12, OC48) RTRV-VT RTRV-<OCN_TYPE> SET-PMMODE-<STS_PATH> SET-TH-<MOD2>
E100T, E1000T	DLT-EQPT ENT-EQPT INIT-SYS REPT ALM EQPT REPT ALM <MOD2ALM> REPT EVT EQPT REPT EVT <MOD2ALM> REPT PM (E100T) RTRV-ALM-ALL RTRV-ALM-EQPT RTRV-ALM-<MOD2ALM> RTRV-COND-ALL RTRV-COND-EQPT RTRV-COND-<MOD2ALM> RTRV-EQPT RTRV-INV

Table 3-3 TL1 Commands by Card (Cisco ONS 15327) (continued)

Card	Applicable Commands
XTC	APPLY COPY-RFILE DLT-EQPT ED-BITS ED-NE-GEN ED-NE-SYCN ED-SYCN ENT-EQPT INIT-SYS OPR-ACO-ALL OPR-SYCN OPR-SYCN REPT ALM BITS REPT ALM EQPT REPT ALM SYCN REPT ALM <MOD2ALM> REPT EVT BITS REPT EVT EQPT REPT EVT FXFR REPT EVT SYCN REPT EVT <MOD2ALM> RLS-SYCN RTRV-ALM-ALL RTRV-ALM-BITS RTRV-ALM-EQPT RTRV-ALM-SYCN RTRV-ALM-<MOD2ALM> RTRV-BITS RTRV-COND-ALL RTRV-COND-BITS RTRV-COND-EQPT RTRV-COND-SYCN RTRV-EQPT RTRV-INV RTRV-NE-GEN RTRV-NE-SYCN RTRV-SYCN
G1000-2	DLT-CRS-<PATH> DLT-EQPT ED-<MOD_PATH> ED-CRS-<PATH> ED-G1000 ENT-CRS-<PATH> ENT-EQPT INIT-REG-G1000 INIT-SYS OPR-LPBK-<MOD2_IO> REPT ALM EQPT REPT ALM <MOD2ALM> REPT DBCHG REPT EVT EQPT REPT EVT <MOD2ALM> RLS-LPBK-<MOD2_IO> RMV-<MOD2_IO> RST-<MOD2_IO> RTRV-<PATH> RTRV-ALM-ALL RTRV-ALM-EQPT RTRV-ALM-<MOD2ALM> RTRV-COND-ALL RTRV-COND-EQPT RTRV-COND-<MOD2ALM> RTRV-CRS RTRV-CRS-<PATH> RTRV-EQPT RTRV-G1000 RTRV-INV RTRV-PTHTRC-<STS_PATH>
XTC/XCVT	ENT-EQPT INH-SWDX-EQPT INIT-SYS REPT ALM EQPT REPT ALM <MOD2ALM> REPT EVT EQPT REPT EVT <MOD2ALM> REPT SW RTRV-ALM-ALL RTRV-ALM-EQPT RTRV-ALM-<MOD2ALM> RTRV-COND-ALL RTRV-COND-EQPT RTRV-COND-<MOD2ALM> RTRV-EQPT RTRV-INV SW-DX-EQPT

Table 3-3 TL1 Commands by Card (Cisco ONS 15327) (continued)

Card	Applicable Commands
XTC/AIC	ENT-EQPT INIT-SYS OPR-EXT-CONT REPT ALM ENV REPT ALM EQPT REPT ALM <MOD2ALM> REPT EVT ENV REPT EVT EQPT REPT EVT <MOD2ALM> RLS-EXT-CONT RTRV-ALM-ALL RTRV-ALM-ENV RTRV-ALM-EQPT RTRV-ALM-<MOD2ALM> RTRV-ATTR-CONT RTRV-ATTR-ENV RTRV-COND-ALL RTRV-COND-ENV RTRV-COND-EQPT RTRV-COND-<MOD2ALM> RTRV-EQPT RTRV-EXT-CONT RTRV-INV SET-ATTR-CONT SET-ATTR-ENV
MXP_2.5G_10G, TXP_MR_10G	DLT-EQPT DLT-FFP-CLNT ED-CLNT ED-DWDM ED-FFP-CLNT ED-OCH ED-SYNCN (MXP) ED-TRC-CLNT ENT-EQPT ENT-FFP-CLNT INIT-REG-CLNT INIT-SYS OPR-LPBK-<MOD2_IO> OPR-PROTNSW-CLNT REPT ALM EQPT REPT ALM <MOD2ALM> REPT DBCHG REPT EVT EQPT REPT EVT <MOD2ALM> REPT PM <MOD2> RLS-PROTNSW-CLNT RMV-<MOD2_IO> RST-<MOD2_IO> RTRV-ALM-ALL, RTRV-ALM-EQPT RTRV-ALM-<MOD2ALM> RTRV-ALMTH-<MOD2ALM> RTRV-CLNT RTRV-COND-ALL RTRV-COND-EQPT RTRV-COND-<MOD2ALM> RTRV-DWDM RTRV-EQPT RTRV-FFP-CLNT RTRV-INV RTRV-OCH RTRV-PM-<MOD2> RTRV-PMSCHED-<MOD2> RTRV-PMSCHED-ALL RTRV-PROTNSW-CLNT RTRV-SYNCN (MXP) RTRV-TH-<MOD2> RTRV-TRC-CLNT RTRV-TRC-OCH SCHED-PMREPT-<MOD2> SET-ALMTH-<MOD2> SET-ALMTH-EQPT SET-TH-<MOD2>

Table 3-3 TL1 Commands by Card (Cisco ONS 15327) (continued)

Card	Applicable Commands
TXP_MR_2.5G, TXPP_MR_2.5G	DLT-EQPT DLT-FFP-CLNT (TXP) ED-CLNT ED-DWDM ED-FFP-CLNT (TXP) ED-FFP-OCH (TXP-P) ED-OCH ED-TRC-OCH ENT-EQPT ENT-FFP-CLNT (TXP) INIT-REG-CLNT INIT-SYS OPR-LPBK-<MOD2_IO> OPR-PROTNSW-CLNT (TXP) OPR-PROTNSW-OCH (TXP-P) REPT ALM EQPT REPT ALM <MOD2ALM> REPT DBCHG REPT EVT EQPT REPT EVT <MOD2ALM> REPT PM <MOD2> RLS-PROTNSW-CLNT (TXP) RLS-PROTNSW-OCH (TXP-P) RMV-<MOD2_IO> RST-<MOD2_IO> RTRV-ALM-ALL RTRV-ALM-EQPT RTRV-ALM-<MOD2ALM> RTRV-ALMTH-<MOD2ALM> RTRV-CLNT RTRV-COND-ALL RTRV-COND-EQPT RTRV-COND-<MOD2ALM> RTRV-DWDM RTRV-EQPT RTRV-FFP-CLNT (TXP) RTRV-FFP-OCH (TXP-P) RTRV-INV RTRV-OCH RTRV-PM-<MOD2> RTRV-PMSCHED-<MOD2> RTRV-PMSCHED-ALL RTRV-PROTNSW-CLNT (TXP) RTRV-PROTNSW-OCH (TXP-P) RTRV-TH-<MOD2> RTRV-TRC-CLNT RTRV-TRC-OCH SCHED-PMREPT-<MOD2> SET-ALMTH-<MOD2> SET-ALMTH-EQPT SET-TH-<MOD2>

3.4 TL1 Commands

The commands and autonomous messages used for ONS 15454 and ONS 15327 are described in detail in this section and are listed alphabetically according to the first alpha character of the command string.

Each TL1 command must be less than or equal to 255 characters. Any command larger than 255 characters must be split into multiple commands. For example, if you use the ED-<MOD_PATH> command to edit the J1 EXPTRC/TRC message, path protection attributes, and TACC attributes and the command exceeds 255 characters the command will not be processed. You must use multiple ED-<MOD_PATH> commands instead.



Note The CTAG of any TL1 line mode command is a mandatory field in this TL1 release.



Note The AID definitions provided are supersets of the actual AID definitions.



Note TL1 commands that are entered incorrectly are not completed.

**Note**

In release 3.3 and later, the ACT-USER command will return a DENY without any error message. Any other command will return DENY with the PLNA (Login Not Active) error message.

3.4.1 ACT-USER: Activate User

This command set-ups a session with the Network Element (NE).

Notes:

1. Passwords are masked for the following security commands: ACT-USER, COPY-RFILE, COPY-IOSCFG, ED-PID, ENT-USER-SECU and ED-USER-SECU. Access to a TL1 session via any means will have the password masked. The CTC Request History and Message Log will also show the masked commands. When a password-masked command is re-issued by double-clicking the command from CTC Request History, the password will still be masked in the CTC Request History and Message Log. The actual password that was previously issued will be sent to the NE. To use a former command as a template only, single-click the command in CTC Request History. The command will be placed in the Command Request text box, where you can edit the appropriate fields prior to re-issuing it.
2. This command is backwards compatible with userids and passwords from ONS 15454 2.X software versions according to the following rules:

ACT-USER:[TID]:[STRING]:CTAG::[STRING]

- a. The syntax of the userid (first [STRING]) and the password (second [STRING]) are not checked.
 - b. Invalid syntax for both the userid and password is permitted, but the user can only log in if the userid/password match what is in the database.
 - c. The userid and password cannot exceed 10 characters.
3. For the ACT-USER command, it is required that no error code be transmitted except to convey that the login is granted or denied. Per TR-835, Appendix A, Section A.2:

“... the error codes corresponding to ACT ... do not apply to the ACT-USER command because this command requires that no error code be provided to the session request except to indicate that it has been denied. Before a session is established, a specific error code may reveal clues to an intruder attempting unauthorized entry.”

**Note**

Starting with this release (R4.6) the following feature can be turned on or off and the default is off: A new user must change his or her password after establishing a session for the first time before continuing. All TL1 commands except for ED-PID and CANC-USER will be denied until the password is changed. Once the password has been changed, a user can execute any command that his security level allows. If the user logs out without changing his password each following session will DENY all commands, except ED-PID and CANC-USER, until the password is changed.

Section	ACT-USER Description
Category	System
Security	N/A

Section	ACT-USER Description
Related Messages	ALW-MSG-SECU ALW-USER-SECU CANC CANC-USER CANC-USER-SECU DLT-USER-SECU ED-CMD-SECU ED-PID ED-USER-SECU ENT-USER-SECU INH-MSG-SECU INH-USER-SECU REPT ALM SECU REPT EVT SECU REPT EVT SESSION RTRV-CMD-SECU RTRV-DFLT-SECU RTRV-USER-SECU SET-ATTR-SECUDFLT
Input Format	ACT-USER:[<TID>]:<UID>:<CTAG>::<PID>; where: <ul style="list-style-type: none"> <UID> is the user identifier; <UID> is any combination of up to 10 alphanumeric characters. <UID> is a string and must not be null <PID> is the user password; <PID> is any combination of up to 10 alphanumeric characters. <PID> is a string and must not be null <p>Note CTC allows <UID> and <PID> of up to 20 characters. The 20 character CTC-entered <UID> and <PID> are not valid TL1 <UID> and <PID></p>
Input Example	ACT-USER:PETALUMA:TERRI:100::MYPASSWD;
Output Format	SID DATE TIME A CTAG COMPLD “<UID>:<LASTLOGINTIME>,<UNSUCCESSFULLOGINS>” ; where: <ul style="list-style-type: none"> <UID> userid of the person logging in; <UID> is a string <LASTLOGINTIME> date and time of the last successful connection to the NE (not including current login); <LASTLOGINTIME> is a string <UNSUCCESSFULLOGINS> number of unsuccessful login attempts since the last successful login; <UNSUCCESSFULLOGINS> is an integer
Output Example	TID-000 1998-06-20 14:30:00 A 001 COMPLD “TERRI:2003-01-02 14-04-49,0” ;
Errors	Errors are listed in Table 7-33 on page 7-27 .

3.4.2 ALW-MSG-ALL: Allow Message All

This command instructs the NE to enter a mode in which all the REPT ALM and REPT EVT autonomous messages are transmitted. See the INH-MSG-ALL command to inhibit these autonomous messages. When a TL1 session starts, the REPT ALM and REPT EVT messages are allowed by default.



Note

If this command is issued twice in the same session, the SAAL (Status, Already Allowed) error message will be returned. The optional fields in the e block are not supported.

Section	ALW-MSG-ALL Description
Category	System
Security	Retrieve
Related Messages	INH-MSG-ALL
Input Format	ALW-MSG-ALL:[<TID>]::<CTAG>[::,,];
Input Example	ALW-MSG-ALL:PETALUMA::549;
Errors	Errors are listed in Table 7-33 on page 7-27 .

3.4.3 ALW-MSG-DBCHG: Allow Database Change Message

This command enables REPT DBCHG. When a TL1 session starts, the REPT DBCHG messages are not allowed by default.



Note

This command is not defined in the GR.

Section	ALW-MSG-DBCHG Description
Category	Log
Security	Retrieve
Related Messages	INH-MSG-DBCHG REPT DBCHG
Input Format	ALW-MSG-DBCHG:[<TID>]::<CTAG>[::,,];
Input Example	ALW-MSG-DBCHG:CISCO::123;
Errors	Errors are listed in Table 7-33 on page 7-27 .

3.4.4 ALW-MSG-SECU: Allow Message Security

This command enables REPT EVT SECU and REPT ALM SECU

Section	ALW-MSG-SECU Description
Category	Security
Security	Superuser

Section	ALW-MSG-SECU Description
Related Messages	ACT-USER ALW-USER-SECU CANC CANC-USER CANC-USER-SECU DLT-USER-SECU ED-CMD-SECU ED-PID ED-USER-SECU ENT-USER-SECU INH-MSG-SECU INH-USER-SECU REPT ALM SECU REPT EVT SECU REPT EVT SESSION RTRV-CMD-SECU RTRV-DFLT-SECU RTRV-USER-SECU SET-ATTR-SECUDFLT
Input Format	ALW-MSG-SECU:[<TID>]::<CTAG>;
Input Example	ALW-MSG-SECU:PETALUMA::123;
Errors	Errors are listed in Table 7-33 on page 7-27 .

3.4.5 ALW-PMREPT-ALL: Allow Performance Report All

This command resumes processing all the PM reports that are inhibited. The allowance of the PM reporting is session-based, which means the command is only effective to the TL1 session that issues this command. REPT PM messages are inhibited by default for a session.

Section	ALW-PMREPT-ALL Description
Category	Performance
Security	Retrieve
Related Messages	INH-PMREPT-ALL INIT-REG-<MOD2> REPT PM <MOD2> RTRV-PM-<MOD2> RTRV-PMMODE-<STS_PATH> RTRV-PMSCHED-<MOD2> RTRV-PMSCHED-ALL RTRV-TH-<MOD2> RTRV-TH-ALL SCHED-PMREPT-<MOD2> SET-PMMODE-<STS_PATH> SET-TH-<MOD2>
Input Format	ALW-PMREPT-ALL:[<TID>]::<CTAG>;
Input Example	ALW-PMREPT-ALL:CISCONODE::123;
Errors	Errors are listed in Table 7-33 on page 7-27 .

3.4.6 ALW-SWDX-EQPT: Allow Switch Duplex Equipment

(Cisco ONS 15454 only)

This command allows automatic or manual switching on a duplex system containing duplexed or redundant equipment. To inhibit an NE switching to duplex, use the INH-SWDX-EQPT command.

ALW-SWDX-EQPT is not used for SONET line or electrical card protection switching. For SONET line or path protection switching commands, see OPR-PROTNSW and RLS-PROTNSW commands. For the electrical card protection switching, see the SW-TOWKG-EQPT and SW-TOPROTN-EQPT commands.

**Note**

This command applies to the XC, XCVT, or XC10G equipment units only in this release.

Section	ALW-SWDX-EQPT Description																				
Category	Equipment																				
Security	Maintenance																				
Related Messages	<table border="0"> <tr> <td>ALW-SWTOPROTN-EQPT</td> <td>REPT SW</td> </tr> <tr> <td>ALW-SWTOWKG-EQPT</td> <td>RTRV-ALM-EQPT</td> </tr> <tr> <td>DLT-EQPT</td> <td>RTRV-ALMTH-EQPT</td> </tr> <tr> <td>ED-EQPT ENT-EQPT</td> <td>RTRV-COND-EQPT</td> </tr> <tr> <td>EX-SW-<OCN_BLSR></td> <td>RTRV-EQPT</td> </tr> <tr> <td>INH-SWDX-EQPT</td> <td>SET-ALMTH-EQPT</td> </tr> <tr> <td>INH-SWTOPROTN-EQPT</td> <td>SW-DX-EQPT</td> </tr> <tr> <td>INH-SWTOWKG-EQPT</td> <td>SW-TOPROTN-EQPT</td> </tr> <tr> <td>REPT ALM EQPT</td> <td>SW-TOWKG-EQPT</td> </tr> <tr> <td>REPT EVT EQPT</td> <td></td> </tr> </table>	ALW-SWTOPROTN-EQPT	REPT SW	ALW-SWTOWKG-EQPT	RTRV-ALM-EQPT	DLT-EQPT	RTRV-ALMTH-EQPT	ED-EQPT ENT-EQPT	RTRV-COND-EQPT	EX-SW-<OCN_BLSR>	RTRV-EQPT	INH-SWDX-EQPT	SET-ALMTH-EQPT	INH-SWTOPROTN-EQPT	SW-DX-EQPT	INH-SWTOWKG-EQPT	SW-TOPROTN-EQPT	REPT ALM EQPT	SW-TOWKG-EQPT	REPT EVT EQPT	
ALW-SWTOPROTN-EQPT	REPT SW																				
ALW-SWTOWKG-EQPT	RTRV-ALM-EQPT																				
DLT-EQPT	RTRV-ALMTH-EQPT																				
ED-EQPT ENT-EQPT	RTRV-COND-EQPT																				
EX-SW-<OCN_BLSR>	RTRV-EQPT																				
INH-SWDX-EQPT	SET-ALMTH-EQPT																				
INH-SWTOPROTN-EQPT	SW-DX-EQPT																				
INH-SWTOWKG-EQPT	SW-TOPROTN-EQPT																				
REPT ALM EQPT	SW-TOWKG-EQPT																				
REPT EVT EQPT																					
Input Format	ALW-SWDX-EQPT:[<TID>]:<AID>:<CTAG>[::]; where: <ul style="list-style-type: none"> • <AID> is the XC/XCVT/XC10G equipment AID from the “EQPT” section on page 4-27 																				
Input Example	ALW-SWDX-EQPT:CISCO:SLOT-8:1234;																				
Errors	Errors are listed in Table 7-33 on page 7-27 .																				

3.4.7 ALW-SWTOPROTN-EQPT: Allow Switch to Protection Equipment

(Cisco ONS 15454 only)

This command allows automatic or manual switching of an equipment unit back to a protection status. Use the INH-SWTOPROTN-EQPT command to inhibit an NE from switching to protection.

ALW-SWTOPROTN-EQPT is used for non-SONET line cards (e.g. DS1, DS3, DS3XM, and EC1). DS1 and DS3 cards have 1:1 and 1:N equipment protection. DS3XM and EC1 cards have only 1:1 equipment protection. When this command is given to a working unit, the working unit will be allowed to switch to the protection unit. When this command is given to a protection unit, any working unit in the protection group is allowed to switch to the protection unit.

The standing condition of INHSWPR on the unit specified by the AID will be cleared.

Notes:

1. This command only supports one value of the <DIRN> parameter - BTH. A command with any other value is considered an incorrect use of the command. An IDNV (Input, Data Not Valid) error message should be responded.
2. This command is not used for the common control (TCC2 or XC/XCVT/XC10G) cards. A command on a common control card will receive an IIAC (Input, Invalid Access Identifier) error message. To use the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.

3. This command is not used for SONET (OCN) cards. A command on a SONET card will receive an IIAC (Input, Invalid Access identifier) error message. To use a SONET card switching command, use OPR-PROTNSW and RLS-PROTNSW commands.
4. If this command is used on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message should be responded.
5. If this command is used on a card that is not in the inhibit state, the SAAL (Status, Already Allowed) error message should be responded.
6. The following situation(s) are allowed and will not generate any error response: Sending this command to missing cards so long as none of the previous error conditions apply.

Section	ALW-SWTOPROTN-EQPT Description																				
Category	Equipment																				
Security	Maintenance																				
Related Messages	<table border="0"> <tr> <td>ALW-SWDX-EQPT</td> <td>REPT EVT EQPT</td> </tr> <tr> <td>ALW-SWTOWKG-EQPT</td> <td>REPT SW</td> </tr> <tr> <td>DLT-EQPT</td> <td>RTRV-ALM-EQPT</td> </tr> <tr> <td>ED-EQPT</td> <td>RTRV-ALMTH-EQPT</td> </tr> <tr> <td>ENT-EQPT</td> <td>RTRV-COND-EQPT</td> </tr> <tr> <td>EX-SW-<OCN_BLSR></td> <td>RTRV-EQPT</td> </tr> <tr> <td>INH-SWDX-EQPT</td> <td>SET-ALMTH-EQPT</td> </tr> <tr> <td>INH-SWTOPROTN-EQPT</td> <td>SW-DX-EQPT</td> </tr> <tr> <td>INH-SWTOWKG-EQPT</td> <td>SW-TOPROTN-EQPT</td> </tr> <tr> <td>REPT ALM EQPT</td> <td>SW-TOWKG-EQPT</td> </tr> </table>	ALW-SWDX-EQPT	REPT EVT EQPT	ALW-SWTOWKG-EQPT	REPT SW	DLT-EQPT	RTRV-ALM-EQPT	ED-EQPT	RTRV-ALMTH-EQPT	ENT-EQPT	RTRV-COND-EQPT	EX-SW-<OCN_BLSR>	RTRV-EQPT	INH-SWDX-EQPT	SET-ALMTH-EQPT	INH-SWTOPROTN-EQPT	SW-DX-EQPT	INH-SWTOWKG-EQPT	SW-TOPROTN-EQPT	REPT ALM EQPT	SW-TOWKG-EQPT
ALW-SWDX-EQPT	REPT EVT EQPT																				
ALW-SWTOWKG-EQPT	REPT SW																				
DLT-EQPT	RTRV-ALM-EQPT																				
ED-EQPT	RTRV-ALMTH-EQPT																				
ENT-EQPT	RTRV-COND-EQPT																				
EX-SW-<OCN_BLSR>	RTRV-EQPT																				
INH-SWDX-EQPT	SET-ALMTH-EQPT																				
INH-SWTOPROTN-EQPT	SW-DX-EQPT																				
INH-SWTOWKG-EQPT	SW-TOPROTN-EQPT																				
REPT ALM EQPT	SW-TOWKG-EQPT																				
Input Format	<p>ALW-SWTOPROTN-EQPT:[<TID>]:<AID>:<CTAG>[:<DIRN>];</p> <p>where:</p> <ul style="list-style-type: none"> • <AID> This parameter can either be the protection unit for which carrying traffic is to be allowed (release of lockout) or the working unit for which switching to protect is to be allowed (release of lock on); <AID> is from the “EQPT” section on page 4-27 • <DIRN> is the direction of the switching. The command only supports one value of the <DIRN> parameter - BTH. This parameter defaults to BTH; valid values for <DIRN> are shown in the “DIRECTION” section on page 4-56 																				
Input Example	ALW-SWTOPROTN-EQPT:CISCO:SLOT-2:123::BTH;																				
Errors	Errors are listed in Table 7-33 on page 7-27 .																				

3.4.8 ALW-SWTOWKG-EQPT: Allow Switch to Working Equipment

(Cisco ONS 15454 only)

This command allows automatic or manual switching of an equipment unit back to a working status. Use the INH-SWTOWKG-EQPT command to inhibit an NE from switching to working.

ALW-SWTOWKG-EQPT is used for non-SONET line cards (e.g. DS1, DS3, DS3XM, and EC1). DS1 and DS3 cards have 1:1 and 1:N equipment protection. DS3XM and EC1 cards have only 1:1 equipment protection.

When this command is given to a working unit, the working unit will be allowed to carry traffic. In the case of revertive protection, the traffic will switch immediately from the protection unit to the working unit regardless of the reversion time setting.

When this command is given to a protection unit, the protection unit will be allowed to switch back to the working unit currently protected as long as the working unit has not raised INHSWWKG. In the case of revertive protection, the traffic will switch immediately from the protection unit to the working unit regardless of the reversion time setting. In the case of non-revertive protection, the protection unit will continue to carry the traffic.

The standing condition of INHSWWKG on the unit specified by the AID will be cleared.

Notes:

1. This command only supports one value of the <DIRN> parameter - BTH. A command with any other value is considered an incorrect use of the command. An IDNV (Input, Data Not Valid) error message should be responded.
2. This command is not used for the common control (TCC2 or XC/XCVT/XC10G) cards. A command on a common control card will receive an IIAC (Input, Invalid Access Identifier) error message. To use the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
3. This command is not used for SONET (OCN) cards. A command on a SONET card will receive an IIAC (Input, Invalid Access Identifier) error message. To use a SONET card switching command, use the OPR-PROTNSW and RLS-PROTNSW commands.
4. If this command is used on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message should be responded.
5. If this command is used on a card that is not in the inhibit state, the SAAL (Status, Already Allowed) error message should be responded.
6. The following situation(s) are allowed and will not generate any error response: sending this command to missing cards as long as none of the previous error conditions apply.

Section	ALW-SWTOWKG-EQPT Description	
Category	Equipment	
Security	Maintenance	
Related Messages	ALW-SWDX-EQPT	REPT EVT EQPT
	ALW-SWTOPROTN-EQPT	REPT SW
	DLT-EQPT	RTRV-ALM-EQPT
	ED-EQPT	RTRV-ALMTH-EQPT
	ENT-EQPT	RTRV-COND-EQPT
	EX-SW-<OCN_BLSR>	RTRV-EQPT
	INH-SWDX-EQPT	SET-ALMTH-EQPT
	INH-SWTOPROTN-EQPT	SW-DX-EQPT
	INH-SWTOWKG-EQPT	SW-TOPROTN-EQPT
	REPT ALM EQPT	SW-TOWKG-EQPT

Section	ALW-SWTOWKG-EQPT Description
Input Format	ALW-SWTOWKG-EQPT:[<TID>]:<AID>:<CTAG>[:<DIRN>]; where: <ul style="list-style-type: none"> • <AID> This parameter can either be the protection unit for which switching back to working is to be allowed (release of lock on) or the working unit for which carrying traffic is to be allowed (release of lockout); <AID> is from the “EQPT” section on page 4-27 • <DIRN> is the direction of the switching. The command only supports one value of the <DIRN> parameter - BTH. This parameter defaults to BTH; valid values for <DIRN> are shown in the “DIRECTION” section on page 4-56
Input Example	ALW-SWTOWKG-EQPT:CISCO:SLOT-2:123::BTH;
Errors	Errors are listed in Table 7-33 on page 7-27 .

3.4.9 ALW-USER-SECU: Allow User Security

This command enables a userid that has been disabled (e.g., via the INH-USER-SECU command) so the user can establish a session with the NE.

Section	ALW-USER-SECU Description																				
Category	Security																				
Security	Superuser																				
Related Messages	<table border="0"> <tr> <td>ACT-USER</td> <td>INH-MSG-SECU</td> </tr> <tr> <td>ALW-MSG-SECU</td> <td>INH-USER-SECU</td> </tr> <tr> <td>CANC</td> <td>REPT ALM SECU</td> </tr> <tr> <td>CANC-USER</td> <td>REPT EVT SECU</td> </tr> <tr> <td>CANC-USER-SECU</td> <td>REPT EVT SESSION</td> </tr> <tr> <td>DLT-USER-SECU</td> <td>RTRV-CMD-SECU</td> </tr> <tr> <td>ED-CMD-SECU</td> <td>RTRV-DFLT-SECU</td> </tr> <tr> <td>ED-PID</td> <td>RTRV-USER-SECU</td> </tr> <tr> <td>ED-USER-SECU</td> <td>SET-ATTR-SECUDFLT</td> </tr> <tr> <td>ENT-USER-SECU</td> <td></td> </tr> </table>	ACT-USER	INH-MSG-SECU	ALW-MSG-SECU	INH-USER-SECU	CANC	REPT ALM SECU	CANC-USER	REPT EVT SECU	CANC-USER-SECU	REPT EVT SESSION	DLT-USER-SECU	RTRV-CMD-SECU	ED-CMD-SECU	RTRV-DFLT-SECU	ED-PID	RTRV-USER-SECU	ED-USER-SECU	SET-ATTR-SECUDFLT	ENT-USER-SECU	
ACT-USER	INH-MSG-SECU																				
ALW-MSG-SECU	INH-USER-SECU																				
CANC	REPT ALM SECU																				
CANC-USER	REPT EVT SECU																				
CANC-USER-SECU	REPT EVT SESSION																				
DLT-USER-SECU	RTRV-CMD-SECU																				
ED-CMD-SECU	RTRV-DFLT-SECU																				
ED-PID	RTRV-USER-SECU																				
ED-USER-SECU	SET-ATTR-SECUDFLT																				
ENT-USER-SECU																					
Input Format	ALW-USER-SECU:[<TID>]:<CTAG>::<UID>; where: <ul style="list-style-type: none"> • <UID> is the userid to enable. The userid can be a list of userids separated by ‘&’. The keyword ALL cannot be used to specify all users on an NE. <UID> is a string 																				
Input Example	ALW-USER-SECU:PETALUMA::123::UID;																				
Errors	Errors are listed in Table 7-33 on page 7-27 .																				

3.4.10 APPLY: Apply

This command activates or reverts a software load during a software upgrade or downgrade process.

**Note**

An error will be generated if you attempt to activate an older software load or attempt to revert to a newer software load.

Section	APPLY Description
Category	File Transfer
Security	Superuser
Related Messages	COPY-RFILE REPT EVT FXFR
Input Format	APPLY:[<TID>]:::<CTAG>[:::<MEM_SW_TYPE>]; where: <ul style="list-style-type: none"> <MEM_SW_TYPE> indicates memory switch action during the software upgrade; valid values are shown in the “DL_TYPE” section on page 4-57
Input Example	APPLY:CISCO::123::ACT;
Errors	Errors are listed in Table 7-33 on page 7-27 .

3.4.11 CANC: Cancel

Reports the occurrence of a session timeout event.

CANC is an autonomous message transmitted by the NE to a user when a session established by that user is terminated because no messages were exchanged for a long period of time, a timeout. There is a default timeout period based on the user’s privilege/security level, and starting with Release 4.0 timeouts can be provisioned. The default timeouts based on privilege/security level are: superuser [SUPER] has the timeout period of 15 minutes., the Provision user [PROV] has the timeout period of 30 minutes, the Maintenance [MAINT] user has the timeout period of 60 minutes, the Retrieve user [RTRV] has no timeout.

When a timeout occurs, the corresponding port drops and the next session initiation at that port requires the regular login procedure.

The CANC message is only used to indicate that a session has been terminated because of a timeout. If a session is terminated for a different reason (e.g., forced logout, loss of communication), the REPT EVT SESSION message is used.

Section	CANC Description
Category	Security
Security	Retrieve

Section	CANC Description
Related Messages	ACT-USER ALW-MSG-SECU ALW-USER-SECU CANC-USER CANC-USER-SECU DLT-USER-SECU ED-CMD-SECU ED-PID ED-USER-SECU ENT-USER-SECU INH-MSG-SECU INH-USER-SECU REPT ALM SECU REPT EVT SECU REPT EVT SESSION RTRV-CMD-SECU RTRV-DFLT-SECU RTRV-USER-SECU SET-ATTR-SECUDFLT
Output Format	SID DATE TIME A ATAG CANC "<UID>" ; where: <ul style="list-style-type: none"> <UID> refers to the user's identification whose session is terminated due to timeout; <UID> is a string
Output Example	TID-000 1998-06-20 14:30:00 A 100.100 CANC "CISCO15" ;

3.4.12 CANC-USER: Cancel User

This command logs a user out of an active session with the NE.



Note

The USERID field of this command is a mandatory field.

For the CANC-USER command: CANC-USER:[TID]:[STRING]:CTAG

the syntax of the userid (first [STRING]) is not checked. Invalid syntax for the userid is permitted and the userid must not exceed 10 characters.

Section	CANC-USER Description
Category	Security
Security	Retrieve

Section	CANC-USER Description
Related Messages	ACT-USER ALW-MSG-SECU ALW-USER-SECU CANC CANC-USER-SECU DLT-USER-SECU ED-CMD-SECU ED-PID ED-USER-SECU ENT-USER-SECU INH-MSG-SECU INH-USER-SECU REPT ALM SECU REPT EVT SECU REPT EVT SESSION RTRV-CMD-SECU RTRV-DFLT-SECU RTRV-USER-SECU SET-ATTR-SECUDFLT
Input Format	CANC-USER:[<TID>]:<USERID>:<CTAG>; where: <ul style="list-style-type: none"> <USERID> identifies the user to the system; <USERID> is any combination of up to 10 alphanumeric characters. <USERID> is a string Note CTC allows <UID> and <PID> of up to 20 characters. The 20 character CTC-entered <UID> and <PID> are not valid TL1 <UID> and <PID>
Input Example	CANC-USER:PETALUMA:TERRI:101;
Errors	Errors are listed in Table 7-33 on page 7-27 .

3.4.13 CANC-USER-SECU: Cancel User Security

This command forces a user off of the NE.

The UID specified can be a single userid or a list of userids separated by '&'. The keyword ALL is not permitted. The UID specified cannot be the userid of the administrator issuing the command.



Note

This command will log out ALL sessions on the NE (TL1 and CTC) of a user whose userid matches the UID specified in the command.

Section	CANC-USER-SECU Description
Category	Security
Security	Superuser
Related Messages	ACT-USER ALW-MSG-SECU ALW-USER-SECU CANC CANC-USER DLT-USER-SECU ED-CMD-SECU ED-PID ED-USER-SECU ENT-USER-SECU INH-MSG-SECU INH-USER-SECU REPT ALM SECU REPT EVT SECU REPT EVT SESSION RTRV-CMD-SECU RTRV-DFLT-SECU RTRV-USER-SECU SET-ATTR-SECUDFLT

Section	CANC-USER-SECU Description
Input Format	CANC-USER-SECU:[<TID>]:<UID>:<CTAG>; where: <ul style="list-style-type: none"> • <UID> is a user identifier, or list of UIDs separated by '&'. The keyword ALL is not permitted. <UID> is a string
Input Example	CANC-USER-SECU:PETALUMA:CISCO10:100;
Errors	Errors are listed in Table 7-33 on page 7-27 .

3.4.14 CHG-ACCMD-<MOD_TACC>: Change Test Access Mode (DS1, DS3I, E1, E3, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command changes the test access (TACC) mode for the circuit being tested. For more information on TACC, refer to the “[Test Access](#)” section on [page 1-21](#).

This may be a change from monitoring the data to inserting data into the STS. This command can only be applied to an existing TAP connection.

For this command to be applicable, you must first create the TAP using the ED-<MOD_PATH> command. Intrusive test access modes are traffic-affecting. If a facility/path is connected to a TAP in an intrusive test access mode, it is forced to go into the OOS-MT state. The forced transition could be traffic-affecting. The present state of the facility/path is stored by the NE and is restored when the TAP connection is brought down. Test access connections are dropped automatically if the TL1 session is terminated or is timed out.

Notes:

1. If there is no TAP connection, a DENY error message is returned.
2. If a requested condition already exists, a SRCN error message is returned.
3. If a requested access configuration is invalid, a SRAC error message is returned
4. If a requested TAP does not exist, a RTEN error message is returned.

Section	CHG-ACCMD-<MOD_TACC> Description
Category	Test Access
Security	Maintenance
Related Messages	CONN-TACC-<MOD_TACC> DISC-TACC RTRV-TACC

Section	CHG-ACCMD-<MOD_TACC> Description
Input Format	CHG-ACCMD-<MOD_TACC>:[<TID>]:<TAP>:<CTAG>::<MD>; where: <ul style="list-style-type: none"> <TAP> indicates the test access path number selected by the NE. The <TAP> is used to identify all messages between the TSC and NE until the access point is released. The <TAP> number must be an integer with a range of 1 to 999. <TAP> is a string <p>Note This command only changes a single TAP at a time.</p> <ul style="list-style-type: none"> <MD> indicates the test access mode (SPLTE, SPLTF, LOOPE, AND LOOPF require an external QRS input signal); valid values for <MD> are shown in the “TACC_MODE” section on page 4-91
Input Example	CHG-ACCMD-ST51:CISCO:8:123::MONE;
Errors	Errors are listed in Table 7-33 on page 7-27 .

3.4.15 CONN-TACC-<MOD_TACC>: Connect Test Access (DS1, DS3I, E1, E3, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command connects the STS or VT defined by AID to the STS specified by the TAP number. For more information on TACC, refer to the “[Test Access](#)” section on page 1-21.

For this command to be applicable, you must first create the TAP using the ED-<MOD_PATH> command. Intrusive test access modes are traffic-affecting. If a facility/path is connected to a TAP in an intrusive test access mode, it is forced to go into the OOS-MT state. The forced transition could be traffic-affecting. The present state of the facility/path is stored by the NE and is restored when the TAP connection is brought down. Test access connections are dropped automatically if the TL1 session is terminated or is timed out.

Notes:

1. If all TAPs are busy, a RABY error message is returned.
2. If a requested TAP is busy, a RTBY error message is returned.
3. If a requested TAP does not exist, a RTEN error message is returned.
4. If a circuit is already connected to another TAP, a SCAT error message is returned.
5. If a requested condition already exists, a SRCN error message is returned.
6. If the AID is invalid, an IIAC (Input, Invalid Access Identifier) error message is returned.
7. If an access is not supported, an EANS error message is returned.
8. If a requested access configuration is invalid, a SRAC error message is returned.
9. A connection can be made to a cross-connection in which case all modes of access are supported. A connection to an Unmapped AID (AID without a cross-connect on it) will allow only MONE, SPLTE, and LOOPE modes.
10. A connection to the protect path of a 1+1, 1:1, or 1:N is not allowed; however, connecting to the PCA path of a two-fiber or four-fiber is supported. This will be preempted when a BLSR switch occurs.

Section	CONN-TACC-<MOD_TACC> Description
Category	Test Access
Security	Provisioning
Related Messages	CHG-ACCMD-<MOD_TACC> DISC-TACC RTRV-TACC
Input Format	CONN-TACC-<MOD_TACC>:[<TID>]:<SRC>:<CTAG>::<TAP>:MD=<MD>; where: <ul style="list-style-type: none"> • <SRC> is the AID from the “ALL” section on page 4-9 and must not be null • <TAP> indicates the test access path number selected by the NE. The <TAP> is used to identify all messages between the TSC and the NE until the access point is released. The <TAP> number must be an integer with a range of 1 to 999. A null <TAP> defaults to an appropriate <TAP> number selected by the NE. <TAP> is an integer and a null value is equivalent to ALL • <MD> indicates the test access mode (SPLTE, SPLTF, LOOPE and LOOPF require an external QRS input signal); valid values for <MD> are shown in the “TACC_MODE” section on page 4-91. <MD> must not be null
Input Example	CONN-TACC-STS1:CISCO:STS-2-1-4:123::8:MD=MONE;
Output Format	SID DATE TIME M CTAG COMPLD “<TAP>” ; where: <ul style="list-style-type: none"> • <TAP> indicates the test access path number selected by the NE. The <TAP> is used to identify all messages between the TSC and NE until the access point is released. The <TAP> number must be an integer with a range of 1 - 999. A null <TAP> defaults to an appropriate <TAP> number selected by the NE. <TAP> is an integer
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD “8” ;
Errors	Errors are listed in Table 7-33 on page 7-27 .

3.4.16 COPY-IOSCFG: Copy IOS Config File

(Cisco ONS 15454 only)

This command supports the following types of operations on the IOS configuration file of ML-series Ethernet cards:

1. Uploading of startup IOS configuration file from the network to the node.

FTP is the only protocol allowed for uploading. When doing this operation, the SRC field must be a FTP URL string specifying the user name and password for FTP authentication, and specifying the host and the directory to locate the startup config file from the network. The DEST field must be a string of “STARTUP”.

2. Downloading of startup IOS configuration file from the node to the network.

FTP is the only protocol allowed for downloading. When doing this operation, the SRC field must be a string of "STARTUP". The DEST field must be a FTP URL string specifying the user name and password for FTP authentication, and specifying the host and the directory to store the startup config file.

Notes:

1. The IOS configuration file is unique for each ML-series card, and is specified by the SLOT number in the AID field of the command.
2. In the GNE/ENE environment, if the GNE firewall exists, the download (backup) of IOS configuration file via TL1 is not allowed. Any such attempt will receive a "Data Connection Error" from the GNE. For the upload of IOS configuration file via TL1, GNE will allow it to go through the firewall only if the file contains the header "! Cisco IOS config <text>". If the configuration file does not contain this header, GNE will block the uploading with "Data Connection Error".
3. The format of the FTP URL string used in the SRC or DEST field of the command is as follows:

In a non-firewall environment, the format of the URL should be

"FTP://[FTPUSER[:FTPPASSWORD]]@FTPHOST/PACKAGE_PATH" where:

<FTPUSER> is the userid to connect to the computer with the package file

<FTPPASSWORD> is the password used to connect to the computer with the package file

<FTPHOST> is the IP address of the computer with the package file, DNS lookup of hostnames is not supported

<PACKAGE_PATH> is the long path name to the package file



Note Note that USERID and PASSWORD are optional if the user does not need to log into the host computer. Also note that the password may be optional if the user does not need to log in. All the other portions of the URL are required, including the initial "FTP:\\" string.

In a firewall environment, the hostname should be replaced with a list of IP addresses each separated by a @ character. The first IP address should be for the machine where the package file is stored. Subsequent IP addresses should then be for firewall machines moving outwards towards the edge of the network, until the final IP address listed was the machine that outside users first access the network.

For example: if your topology is "FTPHOST <-> GNE3 <-> GNE2 <-> GNE1 <-> ENE", your FTP URL will be:

FTP://FTPUSER:FTPPASSWORD@FTPHOST@GNE3@GNE2@GNE1/PACKAGE_PATH

Section	COPY-IOSCFG Description
Category	IOS
Security	Provisioning
Related Messages	REPT EVT IOSCFG

Section	COPY-IOSCFG Description
Input Format	COPY-IOSCFG:[<TID>]:<AID>:<CTAG>::SRC=<SRC>,DEST=<DEST>; where: <ul style="list-style-type: none"> • <AID> specifies the slot number of the card where the IOS configuration file belongs and is from the AID “EQPT” section on page 4-27 • <SRC> specifies where the IOS config file is copied from and is a string • <DEST> specifies where the IOS config file is copied to and is a string
Input Example	COPY-IOSCFG::SLOT-1:CTAG::SRC=“LONG_FTP_PATH”,DEST=“STARTUP”;
Errors	Errors are listed in Table 7-33 on page 7-27.

3.4.17 COPY-RFILE: Copy RFILE

This command downloads a new software package from the location specified by the FTP URL. It is also used to backup and restore the system database.

In order to upload package files or restore databases from a host, the host must be running an FTP server application. If the host is not running an FTP server application, the command fails indicating that the NE was unable to connect to the remote IP address (host). A host can either be a PC or a workstation running an FTP Server Application.

- Userid is the userid to connect to the computer with the package file or system database.
- Password is the password used to connect to the computer with the package file or system database.



Note Both the userid and password are optional if the user does not need to log into the host computer. The password may be optional if the user does not need to log in.

- Hostname is the hostname or IP address of the computer with the package file or system database.
- Package_path is the long path name to the package file or system database.

All the other portions of the URL are required, including the initial “FTP://” string.

Example:

```
COPY-RFILE:TID:RFILE-PKG:703::TYPE=SWDL,SRC=“FTP://USERID:
PASSWORD@HOSTIP:21/DIR1/DIR2/DIR3/PACKAGE.PKG”;
```

Notes:

1. The SWDL type is used for software package uploads. The RFBU type is used for system database backups, and the RFR type is used for system database restores. The SRC input is required when the type is SWDL or RFR. The DEST input is needed when the type is RFBU. The SRC and DEST inputs cannot both be used in the same command.
2. FTP is the only allowed file transfer method.
3. The extended FTP URL syntax is required by the COPY-RFILE syntax.
4. Port number (21) is optional. 21 is the only supported Port Number. Leaving this field blank defaults to 21.

Section	COPY-RFILE Description
Category	File Transfer
Security	Superuser
Related Messages	APPLY REPT EVT FXFR
Input Format	<p>COPY-RFILE:[<TID>]:[<SRC>]:<CTAG>::TYPE=<XFERTYPE>, [SRC=<SRC1>],[DEST=<DEST>],[OVWRT=<OVWRT>],[FTTD=<FTTD>];</p> <p>where:</p> <ul style="list-style-type: none"> • <SRC> is the type of file being transferred; <SRC> is the AID from the “RFILE” section on page 4-31 • <XFERTYPE> is the file transfer protocol; valid values for <XFERTYPE> are shown in the “TX_TYPE” section on page 4-95 • <SRC1> specifies the source of the file to be transferred. Only the FTP URL is supported. In a non-firewall environment the format of the URL should be: “FTP://FTP_USER[:FTP_PASSWORD]]@FTP_HOST_IP[:21]/PACKAGE_PATH[:TYPE=I]” where: <ul style="list-style-type: none"> – <FTP_USER> is the userid to connect to the computer with the package file – <FTP_PASSWORD> is the password used to connect to the computer with the package file – <FTP_HOST_IP> is the IP address of the computer with the package file, DNS lookup of hostnames is not supported – <PACKAGE_PATH> is the long path name to the package file <p>Note Userid and password are optional if the user does not need to log into the host computer. The password may be optional if the user does not need to log in. All the other portions of the URL are required, including the initial “FTP://” string.</p> <p>In a firewall environment, the hostname should be replaced with a list of IP addresses each separated by a @ character. The first IP address should be for the machine where the package file is stored. Subsequent IP addresses should then be for firewall machines moving outwards towards the edge of the network, until the final IP address listed is the machine that outside users first access the network.</p>
Input Format (continued)	<p>For example, if the topology is “FTP_HOST_IP <-> GNE3 <-> GNE2 <-> GNE1 <-> ENE”, the FTP URL is:</p> <p>FTP://FTP_USER:FTP_PASSWORD@FTP_HOST_IP@GNE3@GNE2@GNE1/PACKAGE_PATH</p> <p><SRC1> is a string.</p> <ul style="list-style-type: none"> • <DEST> specifies the destinations of the file to be transferred. Same values as <SRC1> above. • <FTTD> the node does not support FTTD. If <FTTD> is used, the COPY-RFILE command will fail with and “FTTD Unsupported” error. <FTTD> is a string

Section	COPY-RFILE Description
Input Example	COPY-RFILE:HERNDON:RFILE-PKG:703::TYPE=SWDL, SRC="LONG_FTP_PATH",DEST="LONG_FTP_PATH",OVWRT=YES, FTTD="UNUSED";
Errors	Errors are listed in Table 7-33 on page 7-27 .

3.4.18 DISC-TACC: Disconnect Test Access

This command disconnects the TAP and puts the connection back to its original state (no splits). For more information on TACC, refer to the [“Test Access” section on page 1-21](#).

For this command to be applicable, you must first create the TAP using the ED-<MOD_PATH> command.

Notes:

1. If you send this command to an already disconnected connection, a SADC error message is returned.
2. If the system cannot release TAP, an SRTN error message is returned.

Section	DISC-TACC Description
Category	Test Access
Security	Provisioning
Related Messages	CHG-ACCMD-<MOD_TACC> CONN-TACC-<MOD_TACC> RTRV-TACC
Input Format	DISC-TACC:[<TID>]:<TAP>:<CTAG>; where: <ul style="list-style-type: none"> • <TAP> indicates the test access path number; <TAP> must be an integer with a range of 1- 999. <TAP> is a string <p>Note This command only supports disconnecting one <TAP> at a time.</p>
Input Example	DISC-TACC:CISCO:8:123;
Errors	Errors are listed in Table 7-33 on page 7-27 .

3.4.19 DLT-<MOD_RING>: Delete (BLSR)

This command deletes the BLSR of the NE.



Note

ONS 15327 does not support four-fiber BLSR.

Error conditions:

1. If the system fails on getting IOR, a SROG (Status, Get IOR Failed) error message is returned.
2. If the AID is invalid, an IIAC (Invalid AID) error message is returned.
3. If the BLSR does not exist, a SRQN (BLSR Does Not Exist) error message is returned.
4. The ALL AID is invalid for this command.

5. The list AID format is supported in this release (R4.6).
6. The SROF (Facility Not Provisioned) or (Cannot Access BLSR) error message will be returned for the invalid query.
7. If the BLSR is in use, a SROF (BLSR In Use) error message is returned.
8. The SRQN (BLSR Deletion Failed) error message is returned for the invalid deletion query.

Section	DLT-<MOD_RING> Description
Category	BLSR
Security	Provisioning
Related Messages	ED-<MOD_RING> RTRV-<MOD_RING> ENT-<MOD_RING>
Input Format	DLT-<MOD_RING>:[<TID>]:<AID>:<CTAG>[:::]; where: <ul style="list-style-type: none"> • <AID> identifies the BLSR of the NE. “ALL” or “BLSR-ALL” AID is not allowed for editing BLSR. <AID> is the AID from the “AidUnionId” section on page 4-15
Input Example	DLT-BLSR:PETALUMA:BLSR-2:123;
Errors	Errors are listed in Table 7-33 on page 7-27 .

3.4.20 DLT-CRS-<PATH>: Delete Cross Connection (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C, VT1, VT2)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command deletes a cross-connection between STS and VT paths. STS paths are specified using their STS AID.

Notes:

1. The fields after CTAG (trailing colons) are optional.
2. For the 1-way cross-connections the AIDs must be in the same order as originally entered; for the 2-way cross-connections, either order will work.
3. This command does not support deleting multiple STS cross-connections.
4. Using “&” in the AID field of this command can delete an path protection STS cross-connection.
 - a. The following command is used to delete a 1-way selector or 2-way selector and bridge with:
 - from points: F1, F2
 - to points: T1
 - DLT-CRS-{STS_PATH};[<TID>]:F1&F2,T1:<CTAG>;
 - b. The following command is used to delete a 1-way bridge or 2-way selector and bridge with:
 - from point: F1
 - to points: T1, T2
 - DLT-CRS-{STS_PATH};[<TID>]:F1,T1&T2:<CTAG>;

- c. The following command is used to delete a 1-way or 2-way subtending path protection connection with:
- from point: F1, F2
- to points: T1, T2
- ```
DLT-CRS-{STS_PATH}:[<TID>]:F1&F2,T1&T2:<CTAG>;
```
- d. The AID format in the deletion command is the same as the AID format in the retrieved response message. For example, if the output of any retrieved AID is “F1&F2,T1:CCT,STS3C”, the deletion command with the AID format (F1&F2,T1) is required to delete this cross-connection.
- e. The following command is used to create a path protection IDRI Cross-Connection:
- ```
ENT-CRS-{STS_PATH}:[<TID>]:A&B,C&D:<CTAG>::2WAYDC;
```
- A–Path on ring X to which traffic from ring Y is bridged
- B–Path on ring X to which traffic from the same ring is bridged
- C–Path on ring Y to which traffic from ring X is bridged
- D–Path on ring Y to which traffic from the same ring is bridged
- A, B, C, and D have a positional meaning. Connection type 2WAYDC is used for path protection IDRI cross-connections.
- f. The following command is used to create a path protection DRI Cross-Connection:
- ```
ENT-CRS-{STS_PATH}:[<TID>]:A&B,C:<CTAG>::2WAYDC;
```
- A–Path on ring X to which traffic from ring Y is bridged
- B–Path on ring X to which traffic from the same ring is bridged
- C–Traffic to and from ring Y
- A, B, C, and D have a positional meaning. Connection type 2WAYDC is used for path protection DRI cross-connections.
5. All A&B AIDs in the TL1 cross-connection command are in the format of WorkingAID&ProtectAID.
  6. You can experience some implementation behavior problems if additional drops have been added to the connection object.
  7. The facility AID is only valid for slots holding the G1000-4 card.
  8. The virtual facility AID (VFAC) is only valid on slots holding an ML-series card.
  9. A TL1 cross-connect that has been upgraded to a CTC circuit can no longer be managed by TL1. For example, if you issue a DLT-CRS-<PATH> command to delete a circuit, you will see that the circuit still appears in CTC as “incomplete”. The reason for this is because in addition to creating cross-connects (as TL1 does), CTC creates another object on the source node that stores network-level circuit attributes. CTC will continue to see that object after the cross-connect is deleted which is why it shows an incomplete circuit.

| Section          | DLT-CRS-<PATH> Description      |                             |
|------------------|---------------------------------|-----------------------------|
| Category         | Cross Connections               |                             |
| Security         | Provisioning                    |                             |
| Related Messages | ED-CRS-<PATH><br>ENT-CRS-<PATH> | RTRV-CRS<br>RTRV-CRS-<PATH> |

| Section       | DLT-CRS-<PATH> Description                                                                                                                                                                                                                                            |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | DLT-CRS-<PATH>:[<TID>]:<SRC>,<DST>:<CTAG>[::];<br>where: <ul style="list-style-type: none"> <li>• &lt;SRC&gt; is the AID from the “CrossConnectId1” section on page 4-23</li> <li>• &lt;DST&gt; is the AID from the “CrossConnectId1” section on page 4-23</li> </ul> |
| Input Example | DLT-CRS-ST512C:VINBURG:STS-1-1-1,STS-12-1-1:102;                                                                                                                                                                                                                      |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                        |

### 3.4.21 DLT-EQPT: Delete Equipment

This command deletes a card from the NE.

This command removes the card type and attributes that were entered for a particular slot. If any facilities are assigned, they are deleted too. The command will be denied if the card is part of a protection group or has a cross-connect end-point.

To delete a card that is part of a protection group, it has to be removed from the protection group first using the ED-EQPT command.

Error conditions for deleting equipment may be:

1. If a card in a protection group that has a cross-connection, DCC or is a synchronization source, the SPLD (Equipment in use) error message will be returned.
2. If a card is not provisioned, an error message will be returned.

| Section            | DLT-EQPT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |               |                    |               |                  |                 |         |                |          |           |               |                |                    |            |                  |                 |               |               |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|--------------------|---------------|------------------|-----------------|---------|----------------|----------|-----------|---------------|----------------|--------------------|------------|------------------|-----------------|---------------|---------------|
| Category           | Equipment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |               |                    |               |                  |                 |         |                |          |           |               |                |                    |            |                  |                 |               |               |
| Security           | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |               |               |                    |               |                  |                 |         |                |          |           |               |                |                    |            |                  |                 |               |               |
| Related Messages   | <table> <tbody> <tr> <td>ALW-SWDX-EQPT</td> <td>REPT EVT EQPT</td> </tr> <tr> <td>ALW-SWTOPROTN-EQPT</td> <td>RTRV-ALM-EQPT</td> </tr> <tr> <td>ALW-SWTOWKG-EQPT</td> <td>RTRV-ALMTH-EQPT</td> </tr> <tr> <td>ED-EQPT</td> <td>RTRV-COND-EQPT</td> </tr> <tr> <td>ENT-EQPT</td> <td>RTRV-EQPT</td> </tr> <tr> <td>INH-SWDX-EQPT</td> <td>SET-ALMTH-EQPT</td> </tr> <tr> <td>INH-SWTOPROTN-EQPT</td> <td>SW-DX-EQPT</td> </tr> <tr> <td>INH-SWTOWKG-EQPT</td> <td>SW-TOPROTN-EQPT</td> </tr> <tr> <td>REPT ALM EQPT</td> <td>SW-TOWKG-EQPT</td> </tr> </tbody> </table> | ALW-SWDX-EQPT | REPT EVT EQPT | ALW-SWTOPROTN-EQPT | RTRV-ALM-EQPT | ALW-SWTOWKG-EQPT | RTRV-ALMTH-EQPT | ED-EQPT | RTRV-COND-EQPT | ENT-EQPT | RTRV-EQPT | INH-SWDX-EQPT | SET-ALMTH-EQPT | INH-SWTOPROTN-EQPT | SW-DX-EQPT | INH-SWTOWKG-EQPT | SW-TOPROTN-EQPT | REPT ALM EQPT | SW-TOWKG-EQPT |
| ALW-SWDX-EQPT      | REPT EVT EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |               |                    |               |                  |                 |         |                |          |           |               |                |                    |            |                  |                 |               |               |
| ALW-SWTOPROTN-EQPT | RTRV-ALM-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |               |                    |               |                  |                 |         |                |          |           |               |                |                    |            |                  |                 |               |               |
| ALW-SWTOWKG-EQPT   | RTRV-ALMTH-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |               |                    |               |                  |                 |         |                |          |           |               |                |                    |            |                  |                 |               |               |
| ED-EQPT            | RTRV-COND-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |               |                    |               |                  |                 |         |                |          |           |               |                |                    |            |                  |                 |               |               |
| ENT-EQPT           | RTRV-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |               |                    |               |                  |                 |         |                |          |           |               |                |                    |            |                  |                 |               |               |
| INH-SWDX-EQPT      | SET-ALMTH-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |               |                    |               |                  |                 |         |                |          |           |               |                |                    |            |                  |                 |               |               |
| INH-SWTOPROTN-EQPT | SW-DX-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |               |               |                    |               |                  |                 |         |                |          |           |               |                |                    |            |                  |                 |               |               |
| INH-SWTOWKG-EQPT   | SW-TOPROTN-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |               |                    |               |                  |                 |         |                |          |           |               |                |                    |            |                  |                 |               |               |
| REPT ALM EQPT      | SW-TOWKG-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |               |                    |               |                  |                 |         |                |          |           |               |                |                    |            |                  |                 |               |               |
| Input Format       | DLT-EQPT:[<TID>]:<AID>:<CTAG>[::];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the equipment unit (slot) to act on and is the AID from the “EQPT” section on page 4-27</li> </ul>                                                                                                                                                                                                                                                                                                                                                                |               |               |                    |               |                  |                 |         |                |          |           |               |                |                    |            |                  |                 |               |               |
| Input Example      | DLT-EQPT:SONOMA:SLOT-1:104;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               |               |                    |               |                  |                 |         |                |          |           |               |                |                    |            |                  |                 |               |               |
| Errors             | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |               |                    |               |                  |                 |         |                |          |           |               |                |                    |            |                  |                 |               |               |



### 3.4.22 DLT-FFP-<OCN\_TYPE>: Delete Facility Protection Group (OC3, OC12, OC48, OC192)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command deletes an OCN facility protection group in a 1+1 architecture.



**Note**

If the protection group does not exist, an error message will be returned.

| Section          | DLT-FFP-<OCN_TYPE> Description                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Facility Protection                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Related Messages | DLT-FFP-CLNT                                    OPR-PROTNSW-<OCN_TYPE><br>ED-FFP-<OCN_TYPE>                              RLS-PROTNSW-<OCN_TYPE><br>ED-FFP-CLNT                                      RTRV-FFP-<OCN_TYPE><br>ED-FFP-OCH                                        RTRV-FFP-CLNT<br>ENT-FFP-<OCN_TYPE>                             RTRV-FFP-OCH<br>ENT-FFP-CLNT                                    RTRV-PROTNSW-<OCN_TYPE> |
| Input Format     | DLT-FFP-<OCN_TYPE>:[<TID>]:<WORK>,<PROTECT>:<CTAG>[:::];<br>where: <ul style="list-style-type: none"> <li>• &lt;WORK&gt; identifies the working facility and is the AID from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;PROTECT&gt; identifies the protect facility and is the AID <a href="#">“FACILITY” section on page 4-28</a></li> </ul>                                                                |
| Input Example    | DLT-FFP-OC3:PETALUMA:FAC-2-1,FAC-1-1:1;                                                                                                                                                                                                                                                                                                                                                                                              |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                       |

### 3.4.23 DLT-FFP-CLNT: Delete Facility Protection Group Client

(Cisco ONS 15454 only)

This command deletes Y cable protection on client facilities.

| Section  | DLT-FFP-CLNT Description |
|----------|--------------------------|
| Category | DWDM                     |
| Security | Provisioning             |

| Section          | DLT-FFP-CLNT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | DLT-FFP-<OCN_TYPE>                    OPR-PROTNSW-OCH<br>DLT-LNK-<MOD2O>                        RLS-LASER-OTS<br>ED-CLNT                                    RLS-PROTNSW-<OCN_TYPE><br>ED-DWDM                                   RLS-PROTNSW-CLNT<br>ED-FFP-<OCN_TYPE>                       RLS-PROTNSW-OCH<br>ED-FFP-CLNT                              RTRV-CLNT<br>ED-FFP-OCH                                RTRV-DWDM<br>ED-LNK-<MOD2O>                           RTRV-FFP-<OCN_TYPE><br>ED-OCH                                      RTRV-FFP-CLNT<br>ED-OMS                                     RTRV-FFP-OCH<br>ED-OTS                                     RTRV-LNK-<MOD2O><br>ED-TRC-CLNT                              RTRV-OCH<br>ED-TRC-OCH                               RTRV-OMS<br>ENT-FFP-<OCN_TYPE>                       RTRV-OTS<br>ENT-FFP-CLNT                              RTRV-PROTNSW-<OCN_TYPE><br>ENT-LNK-<MOD2O>                           RTRV-PROTNSW-CLNT<br>OPR-LASER-OTS                            RTRV-PROTNSW-OCH<br>OPR-PROTNSW-<OCN_TYPE>                   RTRV-TRC-CLNT<br>OPR-PROTNSW-CLNT                        RTRV-TRC-OCH |
| Input Format     | DLT-FFP-CLNT:[<TID>]:<WORKAID>,<PROTAID>:<CTAG>[:::];<br>where: <ul style="list-style-type: none"> <li>• &lt;WORKAID&gt; identifies the working facility and is the AID from the “FACILITY” section on page 4-28</li> <li>• &lt;PROTECTAID&gt; identifies the protect facility and is the AID “FACILITY” section on page 4-28</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Input Example    | DLT-FFP-CLNT:CISCO:FAC-1-1,FAC-2-1:100;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### 3.4.24 DLT-LNK-<MOD2O>: Delete Optical Link (OCH, OMS, OTS)

(Cisco ONS 15454 only)

This command deletes an optical link between two optical connection points. Optical link is specified by using the AID of the involved Optical Connection points.

| Section  | DLT-LNK-<MOD2O> Description |
|----------|-----------------------------|
| Category | DWDM                        |
| Security | Provisioning                |

| Section          | DLT-LNK-<MOD2O> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | DLT-FFP-CLNT<br>ED-CLNT<br>ED-DWDM<br>ED-FFP-CLNT<br>ED-FFP-OCH<br>ED-LNK-<MOD2O><br>ED-OCH<br>ED-OMS<br>ED-OTS<br>ED-TRC-CLNT<br>ED-TRC-OCH<br>ENT-FFP-CLNT<br>ENT-LNK-<MOD2O><br>OPR-LASER-OTS<br>OPR-PROTNSW-CLNT<br>OPR-PROTNSW-OCH<br>RLS-LASER-OTS<br>RLS-PROTNSW-CLNT<br>RLS-PROTNSW-OCH<br>RTRV-CLNT<br>RTRV-DWDM<br>RTRV-FFP-CLNT<br>RTRV-FFP-OCH<br>RTRV-LNK-<MOD2O><br>RTRV-OCH<br>RTRV-OMS<br>RTRV-OTS<br>RTRV-PROTNSW-CLNT<br>RTRV-PROTNSW-OCH<br>RTRV-TRC-CLNT<br>RTRV-TRC-OCH |
| Input Format     | DLT-LNK-<MOD2O>:[<TID>]:<FROM>,<TO>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>• &lt;FROM&gt; indicates an identifier at one end of the optical link and is the AID from the “BAND” section on page 4-18</li> <li>• &lt;TO&gt; indicates an identifier at the other end of the optical link and is the AID from the “BAND” section on page 4-18.</li> </ul>                                                                                                                    |
| Input Example    | DLT-LNK-OMS:PENNGROVE:BAND-6-1-TX,BAND-13-1-RX:114;                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Errors           | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                |

### 3.4.25 DLT-OSC: Delete OSC

(Cisco ONS 15454 only)

This command deletes the OSC group of the NE.

| Section          | DLT-OSC Description                                                                                                                                                                  |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | DWDM                                                                                                                                                                                 |
| Security         | Provisioning                                                                                                                                                                         |
| Related Messages | ENT-OSC<br>ED-OSC<br>RTRV-OSC                                                                                                                                                        |
| Input Format     | DLT-OSC:[<TID>]:<AID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies the OSC group of the NE and is the AID “OSC” section on page 4-30</li> </ul> |
| Input Example    | DLT-OSC:PENNGROVE:OSC-1:114;                                                                                                                                                         |
| Errors           | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                        |

## 3.4.26 DLT-UCP-CC: Delete Unified Control Plane Control Channel

(Cisco ONS 15454 only)

This command deletes a UCP IP control channel.

1. If you send this command to a control channel that is in use, a SRQN (Status, Invalid Request) error message is returned.
2. If sending this command to delete an SDCC IPCC with a complete result, the SDCC of the specified SONET line is deleted (or disabled) automatically with a DB change reporting (if the DB change report is enabled).
3. If sending this command to delete an IPCC which is in use by a UCP Interface, an SROF (Delete UCP IPCC Failed - Object Is In Use) error message is returned.

| Section          | DLT-UCP-CC Description                                                                                                                                                                                                                                             |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | UCP                                                                                                                                                                                                                                                                |
| Security         | Provisioning                                                                                                                                                                                                                                                       |
| Related Messages | DLT-UCP-IF REPT EVT UCP<br>DLT-UCP-NBR RTRV-ALM-UCP<br>ED-UCP-CC RTRV-CKT-ORIG<br>ED-UCP-IF RTRV-CKT-TERM<br>ED-UCP-NBR RTRV-COND-UCP<br>ED-UCP-NODE RTRV-UCP-CC<br>ENT-UCP-CC RTRV-UCP-IF<br>ENT-UCP-IF RTRV-UCP-NBR<br>ENT-UCP-NBR RTRV-UCP-NODE<br>REPT ALM UCP |
| Input Format     | DLT-UCP-CC:[<TID>]:<AID>:<CTAG>[::::];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates an individual IPCC ID; &lt;AID&gt; is the AID from the <a href="#">“IPCC” section on page 4-29</a></li> </ul>                                      |
| Input Example    | DLT-UCP-CC:CISCO:CC-9:CTAG;                                                                                                                                                                                                                                        |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                     |

## 3.4.27 DLT-UCP-IF: Delete Unified Control Plane Interface

This command deletes a UCP interface.



### Note

If the UCP interface is not found or in use, a SRQN (Status, Invalid Request) error message is returned.

| Section  | DLT-UCP-IF Description |
|----------|------------------------|
| Category | UCP                    |
| Security | Provisioning           |

| Section          | DLT-UCP-IF Description                                                                                                                                                                                                               |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | DLT-UCP-CC REPT ALM UCP<br>DLT-UCP-NBR REPT EVT UCP<br>ED-UCP-CC RTRV-ALM-UCP<br>ED-UCP-IF RTRV-COND-UCP<br>ED-UCP-NBR RTRV-UCP-CC<br>ED-UCP-NODE RTRV-UCP-IF<br>ENT-UCP-CC RTRV-UCP-NBR<br>ENT-UCP-IF RTRV-UCP-NODE<br>ENT-UCP-NBR  |
| Input Format     | DLT-UCP-IF:[<TID>]:<AID>:<CTAG>[:::];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates the interface port index of the data link; &lt;AID&gt; is the AID from the “FACILITY” section on page 4-28</li> </ul> |
| Input Example    | DLT-UCP-IF:CISCO:FAC-2-1:CTAG;                                                                                                                                                                                                       |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                       |

### 3.4.28 DLT-UCP-NBR: Delete Unified Control Plane Neighbor

This command deletes a UCP neighbor.

Notes:

1. If the neighbor is in use, an SRQN (Status, Invalid Request) error message is returned.
2. If sending this command to delete a neighbor which is in use by IPCC, an SROF (Delete UCP neighbor Failed - Object Is In Use) error message is returned.

| Section          | DLT-UCP-NBR Description                                                                                                                                                                                                            |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | UCP                                                                                                                                                                                                                                |
| Security         | Provisioning                                                                                                                                                                                                                       |
| Related Messages | DLT-UCP-CC REPT ALM UCP<br>DLT-UCP-IF REPT EVT UCP<br>ED-UCP-CC RTRV-ALM-UCP<br>ED-UCP-IF RTRV-COND-UCP<br>ED-UCP-NBR RTRV-UCP-CC<br>ED-UCP-NODE RTRV-UCP-IF<br>ENT-UCP-CC RTRV-UCP-NBR<br>ENT-UCP-IF RTRV-UCP-NODE<br>ENT-UCP-NBR |
| Input Format     | DLT-UCP-NBR:[<TID>]:<AID>:<CTAG>[:::];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates an individual neighbor AID of the UCP; &lt;AID&gt; is the AID from the “NBR” section on page 4-30</li> </ul>       |
| Input Example    | DLT-UCP-NBR:CISCO:NBR-8:CTAG;                                                                                                                                                                                                      |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                     |

### 3.4.29 DLT-USER-SECU: Delete User Security

This command deletes a user and can only be performed by a Superuser. Privilege levels are described in the ENT-USER-SECU command.

This command cannot be used to delete a user that is currently logged on.

For the DLT-USER-SECU command:

DLT-USER-SECU:[TID]:<UID>:[CTAG];

the syntax of <UID> is not checked. The user is deleted if the <UID> exists in the database.

| Section          | DLT-USER-SECU Description                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Security                                                                                                                                                                                                                                                                                                                                                                                                           |
| Security         | Superuser                                                                                                                                                                                                                                                                                                                                                                                                          |
| Related Messages | ACT-USER<br>ALW-MSG-SECU<br>ALW-USER-SECU<br>CANC-USER<br>CANC-USER-SECU<br>ED-CMD-SECU<br>ED-PID<br>ED-USER-SECU<br>ENT-USER-SECU<br>INH-MSG-SECU<br>INH-USER-SECU<br>REPT ALM SECU<br>REPT EVT SECU<br>REPT EVT SESSION<br>RTRV-CMD-SECU<br>RTRV-DFLT-SECU<br>RTRV-USER-SECU<br>SET-ATTR-SECUDFLT                                                                                                                |
| Input Format     | DLT-USER-SECU:[<TID>]:<UID>:[<CTAG>];<br>where: <ul style="list-style-type: none"> <li>&lt;UID&gt; is the user identifier and is a string; &lt;UID&gt; is any combination of up to 10 alphanumeric characters</li> </ul> <p><b>Note</b> CTC allows &lt;UID&gt; and &lt;PID&gt; of up to 20 characters. The 20 character CTC-entered &lt;UID&gt; and &lt;PID&gt; are not valid TL1 &lt;UID&gt; and &lt;PID&gt;.</p> |
| Input Example    | DLT-USER-SECU:PETALUMA:CISCO15:123;                                                                                                                                                                                                                                                                                                                                                                                |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                     |

### 3.4.30 DLT-VCG: Delete Virtual Concatenated Group

(Cisco ONS 15454 only)

This command deletes a VCG object.

| Section          | DLT-VCG Description |
|------------------|---------------------|
| Category         | VCAT                |
| Security         | Provisioning        |
| Related Messages | ENT-VCG<br>RTRV-VCG |

| Section       | DLT-VCG Description                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | DLT-VCG:[<TID>]:<SRC>:<CTAG>:::[CMDMDE=<CMDMDE>][:];<br>where: <ul style="list-style-type: none"> <li>• &lt;SRC&gt; AID to address the VCG from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;CMDMDE&gt; command mode. FRCD deletes all the VCG members and member cross-connects of a VCG; valid values are shown in the <a href="#">“CMD_MODE” section on page 4-54</a></li> </ul> |
| Input Example | DLT-VCG:NODE1:FAC-1-1:1234:::CMDMDE=FRCD;                                                                                                                                                                                                                                                                                                                                                                 |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                            |

### 3.4.31 DLT-WLEN: Delete Wavelength

(Cisco ONS 15454 only)

This command deletes the provisioned wavelength (WLEN).

Note:

1. The fields after CTAG (trailing colons) are the optional.
2. This command does not support multiple deleting WLEN provisioning.

| Section          | DLT-WLEN Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Related Messages | ENT-WLEN<br>ED-WLEN<br>RTRV-WLEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Input Format     | DLT-WLEN:[<TID>]:<AID>:<CTAG>[:::CMDMDE=<CMDMDE>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the wavelength AID per ring direction from the <a href="#">“WLEN” section on page 4-37</a></li> <li>• &lt;CMDMDE&gt; indicates the command execution mode. There are two options: NORM for normal (default), and FRCD for forced. Forced will override any safeguards that normally reject a request to delete an In Service resource. Valid values are shown in the <a href="#">“CMD_MODE” section on page 4-54</a></li> </ul> |
| Input Example    | DLT-WLEN:PENNGROVE:WLEN-W_E-1530.33:114:::CMDMDE=NORM;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### 3.4.32 ED-<MOD\_PATH>: Edit (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C, VT1, VT2)

This command edits the attributes associated with STS and VT paths.

The SFBER, SDBER, RVRTV, and RVTM parameters only apply to path protection.

The path trace message is a 64 character string including the terminating CR (carriage return) and LF (line feed) that is transported in the J1 byte of the SONET STS Path overhead. Both the EXPTRC and TRC string can be provisioned by user with up to 62 character string.

The EXPTRC indicates the contents of the expected incoming path trace are provisioned by the user. The TRC indicates the contents of the outgoing path trace message. The INCTRC indicates the contents of the incoming path trace message.

The path trace mode has three modes: OFF, MANUAL, and AUTO. The path trace mode defaults to OFF. The MANUAL mode performs the comparison of the received string with the user-entered expected string. The AUTO mode performs the comparison of the present received string with an expected string set to a previously received string. If there is a mismatch, TIM-P alarm is raised. When the path trace mode is in OFF mode, there is no path trace processing, and all the alarm and state conditions are reset.

The TACC parameter edits an existing single STS or VT and changes it to a test access point. When an editing command on TACC is executed, it assigns the STS for the first 2-way connection and STS=1 as the second 2-way connection. For STS3C and STS12C, the next available STS of the same width is chosen. For more information on TACC, refer to the [“Test Access” section on page 1-21](#).

J1 is implemented on the DS1/DS1N, DS3E/DS3NE, DS3XM, EC1, OC3, OC12, OC48AS and OC192 cards.

DS3/DS3N, OC48, E100, and E1000 cards do not support path trace.

DS1/DS1N, DS3E/DS3NE, and DS3XM support both TRC and EXPTRC in the ED-STSPATH command.

EC1, OC3, OC48AS, and OC192 only support EXPTRC in the ED-STSPATH command.


**Note**

Each TL1 command must be less than or equal to 255 characters. Any command larger than 255 characters must be split into multiple commands. For example, if you use the ED-<MOD\_PATH> command to edit the J1 EXPTRC/TRC message, path protection attributes, and TACC attributes and the command exceeds 255 characters the command will not be processed. You must use multiple ED-<MOD\_PATH> commands instead.

Error conditions:

1. If sending this command to edit SFBER or SDBER or RVRTV or RVTM for the non-path protection STS path, an error message will be returned.
2. If sending this command to edit the EXPTRC string with the AUTO path trace mode (TRCMODE=AUTO), an error message will be returned.
3. If sending this command to edit TRC on any card other than DS3(N)E, DS1(N), and DS3XM cards, an error message (TRC-not allowed for monitor paths. Incorrect card type.) will be returned.
4. This command is allowed to edit EXPTRC on DS1(N), DS3(N)E, DS3XM, EC1, OC3, OC48AS, and OC192 cards.
5. If sending this command to edit both TACC and any other attribute(s), the (Parameters Not compatible) error message will be returned.
6. If sending this command to edit TACC on an AID with cross-connections, an error message (STS in Use) will be returned.
7. TACC creation will also be denied on the protect ports/cards for 1:1, 1:N, and 1+1.
8. The VFAC AID is only valid on slots containing an ML1000-2 or ML100T-12 card. TACC is not supported for the ML1000-2 or ML100T-12 cards.



9. After the BLSR switching, provisioning of the J1 trace string or trace mode is not allowed on the protection path.
10. TACC creation is allowed on PCA for two-fiber and four-fiber BLSR.
11. TACC is not supported on G1000, MXP\_2.5\_10G/TXP\_MR-10G, ML1000-2 and ML100T-12 cards.
12. HOLDOFFTIMER is not specific to a path. It is applicable to the path protection selector. If HOLDOFFTIMER is changed on one path associated with the selector, the HOLDOFFTIMER of the other path associated with the same selector is also changed.

| Section          | ED-<MOD_PATH> Description |
|------------------|---------------------------|
| Category         | Paths                     |
| Security         | Provisioning              |
| Related Messages | —                         |

| Section      | ED-<MOD_PATH> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format | <p data-bbox="537 260 1362 422">ED-&lt;MOD_PATH&gt;:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;:::[SFBER=&lt;SFBER&gt;],[SDBER=&lt;SDBER&gt;],[RVRTV=&lt;RVRTV&gt;],[RVTM=&lt;RVTM&gt;],[SWPDIP=&lt;SWPDIP&gt;],[HOLDOFFTIMER=&lt;HOLDOFFTIMER&gt;],[EXPTRC=&lt;EXPTRC&gt;],[TRC=&lt;TRC&gt;],[TRCMODE=&lt;TRCMODE&gt;],[TACC=&lt;TACC&gt;],[TAPTYPE=&lt;TAPTYPE&gt;]:[&lt;PST&gt;],[&lt;SST&gt;];</p> <p data-bbox="537 436 613 464">where:</p> <ul data-bbox="537 478 1362 1917" style="list-style-type: none"> <li data-bbox="537 478 1362 541">• &lt;AID&gt; is the access identifier from the “<a href="#">CrossConnectId1</a>” section on page 4-23</li> <li data-bbox="537 556 1362 653">• &lt;SFBER&gt; identifies an STS path SFBER which only applies to path protection; valid values for &lt;SFBER&gt; are shown in the “<a href="#">SF_BER</a>” section on page 4-86</li> <li data-bbox="537 667 1362 764">• &lt;SDBER&gt; identifies an STS path SDBER which only applies to path protection; valid values for &lt;SDBER&gt; are shown in the “<a href="#">SD_BER</a>” section on page 4-85</li> <li data-bbox="537 779 1362 875">• &lt;RVRTV&gt; identifies a revertive mode which only applies to path protection; valid values for &lt;RVRTV&gt; are shown in the “<a href="#">ON_OFF</a>” section on page 4-76</li> <li data-bbox="537 890 1362 1010">• &lt;RVTM&gt; identifies a revertive time which only applies to path protection; valid values for &lt;RVTM&gt; are shown in the “<a href="#">REVERTIVE_TIME</a>” section on page 4-84. &lt;RVTM&gt; is not allowed to be set while &lt;RVRTV&gt; is N.</li> <li data-bbox="537 1024 1362 1121">• &lt;SWPDIP&gt; On-Off switch for path protection Payload Defect Level switching. Valid values for &lt;SWPDIP&gt; are shown in the “<a href="#">ON_OFF</a>” section on page 4-76</li> <li data-bbox="537 1136 1362 1232">• &lt;HOLDOFFTIMER&gt; Hold-off timer for path protection DRI. Values must be within 0 and 10000 milliseconds (0 to 10 seconds) with increments of 100 milliseconds; &lt;HOLDOFFTIMER&gt; is an integer</li> <li data-bbox="537 1247 1362 1344">• &lt;EXPTRC&gt; indicates the expected path trace message (J1) contents. The EXPTRC is any 64 character string, including the terminating CR (carriage return) and LF (line feed); &lt;EXPTRC&gt; is a string</li> <li data-bbox="537 1358 1362 1514">• &lt;TRC&gt; identifies the path trace message to be transmitted. The TRC is any combination of 64 characters, including the terminating CR and LF. The trace byte (J1) continuously transmits a 64 byte string, one byte at a time. A null value defaults to the NE transmitting null characters (Hex 00); &lt;TRC&gt; is a string</li> <li data-bbox="537 1528 1362 1625">• &lt;TRCMODE&gt; indicates the path trace mode, and defaults to the OFF mode; valid values for &lt;TRCMODE&gt; are shown in the “<a href="#">TRCMODE</a>” section on page 4-94</li> <li data-bbox="537 1640 1362 1696">• &lt;TACC&gt; is the TAP number in a range of 0 to 999. When TACC is 0 (zero), the TAP is deleted.</li> <li data-bbox="537 1711 1362 1768">• &lt;TAPTYPE&gt; is the TAP type and valid values are shown in the “<a href="#">TAPTYPE</a>” section on page 4-92; &lt;TAPTYPE&gt; defaults to Dual</li> <li data-bbox="537 1782 1362 1839">• &lt;PST&gt; is the primary state; valid values for &lt;PST&gt; are shown in the “<a href="#">PST</a>” section on page 4-83</li> <li data-bbox="537 1854 1362 1911">• &lt;SST&gt; is the secondary state; valid values for &lt;SST&gt; are shown in the “<a href="#">SST</a>” section on page 4-86</li> </ul> |

| Section       | ED-<MOD_PATH> Description                                                                                                                                                              |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Example | ED-STS3C:FERNDAL:STS-2-1-4:115::SFBER=1E-3,SDBER=1E-5, RVRTV=Y,RVTM=1.0,SWPDIP=Y,HOLDOFFTIMER=2000, EXPTRC="EXPTRCSTRING",TRC="TRCSTRING", TRCMODE=OFF,TACC=8,TAPTYPE=SINGLE:OOS,AINS; |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                         |

### 3.4.33 ED-<MOD\_RING>: Edit Bidirectional Line Switched Ring

This command edits the BLSR attributes.

Notes:

1. ONS 15327 does not support four-fiber BLSR.
2. Only the RVRTV, RVTM, SRVRTV, SRVTM attributes can be edited for the 4-Fiber BLSR.
3. Only the RVRTV and RVTM attributes can be edited for the 2-Fiber BLSR.

Error conditions:

1. If the system fails on getting IOR, a SDBE (Status, Internal Data Base Error) error message will be returned.
2. If the AID is invalid, an IIAC (Invalid AID) error message is returned.
3. If the BLSR does not exist, a SRQN (BLSR Does Not Exist) error message is returned.
4. The ALL AID is invalid for this command.
5. The list AID format is supported in this release (R4.6).
6. The SROF (Facility Not Provisioned) or Cannot Access BLSR) error message will be returned for the invalid query.
7. The SRQN (BLSR Edition Failed) error message is returned for the invalid edition query.
8. If sending this command to modify SRVRTV or SRVTM on a two-fiber BLSR, an IDNV (Invalid Data For 2F-BLSR) error message will be returned.
9. If sending this command to modify the nodeid with invalid data, an IIAC (Invalid NodeId) error message is returned.
10. If sending this command to change the ringid into invalid data, an IIAC (Invalid RingId) error message is returned.
11. If changing the BLSR nodeid with a duplicated ID, a SROF (Cannot Set NodeId) error message is returned.
12. If changing the BLSR ringid with a duplicated ID, a SROF (Cannot Set RingId) error message is returned.

| Section          | ED-<MOD_RING> Description                        |
|------------------|--------------------------------------------------|
| Category         | BLSR                                             |
| Security         | Provisioning                                     |
| Related Messages | DLT-<MOD_RING> RTRV-<MOD_RING><br>ENT-<MOD_RING> |

| Section       | ED-<MOD_RING> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | <p>ED-&lt;MOD_RING&gt;:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;:::[RINGID=&lt;RINGID&gt;,<br/>[NODEID=&lt;NODEID&gt;],[RVRTV=&lt;RVRTV&gt;],[RVTM=&lt;RVTM&gt;,<br/>[SRVRTV=&lt;SRVRTV&gt;],[SRVTM=&lt;SRVTM&gt;]][:];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies the BLSR of the NE and is from the “AidUnionId” section on page 4-15 (the AID “ALL” or “BLSR ALL” is not allowed for editing BLSR).</li> <li>• &lt;RINGID&gt; identifies the BLSR ring ID of the NE. &lt;RINGID&gt; is a string of up to six characters; valid characters are [A–Z, 0–9]</li> <li>• &lt;NODEID&gt; identifies the BLSR node ID of the NE. It ranges from 0–31. &lt;NODEID&gt; is an integer</li> <li>• &lt;RVRTV&gt; identifies the revertive mode and valid values are shown in the “ON_OFF” section on page 4-76</li> <li>• &lt;RVTM&gt; identifies the revertive time; valid values for &lt;RVTM&gt; are shown in the “REVERTIVE_TIME” section on page 4-84</li> <li>• &lt;SRVRTV&gt; identifies the span revertive mode for 4F BLSR only and valid values are shown in the “ON_OFF” section on page 4-76</li> <li>• &lt;SRVTM&gt; identifies the span revertive time for 4F BLSR only; valid values for &lt;SRVTM&gt; are shown in the “REVERTIVE_TIME” section on page 4-84. &lt;SRVTM&gt; is not allowed to be set while &lt;SRVRTV&gt; is N</li> </ul> |
| Input Example | ED-BLSR:PETALUMA:BLSR-43:123:::RINGID=43,NODEID=3,RVRTV=Y,RVTM=2.0,SRVRTV=Y,SRVTM=5.0;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Errors        | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

### 3.4.34 ED-<OCN\_TYPE>: Edit (OC3, OC12, OC48, OC192)

See Table 4-11 on page 4-5 for supported modifiers by platform.

This command edits the attributes (i.e., service parameters) and state of an OC-N facility. Allowable states for a facility are Out Of Service (OOS), Out Of Service with Automatic In Service transitioning (OOS-AINS), Out Of Service for Maintenance (OOS-MT), and In Service (IS).

The DCC transmit is bridged to both working and protect in a 1+1 configuration. On the receive side, the active one is selected for DCC. The DCC is provisioned on the working port only in a 1+1 configuration.

All lines in a 1+1 BLSR must have the same mode. If you change the mode of a line that is in a 1+1 BLSR, an error message will be returned.

UNI-C DCC provisioning notes:

1. The attributes DCC(Y/N) and mode (SONET/SDH) remain the same in the ED/RTRV-OCN commands when the DCC is used for UNI-C, in which case the port attribute UNIC is enables (UNIC=Y).
2. UNI-C DCC termination cannot be deleted by the regular DCC de-provisioning command.
3. If the DCC is created under regular SONET provisioning, and this port is used by UNI-C, the port is converted as a UNI-C DCC automatically.
4. De-provisioning UNI-C IF/IB IPCC will free up DCC termination automatically.

5. The parameters ALSMODE, ALSCRINT and ALSRCPW are valid only for OC3-8, OC-192, and OC48ELR cards.

| Section          | ED-<OCN_TYPE>   | Description |
|------------------|-----------------|-------------|
| Category         | Ports           |             |
| Security         | Provisioning    |             |
| Related Messages | ED-DS1          | RTRV-DS1    |
|                  | ED-EC1          | RTRV-EC1    |
|                  | ED-FAC          | RTRV-FAC    |
|                  | ED-FC           | RTRV-FC     |
|                  | ED-G1000        | RTRV-FSTE   |
|                  | ED-T1           | RTRV-G1000  |
|                  | ED-T3           | RTRV-GIGE   |
|                  | RMV-<MOD2_IO>   | RTRV-POS    |
|                  | RST-<MOD2_IO>   | RTRV-T1     |
|                  | RTRV-<OCN_TYPE> | RTRV-T3     |

| Section      | ED-<OCN_TYPE> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format | <pre>ED-&lt;OCN_TYPE&gt;:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;:::[DCC=&lt;DCC&gt;,) [AREA=&lt;AREA&gt;],[SYNCSMSG=&lt;SYNCSMSG&gt;],[SENDDUS=&lt;SENDDUS&gt;,) [PJMON=&lt;PJMON&gt;],[SFBER=&lt;SFBER&gt;],[SDBER=&lt;SDBER&gt;,) [MODE=&lt;MODE&gt;],[MUX=&lt;MUX&gt;],[SOAK=&lt;SOAK&gt;],[OSPF=&lt;OSPF&gt;,) [LDCC=&lt;LDCC&gt;],[ALSMODE=&lt;ALSMODE&gt;],[ALSRCINT=&lt;ALSRCINT&gt;,) [ALSRCPW=&lt;ALSRCPW&gt;],[RLASER=&lt;RLASER&gt;]:[&lt;PST&gt;],[&lt;SST&gt;];</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;DCC&gt; identifies the section DCC connection of the port; valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a></li> <li>• &lt;AREA&gt; is area ID and shows up only if the DCC is enabled; &lt;AREA&gt; is a string</li> <li>• &lt;SYNCSMSG&gt; indicates if sync status messaging is enabled or disabled on the facility; valid values for &lt;SYNCSMSG&gt; are shown in the <a href="#">“ON_OFF” section on page 4-76</a></li> <li>• &lt;SENDDUS&gt; indicates that the facility will send out the DUS (do not use for synchronization) value as the sync status message for that facility; valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a></li> <li>• &lt;PJMON&gt; identifies an OC-N port PJMON with a value range of [0, highest STS number for the SONET card]; &lt;PJMON&gt; is an integer</li> <li>• &lt;SFBER&gt; identifies an OC-N port SFBER; valid values for &lt;SFBER&gt; are shown in the <a href="#">“SF_BER” section on page 4-86</a></li> <li>• &lt;SDBER&gt; identifies an OC-N port SDBER; valid values for &lt;SDBER&gt; are shown in the <a href="#">“SD_BER” section on page 4-85</a></li> <li>• &lt;MODE&gt; indicates the OCN port mode; valid values for are shown in the <a href="#">“OPTICAL_MODE” section on page 4-77</a></li> <li>• &lt;MUX&gt; BLSR Extension Byte (supported only on OC48AS cards); valid values for &lt;MUX&gt; are shown in the <a href="#">“MUX_TYPE” section on page 4-75</a></li> <li>• &lt;SOAK&gt; OOS-AINS to IS transition soak time as measured in 15 minute intervals, so a value of 4 translates to a soak time of 1 hour. The allowable range is 0–192 intervals (maximum of 48 hours). &lt;SOAK&gt; is an integer.</li> <li>• &lt;OSPF&gt; indicates the OSPF discovery; valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a></li> <li>• &lt;LDCC&gt; indicates the Line DCC connection on the port; valid values are shown in the <a href="#">“EXT_RING” section on page 4-65</a></li> <li>• &lt;ALSMODE&gt; valid only for OC3-8, OC192 and OC48ELR cards. Indicates the ALS recovery interval. The range is 100–300 seconds; &lt;ALSMODE&gt; is an integer</li> <li>• &lt;ALSRCINT&gt; valid only for OC3-8, OC192 and OC48ELR cards. Indicates the ALS recovery interval. The range is 100–300 seconds; &lt;ALSRCINT&gt; is an integer</li> </ul> |

| Section                     | ED-<OCN_TYPE> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format<br>(continued) | <ul style="list-style-type: none"> <li>• &lt;ALSRCPW&gt; valid only for OC3-8, OC192 and OC48ELR cards. Indicates the ALS recovery pulse width. The range is 20–100 seconds; &lt;ALSRCPW&gt; is a float</li> <li>• &lt;RLASER&gt; indicates if the laser should be restarted. Applicable only if the ALSMODE is not Automatic; valid values are shown in the “ON_OFF” section on page 4-76</li> <li>• &lt;PST&gt; is the primary state; valid values for &lt;PST&gt; are shown in the “PST” section on page 4-83</li> <li>• &lt;SST&gt; is the secondary state; valid values for &lt;SST&gt; are shown in the “SST” section on page 4-86</li> </ul> |
| Input Example               | ED-OC48:PENNGROVE:FAC-6-1:114:::DCC=Y,AREA=10.92.63.1, SYNCMSG=Y,SENDDUS=N,PJMON=48,SFBER=1E-4,SDBER=1E-6, MODE=SONET,MUX=E2,SOAK=10,OSPF=Y,LDCC=N,ALSMODE=MAN, ALSRCINT=101,ALSRCPW=35.1,RLASER=Y:OOS,AINS;                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Errors                      | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### 3.4.35 ED-BITS: Edit Building Integrated Timing Supply

This command edits the BITS reference attributes.



**Note**

SYNC-BITS1 and SYNC-BITS2 AIDs can be used for setting the port state of BITS-OUT ports.

| Section          | ED-BITS Description                                                                                                                                                                                                                                                                                                                                                                       |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Synchronization                                                                                                                                                                                                                                                                                                                                                                           |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                              |
| Related Messages | ED-NE-SYNCN                      RTRV-ALM-BITS<br>ED-SYNCN                            RTRV-ALM-SYNCN<br>OPR-SYNCNSW                        RTRV-BITS<br>REPT ALM BITS                        RTRV-COND-BITS<br>REPT ALM SYNCN                      RTRV-COND-SYNCN<br>REPT EVT BITS                        RTRV-NE-SYNCN<br>REPT EVT SYNCN                      RTRV-SYNCN<br>RLS-SYNCNSW |

| Section       | ED-BITS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | ED-BITS:[<TID>]:<AID>:<CTAG>:::[LINECDE=<LINECDE>],[FMT=<FMT>],[LBO=<LBO>],[SYNCSMSG=<SYNCSMSG>],[AISTHRSHLD=<AISTHRSHLD>],[SABIT=<SABIT>],[IMPEDANCE=<IMPEDANCE>][:<PST>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier from the “BITS” section on page 4-19</li> <li>• &lt;LINECDE&gt; is a line code; valid values for &lt;LINECDE&gt; are shown in the “LINE_CODE” section on page 4-68</li> <li>• &lt;FMT&gt; is the frame format; valid values for &lt;FMT&gt; are shown in the “FRAME_FORMAT” section on page 4-65</li> <li>• &lt;LBO&gt; indicates BITS line build out. The default value is 0–133. Valid values for &lt;LBO&gt; are shown in the “BITS_LineBuildOut” section on page 4-50</li> <li>• &lt;SYNCSMSG&gt; indicates if this BITS facility supports synchronization status message; &lt;SYNCSMSG&gt; defaults to (Y) and valid values are shown in the “ON_OFF” section on page 4-76</li> <li>• &lt;AISTHRSHLD&gt; is the AIS Threshold. Valid values for &lt;AISTHRSHLD&gt; shown in the “SYNC_CLOCK_REF_QUALITY_LEVEL” section on page 4-89</li> <li>• &lt;SABIT&gt; when the frame format selection is E1, &lt;SABIT&gt; indicates the BIT used to receive and transmit the SSM; valid values are shown in the “SABITS” section on page 4-84</li> <li>• &lt;IMPEDANCE&gt; when the frame format selection is one of the E1 values &lt;IMPEDANCE&gt; indicates the terminal impedance of BITS-IN port. Valid values are shown in the “IMPEDANCE” section on page 4-66</li> <li>• &lt;PST&gt; is a state; valid values for &lt;PST&gt; are shown in the “PST” section on page 4-83</li> </ul> |
| Input Example | ED-BITS:SONOMA:BITS-2:779:::LINECDE=AMI,FMT=ESF,LBO=0-133,SYNCSMSG=Y,AISTHRSHLD=PRS:IS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

### 3.4.36 ED-CLNT: Edit Client

(Cisco ONS 15454 only)

This command edits client facility attributes.



**Note**

Primary=OOS and secondary=AINS states do not apply to Ethernet mode.

| Section  | ED-CLNT Description |
|----------|---------------------|
| Category | DWDM                |
| Security | Provisioning        |



| Section           | ED-CLNT Description |
|-------------------|---------------------|
| Related Messages  | DLT-FFP-CLNT        |
|                   | DLT-LNK-<MOD2O>     |
|                   | ED-DWDM             |
|                   | ED-FFP-CLNT         |
|                   | ED-FFP-OCH          |
|                   | ED-LNK-<MOD2O>      |
|                   | ED-OCH              |
|                   | ED-OMS              |
|                   | ED-OTS              |
|                   | ED-TRC-CLNT         |
|                   | ED-TRC-OCH          |
|                   | ENT-FFP-CLNT        |
|                   | ENT-LNK-<MOD2O>     |
|                   | OPR-LASER-OTS       |
|                   | OPR-PROTNSW-CLNT    |
|                   | OPR-PROTNSW-OCH     |
|                   | RLS-LASER-OTS       |
|                   | RLS-PROTNSW-CLNT    |
| RLS-PROTNSW-OCH   |                     |
| RTRV-CLNT         |                     |
| RTRV-DWDM         |                     |
| RTRV-FFP-CLNT     |                     |
| RTRV-FFP-OCH      |                     |
| RTRV-LNK-<MOD2O>  |                     |
| RTRV-OCH          |                     |
| RTRV-OMS          |                     |
| RTRV-OTS          |                     |
| RTRV-PROTNSW-CLNT |                     |
| RTRV-PROTNSW-OCH  |                     |
| RTRV-TRC-CLNT     |                     |
| RTRV-TRC-OCH      |                     |

| Section      | ED-CLNT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format | <p data-bbox="537 260 1472 453">ED-CLNT:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;:::[NAME=&lt;PORTNAME&gt;],[SFBER=&lt;SFBER&gt;],[SDBER=&lt;SDBER&gt;],[ALSMODE=&lt;ALSMODE&gt;],[ALSRCINT=&lt;ALSRCINT&gt;],[ALSRCPW=&lt;ALSRCPW&gt;],[COMM=&lt;COMM&gt;],[MACADDR=&lt;MACADDR&gt;],[SYNCMSG=&lt;SYNCMSG&gt;],[SENDDUS=&lt;SENDDUS&gt;],[RLASER=&lt;RLASER&gt;],[SOAK=&lt;SOAK&gt;],[OSPF=&lt;OSPF&gt;]:[&lt;PST&gt;],[&lt;SST&gt;];</p> <p data-bbox="537 470 613 495">where:</p> <ul data-bbox="537 512 1472 1610" style="list-style-type: none"> <li data-bbox="537 512 1187 537">• &lt;AID&gt; is from the “FACILITY” section on page 4-28</li> <li data-bbox="537 554 1195 579">• &lt;PORTNAME&gt; indicates the port name and is a string</li> <li data-bbox="537 596 1472 663">• &lt;SFBER&gt; identifies the SFBER for the SONET payload; valid values are shown in the “SF_BER” section on page 4-86</li> <li data-bbox="537 680 1414 747">• &lt;SDBER&gt; identifies the SDBER for the SONET payload; valid values are shown in the “SD_BER” section on page 4-85</li> <li data-bbox="537 764 1430 831">• &lt;ALSMODE&gt; indicates if the Automatic Laser Shutdown is enabled or disabled; valid values are shown in the “ALS_MODE” section on page 4-49</li> <li data-bbox="537 848 1472 915">• &lt;ALSRCINT&gt; indicates the ALS recovery interval. Range is 100–300 seconds; &lt;ALSRCINT&gt; is an integer</li> <li data-bbox="537 932 1422 999">• &lt;ALSRCPW&gt; indicates the ALS recovery pulse width. The range is 2–100 seconds, in increments of 100ms, e.g. 30.1; &lt;ALSRCPW&gt; is a float</li> <li data-bbox="537 1016 1472 1314">• &lt;COMM&gt; indicates if the GCC or DCC is enabled or disabled. The GCC can be enabled only if the digital wrapper has been enabled for the card. The default is NONE. Valid values are shown in the “COMM_TYPE” section on page 4-54. Rules for an MXP_2.5G_10G/TXP_MR_10G client port are; only the DCC can be provisioned, if the termination mode is not transparent and the payload is SONET. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the DCC can be enabled only if the G.709 is not enabled and if the payload is SONET and the termination mode is not transparent. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the GCC can be enabled if there is no DCC and the G.709 flag is enabled.</li> <li data-bbox="537 1331 1398 1398">• &lt;MACADDR&gt; identifies the MAC address for the 10G Ethernet payload; &lt;MACADDR&gt; is a string</li> <li data-bbox="537 1415 1472 1610">• &lt;SYNCMSG&gt; indicates that the facility be enabled to provide the synchronization clock. This does not apply to a TXP_MR_10G card. This applies to an MXP_2.5G_10G card, only if the payload is SONET and the card termination mode is as follows: TRANSPARENT - All Client ports are available for all timing selections. All Trunk ports are not available. Valid values are shown in the “ON_OFF” section on page 4-76<br/>LINE - All ports are available for all-timing selections.</li> </ul> |

| Section                     | ED-CLNT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format<br>(continued) | <ul style="list-style-type: none"> <li>• &lt;SENDDUS&gt; indicates that the facility send out a Do not Use for Sync message. This does not apply to a TXP_MR_10G card. This applies to an MXP_2.5G_10G card, only if the payload is SONET and the card termination mode is as follows: TRANSPARENT - All Client ports are available for all timing selections. All Trunk ports are not available.<br/>LINE - All ports are available for all-timing selections. Valid values are shown in the “ON_OFF” section on page 4-76</li> <li>• &lt;RLASER&gt; indicates if the laser should be restarted. This is applicable only if the ALSMODE is not automatic; valid values are shown in the “ON_OFF” section on page 4-76</li> <li>• &lt;SOAK&gt; OOS-AINS to IS transition soak time as measured in 15–minute intervals. A value of 4 translates to a soak time of one hour. The allowable range is 0–192 intervals (maximum of 48–hours). &lt;SOAK&gt; is an integer</li> <li>• &lt;OSPF&gt; indicates the OSPF discovery. &lt;OSPF&gt; can be edited only if the DCC is enabled; valid values are shown in the “ON_OFF” section on page 4-76</li> <li>• &lt;PST&gt; primary state; valid values are shown in the “PST” section on page 4-83</li> <li>• &lt;SST&gt; secondary state; valid values are shown in the “SST” section on page 4-86</li> </ul> |
| Input Example               | ED-CLNT:CISCO:FAC-1-1:100:::NAME=“NY PORT”,SFBER=1E-4,SDBER=1E-5,ALSMODE=Y,ALSRCINT=30,ALSRCPW=35.1,COMM=DCC,MACADDR=00-0E-AA-BB-CC-FF,SYNCMSG=Y,SENDDUS=Y,RLASER=Y,SOAK=10,OSPF=Y:OOS,AINS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Errors                      | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

### 3.4.37 ED-CMD-SECU: Edit Command Security

This command edits the command security level of a particular command.

| Section          | ED-CMD-SECU Description                                                                                                                                                                                                                                                                                       |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Security                                                                                                                                                                                                                                                                                                      |
| Security         | Administrator                                                                                                                                                                                                                                                                                                 |
| Related Messages | ACT-USER<br>ALW-MSG-SECU<br>ALW-USER-SECU<br>CANC<br>CANC-USER<br>CANC-USER-SECU<br>DLT-USER-SECU<br>ED-PID<br>ED-USER-SECU<br>ENT-USER-SECU<br>INH-MSG-SECU<br>INH-USER-SECU<br>REPT ALM SECU<br>REPT EVT SECU<br>REPT EVT SESSION<br>RTRV-CMD-SECU<br>RTRV-DFLT-SECU<br>RTRV-USER-SECU<br>SET-ATTR-SECUDFLT |

| Section       | ED-CMD-SECU Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | ED-CMD-SECU:[<TID>]:<AID>:<CTAG>::<CAP>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier string. It is the command verb along with the verb modifier(s) as it currently exists. It may be a single command or a block of commands where the block may include all commands. Only INIT-REG is supported in this release (R4.6). &lt;AID&gt; is a string and must not be null</li> <li>• &lt;CAP&gt; is the command access privilege; valid values are shown in the “PRIVILEGE” section on page 4-82. &lt;CAP&gt; must not be null</li> </ul> |
| Input Example | ED-CMD-SECU::INIT-REG:1::SU;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

### 3.4.38 ED-CRS-<PATH>:ED Cross Connect (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS 48C, STS192C, VT1, VT2)

This command edits the state of an STS or VT cross-connection.

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

| Section          | ED-CRS-<PATH> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Cross Connections                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Related Messages | DLT-CRS-<PATH> RTRV-CRS<br>ENT-CRS-<PATH> RTRV-CRS-<PATH>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Input Format     | ED-CRS-<PATH>:[<TID>]:<SRC>,<DST>:<CTAG>:::[ADD=<ADD>],[REMOVE=<REMOVE>]:[<PST>],[<SST>];<br>where: <ul style="list-style-type: none"> <li>• &lt;SRC&gt; is the AID from the “CrossConnectId1” section on page 4-23</li> <li>• &lt;DST&gt; is the AID from the “CrossConnectId1” section on page 4-23</li> <li>• &lt;ADD&gt; is the AID from the “CrossConnectId1” section on page 4-23</li> <li>• &lt;REMOVE&gt; is the AID from the “CrossConnectId1” section on page 4-23</li> <li>• &lt;PST&gt; primary state; valid values for &lt;PST&gt; are shown in the “PST” section on page 4-83</li> <li>• &lt;SST&gt; secondary state; valid values for &lt;SST&gt; are shown in the “SST” section on page 4-86</li> </ul> |
| Input Example    | ED-CRS-STS3C::STS-1-1-1,STS-2-1-1:1::ADD=STS-13-1-1,REMOVE=STS-2-1-1:OOS,AINS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

### 3.4.39 ED-DAT: Edit Date and Time

This command edits the date and the time

| Section          | ED-DAT Description                                                                                                                                                                                                           |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | System                                                                                                                                                                                                                       |
| Security         | Provisioning                                                                                                                                                                                                                 |
| Related Messages | ALW-MSG-ALL RTRV-INV<br>ALW-MSG-DBCHG RTRV-NE-GEN<br>ED-NE-GEN RTRV-NE-IPMAP<br>ED-NE-PATH RTRV-NE-PATH<br>ED-NE-SYNCN RTRV-NE-SYNCN<br>INH-MSG-ALL RTRV-NE-WDMANS<br>INH-MSG-DBCHG RTRV-TOD<br>INIT-SYS SET-TOD<br>RTRV-HDR |
| Input Format     | ED-DAT:[<TID>]::<CTAG>::[<DATE>],[<TIME>];<br>where: <ul style="list-style-type: none"> <li>• &lt;DATE&gt; identifies the date and is a string</li> <li>• &lt;TIME&gt; identifies the time and is a string</li> </ul>        |
| Input Example    | ED-DAT:CISCO::1234::99-12-21,14-35-15;                                                                                                                                                                                       |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                               |

### 3.4.40 ED-DS1: Edit DS1

(Cisco ONS 15454 only)

This command edits the test access attribute for DS1 access on a DS3XM card.



**Note**

This command is not allowed if the card is a protecting card.

| Section          | ED-DS1 Description                                                                                                                                                                                                       |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Ports                                                                                                                                                                                                                    |
| Security         | Provisioning                                                                                                                                                                                                             |
| Related Messages | ED-<OCN_TYPE> RTRV-DS1<br>ED-EC1 RTRV-EC1<br>ED-FAC RTRV-FAC<br>ED-FC RTRV-FC<br>ED-G1000 RTRV-FSTE<br>ED-T1 RTRV-G1000<br>ED-T3 RTRV-GIGE<br>RMV-<MOD2_IO> RTRV-POS<br>RST-<MOD2_IO> RTRV-T1<br>RTRV-<OCN_TYPE> RTRV-T3 |

| Section       | ED-DS1 Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | ED-DS1:[<TID>]:<AID>:<CTAG>:::[TACC=<TACC>,<br>[TAPTYPE=<TAPTYPE>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the DS1 AID from the “DS1” section on page 4-26</li> <li>• &lt;TACC&gt; is the TAP number. The TAP number ranges from 0–999. When &lt;TACC&gt; is 0, the TAP is deleted. &lt;TACC&gt; is an integer</li> <li>• &lt;TAPTYPE&gt; is the TAP type; valid values are shown in the “TAPTYPE” section on page 4-92. The default value is DUAL</li> </ul> |
| Input Example | ED-DS1:PETALUMA:DS1-2-1-6-12:123:::TACC=8,TAPTYPE=DUAL;                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                           |

### 3.4.41 ED-DWDM: Edit Dense Wavelength Division Multiplexing

(Cisco ONS 15454 only)

The command edits an already pre-provisioned/provisioned MXP\_2.5G\_10G/TXP\_MR\_10G card. It changes the operating parameters for the card.

The rules for provisioning a regeneration group are: a regeneration group can be created only between a pair of TXP cards. The peer slot should contain a card of the same type, and should not have an existing regeneration group for the same slot. The termination mode should be identical for the cards. All the client port level settings should be identical for the cards. Setting the PEERID=Null will remove an existing regeneration group. The two TXP cards should be set to transparent termination mode to successfully create a regeneration group.

The rules for provisioning the payload field are as follows: For a TXP\_MR\_10G card, the SONET/10GE (Ethernet) applies. For a TXP\_MR\_2.5G card or TXPP\_MR\_2.5G card, the options of SONET/10GE are not applicable. Instead, the actual protocol; for example, OC3/OC12/OC48/STM1 should be used. The port has to be in OOS state for a payload change to be successful. There should be no Trace enabled for the port. To set the Payload to 10GE, the termination mode should already be in Transparent mode.

The MXP\_2.5\_10G card does not support 10GE payload. To change the payload type for the MXP\_2.5\_10G card, all the ports should be in OOS state.

See the “[Provisioning Rules for MXP\\_2.5G\\_10G and TXP\\_MR\\_10G Cards](#)” section on page 1-8 and “[Provisioning Rules for TXP\\_MR\\_2.5G and TXPP\\_MR\\_2.5G Cards](#)” section on page 1-13 for specific card provisioning rules.

| Section  | ED-DWDM Description |
|----------|---------------------|
| Category | DWDM                |
| Security | Provisioning        |

| Section          | ED-DWDM Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | DLT-FFP-CLNT<br>DLT-LNK-<MOD2O><br>ED-CLNT<br>ED-FFP-CLNT<br>ED-FFP-OCH<br>ED-LNK-<MOD2O><br>ED-OCH<br>ED-OMS<br>ED-OTS<br>ED-TRC-CLNT<br>ED-TRC-OCH<br>ENT-FFP-CLNT<br>ENT-LNK-<MOD2O><br>OPR-LASER-OTS<br>OPR-PROTNSW-CLNT<br>OPR-PROTNSW-OCH<br>RLS-LASER-OTS<br>RLS-PROTNSW-CLNT<br>RLS-PROTNSW-OCH<br>RTRV-CLNT<br>RTRV-DWDM<br>RTRV-FFP-CLNT<br>RTRV-FFP-OCH<br>RTRV-LNK-<MOD2O><br>RTRV-OCH<br>RTRV-OMS<br>RTRV-OTS<br>RTRV-PROTNSW-CLNT<br>RTRV-PROTNSW-OCH<br>RTRV-TRC-CLNT<br>RTRV-TRC-OCH                                                                                                                                                                                                                                                                                                             |
| Input Format     | ED-DWDM:[<TID>]:<AID>:<CTAG>:::[PEERID=<PEERID>,<br>[NAME=<NAME>],[TERMMODE=<TERMMODE>],<br>[PAYLOAD=<PAYLOAD>],[PWL=<PWL>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is from the “EQPT” section on page 4-27</li> <li>• &lt;PEERID&gt; peer regeneration group card slot AID from the “EQPT” section on page 4-27</li> <li>• &lt;NAME&gt; name for the regeneration group; &lt;NAME&gt; is a string</li> <li>• &lt;TERMMODE&gt; termination mode of the card; valid values are shown in the “TERM_MODE” section on page 4-92</li> <li>• &lt;PAYLOAD&gt; type of payload supported by the card; valid values are shown in the “EQPT_TYPE” section on page 4-59</li> <li>• &lt;PWL&gt; provisioned wavelength; valid values are shown in the “OPTICAL_WLEN” section on page 4-78</li> </ul> |
| Input Example    | ED-DWDM:VA454-22:SLOT-1:100:::PEERID=SLOT-2,<br>NAME=“NY GROUP”,TERMMODE=TRANS,PAYLOAD=OC48,PWL=1546.52;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### 3.4.42 ED-EC1: Edit Electrical Carrier

(Cisco ONS 15454 only)

This command edits the attributes of an EC1.



**Note**

This command is not allowed if the card is a protecting card.

| Section          | ED-EC1 Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Ports                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Related Messages | ED-<OCN_TYPE> RTRV-DS1<br>ED-DS1 RTRV-EC1<br>ED-G1000 RTRV-FSTE<br>ED-T1 RTRV-G1000<br>ED-T3 RTRV-GIGE<br>INIT-REG-G1000 RTRV-POS<br>RMV-<MOD2_IO> RTRV-T1<br>RST-<MOD2_IO> RTRV-T3<br>RTRV-<OCN_TYPE>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Input Format     | ED-EC1:[<TID>]:<AID>:<CTAG>:::[PJMOM=<PJMOM>],[LBO=<LBO>],[SOAK=<SOAK>],[SFBER=<SFBER>],[SDBER=<SDBER>]:[<PST>],[<SST>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is a facility AID of an EC1 port and is from the “FACILITY” section on page 4-28</li> <li>• &lt;PJMOM&gt; is a SONET pointer number (0 or 1) of an EC1 port and is an integer</li> <li>• Valid values for &lt;LBO&gt; are shown in the “E_LBO” section on page 4-58</li> <li>• &lt;SOAK&gt; OOS-AINS to IS transition soak time as measured in 15 minute intervals, so a value of 4 translates to a soak time of 1 hour. The allowable range is 0–192 intervals (maximum of 48 hours). &lt;SOAK&gt; is an integer</li> <li>• &lt;SFBER&gt; identifies port SFBER; valid values are shown in the “SF_BER” section on page 4-86</li> <li>• &lt;SDBER&gt; identifies port SDBER; valid values are shown in the “SD_BER” section on page 4-85</li> <li>• &lt;PST&gt; primary state; valid values for &lt;PST&gt; are shown in the “PST” section on page 4-83</li> <li>• &lt;SST&gt; secondary state; valid values for &lt;SST&gt; are shown in the “SST” section on page 4-86</li> </ul> |
| Input Example    | ED-EC1:CISCO:FAC-1-1:123:::PJMOM=0,LBO=0-225,SOAK=10,SFBER=1E-4,SDBER=1E-6:OOS,AINS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Errors           | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

### 3.4.43 ED-EQPT: Edit Equipment

This command edits the attributes for a given equipment slot in the NE. If the card is in an equipment slot, this command is allowed only on the working AID.

The PROTID parameter indicates the unique identifier of the protection group (the protect card). “NULL” is a special value of the PROTID parameter and indicates absence of a protection group. For 1:1 protection type, RVRTV and RVTM parameters can be changed. For 1:1 protection type, if the PROTID parameter is entered as “NULL”, the protection group is deleted.

```
ED-EQPT:[<TID>]:SLOT-2:<CTAG>:::PROTID=NULL;
```



For 1:N protection type, if the PROTID is “NULL”, the AIDs in the list are removed from the protection group. If all the working cards are in the AID list, the protection group is deleted.

Example: if Slot-1, Slot-2 and Slot-4 were the only working cards in the protection group. The following command will remove Slot-4 from the protection group:

```
ED-EQPT:[<TID>]:SLOT-4:<CTAG>:::PROTID=NULL;
```

The protection group still has Slot-1 and Slot-2 as working cards.

The following command will remove all the other working cards in the above example and consequently, delete the protection group itself:

```
ED-EQPT:[<TID>]:SLOT-2&SLOT-1:<CTAG>:::PROTID=NULL;
```

The ED-EQPT command can be successfully executed on an already provisioned card to add a working card to or remove one from a protection group. This command is not valid on a protect card. Only cards can be added to or removed from a protection group. Protection type is immutable and is determined at the time of creation of a protection group (while adding the first working card). Once provisioned, the equipment type cannot be edited either.

Examples of adding an existing card to a protection group using the ED-EQPT command:

1:1 protection group

```
ED-EQPT::SLOT-2:12:::PROTID=SLOT-1,RVRTV=Y,RVTM=9.0;
```

1:N protection group

```
ED-EQPT::SLOT-2:12:::PROTID=SLOT-3,PRTYPE=1-N,RVTM=6.5;
```

Error conditions for editing a 1:1 or 1:N protection group may be:

1. Editing the PRTYPE or PROTID (non-NULL value) parameters.
2. Editing RVRTV or RVTM when no protection group exists.
3. Editing RVRTV for 1:N protection.
4. Failed to remove, currently switched to protect.
5. If the command mode (CMDMDE) is set to forced (FRCD) during the creation of a 1:1 or 1:N protection group, all cards must be physically plugged in and in the ready state (IS). If the cards are not physically plugged in, then the command is denied with an appropriate error message. When the command mode is set to normal (NORM) (which is the default) the cards do not have to be physically plugged in and in the ready state.
6. If the command mode is set to forced (FRCD) during the removal of a card in a 1:1 or 1:N protection group, there must be no cross-connects (i.e., services) present on the card. If there are cross-connects present on the card, the command is denied with an appropriate error message. If the command mode is set to normal (NORM) (which is the default), it does not require that cross-connects be deleted on the card.

| Section  | ED-EQPT Description |
|----------|---------------------|
| Category | Equipment           |
| Security | Provisioning        |

| Section          | ED-EQPT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ALW-SWDX-EQPT REPT EVT EQPT<br>ALW-SWTOPROTN-EQPT REPT RMV EQPT<br>ALW-SWTOWKG-EQPT REPT RST EQPT<br>DLT-EQPT RTRV-ALM-EQPT<br>ENT-EQPT RTRV-COND-EQPT<br>INH-SWDX-EQPT RTRV-EQPT<br>INH-SWTOPROTN-EQPT SW-DX-EQPT<br>INH-SWTOWKG-EQPT SW-TOPROTN-EQPT<br>REPT ALM EQPT SW-TOWKG-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Input Format     | ED-EQPT:[<TID>]:<AID>:<CTAG>:::[PROTID=<PROTID>,<br>[PRTYPE=<PRTYPE>],[RVRTV=<RVRTV>],[RVTM=<RVTM>,<br>[CMDMDE=<CMDMDE>][:];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier from the “EQPT” section on page 4-27</li> <li>• &lt;PROTID&gt; is the protecting card slot number of the protection group. &lt;PROTID&gt; is the AID from the “PRSLOT” section on page 4-31</li> <li>• &lt;PRTYPE&gt; is the protection group type; valid values for &lt;PRTYPE&gt; are shown in the “PROTECTION_GROUP” section on page 4-83</li> <li>• &lt;RVRTV&gt; is the revertive mode; valid values for &lt;RVRTV&gt; are shown in the “ON_OFF” section on page 4-76</li> <li>• &lt;RVTM&gt; is the revertive time; valid values for &lt;RVTM&gt; are shown in the “REVERTIVE_TIME” section on page 4-84</li> <li>• &lt;CMDMDE&gt; is the command mode. It is only applicable when creating or deleting a 1:1 or 1:N protection group and/or adding cards to an existing protection group (1:N). The default is NORM. Valid values are shown in the “CMD_MODE” section on page 4-54. If creating or adding cards to a protection group, specifying FRCD will require the card to be physically plugged in and in the ready state (IS). If removing cards from a 1:N protection group or deleting a 1:1 or 1:N protection group, specifying FRCD will require that there are no cross-connects (i.e., services) on the card.</li> </ul> |
| Input Example    | ED-EQPT:CISCO:SLOT-2:123:::PROTID=SLOT-1,PRTYPE=1-1,RVRTV=Y,RVTM=9.0,CMDMDE=FRCD;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### 3.4.44 ED-FC: Edit Fiber Channel Facility

This command edits the attributes related to the fiber channel facility.



#### Note

The OOS,AINS is not supported on the FC port.

| Section  | ED-FC Description |
|----------|-------------------|
| Category | Ports             |
| Security | Provisioning      |

| Section          | ED-FC Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ED-<OCN_TYPE><br>ED-DS1<br>ED-EC1<br>ED-FAC<br>ED-G1000<br>ED-T1<br>ED-T3<br>RMV-<MOD2_IO><br>RST-<MOD2_IO><br>RTRV-<OCN_TYPE>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                  | RTRV-DS1<br>RTRV-EC1<br>RTRV-FAC<br>RTRV-FC<br>RTRV-FSTE<br>RTRV-G1000<br>RTRV-GIGE<br>RTRV-POS<br>RTRV-T1<br>RTRV-T3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Input Format     | ED-FC:[<TID>]:<AID>:<CTAG>:::[PAYLOAD=<PAYLOAD>,<br>[LINKRCVRY=<LINKRCVRY>]:[<PST>],[<SST>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the facility AID from the “FACILITY” section on page 4-28</li> <li>• &lt;PAYLOAD&gt; payload type. Can be 1GFC or 2GFC. Valid values are shown in the “FC_LINKRATE” section on page 4-65</li> <li>• &lt;LINKRCVRY&gt; link recovery; valid values are shown in the “ON_OFF” section on page 4-76</li> <li>• &lt;PST&gt; primary state; valid values are shown in the “PST” section on page 4-83</li> <li>• &lt;SST&gt; secondary state; valid values are shown in the “SST” section on page 4-86</li> </ul> |
| Input Example    | ED-FC:CISCO1:FAC-6-1:1:::PAYLOAD=2GFC,LINKRCVRY=Y:OOS,MT;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Errors           | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

### 3.4.45 ED-FFP-<OCN\_TYPE>: Edit Facility Protection Group (OC3, OC12, OC48, OC192)

See Table 4-11 on page 4-5 for supported modifiers by platform.

This command edits the optical facility protection.



#### Note

This command can be used on both protecting and working AIDs.

| Section          | ED-FFP-<OCN_TYPE> Description                                                                                       |
|------------------|---------------------------------------------------------------------------------------------------------------------|
| Category         | SONET Line Protection                                                                                               |
| Security         | Provisioning                                                                                                        |
| Related Messages | DLT-FFP-<OCN_TYPE><br>DLT-FFP-CLNT<br>ED-FFP-CLNT<br>ENT-FFP-<OCN_TYPE><br>ENT-FFP-CLNT<br>EX-SW-<OCN_BLSR>         |
|                  | OPR-PROTNSW-<OCN_TYPE><br>RLS-PROTNSW-<OCN_TYPE><br>RTRV-FFP-<OCN_TYPE><br>RTRV-FFP-CLNT<br>RTRV-PROTNSW-<OCN_TYPE> |

| Section       | ED-FFP-<OCN_TYPE> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | ED-FFP-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>:::[PROTID=<PROTID>,<br>[RVRTV=<RVRTV>],[RVTM=<RVTM>],[PSDIRN=<PSDIRN>][:];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the facility AID from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;PROTID&gt; is the protection group identifier (protection group name) and is a string; &lt;PROTID&gt; can have a maximum of 32 characters</li> <li>• &lt;RVRTV&gt; identifies a revertive mode; valid values for &lt;RVRTV&gt; are shown in the <a href="#">“ON_OFF” section on page 4-76</a></li> <li>• &lt;RVTM&gt; identifies a revertive time; valid values for &lt;RVTM&gt; are shown in the <a href="#">“REVERTIVE_TIME” section on page 4-84</a></li> <li>• &lt;PSDIRN&gt; identifies the switching mode; valid values for &lt;PSDIRN&gt; are shown in the <a href="#">“UNI_BI” section on page 4-96</a></li> </ul> |
| Input Example | ED-FFP-OC3:PETALUMA:FAC-1-1:1:::PROTID=PROT_NAME,RVRTV=Y,<br>RVTM=1.0,PSDIRN=BI;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

### 3.4.46 ED-FFP-CLNT: Edit Facility Protection Group Client

(Cisco ONS 15454 only)

This command edits a Y cable protection group on client facilities.

See the [“Provisioning Rules for MXP\\_2.5G\\_10G and TXP\\_MR\\_10G Cards” section on page 1-8](#) and the [“Provisioning Rules for TXP\\_MR\\_2.5G and TXPP\\_MR\\_2.5G Cards” section on page 1-13](#) for specific card provisioning rules.

| Section  | ED-FFP-CLNT Description |
|----------|-------------------------|
| Category | DWDM                    |
| Security | Provisioning            |

| Section          | ED-FFP-CLNT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | DLT-FFP-<OCN_TYPE><br>DLT-FFP-CLNT<br>DLT-LNK-<MOD2O><br>ED-CLNT<br>ED-DWDM<br>ED-FFP-<OCN_TYPE><br>ED-FFP-OCH<br>ED-LNK-<MOD2O><br>ED-OCH<br>ED-OMS<br>ED-OTS<br>ED-TRC-CLNT<br>ED-TRC-OCH<br>ENT-FFP-<OCN_TYPE><br>ENT-FFP-CLNT<br>ENT-LNK-<MOD2O><br>EX-SW-<OCN_BLSR><br>OPR-LASER-OTS<br>OPR-PROTNSW-<OCN_TYPE><br>OPR-PROTNSW-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                  | OPR-PROTNSW-OCH<br>RLS-LASER-OTS<br>RLS-PROTNSW-<OCN_TYPE><br>RLS-PROTNSW-CLNT<br>RLS-PROTNSW-OCH<br>RTRV-CLNT<br>RTRV-DWDM<br>RTRV-FFP-<OCN_TYPE><br>RTRV-FFP-CLNT<br>RTRV-FFP-OCH<br>RTRV-LNK-<MOD2O><br>RTRV-OCH<br>RTRV-OMS<br>RTRV-OTS<br>RTRV-PROTNSW-<OCN_TYPE><br>RTRV-PROTNSW-CLNT<br>RTRV-PROTNSW-OCH<br>RTRV-TRC-CLNT<br>RTRV-TRC-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Input Format     | ED-FFP-CLNT:[<TID>]:<AID>:<CTAG>:::[PROTID=<PROTID>,<br>[RVRTV=<RVRTV>],[RVTM=<RVTM>],[PSDIRN=<PSDIRN>][:];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies a port in a protection group and is the AID from the “FACILITY” section on page 4-28</li> <li>• &lt;PROTID&gt; is a protection group identifier (protection group name). It defaults to the protecting port AID of the protection group. It is a string and can have a maximum length of 32 characters. &lt;PROTID&gt; is a string</li> <li>• &lt;RVRTV&gt; identifies a revertive mode. The retrieve behavior defaults to N (non-revertive mode); valid values are shown in the “ON_OFF” section on page 4-76</li> <li>• &lt;RVTM&gt; identifies a revertive time. The revertive time defaults to 5.0 minutes; valid values are shown in the “REVERTIVE_TIME” section on page 4-84</li> <li>• &lt;PSDIRN&gt; identifies the switching mode and defaults to UNI. MXP_2.5G_10G/TXP_MR_10G cards do not support BI-DIRECTIONAL switching. Valid values for &lt;PSDIRN&gt; are shown in the “UNI_BI” section on page 4-96</li> </ul> |
| Input Example    | ED-FFP-CLNT:CISCO:FAC-1-1:100:::PROTID=DC-METRO,RVRTV=N,RVTM=1.0,PSDIRN=BI;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

### 3.4.47 ED-FFP-OCH: Edit Facility Protection Group OCH

(Cisco ONS 15454 only)

This command changes the provisioning for the default protection group on the DWDM port of a TXP\_MR\_2.5G and TXPP\_MR\_2.5G card.

| Section          | ED-FFP-OCH Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Related Messages | DLT-FFP-<OCN_TYPE>                    OPR-PROTNSW-OCH<br>DLT-FFP-CLNT                            RLS-LASER-OTS<br>DLT-LNK-<MOD2O>                        RLS-PROTNSW-<OCN_TYPE><br>ED-CLNT                                    RLS-PROTNSW-CLNT<br>ED-DWDM                                   RLS-PROTNSW-OCH<br>ED-FFP-<OCN_TYPE>                       RTRV-CLNT<br>ED-FFP-CLNT                              RTRV-DWDM<br>ED-LNK-<MOD2O>                         RTRV-FFP-<OCN_TYPE><br>ED-OCH                                     RTRV-FFP-CLNT<br>ED-OMS                                    RTRV-FFP-OCH<br>ED-OTS                                    RTRV-LNK-<MOD2O><br>ED-TRC-CLNT                              RTRV-OCH<br>ED-TRC-OCH                               RTRV-OMS<br>ENT-FFP-<OCN_TYPE>                       RTRV-OTS<br>ENT-FFP-CLNT                              RTRV-PROTNSW-<OCN_TYPE><br>ENT-LNK-<MOD2O>                         RTRV-PROTNSW-CLNT<br>EX-SW-<OCN_BLSR>                        RTRV-PROTNSW-OCH<br>OPR-LASER-OTS                            RTRV-TRC-CLNT<br>OPR-PROTNSW-<OCN_TYPE>                RTRV-TRC-OCH<br>OPR-PROTNSW-CLNT |
| Input Format     | ED-FFP-OCH:[<TID>]:<AID>:<CTAG>:::[PROTID=<PROTID>,<br>[RVRTV=<RVRTV>],[RVTM=<RVTM>],[PSDIRN=<PSDIRN>][:];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the AID from the <a href="#">“CHANNEL” section on page 4-19</a></li> <li>• &lt;PROTID&gt; is a protection group and is a string</li> <li>• &lt;RVRTV&gt; identifies a revertive mode; valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a></li> <li>• &lt;RVTM&gt; identifies a revertive time; valid values are shown in the <a href="#">“REVERTIVE_TIME” section on page 4-84</a></li> <li>• Valid values for &lt;PSDIRN&gt; are shown in the <a href="#">“TRANS_MODE” section on page 4-93</a></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Input Example    | ED-FFP-OCH:VA454-22:CHAN-2-2:100:::PROTID=“FIXED PROTECTION”,RVRTV=N,RVTM=1.0,PSDIRN=BI;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

### 3.4.48 ED-G1000: Edit G1000

This command edits the attributes related to a G1000 port.

**Note**

The state OOS-AINS is not supported on the G1000.

| Section          | ED-G1000 Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Ports                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Related Messages | ED-<OCN_TYPE> RTRV-DS1<br>ED-DS1 RTRV-EC1<br>ED-EC1 RTRV-FC<br>ED-FC RTRV-FSTE<br>ED-T1 RTRV-G1000<br>ED-T3 RTRV-GIGE<br>INIT-REG-G1000 RTRV-POS<br>RMV-<MOD2_IO> RTRV-T1<br>RST-<MOD2_IO> RTRV-T3<br>RTRV-<OCN_TYPE>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Input Format     | ED-G1000:[<TID>]:<AID>:<CTAG>:::[MFS=<MFS>],[FLOW=<FLOW>],[LOWMRK=<LOWMRK>],[HIWMRK=<HIWMRK>]:[<PST>],[<SST>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the AID facility from the <a href="#">“FACILITY”</a> section on page 4-28</li> <li>• Valid values for &lt;MFS&gt; are shown in the <a href="#">“MFS_TYPE”</a> section on page 4-68</li> <li>• Valid values for &lt;FLOW&gt; are shown in the <a href="#">“ON_OFF”</a> section on page 4-76</li> <li>• &lt;LOWMRK&gt; low watermark value and an integer</li> <li>• &lt;HIWMRK&gt; high watermark value and an integer</li> <li>• &lt;PST&gt; primary state; valid values for &lt;PST&gt; are shown in the <a href="#">“PST”</a> section on page 4-83</li> <li>• &lt;SST&gt; secondary state; valid values for &lt;SST&gt; are shown in the <a href="#">“SST”</a> section on page 4-86</li> </ul> |
| Input Example    | ED-G1000:TID:FAC-1-1:CTAG:::MFS=1548,FLOW=Y,LOWMRK=20,HIWMRK=492:OOS,AINS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### 3.4.49 ED-LNK-<MOD20>: Edit Link (OCH, OMS, OTS)

(Cisco ONS 15454 only)

This command edits an optical link state.

| Section  | ED-LNK-<MOD20> Description |
|----------|----------------------------|
| Category | DWDM                       |
| Security | Provisioning               |

| Section          | ED-LNK-<MOD2O> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | DLT-FFP-CLNT<br>DLT-LNK-<MOD2O><br>ED-CLNT<br>ED-DWDM<br>ED-FFP-CLNT<br>ED-FFP-OCH<br>ED-OCH<br>ED-OMS<br>ED-OTS<br>ED-TRC-CLNT<br>ED-TRC-OCH<br>ENT-FFP-CLNT<br>ENT-LNK-<MOD2O><br>OPR-LASER-OTS<br>OPR-PROTNSW-CLNT<br>OPR-PROTNSW-OCH<br>RLS-LASER-OTS<br>RLS-PROTNSW-CLNT<br>RLS-PROTNSW-OCH<br>RTRV-CLNT<br>RTRV-DWDM<br>RTRV-FFP-CLNT<br>RTRV-FFP-OCH<br>RTRV-LNK-<MOD2O><br>RTRV-OCH<br>RTRV-OMS<br>RTRV-OTS<br>RTRV-PROTNSW-CLNT<br>RTRV-PROTNSW-OCH<br>RTRV-TRC-CLNT<br>RTRV-TRC-OCH                                                                                           |
| Input Format     | ED-LNK-<MOD2O>:[<TID>]:<FROM>,<TO>:<CTAG>:::<PST>,[<SST>];<br>where: <ul style="list-style-type: none"> <li>• &lt;FROM&gt; indicates an identifier at one end of the optical link and is the AID from the “BAND” section on page 4-18</li> <li>• &lt;TO&gt; indicates an identifier at the other end of the optical link and is the AID from the “BAND” section on page 4-18</li> <li>• &lt;PST&gt; primary state; valid values are shown in the “PST” section on page 4-83</li> <li>• &lt;SST&gt; secondary state: valid values are shown in the “SST” section on page 4-86</li> </ul> |
| Input Example    | ED-LNK-OMS:PENNGROVE:BAND-6-1-TX,BAND-13-1-RX:114:::OOS,AINS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Errors           | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

### 3.4.50 ED-NE-GEN: Edit Network Element General

This command edits the node attributes of the NE.

Notes:

1. Only the IPADDR, IPMASK, DEFRTTR, IIOP PORT and node name can be modified with this command.
2. The node name can be a maximum of 20 characters. If the entered name exceeds 20 characters, an IPNV (Node Name Too Long) error message is returned.
3. An existing timing source can be removed by setting the address to 0.0.0.0.



**Caution**

Changing the IPADDR, IPMASK, or IIOP Port will cause a reset of the TCC2.

| Section  | ED-NE-GEN Description |
|----------|-----------------------|
| Category | System                |
| Security | Superuser             |



| Section          | ED-NE-GEN Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ALW-MSG-ALL RTRV-INV<br>ALW-MSG-DBCHG RTRV-NE-GEN<br>ED-DAT RTRV-NE-IPMAP<br>ED-NE-PATH RTRV-NE-PATH<br>ED-NE-SYCN RTRV-NE-SYCN<br>INH-MSG-ALL RTRV-NE-WDMANS<br>INH-MSG-DBCHG RTRV-TOD<br>INIT-SYS SET-TOD<br>RTRV-HDR                                                                                                                                                                                                                                                                                                                                                                                                                |
| Input Format     | ED-NE-GEN:[<TID>]::<CTAG>:::[NAME=<NAME>],[IPADDR=<IPADDR>],[IPMASK=<IPMASK>],[DEFRTR=<DEFRTR>],[IOPORT=<IOPORT>],[NTP=<NTP>];<br>where: <ul style="list-style-type: none"> <li>• &lt;NAME&gt; indicates the node name and is a string</li> <li>• &lt;IPADDR&gt; indicates the node IP address and is a string</li> <li>• &lt;IPMASK&gt; indicates the node IP mask and is a string</li> <li>• &lt;DEFRTR&gt; indicates the node default router and is a string</li> <li>• &lt;IOPORT&gt; indicates the node IOPORT and is an integer</li> <li>• &lt;NTP&gt; indicates the node's NTP timing origin address and is a string</li> </ul> |
| Input Example    | ED-NE-GEN:CISCO::123:::NAME=NODENAME,IPADDR=192.168.100.52,IPMASK=255.255.255.0,DEFRTR=192.168.100.1,IOPORT=57790,NTP=192.168.100.52;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

### 3.4.51 ED-NE-PATH: Edit Network Element Paths

This command edits the path attributes of the NE.

| Section          | ED-NE-PATH Description                                                                                                                                                                                                 |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | System                                                                                                                                                                                                                 |
| Security         | Provisioning                                                                                                                                                                                                           |
| Related Messages | ALW-MSG-ALL RTRV-INV<br>ALW-MSG-DBCHG RTRV-NE-GEN<br>ED-DAT RTRV-NE-IPMAP<br>ED-NE-GEN RTRV-NE-PATH<br>ED-NE-SYCN RTRV-NE-SYCN<br>INH-MSG-ALL RTRV-NE-WDMANS<br>INH-MSG-DBCHG RTRV-TOD<br>INIT-SYS SET-TOD<br>RTRV-HDR |

| Section       | ED-NE-PATH Description                                                                                                                                                                                                                                                                                                                            |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | ED-NE-PATH:[<TID>]::<CTAG>[::<PDIP=<PDIP>];<br>where: <ul style="list-style-type: none"> <li>&lt;PDIP&gt; flag used to indicate whether PDI-P should be generated on the outgoing VT-structured STSs. PDI-P is specified in GR-253 (Issue2 Rev2 1999) CR6-261 (6.2.1.4.1); valid values are shown in the “ON_OFF” section on page 4-76</li> </ul> |
| Input Example | ED-NE-PATH:::CTAG:::PDIP=Y;                                                                                                                                                                                                                                                                                                                       |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                    |

## 3.4.52 ED-NE-SYCN: Edit Network Element Synchronization

This command edits the synchronization attributes of the NE.

Notes:

- Although mixed mode timing is supported in this release, it is not recommended. See the “[Mixed Mode Timing Support](#)” section on page 1-19 for more information.
- The existing external and line modes have the same functionality in all ONS 15454 4.x releases:
  - External mode: the node derives its timing from the BITS inputs.
  - Line mode: the node derives its timing from the SONET line(s).
  - Mixed mode: the node derives its timing from the BITS input or SONET lines.

| Section          | ED-NE-SYCN Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |               |               |               |         |           |        |                |           |                |            |          |         |          |             |             |               |               |          |              |          |              |               |                |               |           |               |          |               |         |          |  |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|---------------|---------------|---------|-----------|--------|----------------|-----------|----------------|------------|----------|---------|----------|-------------|-------------|---------------|---------------|----------|--------------|----------|--------------|---------------|----------------|---------------|-----------|---------------|----------|---------------|---------|----------|--|
| Category         | Synchronization                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |               |               |               |         |           |        |                |           |                |            |          |         |          |             |             |               |               |          |              |          |              |               |                |               |           |               |          |               |         |          |  |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |               |               |               |         |           |        |                |           |                |            |          |         |          |             |             |               |               |          |              |          |              |               |                |               |           |               |          |               |         |          |  |
| Related Messages | <table> <tbody> <tr> <td>ALW-MSG-ALL</td> <td>RTRV-ALM-BITS</td> </tr> <tr> <td>ALW-MSG-DBCHG</td> <td>RTRV-ALM-SYCN</td> </tr> <tr> <td>ED-BITS</td> <td>RTRV-BITS</td> </tr> <tr> <td>ED-DAT</td> <td>RTRV-COND-BITS</td> </tr> <tr> <td>ED-NE-GEN</td> <td>RTRV-COND-SYCN</td> </tr> <tr> <td>ED-NE-PATH</td> <td>RTRV-HDR</td> </tr> <tr> <td>ED-SYCN</td> <td>RTRV-INV</td> </tr> <tr> <td>INH-MSG-ALL</td> <td>RTRV-NE-GEN</td> </tr> <tr> <td>INH-MSG-DBCHG</td> <td>RTRV-NE-IPMAP</td> </tr> <tr> <td>INIT-SYS</td> <td>RTRV-NE-PATH</td> </tr> <tr> <td>OPR-SYCN</td> <td>RTRV-NE-SYCN</td> </tr> <tr> <td>REPT ALM BITS</td> <td>RTRV-NE-WDMANS</td> </tr> <tr> <td>REPT ALM SYCN</td> <td>RTRV-SYCN</td> </tr> <tr> <td>REPT EVT BITS</td> <td>RTRV-TOD</td> </tr> <tr> <td>REPT EVT SYCN</td> <td>SET-TOD</td> </tr> <tr> <td>RLS-SYCN</td> <td></td> </tr> </tbody> </table> | ALW-MSG-ALL | RTRV-ALM-BITS | ALW-MSG-DBCHG | RTRV-ALM-SYCN | ED-BITS | RTRV-BITS | ED-DAT | RTRV-COND-BITS | ED-NE-GEN | RTRV-COND-SYCN | ED-NE-PATH | RTRV-HDR | ED-SYCN | RTRV-INV | INH-MSG-ALL | RTRV-NE-GEN | INH-MSG-DBCHG | RTRV-NE-IPMAP | INIT-SYS | RTRV-NE-PATH | OPR-SYCN | RTRV-NE-SYCN | REPT ALM BITS | RTRV-NE-WDMANS | REPT ALM SYCN | RTRV-SYCN | REPT EVT BITS | RTRV-TOD | REPT EVT SYCN | SET-TOD | RLS-SYCN |  |
| ALW-MSG-ALL      | RTRV-ALM-BITS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |               |               |               |         |           |        |                |           |                |            |          |         |          |             |             |               |               |          |              |          |              |               |                |               |           |               |          |               |         |          |  |
| ALW-MSG-DBCHG    | RTRV-ALM-SYCN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |               |               |               |         |           |        |                |           |                |            |          |         |          |             |             |               |               |          |              |          |              |               |                |               |           |               |          |               |         |          |  |
| ED-BITS          | RTRV-BITS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |               |               |               |         |           |        |                |           |                |            |          |         |          |             |             |               |               |          |              |          |              |               |                |               |           |               |          |               |         |          |  |
| ED-DAT           | RTRV-COND-BITS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |               |               |               |         |           |        |                |           |                |            |          |         |          |             |             |               |               |          |              |          |              |               |                |               |           |               |          |               |         |          |  |
| ED-NE-GEN        | RTRV-COND-SYCN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |               |               |               |         |           |        |                |           |                |            |          |         |          |             |             |               |               |          |              |          |              |               |                |               |           |               |          |               |         |          |  |
| ED-NE-PATH       | RTRV-HDR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |               |               |               |         |           |        |                |           |                |            |          |         |          |             |             |               |               |          |              |          |              |               |                |               |           |               |          |               |         |          |  |
| ED-SYCN          | RTRV-INV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |               |               |               |         |           |        |                |           |                |            |          |         |          |             |             |               |               |          |              |          |              |               |                |               |           |               |          |               |         |          |  |
| INH-MSG-ALL      | RTRV-NE-GEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |               |               |               |         |           |        |                |           |                |            |          |         |          |             |             |               |               |          |              |          |              |               |                |               |           |               |          |               |         |          |  |
| INH-MSG-DBCHG    | RTRV-NE-IPMAP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |               |               |               |         |           |        |                |           |                |            |          |         |          |             |             |               |               |          |              |          |              |               |                |               |           |               |          |               |         |          |  |
| INIT-SYS         | RTRV-NE-PATH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |               |               |               |         |           |        |                |           |                |            |          |         |          |             |             |               |               |          |              |          |              |               |                |               |           |               |          |               |         |          |  |
| OPR-SYCN         | RTRV-NE-SYCN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |               |               |               |         |           |        |                |           |                |            |          |         |          |             |             |               |               |          |              |          |              |               |                |               |           |               |          |               |         |          |  |
| REPT ALM BITS    | RTRV-NE-WDMANS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |               |               |               |         |           |        |                |           |                |            |          |         |          |             |             |               |               |          |              |          |              |               |                |               |           |               |          |               |         |          |  |
| REPT ALM SYCN    | RTRV-SYCN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |               |               |               |         |           |        |                |           |                |            |          |         |          |             |             |               |               |          |              |          |              |               |                |               |           |               |          |               |         |          |  |
| REPT EVT BITS    | RTRV-TOD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |               |               |               |         |           |        |                |           |                |            |          |         |          |             |             |               |               |          |              |          |              |               |                |               |           |               |          |               |         |          |  |
| REPT EVT SYCN    | SET-TOD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |               |               |               |         |           |        |                |           |                |            |          |         |          |             |             |               |               |          |              |          |              |               |                |               |           |               |          |               |         |          |  |
| RLS-SYCN         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |               |               |               |         |           |        |                |           |                |            |          |         |          |             |             |               |               |          |              |          |              |               |                |               |           |               |          |               |         |          |  |

| Section       | ED-NE-SYCN Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | ED-NE-SYCN:[<TID>]::<CTAG>:::[TMMD=<TMMD>,<br>[SSMGEN=<SSMGEN>],[QRES=<QRES>],[RVRTV=<RVRTV>,<br>[RVTM=<RVTM>];<br><br>where: <ul style="list-style-type: none"> <li>• &lt;TMMD&gt; is the timing mode; valid values for &lt;TMMD&gt; are shown in the “TIMING_MODE” section on page 4-92</li> <li>• &lt;SSMGEN&gt; is the SSM message set; valid values for &lt;SSMGEN&gt; are shown in the “SYNC_GENERATION” section on page 4-89</li> <li>• &lt;QRES&gt; is the quality of the RES; valid values for &lt;QRES&gt; are shown in the “SYNC_QUALITY_LEVEL” section on page 4-89</li> <li>• &lt;RVRTV&gt; is the revertive mode; valid values for &lt;RVRTV&gt; are shown in the “ON_OFF” section on page 4-76</li> <li>• &lt;RVTM&gt; is the revertive time; valid values for &lt;RVTM&gt; are shown in the “REVERTIVE_TIME” section on page 4-84</li> </ul> |
| Input Example | ED-NE-SYCN:CISCO::123:::TMMD=LINE,SSMGEN=GEN1,<br>QRES=ABOVE-PRS,RVRTV=Y,RVTM=8.0;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

### 3.4.53 ED-OCH: Edit Optical Channel

(Cisco ONS 15454 only)

This command edits the attributes (service parameters) and state of an OCH facility.

See the “[Provisioning Rules for MXP\\_2.5G\\_10G and TXP\\_MR\\_10G Cards](#)” section on page 1-8 and the “[Provisioning Rules for TXP\\_MR\\_2.5G and TXPP\\_MR\\_2.5G Cards](#)” section on page 1-13 for specific card provisioning rules.

| Section  | ED-OCH Description |
|----------|--------------------|
| Category | DWDM               |
| Security | Provisioning       |

| Section          | ED-OCH Description |
|------------------|--------------------|
| Related Messages | DLT-FFP-CLNT       |
|                  | DLT-LNK-<MOD2O>    |
|                  | ED-CLNT            |
|                  | ED-DWDM            |
|                  | ED-FFP-CLNT        |
|                  | ED-FFP-OCH         |
|                  | ED-LNK-<MOD2O>     |
|                  | ED-OMS             |
|                  | ED-OTS             |
|                  | ED-TRC-CLNT        |
|                  | ED-TRC-OCH         |
|                  | ENT-FFP-CLNT       |
|                  | ENT-LNK-<MOD2O>    |
|                  | OPR-LASER-OTS      |
|                  | OPR-PROTNSW-CLNT   |
|                  | OPR-PROTNSW-OCH    |
|                  | Input Format       |

| Section                     | ED-OCH Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format<br>(continued) | <ul style="list-style-type: none"> <li>• &lt;CHPOWER&gt; indicates the value of per channel optical power expected to the OCH drop port of an AD-4C unit. &lt;CHPOWER&gt; is a float expressed in dBm. Valid values are shown in the <a href="#">“REVERTIVE_TIME”</a> section on page 4-84</li> <li>• &lt;PORTNAME&gt; identifies a port name and is a string</li> <li>• &lt;SFBER&gt; identifies the SFBER for the SONET payload; valid values are shown in the <a href="#">“SF_BER”</a> section on page 4-86</li> <li>• &lt;SDBER&gt; identifies the SDBER for the SONET payload; valid values are shown in the <a href="#">“SD_BER”</a> section on page 4-85</li> <li>• &lt;ALSMODE&gt; indicates if the Automatic Laser Shutdown is enabled or disabled; valid values are shown in the <a href="#">“ALS_MODE”</a> section on page 4-49</li> <li>• &lt;ALSRCINT&gt; indicates the ALS recovery interval. Range is 100–300 seconds; &lt;ALSRCINT&gt; is an integer</li> <li>• &lt;ALSRCPW&gt; indicates the ALS recovery pulse width. The range is 2–100 seconds, in increments of 100ms, e.g. 30.1; &lt;ALSRCPW&gt; is a float</li> <li>• &lt;COMM&gt; indicates if the GCC or DCC is enabled or disabled. The GCC can be enabled only if the digital wrapper has been enabled for the card. The default is NONE. Valid values are shown in the <a href="#">“COMM_TYPE”</a> section on page 4-54. Rules for an MXP_2.5G_10G/TXP_MR_10G client port are; only the DCC can be provisioned, if the termination mode is not transparent and the payload is SONET. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the DCC can be enabled only if the G.709 is not enabled and if the payload is SONET and the termination mode is not transparent. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the GCC can be enabled if there is no DCC and the G.709 flag is enabled.</li> <li>• &lt;GCCRATE&gt; indicates the data rate of the GCC traffic. Valid values are shown in the <a href="#">“GCCRATE”</a> section on page 4-66. The default is 192Kbps. For MXP_2.5G_10G/TXP_MR_10G cards this applies only to the DWDM port. The 576K option is not supported for this release.</li> <li>• &lt;OSDBER&gt; identifies the signal degrade threshold setting for the OTN level. Applicable only if the G.709 is enabled; valid values are shown in the <a href="#">“SD_BER”</a> section on page 4-85</li> </ul> |

| Section                     | ED-OCH Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format<br>(continued) | <ul style="list-style-type: none"> <li>• &lt;DWRAP&gt; is the G.709 digital wrapper. It is either on or off. The system default is ON. For MXP_2.5G_10G/TXP_MR_10G cards, this applies only to the DWDM port. To enable G.709 there should be no GCC on the DWDM port. To disable G.709 there should be no GCC on the DWDM port. The FEC should be turned to off; valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a></li> <li>• &lt;FEC&gt; is the Forward Error Correction. It can be enabled only if the G.709 is turned ON. It is either on or off. The system default is ON. For MXP_2.5G_10G/TXP_MR_10G cards this applies only to the DWDM port. The FEC level PM and thresholds apply if the FEC is turned on; valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a></li> <li>• &lt;MACADDR&gt; identifies the MAC address for the 10GE payload; &lt;MACADDR&gt; is a string</li> <li>• &lt;SYNCMSG&gt; indicates that the facility be enabled to provide the synchronization clock. This does not apply to a TXP_MR-10G card. This applies to an MXP_2.5G_10G card, only if the payload is SONET and the card termination mode is as follows:<br/>TRANSPARENT - All Client ports are available for all timing selections. All Trunk ports are not available.<br/>LINE - All ports are available for all-timing selections.<br/>Valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a></li> <li>• &lt;SENDDUS&gt; indicates that the facility send out a Do not Use for Sync message. This does not apply to a TXP card. This applies to an MXP_2.5G_10G card, only if the payload is SONET and the card termination mode is as follows:<br/>TRANSPARENT- All Client ports are available for all timing selections. All Trunk ports are not available.<br/>LINE - All ports are available for all-timing selections.<br/>Valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a></li> <li>• &lt;RLASER&gt; indicates if the laser should be restarted. This is applicable only if the ALSMODE is not automatic; valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a></li> <li>• &lt;SOAK&gt; OOS-AINS to IS transition soak time as measured in 15–minute intervals. A value of 4 translates to a soak time of one hour. The allowable range is 0–192 intervals (maximum of 48–hours). &lt;SOAK&gt; is an integer</li> <li>• &lt;OSPF&gt; indicates the OSPF discovery. &lt;OSPF&gt; can be edited only if the DCC is enabled; valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a></li> <li>• &lt;PST&gt; primary state; valid values are shown in the <a href="#">“PST” section on page 4-83</a></li> <li>• &lt;SST&gt; secondary state; valid values are shown in the <a href="#">“SST” section on page 4-86</a></li> </ul> |
| Input Example               | <pre>ED-OCH:CISCO:CHAN-6-2:114:::RDIRN=W-E,EXPWLEN=1530.32, VOAATTN=2.5,VOAPWR=7.5,CALOPWR=0.0,CHPOWER=2.0, NAME="NY LINE",SFBER=1E-5,SDBER=1E-6,ALSMODE=Y, ALSRCINT=30,ALSRCPW=35.1,COMM=DCC,GCCRATE=192K, OSDBER=1E-5,DWRAP=Y,FEC=Y,MACADDR=00-0E-AA-BB-CC-DD, SYNCMSG=N,SENDDUS=Y,RLASER=Y,SOAK=10,OSPF=Y:OOS,AINS;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Errors                      | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

### 3.4.54 ED-OMS: Edit Optical Multiplex Section

(Cisco ONS 15454 only)

This command edits the attributes (service parameters) and state of an OMS facility.

| Section          | ED-OMS Description |                   |
|------------------|--------------------|-------------------|
| Category         | DWDM               |                   |
| Security         | Provisioning       |                   |
| Related Messages | DLT-FFP-CLNT       | RLS-LASER-OTS     |
|                  | DLT-LNK-<MOD2O>    | RLS-PROTNSW-CLNT  |
|                  | ED-CLNT            | RLS-PROTNSW-OCH   |
|                  | ED-DWDM            | RTRV-CLNT         |
|                  | ED-FFP-CLNT        | RTRV-DWDM         |
|                  | ED-FFP-OCH         | RTRV-FFP-CLNT     |
|                  | ED-LNK-<MOD2O>     | RTRV-FFP-OCH      |
|                  | ED-OCH             | RTRV-LNK-<MOD2O>  |
|                  | ED-OTS             | RTRV-OCH          |
|                  | ED-TRC-CLNT        | RTRV-OMS          |
|                  | ED-TRC-OCH         | RTRV-OTS          |
|                  | ENT-FFP-CLNT       | RTRV-PROTNSW-CLNT |
|                  | ENT-LNK-<MOD2O>    | RTRV-PROTNSW-OCH  |
|                  | OPR-LASER-OTS      | RTRV-TRC-CLNT     |
|                  | OPR-PROTNSW-CLNT   | RTRV-TRC-OCH      |
|                  | OPR-PROTNSW-OCH    |                   |

| Section       | ED-OMS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | <p>ED-OMS:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;:::[RDIRN=&lt;RDIRN&gt;,<br/> [EXPBAND=&lt;EXPBAND&gt;],[VOAATTN=&lt;VOAATTN&gt;,<br/> [VOAPWR=&lt;VOAPWR&gt;],[CALOPWR=&lt;CALOPWR&gt;,<br/> [CHPOWER=&lt;CHPOWER&gt;]:[&lt;PST&gt;],[&lt;SST&gt;];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the AID from the “BAND” section on page 4-18</li> <li>• &lt;RDIRN&gt; identifies the ring directionality of the optical line; valid values are shown in the “RDIRN_MODE” section on page 4-83</li> <li>• &lt;EXPBAND&gt; identifies the expected value of band for this port; valid values are shown in the “OPTICAL_BAND” section on page 4-76</li> <li>• &lt;VOAATTN&gt; indicates the value of calibrated attenuation for the VOA. The range is 0,0 to +3.0. &lt;VOAATTN&gt; is a float</li> <li>• &lt;VOAPWR&gt; indicates the value of calibrated output power that the VOA is going to set as a result of its attenuation. &lt;VOAPWR&gt; is a float</li> <li>• &lt;CALOPWR&gt; indicates the value of the calibrated optical power expected for the output line which you provide to sum with the calculated value to have the total expected output power; &lt;CALOPWR&gt; is a float expressed in dBm</li> <li>• &lt;CHPOWER&gt; indicates the value of per channel optical power expected to the OMS port in a DROP port of an AD-1B or AD-4B unit; &lt;CHPOWER&gt; is a float expressed in dBm</li> <li>• &lt;PST&gt; primary state; valid values are shown in the “PST” section on page 4-83</li> <li>• &lt;SST&gt; secondary state; valid values are shown in the “SST” section on page 4-86</li> </ul> |
| Input Example | ED-OMS:PENNGROVE:BAND-6-1:114:::RDIRN=W-E,<br>EXPBAND=1530.32-1532.68,VOAATTN=2.5,VOAPWR=7.5,CALOPWR=0.0,<br>CHPOWER=2.0:OOS,AINS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

### 3.4.55 ED-OSC: Edit Optical Service Channel

(Cisco ONS 15454 only)

This command edits the OSC (optical service channel) group attributes.

| Section          | ED-OSC Description            |
|------------------|-------------------------------|
| Category         | DWDM                          |
| Security         | Provisioning                  |
| Related Messages | ENT-OSC<br>DLT-OSC<br>RTR-OSC |



| Section       | ED-OSC Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | ED-OSC:[<TID>]:<AID>:<CTAG>:::[RINGID=<RINGID>,<br>[NODEID=<NODEID>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies the OSC group of the NE and is the AID from the <a href="#">“OSC” section on page 4-30</a></li> <li>• &lt;RINGID&gt; identifies the OSC ring ID of the NE. &lt;RINGID&gt; is a string of up to six characters. Valid characters are [A-Z, 0-9]. &lt;RINGID&gt; is a string and the default value is “# of AID OSC-#”. &lt;RINGID&gt; is an integer</li> <li>• &lt;NODEID&gt; identifies the OSC node ID of the NE. &lt;NODEID&gt; ranges from 0 to 31 and is an integer</li> </ul> |
| Input Example | ED-OSC:PENNGROVE:OSC-1:114:::RINGID=1,NODEID=10;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## 3.4.56 ED-OTS: Edit OTS

(Cisco ONS 15454 only)

This command edits the attributes (service parameters) and state of an OTS facility.

| Section          | ED-OTS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |             |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------|-----------------|------------------|---------|-----------------|---------|-----------|-------------|-----------|------------|---------------|----------------|--------------|--------|------------------|--------|----------|-------------|----------|------------|----------|--------------|-------------------|-----------------|------------------|---------------|---------------|------------------|--------------|-----------------|--|
| Category         | DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |             |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |             |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| Related Messages | <table> <tr> <td>DLT-FFP-CLNT</td> <td>RLS-LASER-OTS</td> </tr> <tr> <td>DLT-LNK-&lt;MOD2O&gt;</td> <td>RLS-PROTNSW-CLNT</td> </tr> <tr> <td>ED-CLNT</td> <td>RLS-PROTNSW-OCH</td> </tr> <tr> <td>ED-DWDM</td> <td>RTRV-CLNT</td> </tr> <tr> <td>ED-FFP-CLNT</td> <td>RTRV-DWDM</td> </tr> <tr> <td>ED-FFP-OCH</td> <td>RTRV-FFP-CLNT</td> </tr> <tr> <td>ED-LNK-&lt;MOD2O&gt;</td> <td>RTRV-FFP-OCH</td> </tr> <tr> <td>ED-OCH</td> <td>RTRV-LNK-&lt;MOD2O&gt;</td> </tr> <tr> <td>ED-OMS</td> <td>RTRV-OCH</td> </tr> <tr> <td>ED-TRC-CLNT</td> <td>RTRV-OMS</td> </tr> <tr> <td>ED-TRC-OCH</td> <td>RTRV-OTS</td> </tr> <tr> <td>ENT-FFP-CLNT</td> <td>RTRV-PROTNSW-CLNT</td> </tr> <tr> <td>ENT-LNK-&lt;MOD2O&gt;</td> <td>RTRV-PROTNSW-OCH</td> </tr> <tr> <td>OPR-LASER-OTS</td> <td>RTRV-TRC-CLNT</td> </tr> <tr> <td>OPR-PROTNSW-CLNT</td> <td>RTRV-TRC-OCH</td> </tr> <tr> <td>OPR-PROTNSW-OCH</td> <td></td> </tr> </table> | DLT-FFP-CLNT | RLS-LASER-OTS | DLT-LNK-<MOD2O> | RLS-PROTNSW-CLNT | ED-CLNT | RLS-PROTNSW-OCH | ED-DWDM | RTRV-CLNT | ED-FFP-CLNT | RTRV-DWDM | ED-FFP-OCH | RTRV-FFP-CLNT | ED-LNK-<MOD2O> | RTRV-FFP-OCH | ED-OCH | RTRV-LNK-<MOD2O> | ED-OMS | RTRV-OCH | ED-TRC-CLNT | RTRV-OMS | ED-TRC-OCH | RTRV-OTS | ENT-FFP-CLNT | RTRV-PROTNSW-CLNT | ENT-LNK-<MOD2O> | RTRV-PROTNSW-OCH | OPR-LASER-OTS | RTRV-TRC-CLNT | OPR-PROTNSW-CLNT | RTRV-TRC-OCH | OPR-PROTNSW-OCH |  |
| DLT-FFP-CLNT     | RLS-LASER-OTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |             |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| DLT-LNK-<MOD2O>  | RLS-PROTNSW-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |             |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-CLNT          | RLS-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |             |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-DWDM          | RTRV-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |             |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-FFP-CLNT      | RTRV-DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |             |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-FFP-OCH       | RTRV-FFP-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |             |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-LNK-<MOD2O>   | RTRV-FFP-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |             |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-OCH           | RTRV-LNK-<MOD2O>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |             |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-OMS           | RTRV-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |             |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-TRC-CLNT      | RTRV-OMS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |             |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-TRC-OCH       | RTRV-OTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |             |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ENT-FFP-CLNT     | RTRV-PROTNSW-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |             |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ENT-LNK-<MOD2O>  | RTRV-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |             |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| OPR-LASER-OTS    | RTRV-TRC-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |             |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| OPR-PROTNSW-CLNT | RTRV-TRC-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |             |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| OPR-PROTNSW-OCH  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |             |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |

| Section       | ED-OTS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | <p>ED-OTS:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;:::[RDIRN=&lt;RDIRN&gt;],[VOAATTN=&lt;VOAATTN&gt;],[VOAPWR=&lt;VOAPWR&gt;],[CALOPWR=&lt;CALOPWR&gt;],[CALTILT=&lt;CALTILT&gt;],[OSRI=&lt;OSRI&gt;],[ALSMODE=&lt;ALSMODE&gt;],[ALSRCINT=&lt;ALSRCINT&gt;],[ALSRCPW=&lt;ALSRCPW&gt;],[EXPGAIN=&lt;EXPGAIN&gt;]:[&lt;PST&gt;],[&lt;SST&gt;];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier from the “<a href="#">LINE</a>” section on page 4-29</li> <li>• &lt;RDIRN&gt; identifies the ring directionality of the optical line; valid values are shown in the “<a href="#">RDIRN_MODE</a>” section on page 4-83</li> <li>• &lt;VOAATTN&gt; indicates the value of calibrated attenuation for the VOA. The range is 0.0 to +3.0. &lt;VOAATTN&gt; is a float</li> <li>• &lt;VOAPWR&gt; indicates the value of calibrated output power that the VOA is going to set as a result of its attenuation. &lt;VOAPWR&gt; is a float</li> <li>• &lt;CALOPWR&gt; indicates the value of the calibrated optical power expected for the output line added to the calculated value which equals the total expected output power; &lt;CALOPWR&gt; is a float</li> <li>• &lt;CALTILT&gt; indicates the amplifier calibration tilt offset added to the calculated reference value. &lt;CALTILT&gt; is an integer and optional</li> <li>• &lt;OSRI&gt; indicates the OSRI enable or disable feature. &lt;OSRI&gt; is optional and present only on a port where the safety is supported; valid values are shown in the “<a href="#">ON_OFF</a>” section on page 4-76</li> <li>• &lt;ALSMODE&gt; indicates if the Automatic Laser Shutdown is enabled or disabled. It is an optional parameter present only on the port where the safety is supported; valid values are shown in the “<a href="#">ALS_MODE</a>” section on page 4-49</li> <li>• &lt;ALSRCINT&gt; indicates the ALS recovery interval. The range is 100–300 seconds. &lt;ALSRCINT&gt; is optional, present only on the port where the safety is supported; &lt;ALSRCINT&gt; is an integer</li> <li>• &lt;ALSRCPW&gt; indicates the ALS recovery pulse width. The range is 2–100 seconds, in increments of 100ms, e.g. 30.1. &lt;ALSRCPW&gt; is optional, present only on the port where the safety is supported; &lt;ALSRCPW&gt; is a float</li> <li>• &lt;EXPGAIN&gt; indicates the gain expected value to be reached from an amplifier when the node works in a DWDM access network. &lt;EXPGAIN&gt; is a float expressed in dBm and is optional</li> <li>• &lt;PST&gt; primary state; valid values are shown in the “<a href="#">PST</a>” section on page 4-83</li> <li>• &lt;SST&gt; secondary state; valid values are shown in the “<a href="#">SST</a>” section on page 4-86</li> </ul> |
| Input Example | ED-OTS:PENNGROVE:LINE-6-1:114:::RDIRN=W-E,VOAATTN=5.0,VOAPWR=10.0,CALOPWR=0,CALTILT=0,OSRI=N,ALSMODE=Y,ALSRCINT=30,ALSRCPW=35.1,EXPGAIN=-5.0:OOS,AINS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Errors        | Errors are listed in <a href="#">Table 7-33</a> on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

### 3.4.57 ED-PID: Edit Password

This command allows a user to change his or her own password.

## Notes:

1. Passwords are masked for the following security commands: ACT-USER, ED-PID, ENT-USER-SECU and ED-USER-SECU. Access to a TL1 session via any means will have the password masked. The CTC Request History and Message Log will also show the masked commands. When a password-masked command is re-issued by double-clicking the command from CTC Request History, the password will still be masked in the CTC Request History and Message Log. The actual password that was previously issued will be sent to the NE. To use a former command as a template only, single-click the command in CTC Request History. The command will be placed in the Command Request text box, where you can edit the appropriate fields prior to re-issuing it.
2. The password will not appear in the TL1 log on the NE.
3. For the ED-PID command:

```
ED-PID:[TID]:<UID>:[CTAG]::<OLDPID>,<NEWPID>;
```

the syntax of <OLDPID> is not checked. The <NEWPID> is required to follow Telcordia standards (i.e., 10 characters maximum including 1 letter, 1 number, and any one of the following characters: #, %, or +). The <OLDPID> must match what is in the database.

| Section          | ED-PID Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |          |              |              |               |               |               |      |               |           |                  |                |               |               |                |             |                |              |                   |               |  |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------|--------------|---------------|---------------|---------------|------|---------------|-----------|------------------|----------------|---------------|---------------|----------------|-------------|----------------|--------------|-------------------|---------------|--|
| Category         | Security                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |          |              |              |               |               |               |      |               |           |                  |                |               |               |                |             |                |              |                   |               |  |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |          |              |              |               |               |               |      |               |           |                  |                |               |               |                |             |                |              |                   |               |  |
| Related Messages | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">ACT-USER</td> <td style="width: 50%;">INH-MSG-SECU</td> </tr> <tr> <td>ALW-MSG-SECU</td> <td>INH-USER-SECU</td> </tr> <tr> <td>ALW-USER-SECU</td> <td>REPT ALM SECU</td> </tr> <tr> <td>CANC</td> <td>REPT EVT SECU</td> </tr> <tr> <td>CANC-USER</td> <td>REPT EVT SESSION</td> </tr> <tr> <td>CANC-USER-SECU</td> <td>RTRV-CMD-SECU</td> </tr> <tr> <td>DLT-USER-SECU</td> <td>RTRV-DFLT-SECU</td> </tr> <tr> <td>ED-CMD-SECU</td> <td>RTRV-USER-SECU</td> </tr> <tr> <td>ED-USER-SECU</td> <td>SET-ATTR-SECUDFLT</td> </tr> <tr> <td>ENT-USER-SECU</td> <td></td> </tr> </table>                                                                                                                                                                                                                                            | ACT-USER | INH-MSG-SECU | ALW-MSG-SECU | INH-USER-SECU | ALW-USER-SECU | REPT ALM SECU | CANC | REPT EVT SECU | CANC-USER | REPT EVT SESSION | CANC-USER-SECU | RTRV-CMD-SECU | DLT-USER-SECU | RTRV-DFLT-SECU | ED-CMD-SECU | RTRV-USER-SECU | ED-USER-SECU | SET-ATTR-SECUDFLT | ENT-USER-SECU |  |
| ACT-USER         | INH-MSG-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |          |              |              |               |               |               |      |               |           |                  |                |               |               |                |             |                |              |                   |               |  |
| ALW-MSG-SECU     | INH-USER-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |              |              |               |               |               |      |               |           |                  |                |               |               |                |             |                |              |                   |               |  |
| ALW-USER-SECU    | REPT ALM SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |              |              |               |               |               |      |               |           |                  |                |               |               |                |             |                |              |                   |               |  |
| CANC             | REPT EVT SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |              |              |               |               |               |      |               |           |                  |                |               |               |                |             |                |              |                   |               |  |
| CANC-USER        | REPT EVT SESSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |              |              |               |               |               |      |               |           |                  |                |               |               |                |             |                |              |                   |               |  |
| CANC-USER-SECU   | RTRV-CMD-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |              |              |               |               |               |      |               |           |                  |                |               |               |                |             |                |              |                   |               |  |
| DLT-USER-SECU    | RTRV-DFLT-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |              |              |               |               |               |      |               |           |                  |                |               |               |                |             |                |              |                   |               |  |
| ED-CMD-SECU      | RTRV-USER-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |              |              |               |               |               |      |               |           |                  |                |               |               |                |             |                |              |                   |               |  |
| ED-USER-SECU     | SET-ATTR-SECUDFLT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          |              |              |               |               |               |      |               |           |                  |                |               |               |                |             |                |              |                   |               |  |
| ENT-USER-SECU    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |              |              |               |               |               |      |               |           |                  |                |               |               |                |             |                |              |                   |               |  |
| Input Format     | <pre>ED-PID:[&lt;TID&gt;]:&lt;UID&gt;:[CTAG]::&lt;OLDPID&gt;,&lt;NEWPID&gt;;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;UID&gt; is the user identifier and is a string; &lt;UID&gt; is any combination of up to 10 alphanumeric characters</li> <li>• &lt;OLDPID&gt; is the old password and is a string; &lt;OLDPID&gt; is any combination of up to 10 alphanumeric characters. The syntax of &lt;OLDPID&gt; is not checked for backwards compatibility</li> <li>• &lt;NEWPID&gt; is the user login password and is a string; &lt;NEWPID&gt; is a minimum of 6, maximum of 10 alphanumeric characters including at least one digit and one special character (% , #, or +)</li> </ul> <p><b>Note</b> CTC allows &lt;UID&gt; and &lt;PID&gt; of up to 20 characters. The 20 character CTC-entered &lt;UID&gt; and &lt;PID&gt; are not valid TL1 &lt;UID&gt; and &lt;PID&gt;.</p> |          |              |              |               |               |               |      |               |           |                  |                |               |               |                |             |                |              |                   |               |  |
| Input Example    | <pre>ED-PID:CISCO:UID:123::OLDPWD,NEWPWD;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |              |              |               |               |               |      |               |           |                  |                |               |               |                |             |                |              |                   |               |  |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |              |              |               |               |               |      |               |           |                  |                |               |               |                |             |                |              |                   |               |  |

### 3.4.58 ED-SYNCN: Edit Synchronization

This command edits the synchronization reference list used to determine the sources for the NE's reference clock and the BITS output clock. For each clock, up to three synchronization sources may be specified (e.g., PRIMARY, SECOND, THIRD). To view or edit the system timing mode, use the RTRV-NE-SYNCN or ED-NE-SYNCN commands.


**Note**

To retrieve/set the timing mode, SSM message Set or Quality of RES information, use the RTRV-NE-SYNCN and ED-NE-SYNCN commands.

| Section          | ED-SYNCN Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Synchronization                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Related Messages | ED-BITS RTRV-ALM-BITS<br>ED-NE-SYNCN RTRV-ALM-SYNCN<br>OPR-SYNCNSW RTRV-BITS<br>REPT ALM BITS RTRV-COND-BITS<br>REPT ALM SYNCN RTRV-COND-SYNCN<br>REPT EVT BITS RTRV-NE-SYNCN<br>REPT EVT SYNCN RTRV-SYNCN<br>RLS-SYNCNSW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Input Format     | ED-SYNCN:[<TID>]:<AID>:<CTAG>:::[PRI=<PRI>],[SEC=<SEC>],[THIRD=<THIRD>][:];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the synchronization reference to be modified and is from the “<a href="#">SYNC_REF</a>” section on page 4-34</li> <li>• &lt;PRI&gt; is the primary reference of the synchronization and is the AID from the “<a href="#">SYN_SRC</a>” section on page 4-34</li> <li>• &lt;SEC&gt; is the secondary reference of the synchronization and is the AID from the “<a href="#">SYN_SRC</a>” section on page 4-34</li> <li>• &lt;THIRD&gt; is the third reference of the synchronization and is the AID from the “<a href="#">SYN_SRC</a>” section on page 4-34</li> </ul> |
| Input Example    | ED-SYNCN:BOYES:SYNC-NE:112:::PRI=INTERNAL,SEC=INTERNAL,THIRD=INTERNAL;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### 3.4.59 ED-T1: Edit T1

This command edits the attributes related to a DS1/T1 port.

Notes:

1. The T1 facilities on the ONS 15327 are on the XTC card.
2. This command is not allowed if the card is a protecting card.

3. If sending this command to edit TACC and any other attribute(s), and the port having the cross-connection, the (Parameters Not compatible) error message will be returned.
4. Editing TACC via an ED-xxx command is only allowed when there is no circuit/cross-connection on this port and the port/VT does not have a test access point (TAP or TACC number). Otherwise, an error message (e.g. VT in Use) will be returned.
5. TACC creation will also be denied on the protect ports/cards.

| Section          | ED-T1 Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Ports                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Related Messages | ED-<OCN_TYPE>                    RTRV-<OCN_TYPE><br>ED-DS1                                RTRV-DS1<br>ED-EC1                                RTRV-EC1<br>ED-FC                                 RTRV-FC<br>ED-G1000                             RTRV-FSTE<br>ED-T3                                 RTRV-G1000<br>INIT-REG-G1000                     RTRV-GIGE<br>REPT RMV <MOD2_IO>                RTRV-POS<br>REPT RST <MOD2_IO>                RTRV-T1<br>RMV-<MOD2_IO>                      RTRV-T3<br>RST-<MOD2_IO> |

| Section       | ED-T1 Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | <p>ED-T1:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;:::[LINECDE=&lt;LINECDE&gt;],[FMT=&lt;FMT&gt;],[LBO=&lt;LBO&gt;],[TACC=&lt;TACC&gt;],[TAPTYPE=&lt;TAPTYPE&gt;],[SOAK=&lt;SOAK&gt;],[SFBER=&lt;SFBER&gt;],[SDBER=&lt;SDBER&gt;]:[&lt;PST&gt;],[&lt;SST&gt;];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier from the “<a href="#">FACILITY</a>” section on page 4-28</li> <li>• &lt;LINECDE&gt; is a line code; valid values for &lt;LINECDE&gt; are shown in the “<a href="#">LINE_CODE</a>” section on page 4-68</li> <li>• &lt;FMT&gt; is a frame format; valid values for &lt;FMT&gt; are shown in the “<a href="#">FRAME_FORMAT</a>” section on page 4-65</li> <li>• &lt;LBO&gt; is a line build out; valid values for &lt;LBO&gt; are shown in the “<a href="#">LINE_BUILDOUT</a>” section on page 4-67</li> <li>• &lt;TACC&gt; defines the STS as a test access port with a selected unique TAP number. The TAP number ranges from 0–999. When TACC is 0, the TAP is deleted; &lt;TACC&gt; is an integer.</li> <li>• &lt;TAPTYPE&gt; indicates the TAP type; valid values are shown in the “<a href="#">TAPTYPE</a>” section on page 4-92. The default value is DUAL</li> <li>• &lt;SOAK&gt; OOS-AINS to IS transition soak time as measured in 15 minute intervals, so a value of 4 translates to a soak time of 1 hour. The allowable range is 0–192 intervals (maximum of 48 hours); &lt;SOAK&gt; is an integer</li> <li>• &lt;SFBER&gt; identifies port SFBER; valid values are shown in the “<a href="#">SF_BER</a>” section on page 4-86</li> <li>• &lt;SDBER&gt; identifies port SDBER; valid values are shown in the “<a href="#">SD_BER</a>” section on page 4-85</li> <li>• &lt;PST&gt; primary state; valid values for &lt;PST&gt; are shown in the “<a href="#">PST</a>” section on page 4-83</li> <li>• &lt;SST&gt; secondary state; valid values for &lt;SST&gt; are shown in the “<a href="#">SST</a>” section on page 4-86</li> </ul> |
| Input Example | ED-T1:CISCO:FAC-2-1:1223:::LINECDE=AMI,FMT=ESF,LBO=0-131,TACC=8,TAPTYPE=SINGLE,SOAK=10,SFBER=1E-4,SDBER=1E-6:OOS,AINS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

### 3.4.60 ED-T3: Edit T3

This command edits the attributes related to a DS3/T3 port.

Notes:

1. T3 facilities on the ONS 15327 are on the XTC card.
2. This command is not allowed if the card is a protecting card.
3. Both FMT and Line code are not supported for T3/DS3 facility. They are supported on both the DS3XM and DS3E card. The unframed value of the framing format is only supported on the DS3E facility.

4. If sending this command to edit TACC and any other attribute(s), and the port having the cross-connection or the port/VT has a test access point (TAP or TACC number), the (Parameters Not compatible) error message will be returned.
5. Editing TACC via an ED-xxx command is only allowed when there is no circuit/cross-connection on the port and the port/VT does not have a test access point (TAP or TACC number). Otherwise, an error message (e.g. VT in Use) will be returned.
6. TACC creation will also be denied on the protect ports/cards.
7. Automatic application of loopbacks originating from the far end can be initiated on the T3 ports of a DS3E, DS3NE, or DS3XM card.

| Section          | ED-T3 Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Ports                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Related Messages | ED-<OCN_TYPE>                      RTRV-<OCN_TYPE><br>ED-DS1                                RTRV-DS1<br>ED-EC1                                RTRV-EC1<br>ED-FC                                 RTRV-FC<br>ED-G1000                             RTRV-FSTE<br>ED-T1                                 RTRV-G1000<br>INIT-REG-G1000                      RTRV-GIGE<br>REPT RMV <MOD2_IO>                RTRV-POS<br>REPT RST <MOD2_IO>                RTRV-T1<br>RMV-<MOD2_IO>                      RTRV-T3<br>RST-<MOD2_IO> |

| Section       | ED-T3 Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | <p>ED-T3:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;:::[FMT=&lt;FMT&gt;],[LINECDE=&lt;LINECDE&gt;],[LBO=&lt;LBO&gt;],[INHFELPBK=&lt;INHFELPBK&gt;],[TACC=&lt;TACC&gt;],[TAPTYPE=&lt;TAPTYPE&gt;],[SOAK=&lt;SOAK&gt;],[SFBER=&lt;SFBER&gt;],[SDBER=&lt;SDBER&gt;]:[&lt;PST&gt;],[&lt;SST&gt;];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates a facility AID from the “<a href="#">FACILITY</a>” section on page 4-28</li> <li>• &lt;FMT&gt; is a frame format and the unframed value of the framing format is only supported for the DS3E; valid values for &lt;FMT&gt; are shown in the “<a href="#">DS_LINE_TYPE</a>” section on page 4-57</li> <li>• &lt;LINECDE&gt; is a line code; valid values for &lt;LINECDE&gt; are shown in the “<a href="#">DS_LINE_CODE</a>” section on page 4-57</li> <li>• &lt;LBO&gt; is a line buildout; valid values for &lt;LBO&gt; are shown in the “<a href="#">E_LBO</a>” section on page 4-58</li> <li>• &lt;INHFELPBK&gt; identifies the Far End Loopback Inhibition attribute of the port. If it is Y, then automatic far end loopbacks are inhibited. It is either on or off. The system default is Y. Valid values are shown in the “<a href="#">ON_OFF</a>” section on page 4-76; &lt;INHFELPBK&gt; is optional</li> <li>• &lt;TACC&gt; defines the STS as a test access port with a selected unique TAP number. The TAP number ranges from 0–999. When TACC is 0, the TAP is deleted; &lt;TACC&gt; is an integer</li> <li>• &lt;TAPTYPE&gt; indicates the TAP type; valid values are shown in the “<a href="#">TAPTYPE</a>” section on page 4-92 and the default is DUAL</li> <li>• &lt;SOAK&gt; OOS-AINS to IS transition soak time as measured in 15 minute intervals, so a value of 4 translates to a soak time of 1 hour. The allowable range is 0–192 intervals (maximum of 48 hours); &lt;SOAK&gt; is an integer</li> <li>• &lt;SFBER&gt; identifies port SFBER; valid values are shown in the “<a href="#">SF_BER</a>” section on page 4-86</li> <li>• &lt;SDBER&gt; identifies port SDBER; valid values are shown in the “<a href="#">SD_BER</a>” section on page 4-85</li> <li>• &lt;PST&gt; primary state; valid values for &lt;PST&gt; are shown in the “<a href="#">PST</a>” section on page 4-83</li> <li>• &lt;SST&gt; secondary state; valid values for &lt;SST&gt; are shown in the “<a href="#">SST</a>” section on page 4-86</li> </ul> |
| Input Example | ED-T3:CISCO:FAC-1-2:123:::FMT=C-BIT,LINECDE=B3ZS,LBO=0-225,INHFELPBK=N,TACC=8,TAPTYPE=SINGLE,SOAK=10,SFBER=1E-4,SDBER=1E-6:OOS,AINS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Errors        | Errors are listed in <a href="#">Table 7-33</a> on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

### 3.4.61 ED-TRC-CLNT: Edit Trace Client

(Cisco ONS 15454 only)

This command edits trace-related attributes on client facilities.



See the “Provisioning Rules for MXP\_2.5G\_10G and TXP\_MR\_10G Cards” section on page 1-8 and the “Provisioning Rules for TXP\_MR\_2.5G and TXPP\_MR\_2.5G Cards” section on page 1-13 for specific card provisioning rules.

| Section          | ED-TRC-CLNT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------|-----------------|------------------|---------|-----------------|---------|-----------|-------------|-----------|------------|---------------|----------------|--------------|--------|------------------|--------|----------|--------|----------|------------|----------|--------------|-------------------|-----------------|------------------|---------------|---------------|------------------|--------------|-----------------|--|
| Category         | DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| Related Messages | <table> <tbody> <tr> <td>DLT-FFP-CLNT</td> <td>RLS-LASER-OTS</td> </tr> <tr> <td>DLT-LNK-&lt;MOD2O&gt;</td> <td>RLS-PROTNSW-CLNT</td> </tr> <tr> <td>ED-CLNT</td> <td>RLS-PROTNSW-OCH</td> </tr> <tr> <td>ED-DWDM</td> <td>RTRV-CLNT</td> </tr> <tr> <td>ED-FFP-CLNT</td> <td>RTRV-DWDM</td> </tr> <tr> <td>ED-FFP-OCH</td> <td>RTRV-FFP-CLNT</td> </tr> <tr> <td>ED-LNK-&lt;MOD2O&gt;</td> <td>RTRV-FFP-OCH</td> </tr> <tr> <td>ED-OCH</td> <td>RTRV-LNK-&lt;MOD2O&gt;</td> </tr> <tr> <td>ED-OMS</td> <td>RTRV-OCH</td> </tr> <tr> <td>ED-OTS</td> <td>RTRV-OMS</td> </tr> <tr> <td>ED-TRC-OCH</td> <td>RTRV-OTS</td> </tr> <tr> <td>ENT-FFP-CLNT</td> <td>RTRV-PROTNSW-CLNT</td> </tr> <tr> <td>ENT-LNK-&lt;MOD2O&gt;</td> <td>RTRV-PROTNSW-OCH</td> </tr> <tr> <td>OPR-LASER-OTS</td> <td>RTRV-TRC-CLNT</td> </tr> <tr> <td>OPR-PROTNSW-CLNT</td> <td>RTRV-TRC-OCH</td> </tr> <tr> <td>OPR-PROTNSW-OCH</td> <td></td> </tr> </tbody> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | DLT-FFP-CLNT | RLS-LASER-OTS | DLT-LNK-<MOD2O> | RLS-PROTNSW-CLNT | ED-CLNT | RLS-PROTNSW-OCH | ED-DWDM | RTRV-CLNT | ED-FFP-CLNT | RTRV-DWDM | ED-FFP-OCH | RTRV-FFP-CLNT | ED-LNK-<MOD2O> | RTRV-FFP-OCH | ED-OCH | RTRV-LNK-<MOD2O> | ED-OMS | RTRV-OCH | ED-OTS | RTRV-OMS | ED-TRC-OCH | RTRV-OTS | ENT-FFP-CLNT | RTRV-PROTNSW-CLNT | ENT-LNK-<MOD2O> | RTRV-PROTNSW-OCH | OPR-LASER-OTS | RTRV-TRC-CLNT | OPR-PROTNSW-CLNT | RTRV-TRC-OCH | OPR-PROTNSW-OCH |  |
| DLT-FFP-CLNT     | RLS-LASER-OTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| DLT-LNK-<MOD2O>  | RLS-PROTNSW-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-CLNT          | RLS-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-DWDM          | RTRV-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-FFP-CLNT      | RTRV-DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-FFP-OCH       | RTRV-FFP-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-LNK-<MOD2O>   | RTRV-FFP-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-OCH           | RTRV-LNK-<MOD2O>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-OMS           | RTRV-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-OTS           | RTRV-OMS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-TRC-OCH       | RTRV-OTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ENT-FFP-CLNT     | RTRV-PROTNSW-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ENT-LNK-<MOD2O>  | RTRV-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| OPR-LASER-OTS    | RTRV-TRC-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| OPR-PROTNSW-CLNT | RTRV-TRC-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| OPR-PROTNSW-OCH  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| Input Format     | <p>ED-TRC-CLNT:[&lt;TID&gt;]:&lt;SRC&gt;:&lt;CTAG&gt;:::[EXPTRC=&lt;EXPTRC&gt;],[<br/> [TRC=&lt;TRC&gt;],[TRCMODE=&lt;TRCMODE&gt;],[TRCLEVEL=&lt;TRCLEVEL&gt;],[<br/> [TRCFORMAT=&lt;TRCFORMAT&gt;][:];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;SRC&gt; is the AID from the “FACILITY” section on page 4-28 and must not be null</li> <li>• &lt;EXPTRC&gt; indicates the expected path trace message (OTUK-path,J0-section, for example) contents. &lt;EXPTRC&gt; is any 64-character string, including the termination CR (carriage return) and LF (line feed). &lt;EXPTRC&gt; is a string and a null value is equivalent to ALL</li> <li>• &lt;TRC&gt; identifies the path trace message to be transmitted. The TRC is any combination of 64 characters, including the terminating CR and LF. The trace byte (OTUK-path,J0-section, for example) continuously transmits a 64-byte string, one byte at a time. A null value defaults to the NE transmitting null characters (Hex 00). &lt;TRC&gt; is a string and a null value is equivalent to ALL</li> <li>• &lt;TRCMODE&gt; indicates the trace mode and defaults to the OFF mode; valid values are shown in the “TRCMODE” section on page 4-94 and a null value is equivalent to ALL</li> <li>• &lt;TRCLEVEL&gt; indicates the level of trace: valid values are shown in the “TRCLEVEL” section on page 4-93 and a null value is equivalent to ALL</li> <li>• &lt;TRCFORMAT&gt; indicates the trace message size; valid values are shown in the “TRCFORMAT” section on page 4-93. A null value is equivalent to ALL</li> </ul> |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |            |          |              |                   |                 |                  |               |               |                  |              |                 |  |

| Section       | ED-TRC-CLNT Description                                                                             |
|---------------|-----------------------------------------------------------------------------------------------------|
| Input Example | ED-TRC-CLNT:CISCO:FAC-6-1:10::EXPTRC="AAA",TRC="AAA",<br>TRCMODE=MAN,TRCLEVEL=J0,TRCFORMAT=16-BYTE; |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                      |

### 3.4.62 ED-TRC-OCH: Edit Trace Optical Channel Facilities

(Cisco ONS 15454 only)

The command edits trace-related optical channel facilities.

See the “[Provisioning Rules for MXP\\_2.5G\\_10G and TXP\\_MR\\_10G Cards](#)” section on page 1-8 and the “[Provisioning Rules for TXP\\_MR\\_2.5G and TXPP\\_MR\\_2.5G Cards](#)” section on page 1-13 for specific card provisioning rules.

| Section          | ED-TRC-OCH Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |              |                   |                 |                  |               |               |                  |              |                 |  |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------|-----------------|------------------|---------|-----------------|---------|-----------|-------------|-----------|------------|---------------|----------------|--------------|--------|------------------|--------|----------|--------|----------|-------------|----------|--------------|-------------------|-----------------|------------------|---------------|---------------|------------------|--------------|-----------------|--|
| Category         | DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| Related Messages | <table> <tbody> <tr> <td>DLT-FFP-CLNT</td> <td>RLS-LASER-OTS</td> </tr> <tr> <td>DLT-LNK-&lt;MOD2O&gt;</td> <td>RLS-PROTNSW-CLNT</td> </tr> <tr> <td>ED-CLNT</td> <td>RLS-PROTNSW-OCH</td> </tr> <tr> <td>ED-DWDM</td> <td>RTRV-CLNT</td> </tr> <tr> <td>ED-FFP-CLNT</td> <td>RTRV-DWDM</td> </tr> <tr> <td>ED-FFP-OCH</td> <td>RTRV-FFP-CLNT</td> </tr> <tr> <td>ED-LNK-&lt;MOD2O&gt;</td> <td>RTRV-FFP-OCH</td> </tr> <tr> <td>ED-OCH</td> <td>RTRV-LNK-&lt;MOD2O&gt;</td> </tr> <tr> <td>ED-OMS</td> <td>RTRV-OCH</td> </tr> <tr> <td>ED-OTS</td> <td>RTRV-OMS</td> </tr> <tr> <td>ED-TRC-CLNT</td> <td>RTRV-OTS</td> </tr> <tr> <td>ENT-FFP-CLNT</td> <td>RTRV-PROTNSW-CLNT</td> </tr> <tr> <td>ENT-LNK-&lt;MOD2O&gt;</td> <td>RTRV-PROTNSW-OCH</td> </tr> <tr> <td>OPR-LASER-OTS</td> <td>RTRV-TRC-CLNT</td> </tr> <tr> <td>OPR-PROTNSW-CLNT</td> <td>RTRV-TRC-OCH</td> </tr> <tr> <td>OPR-PROTNSW-OCH</td> <td></td> </tr> </tbody> </table> | DLT-FFP-CLNT | RLS-LASER-OTS | DLT-LNK-<MOD2O> | RLS-PROTNSW-CLNT | ED-CLNT | RLS-PROTNSW-OCH | ED-DWDM | RTRV-CLNT | ED-FFP-CLNT | RTRV-DWDM | ED-FFP-OCH | RTRV-FFP-CLNT | ED-LNK-<MOD2O> | RTRV-FFP-OCH | ED-OCH | RTRV-LNK-<MOD2O> | ED-OMS | RTRV-OCH | ED-OTS | RTRV-OMS | ED-TRC-CLNT | RTRV-OTS | ENT-FFP-CLNT | RTRV-PROTNSW-CLNT | ENT-LNK-<MOD2O> | RTRV-PROTNSW-OCH | OPR-LASER-OTS | RTRV-TRC-CLNT | OPR-PROTNSW-CLNT | RTRV-TRC-OCH | OPR-PROTNSW-OCH |  |
| DLT-FFP-CLNT     | RLS-LASER-OTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| DLT-LNK-<MOD2O>  | RLS-PROTNSW-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-CLNT          | RLS-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-DWDM          | RTRV-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-FFP-CLNT      | RTRV-DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-FFP-OCH       | RTRV-FFP-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-LNK-<MOD2O>   | RTRV-FFP-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-OCH           | RTRV-LNK-<MOD2O>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-OMS           | RTRV-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-OTS           | RTRV-OMS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ED-TRC-CLNT      | RTRV-OTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ENT-FFP-CLNT     | RTRV-PROTNSW-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| ENT-LNK-<MOD2O>  | RTRV-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| OPR-LASER-OTS    | RTRV-TRC-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| OPR-PROTNSW-CLNT | RTRV-TRC-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |              |                   |                 |                  |               |               |                  |              |                 |  |
| OPR-PROTNSW-OCH  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |               |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |              |                   |                 |                  |               |               |                  |              |                 |  |

| Section       | ED-TRC-OCH Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | ED-TRC-OCH:[<TID>]:<SRC>:<CTAG>:::[EXPTRC=<EXPTRC>,<br>[TRC=<TRC>],[TRCMODE=<TRCMODE>],[TRCLEVEL=<TRCLEVEL>,<br>[TRCFORMAT=<TRCFORMAT>][:];<br>where: <ul style="list-style-type: none"> <li>• &lt;SRC&gt; is the AID from the “CHANNEL” section on page 4-19</li> <li>• &lt;EXPTRC&gt; indicates the expected path trace message (OTUK-path,J0-section, for example) contents. The &lt;EXPTRC&gt; is any 64-character string, including the termination CR (carriage return) and LF (line feed). &lt;EXPTRC&gt; is a string</li> <li>• &lt;TRC&gt; identifies the path trace message to be transmitted. The TRC is any combination of 64 characters, including the terminating CR and LF. The trace byte (OTUK-path, J0-section, for example) continuously transmits a 64-byte string, one byte at a time. A null value defaults to the NE transmitting null characters (Hex 00). &lt;TRC&gt; is a string</li> <li>• &lt;TRCMODE&gt; identifies the trace mode and defaults to the OFF mode; valid values are shown in the “TRCMODE” section on page 4-94</li> <li>• &lt;TRCLEVEL&gt; is a string</li> <li>• &lt;TRCFORMAT&gt; indicates the size of the trace message: valid values are shown in the “TRCFORMAT” section on page 4-93</li> </ul> |
| Input Example | ED-TRC-OCH:CISCO:CHAN-6-2:10:::EXPTRC=“AAA”,TRC=“AAA”,<br>TRCMODE=MAN,TRCLEVEL=TTI-PM,TRCFORMAT=64-BYTE;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

### 3.4.63 ED-UCP-CC: Edit Unified Control Plane Control Channel

(Cisco ONS 15454 only)

This command edits UCP IP control channel attributes.

Notes:

1. If sending this command with invalid data, an IIAC (Status, Invalid Data) error message is returned.
2. If sending this command to provision MTU, CRCMD, or both while the IPCC type is routed (CCTYPE=ROUTED), an IIAC (Routed CC Is Not Allowed to Provision MTU & CRCMD) error message is returned.

| Section  | ED-UCP-CC Description |
|----------|-----------------------|
| Category | UCP                   |
| Security | Provisioning          |

| Section          | ED-UCP-CC Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | DLT-UCP-CC REPT ALM UCP<br>DLT-UCP-IF REPT EVT UCP<br>DLT-UCP-NBR RTRV-ALM-UCP<br>ED-UCP-IF RTRV-COND-UCP<br>ED-UCP-NBR RTRV-UCP-CC<br>ED-UCP-NODE RTRV-UCP-IF<br>ENT-UCP-CC RTRV-UCP-NBR<br>ENT-UCP-IF RTRV-UCP-NODE<br>ENT-UCP-NBR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Input Format     | ED-UCP-CC:[<TID>]:<AID>:<CTAG>:::[LOCALIPCC=<LOCALIPCC>,<br>[REMOTEIPCC=<REMOTEIPCC>],[LMPHELLOINT=<LMPHELLOINT>],<br>[LMPHELLODEADINT=<LMPHELLODEADINT>],[MTU=<MTU>],<br>[CRCMD=<CRCMD>][:];<br><br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates an individual IPCC ID; &lt;AID&gt; is the AID from the <a href="#">“IPCC” section on page 4-29</a></li> <li>• &lt;LOCALIPCC&gt; indicates the local IP address of the control channel and is a string</li> <li>• &lt;REMOTEIPCC&gt; indicates the remote IP address of the control channel and is a string</li> <li>• &lt;LMPHELLOINT&gt; indicates the LMP (line management protocol) interval (in milliseconds) and is an integer. It is the time between hello messages sent by this node.</li> <li>• &lt;LMPHELLODEADINT&gt; indicates the control channel time-out interval (in milliseconds) by the neighbor if the neighbor does not receive the hello message; &lt;LMPHELLODEADINT&gt; is an integer</li> <li>• &lt;MTU&gt; indicates the MTU size of this control channel and is an integer</li> <li>• &lt;CRCMD&gt; indicates the CRC mode for this control channel. It is applicable to IPCCs in SDCC type. Valid values for &lt;CRCMD&gt; are shown in the <a href="#">“UCP_CRC_MODE” section on page 4-96</a></li> </ul> |
| Input Example    | ED-UCP-CC:CISCO:CC-9:CTAG:::LOCALIPCC=172.20.209.31,<br>REMOTEIPCC=172.20.209.15,LMPHELLOINT=1,LMPHELLODEADINT=5,<br>MTU=1500,CRCMD=16-BIT;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### 3.4.64 ED-UCP-IF: Edit Unified Control Plane Interface

(Cisco ONS 15454 only)

This command edits UCP interface attributes.



#### Note

If you send invalid data with this command, an IIAC (Status, Invalid Data) error message is returned.

| Section          | ED-UCP-IF Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | UCP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Related Messages | DLT-UCP-CC REPT ALM UCP<br>DLT-UCP-IF REPT EVT UCP<br>DLT-UCP-NBR RTRV-ALM-UCP<br>ED-UCP-CC RTRV-COND-UCP<br>ED-UCP-NBR RTRV-UCP-CC<br>ED-UCP-NODE RTRV-UCP-IF<br>ENT-UCP-CC RTRV-UCP-NBR<br>ENT-UCP-IF RTRV-UCP-NODE<br>ENT-UCP-NBR                                                                                                                                                                                                                                                                                                                                                                                                             |
| Input Format     | ED-UCP-IF:[<TID>]:<AID>:<CTAG>:::[TNATYPE=<TNATYPE>,<br>[TNAADDR=<TNAADDR>],[CORENETWORKID=<CORENETWORKID>][:];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates the interface port index of the data link; &lt;AID&gt; is the AID from the “FACILITY” section on page 4-28</li> <li>• &lt;TNATYPE&gt; indicates the TNA (transport network administered) type; valid values for &lt;TNATYPE&gt; are shown in the “UCP_TNA_TYPE” section on page 4-96</li> <li>• &lt;TNAADDR&gt; indicates the TNA (transport network administered) IP address and is a string</li> <li>• &lt;CORENETWORKID&gt; is an integer</li> </ul> |
| Input Example    | ED-UCP-IF:CISCO:FAC-2-1:CTAG:::TNATYPE=IPV4,<br>TNAADDR=172.20.209.73,CORENETWORKID=9;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Errors           | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### 3.4.65 ED-UCP-NBR: Edit Unified Control Plane Neighbor

(Cisco ONS 15454 only)

This command edits a UCP neighbor.

The default value of the node name can be overwritten by the TL1 user to a string in a maximum size of 20 characters. If the node name includes non-identified TL1 characters (e.g. space), the text string format with the double quotes is required.

Example:

```
ENT-UCP-NBR::NBR-18:CTAG:::NBRIX=18,NODEID=192.168.101.18,
NAME=NeibhgorName,NDEN=N,HELLOEN=Y,HELLOINT=5, REFREDEN=Y;
```

Notes:

1. If this command is sent twice or input with invalid data, a SRQN (Status, Invalid Request) error message is returned.
2. If sending this command without neighbor node name in the “NAME” field, an IIAC (Neighbor Name Cannot Be Empty) error message is returned.

- If sending this command to set the hello interval while the RSVP hello is disabled, an IIAC (HELLOINT Is Not Allowed If HELLOEN Is Disabled) error message is returned.

| Section          | ED-UCP-NBR Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | UCP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Related Messages | DLT-UCP-CC REPT ALM UCP<br>DLT-UCP-IF REPT EVT UCP<br>DLT-UCP-NBR RTRV-ALM-UCP<br>ED-UCP-CC RTRV-COND-UCP<br>ED-UCP-IF RTRV-UCP-CC<br>ED-UCP-NODE RTRV-UCP-IF<br>ENT-UCP-CC RTRV-UCP-NBR<br>ENT-UCP-IF RTRV-UCP-NODE<br>ENT-UCP-NBR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Input Format     | ED-UCP-NBR:[<TID>]:<AID>:<CTAG>:::[NAME=<NAME>,<br>[HELLOEN=<HELLOEN>],[HELLOINT=<HELLOINT>,<br>[REFREDEN=<REFREDEN>]][:];<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; indicates an individual neighbor index of the UCP. An available neighbor index will be assigned internally while sending this command without AID; &lt;AID&gt; is the AID from the “NBR” section on page 4-30</li> <li>&lt;NAME&gt; indicates the neighbor node name. It defaults to the ASCII representation of the node ID in this command. The default value of this node name can be overwritten by the TL1 user to a string in a maximum size of 20 characters. If the node name includes non-identified TL1 characters (e.g. space), the text string format with the double quotes is required. Node name is a string. The default value is “defaults to the nodeid ASCII representation”. &lt;NAME&gt; is a string. The default value is “the ASCII representation of the nodeid”. &lt;NAME&gt; is a string</li> <li>&lt;HELLOEN&gt; indicates if the RSVP hello enabled to this neighbor or not; valid values for &lt;HELLOEN&gt; are shown in the “ON_OFF” section on page 4-76</li> <li>&lt;HELLOINT&gt; indicates the interval between hello messages to neighbor; &lt;HELLOINT&gt; is an integer</li> <li>&lt;REFREDEN&gt; indicates if the refresh reduction is enabled or not; valid values for &lt;REFREDEN&gt; are shown in the “EXT_RING” section on page 4-65</li> </ul> |
| Input Example    | ED-UCP-NBR:CISCO:NBR-8:CTAG:::NAME=NODE-B,HELLOEN=Y,HELLOINT=20,REFREDEN=N;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## 3.4.66 ED-UCP-NODE: Edit Unified Control Plane Node

(Cisco ONS 15454 only)

This command edits the UCP node level attributes.

The nodeid is the unique number used to identify the local node in LMP, RSVP messages sent to the neighbors. It defaults to the local ethernet interface address (ISA).

The retry initial interval (in seconds) is used for that have been released by the net work side. This interval has a range of 60 seconds (1 minute) to 1800 seconds (30 minutes), with a default value of 180 seconds.

The retry max interval (in seconds) is used for released circuits. The node will back off exponentially from the initial retry interval to this maximum value of 600 seconds (10 minutes).

The restart time is used to be signaled to neighbors. It indicates the time taken by this node (in seconds) to restart. This timer has a range of 1 second to 10 seconds with a default of 5 seconds.

The recovery time is used to be signaled to neighbors. It indicates the time taken by this node (in seconds) to re-sync path, reservation state with a given neighbor. This timer has a range of 300 seconds (5 minutes) to 1800 seconds (30 minutes) and a default value of 600 seconds (10 minutes).

The transmit interval is used to retransmit un-acknowledged messages. This timer has a range of 1 second to 7 seconds with a default value of 1 second.

The refresh interval is used to refresh path, reservation state. This interval has a range of 30 seconds to 4060800 seconds (47 days) with a default value of 30 seconds.

The timeout RESV CONF interval is used to wait for a RESV CONF message in response to a RESV message. This interval has a range of 10–180 seconds with a default value of 60 seconds.

The Source Deletion in Progress is a timeout interval while the source is in the process of cleanly deleting a call. This interval has a range of 1–180 seconds with a default value of 60 seconds.

The Destination Deletion progress is a timeout interval while the destination is in the progress of cleanly deleting a call. This interval has a range of 1–180 seconds with a default value of 60 seconds.

Notes:

1. If the retry initial interval is set to zero, it will be interpreted as having the retry procedure disable.
2. The retry maximum interval has to be set to a higher value than the initial retry interval.

| Section          | ED-UCP-NODE Description |               |
|------------------|-------------------------|---------------|
| Category         | UCP                     |               |
| Security         | Provisioning            |               |
| Related Messages | DLT-UCP-CC              | REPT ALM UCP  |
|                  | DLT-UCP-IF              | REPT EVT UCP  |
|                  | DLT-UCP-NBR             | RTRV-ALM-UCP  |
|                  | ED-UCP-CC               | RTRV-COND-UCP |
|                  | ED-UCP-IF               | RTRV-UCP-CC   |
|                  | ED-UCP-NBR              | RTRV-UCP-IF   |
|                  | ENT-UCP-CC              | RTRV-UCP-NBR  |
|                  | ENT-UCP-IF              | RTRV-UCP-NODE |
|                  | ENT-UCP-NBR             |               |

| Section       | ED-UCP-NODE Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | <p>ED-UCP-NODE:[&lt;TID&gt;]::&lt;CTAG&gt;:::[NODEID=&lt;NODEID&gt;,<br/> [INITRETRY=&lt;INITRETRY&gt;],[MAXRETRY=&lt;MAXRETRY&gt;,<br/> [RESTARTTM=&lt;RESTARTTM&gt;],[RECOVTM=&lt;RECOVTM&gt;,<br/> [RXMTINT=&lt;RXMTINT&gt;],[RFRSHINT=&lt;RFRSHINT&gt;,<br/> [RESVTIMEOUT=&lt;RESVTIMEOUT&gt;,<br/> [RESVCONFTIMEOUT=&lt;RESVCONFTIMEOUT&gt;,<br/> [SOURCEDIP=&lt;SOURCEDIP&gt;],[DESTINATIONDIP=&lt;DESTINATIONDIP&gt;][:];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;NODEID&gt; indicates the node IP address and is a string</li> <li>• &lt;INITRETRY&gt; indicates the circuit retry initial interval (in seconds) and is an integer</li> <li>• &lt;MAXRETRY&gt; indicates the circuit maximum retry initial interval (in seconds) and is an integer</li> <li>• &lt;RESTARTTM&gt; indicates the restart time taken by this local node; &lt;RESTARTTM&gt; is an integer and the default value is 5 seconds.</li> <li>• &lt;RECOVTM&gt; indicates the circuit retry maximum interval (in seconds) and is an integer</li> <li>• &lt;RXMTINT&gt; indicates the interval for re-transmitting un-acknowledged messages and is an integer</li> <li>• &lt;RFRSHINT&gt; indicates the interval for refreshing path, reservation state and is an integer</li> <li>• &lt;RESVTIMEOUT&gt; indicates the timeout interval for waiting for a reservation message in response to a PATH message; &lt;RESVTIMEOUT&gt; is an integer</li> <li>• &lt;RESVCONFTIMEOUT&gt; indicates the timeout interval for waiting for a RESV CONF message in response to a RESV message; &lt;RESVCONFTIMEOUT&gt; is an integer</li> <li>• &lt;SOURCEDIP&gt; indicates the timeout interval of the SourceDip (Source Deletion in Progress) while the source is in the process of cleanly deleting a call; &lt;SOURCEDIP&gt; is an integer</li> <li>• &lt;DESTINATIONDIP&gt; indicates the timeout interval of the DestinationDip (Destination Deletion in Progress) while the destination is in the process of cleanly deleting a call; &lt;DESTINATIONDIP&gt; is an integer</li> </ul> |
| Input Example | ED-UCP-NODE:CISCO::CTAG:::NODEID=192.168.100.52,INITRETRY=180,MAXRETRY=600,RESTARTTM=5,RECOVTM=600,RXMTINT=1,RFRSHINT=30,RESVTIMEOUT=60,RESVCONFTIMEOUT=60,SOURCEDIP=60,DESTINATIONDIP=60;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

### 3.4.67 ED-USER-SECU: Edit User Security

This command edits a user's privileges, password, or ID. Only a Superuser may perform this operation. Privilege levels are described in the ENT-USER-SECU command.



## Notes:

1. Passwords are masked for the following security commands: ACT-USER, ED-PID, ENT-USER-SECU and ED-USER-SECU. Access to a TL1 session via any means will have the password masked. The CTC Request History and Message Log will also show the masked commands. When a password-masked command is re-issued by double-clicking the command from CTC Request History, the password will still be masked in the CTC Request History and Message Log. The actual password that was previously issued will be sent to the NE. To use a former command as a template only, single-click the command in CTC Request History. The command will be placed in the Command Request text box, where you can edit the appropriate fields prior to re-issuing it.
2. Although the CTC allows both <UID> and <PID> of up to 20 characters, the CTC-entered users (<UID>, <PID>) are not valid TL1 users (e.g., if issuing an ACT-USER command and using the CTC-entered <UID> that is greater than 10 characters long, TL1 will respond with DENY).
3. For the ED-USER-SECU command;
 

ED-USER-SECU:[TID]:<UID>:[CTAG]:[<NEWUID>],[<NEWPID>],[<UAP>];;

  - a. If the <NEWPID> is specified, the syntax is checked.
  - b. The syntax of <UID> is not checked.
  - c. Old users can change their password without changing their userid, but the new password must meet the new requirements.
  - d. The <NEWPID> is required when changing the <USERID>.

| Section          | ED-USER-SECU Description                                                                                                                    |                                                                                                                                                               |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Security                                                                                                                                    |                                                                                                                                                               |
| Security         | Superuser                                                                                                                                   |                                                                                                                                                               |
| Related Messages | ACT-USER<br>ALW-MSG-SECU<br>ALW-USER-SECU<br>CANC<br>CANC-USER<br>CANC-USER-SECU<br>DLT-USER-SECU<br>ED-CMD-SECU<br>ED-PID<br>ENT-USER-SECU | INH-MSG-SECU<br>INH-USER-SECU<br>REPT ALM SECU<br>REPT EVT SECU<br>REPT EVT SESSION<br>RTRV-CMD-SECU<br>RTRV-DFLT-SECU<br>RTRV-USER-SECU<br>SET-ATTR-SECUDFLT |

| Section       | ED-USER-SECU Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | ED-USER-SECU:[<TID>]:<UID>:<CTAG>::[<NEWUID>],[<NEWPID>],,<br>[<UAP>][:];<br>where: <ul style="list-style-type: none"> <li>• &lt;UID&gt; is the user identifier and is a string. The minimum &lt;UID&gt; size is 6, the maximum UID size is 10</li> <li>• &lt;NEWUID&gt; is the new user identifier and is a string. The minimum &lt;UID&gt; size is 6, the maximum PID size is 10</li> <li>• &lt;NEWPID&gt; is a new password and is a string; &lt;NEWPID&gt; is a minimum of 6, maximum of 10</li> <li>• &lt;UAP&gt; is a user access privilege; valid values for &lt;UAP&gt; are shown in the “PRIVILEGE” section on page 4-82</li> </ul> <p><b>Note</b> CTC allows &lt;UID&gt; and &lt;PID&gt; of up to 20 characters. The 20 character CTC-entered &lt;UID&gt; and &lt;PID&gt; are not valid TL1 &lt;UID&gt; and &lt;PID&gt;.</p> |
| Input Example | ED-USER-SECU:PETALUMA:CISCO15:123::NEWUID,NEWPID,,MAINT;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

### 3.4.68 ED-WDMANS: Edit Wavelength Division Multiplexing Automatic Node Setup

(Cisco ONS 15454 only)

This command edits the optical node setup application (AONS) attributes.

| Section          | ED-WDMANS Description |
|------------------|-----------------------|
| Category         | DWDM                  |
| Security         | Provisioning          |
| Related Messages | RTRV-WDMANS           |

| Section       | ED-WDMANS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | <p>ED-WDMANS:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;:::[POWER-IN=&lt;POWERIN&gt;,<br/> [POWER-OUT=&lt;POWEROUT&gt;],[POWER-EXP=&lt;POWEREXP&gt;,<br/> [POWER-DROP=&lt;POWERDROP&gt;],[SYS-TYPE=&lt;SYSTYPE&gt;,<br/> [RING-TYPE=&lt;RINGTYPE&gt;];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the AID from the “WDMANS” section on page 4-36</li> <li>• &lt;POWERIN&gt; is the input power for OADM section of an OADM optical network element; &lt;POWERIN&gt; is a float expressed in dBm</li> <li>• &lt;POWEROUT&gt; output power for OADM section or Mux/Demux of HUB, TERMINAL, or OADM optical network elements; &lt;POWEROUT&gt; is a float expressed in dBm</li> <li>• &lt;POWEREXP&gt; is the express power for mux/demux section of a HUB or TERMINAL optical network element; &lt;POWEREXP&gt; is a float expressed in dBm</li> <li>• &lt;POWERDROP&gt; is the drop power for mux/demux section of a HUB or TERMINAL optical network element; &lt;POWERDROP&gt; is a float expressed in dBm</li> <li>• &lt;SYSTYPE&gt; is the type of interconnected fiber between two adjacent nodes and the length category between them; valid values are shown in “SYS_TYPE” section on page 4-90</li> <li>• &lt;RINGTYPE&gt; is the type of network where the DWDM node is installed; valid values are shown in the “DWDM_RING_TYPE” section on page 4-58</li> </ul> |
| Input Example | ED-WDMANS:PENNGROVE:WDMANS-W:114:::POWER-IN=10.0,<br>POWER-OUT=10.0,POWER-EXP=10.0,POWER-DROP=10.0,<br>SYS-TYPE=SMF-28-SR,RING-TYPE=METRO-CORE;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Errors        | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## 3.4.69 ED-WLEN: Edit Wavelength

(Cisco ONS 15454 only)

This command edits WLEN (wavelength) provisioning.

Notes:

1. The fields after CTAG (trailing colons) are optional.
2. This command does not support multiple editing of WLEN provisioning.

| Section          | ED-WLEN Description               |
|------------------|-----------------------------------|
| Category         | DWDM                              |
| Security         | Provisioning                      |
| Related Messages | ENT-WLEN<br>DLT-WLEN<br>RTRV-WLEN |

| Section       | ED-WLEN Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | ED-WLEN:[<TID>]:<AID>:<CTAG>:::[SIZE=<SIZE>]:[<PST>],[<SST>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the AID from the “WLEN” section on page 4-37</li> <li>• &lt;SIZE&gt; is the circuit size allocated on this wavelength; valid values are shown in the “CIRCUIT_SIZE” section on page 4-53. &lt;SIZE&gt; is optional</li> <li>• &lt;PST&gt; primary state; valid values are shown in the “PST” section on page 4-83</li> <li>• &lt;SST&gt; secondary state; valid values are shown in the “SST” section on page 4-86</li> </ul> |
| Input Example | ED-WLEN:PENNGROVE:WLEN-W-ADD-1530.33:1:::SIZE=NOT-SPEC:OOS,AINS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Errors        | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

### 3.4.70 ENT-<MOD\_RING>: Enter BLSR

This command creates either a two-fiber or four-fiber BLSR.



**Note** The ONS 15327 does not support four-fiber BLSR.



**Note** <RINGID> defaults to the string of the AID format of BLSR-string.

Input examples:

Four-fiber BLSR:

```
ENT-BLSR:PETALUMA:BLSR-2:123:::RINGID=2,NODEID=3,MODE=4F,RVRTV=Y,RVTM=5.0,
SRVRTV=Y,SRVTM=5.0,EASTWORK=FAC-5-1,WESTWORK=FAC-6-1,EASTPROT=FAC-12-1,
WESTPROT=FAC-13-1;;
```

Two-fiber BLSR:

```
ENT-BLSR:PETALUMA:BLSR-4:123:::RINGID=4,NODEID=6,MODE=2F,RVRTV=Y,RVTM=5.0,
EASTWORK=FAC-5-1,WESTWORK=FAC-6-1;;
```

Error conditions:

1. If RINGID is different from the string presented in the AID format, an IIAC (RingId Does Not Match With AID) error message is returned.
2. Both <EASTPROT> and <WESTPROT> are optional, but required for 4-fiber BLSR creation.
3. If sending this command to create a BLSR with an out of range nodeid or ringid, an IIAC (Invalid NodeId) or (Invalid RingId) error message will be returned.
4. If sending this command to create 4-fiber BLSR on OC12 cards, or 2-fiber BLSR on OC3 cards, an IIAC (Input, Invalid work/prot port) error message will be returned.
5. If sending this command to create a BLSR on an NE that already has five BLSRs, a SRQN (BLSR Creation Failed) error message will be returned because one NE is only allowed to have up to five BLSRs in this release (R4.6).

6. If sending this command to create a BLSR on a port with 1+1, a SRQN (BLSR Creation Failed) error message will be returned.
7. If the system fails on getting IOR, an SROF (Get IOR Failed) error message is returned.
8. If the AID is invalid, an IIAC (Invalid AID) error message is returned.
9. The ALL AID is invalid for this command.
10. If any facility requested in this command is in use, an SPLD (Facility is Busy) error message is returned.
11. The SRQN (BLSR Creation Failed) error message is returned for an invalid creation query.
12. If sending this command to provision the mode with an invalid BLSR mode, an IIDT (Invalid BLSR Mode) error message is returned.
13. If sending this command to modify SRVRTV or SRVTM on the two-fiber BLSR, an IDNV (Invalid Data for 2F-BLSR) error message is returned.
14. If sending this command to provision the nodeid with invalid data, an IIAC (Invalid NodeId) error message is returned.
15. If sending this command to provision the ringid with invalid data, an IIAC (Invalid RingId) error message is returned.
16. If sending this command with invalid working AID, an IIDT (Invalid BLSR Working Facility) error message is returned.
17. If sending this command with invalid protection AID, an IIDT (Invalid BLSR Protect Facility) error message is returned.
18. If changing the BLSR nodeid with a duplicated ID, a SROF (Cannot Set NodeId) error message is returned.

| Section          | ENT-<MOD_RING> Description                          |                                        |
|------------------|-----------------------------------------------------|----------------------------------------|
| Category         | BLSR                                                |                                        |
| Security         | Provisioning                                        |                                        |
| Related Messages | DLT-<MOD_RING><br>ED-<MOD_RING><br>EX-SW-<OCN_BLSR> | RTRV-<MOD_RING><br>RTRV-TRC-<OCN_BLSR> |

| Section       | ENT-<MOD_RING> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | <p>ENT-&lt;MOD_RING&gt;:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;:::[RINGID=&lt;RINGID&gt;,<br/>           NODEID=&lt;NODEID&gt;,MODE=&lt;MODE&gt;],[RVRTV=&lt;RVRTV&gt;,<br/>           [RVTM=&lt;RVTM&gt;],[SRVRTV=&lt;SRVRTV&gt;],[SRVTM=&lt;SRVTM&gt;],<br/>           EASTWORK=&lt;EASTWORK&gt;,WESTWORK=&lt;WESTWORK&gt;,<br/>           [EASTPROT=&lt;EASTPROT&gt;],[WESTPROT=&lt;WESTPROT&gt;];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies the BLSR of the NE. “ALL” or “BLSR-ALL” AID is not allowed for editing BLSR. This command only supports a single BLSR AID. &lt;AID&gt; is the AID from the <a href="#">“AidUnionId” section on page 4-15</a></li> <li>• &lt;RINGID&gt; identifies the BLSR ring ID of the NE. It is a string of up to six characters, valid characters are [A–Z, 0–9]. The default value is “# of AID BLSR-#”</li> <li>• &lt;NODEID&gt; identifies the BLSR node ID of the NE and is an integer. It ranges from 0–31</li> <li>• &lt;MODE&gt; identifies the BLSR mode; valid values for &lt;MODE&gt; are shown in the <a href="#">“BLSR_MODE” section on page 4-50</a></li> <li>• &lt;RVRTV&gt; identifies the revertive mode and defaults to Y (revertive mode). Valid values for &lt;RVRTV&gt; are shown in the <a href="#">“ON_OFF” section on page 4-76</a>. The default value is Y.</li> <li>• &lt;RVTM&gt; identifies the revertive time and defaults to 5.0. Valid values for &lt;RVTM&gt; are shown in the <a href="#">“REVERTIVE_TIME” section on page 4-84</a>; the default value is 5.0</li> <li>• &lt;SRVRTV&gt; identifies the span revertive mode for 4-fiber BLSR only. &lt;SRVRTV&gt; defaults to Y (revertive mode); valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a>. The default value is Y.</li> <li>• &lt;SRVTM&gt; identifies the span revertive time for 4-fiber BLSR only. &lt;SRVTM&gt; defaults to 5.0 and valid values are shown in the <a href="#">“REVERTIVE_TIME” section on page 4-84</a>. The default value is 5.0</li> <li>• &lt;EASTWORK&gt; identifies the east working facility and is the AID from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;WESTWORK&gt; identifies the west working facility and is the AID from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;EASTPROT&gt; identifies the east protecting facility and is the AID from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;WESTPROT&gt; identifies the west protecting facility and is the AID from the <a href="#">“FACILITY” section on page 4-28</a></li> </ul> |
| Input Example | ENT-BLSR:PETALUMA:BLSR-2:123:::RINGID=2,NODEID=1,MODE=4F,RVRTV=Y,RVTM=5.0,SRVRTV=Y,SRVTM=5.0,EASTWORK=FAC-5-1,WESTWORK=FAC-6-1,EASTPROT=FAC-12-1,WESTPROT=FAC-13-1;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

### 3.4.71 ENT-CRS-<PATH>: Enter Cross Connection (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C, VT1, VT2)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command creates an STS cross-connection with a cross-connection type (CCT).

When a path protection cross-connection is created, the path presented by the first AID is configured to be the preferred path. For example, the AID (F1) of the cross-connection (created by ENT-CRS-STS1::F1&F2,T1:123;) is the preferred path.

Notes:

1. The default cross-connection type is 2-way
2. If a path is already in a connection, it cannot be in another connection even if the other is a 1-way and the new one will be 1-way the other direction.
3. This command does not support creating multiple STS cross-connections.
4. The path protection cross STS connection can be created by using “&” in the AID fields of this command.
  - a. The following command is used to create a 1-way selector or 2-way selector and bridge with:  
 from points: F1, F2  
 to points: T1  
 ENT-CRS-**{STS\_PATH}**:**<TID>**:F1&F2,T1:**<CTAG>**::**<CCT>**;
  - b. The following command is used to create a 1-way bridge or 2-way selector and bridge with:  
 from point: F1  
 to points: T1, T2  
 ENT-CRS-**{STS\_PATH}**:**<TID>**:F1,T1&T2:**<CTAG>**::**<CCT>**;
  - c. The following command is used to create a 1-way subtending path protection connection or 2-way subtending path protection connection with:  
 from point: F1, F2  
 to points: T1, T2  
 ENT-CRS-**{STS\_PATH}**:**<TID>**:F1&F2,T1&T2:**<CTAG>**::**<CCT>**;
  - d. The following command is used to create a 2-way selector and bridge with:  
 from point: F1,F2 (F1 is the working side, F2 is the protect side)  
 selector points: S1, S2 (S1 is the working side, S2 is the protect side)  
 ENT-CRS-**{STS\_PATH}**:**<TID>**:F1&F2,S1&S2:**<CTAG>**::2WAY;
  - e. The following command is used to create a path protection IDRI Cross-Connection:  
 ENT-CRS-**{STS\_PATH}**:**<TID>**:A&B,C&D:**<CTAG>**::2WAYDC;  
 A–Path on ring X to which traffic from ring Y is bridged  
 B–Path on ring X to which traffic from the same ring is bridged  
 C–Path on ring Y to which traffic from ring X is bridged  
 D–Path on ring Y to which traffic from the same ring is bridged

A, B, C, and D have a positional meaning. Connection type 2WAYDC is used for path protection IDRI cross-connections.

- f. The following command is used to create a path protection DRI Cross-Connection:

```
ENT-CRS-{STS_PATH}:[<TID>]:A&B,C:<CTAG>::2WAYDC;
```

A–Path on ring X to which traffic from ring Y is bridged

B–Path on ring X to which traffic from the same ring is bridged

C–Traffic to and from ring Y

A, B, C, and D have a positional meaning. Connection type 2WAYDC is used for path protection DRI cross-connections.

5. All A&B AIDs in the TL1 cross-connection command are in the format of WorkingAID&ProtectAID.
6. To establish a cross-connection on a 2-fiber protection path or on a 4-fiber protection channel, the PCA connection type (1WAYPCA or 2WAYPCA) is required.
7. If you send a PCA cross-connection type on the non-PCA AIDs, the IIAC error message is returned.
8. If you send a non-PCA cross-connection type on the PCA AIDs, the IIAC error message is returned.
9. The facility AID is only valid on slots holding a G1000-4 card.
10. The virtual facility AID (VFAC) is only valid on slots holding an M-series card.

| Section          | ENT-CRS-<PATH> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Cross Connections                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Related Messages | DLT-CRS-<PATH> RTRV-CRS<br>ED-CRS-<PATH> RTRV-CRS-<PATH>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Input Format     | ENT-CRS-<PATH>:[<TID>]:<AID>,<DST>:<CTAG>::[<CCT>]:[<PST>],<br>[<SST>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is from the “CrossConnectId1” section on page 4-23</li> <li>• &lt;DST&gt; is from the “CrossConnectId1” section on page 4-23</li> <li>• &lt;CCT&gt; identifies the cross-connection type; valid values for &lt;CCT&gt; are shown in the “CCT” section on page 4-53</li> <li>• &lt;PST&gt; primary state; valid values for &lt;PST&gt; are shown in the “PST” section on page 4-83</li> <li>• &lt;SST&gt; secondary state; valid values for &lt;SST&gt; are shown in the “SST” section on page 4-86</li> </ul> |
| Input Example    | ENT-CRS-ST3C:BODEGA:STS-5-1-1,STS-12-1-5:116::2WAY::OOS,AINS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Errors           | Errors are listed in <a href="#">Table 7-33</a> on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## 3.4.72 ENT-EQPT: Enter Equipment

This command enters the card type and attributes for a given equipment slot in the NE. It also automatically enters all facilities supported by the card, assigning default values to all facility and path attributes.



The command supports optional parameters: RVTM (revertive time), RVRTV (revertive behavior), PROTID (unique protection ID) and PRTYPE (protection type) for configuring the card in an equipment protection group. PRTYPE can be 1:1 and 1:N. These parameters can only be entered for a working AID. The protect card must already be provisioned before creating the protection group.

1:1 protection involves the odd slot protecting the even slot. The work-protect pair is as follows (2-1, 4-3, 6-5, 16-17, 14-15, 12-13). DS1, DS3, DS3XM, DS3N, DS3E, EC1 and other electrical cards support 1:1 protection. The value of PROTID is the protecting slot and is of the form "slot-x". This command creates a 1:1 protection group. If the command has the optional parameters for creating a protection group and the protection group cannot be created due to an error condition, provisioning of the equipment fails.

The PROTID slot must be provisioned first.

To create 1:1 with the ENT-EQPT command, the working card should not be provisioned first, so the AID type field should be presented in ENT-EQPT for the AID on this <AID>.

The following is an example for a 1:1 protection group:

```
ENT-EQPT:[<TID>]:SLOT-1:<CTAG>::DS1;
ENT-EQPT:[<TID>]:SLOT-2:<CTAG>::DS1:PROTID=SLOT-1,PRTYPE=1-1,RVTM=5.0,
RVRTV=Y;
```

1:N protection is always revertive. For 1:N protection, the protect slot can only be Slot 3 or Slot 15. For a protect card in Slot 3, the working cards can be in any of the slots on Bank A. Slot 15 is for protection in Bank B. A DSXN (DS1N or DS3N) card must be provisioned in the protect slot. A 1:1 protection cannot be upgraded to 1:N protection. This command creates a 1:N protection group or adds a new card to an existing 1:N protection group. Multiple working AIDs can be entered in a protection group.

The following is an example of provisioning a 1:N protection group with the ENT-EQPT command:

```
ENT-EQPT:[<TID>]:SLOT-3:<CTAG>::DS1N;
ENT-EQPT:[<TID>]:SLOT-2&SLOT-1:<CTAG>::DS1:PROTID=SLOT-3,PRTYPE=1-N;
```

The following is an example of provisioning a 1:N protection group with the ED-EQPT command:

```
ENT-EQPT:[<TID>]:SLOT-1&SLOT-2:<CTAG>::DS1;
ENT-EQPT:[<TID>]:SLOT-3:<CTAG>::DS1N;
ED-EQPT:[<TID>]:SLOT-2&SLOT-1:<CTAG>:::PROTID=SLOT-1,PRTYPE=1-N;
```

If the provisioning fails for some AIDs, PRTL responses will be provided indicating failed AIDs. If the provisioning fails for all the AIDs, a DENY response will be provided. For both CMPLD and PRTL responses on creating protection group query, the protection group has been created for the successful AID(s) query.

The following is an example for 1:N protection. The RVRTV parameter is not valid for 1:N protection.

```
ENT-EQPT:[<TID>]:SLOT-2:<CTAG>:::PROTID=SLOT-3,PRTYPE=1-N,RVTM=5.0;
```

Both ENT-EQPT and ED-EQPT commands can provision all working AIDs (1-5) together for 1:N by using listed AIDs.

The ENT-EQPT command provisions a new card and adds it to the protection group. The ED-EQPT command adds the already provisioned cards to the protection group.

Protect AID should already be provisioned for either command because protection group parameters are not supported for the protect AID.

The ENT-EQPT command provisions an equipment successfully on an empty slot if the equipment type is compatible with the slot number. This command can have the optional parameters in the "f" block to provision a card as a working card. It has the effect of adding the protection behavior at the time of

provisioning itself. For the protection provisioning to succeed, the protect card should have already been provisioned. Trying to execute ENT-EQPT to provision a protection group on an already provisioned card will result in an error.

An example to provision a 1:1 protection group:

```
ENT-EQPT::SLOT-1:12::DS3;// provision the protect card
```

```
ENT-EQPT::SLOT-2:12::DS3:PROTID=SLOT-1,RVRTV=Y,RVTM=8.0; //provision a card and add it to the protection group.
```

An example to provision a 1:N protection group:

```
ENT-EQPT::SLOT-3:12::DS3N;//provision the protect card
```

```
ENT-EQPT::SLOT-1:12::DS3:PROTID=SLOT-3,RVTM=7.5,PRTYPE=1-N;//provision a card and add it to protection group.
```

Notes:

1. Sending this command to provision a DS3NE card on Slot {1,2,4,5,6,12,13,14,16,or 17}, the DS3E card type is provisioned instead because 1:N protect cards should be in Slot 3 or Slot 15.
2. Sending this command to provision a DS3N card on Slot {1,2,4,5,6,12,13,14,16,17}, the DS3 card type is provisioned instead because 1:N cards should be in Slot 3 or Slot 15.
3. Sending this command to provision a DS1N card on Slot-{1,2,4,5,6,12,13,14,16,17}, the DS1 card type is provisioned instead because 1:N protect cards should be in Slot 3 or Slot 15.

Error conditions for creating 1:1 or 1:N protection groups are:

1. AID sent to a non-working slot; the working cards must be in even slots for 1:1 and in the same bank for 1:N and not in Slot 3 or Slot 15 (ONS 15454).
2. Invalid AID chosen for protection slot.
3. Working AID is already in protection group.
4. AID is a protect AID.
5. The protect card has a circuit.
6. The equipment type does not match with the allowed AID.
7. The slot is already provisioned.
8. The protecting slot is not provisioned.
9. Multiple working AIDs for 1:1 protection.
10. If the command mode (CMDMDE) is set to forced (FRCD) during the creation of a 1:1 or 1:N protection group, all cards must be physically plugged in and in the ready state (IS). If the cards are not physically plugged in, then the command is denied with an appropriate error message. When the command mode is set to normal (NORM) (which is the default) the cards do not have to be physically plugged in and in the ready state.

| Section  | ENT-EQPT Description |
|----------|----------------------|
| Category | Equipment            |
| Security | Provisioning         |

| Section          | ENT-EQPT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ALW-SWDX-EQPT REPT EVT EQPT<br>ALW-SWTOPROTN-EQPT REPT RMV EQPT<br>ALW-SWTOWKG-EQPT REPT RST EQPT<br>DLT-EQPT RTRV-ALM-EQPT<br>ED-EQPT RTRV-COND-EQPT<br>INH-SWDX-EQPT RTRV-EQPT<br>INH-SWTOPROTN-EQPT SW-DX-EQPT<br>INH-SWTOWKG-EQPT SW-TOPROTN-EQPT<br>REPT ALM EQPT SW-TOWKG-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Input Format     | ENT-EQPT:[<TID>]:<AID>:<CTAG>::<AIDTYPE>:[PROTID=<PROTID>,<br>[PRTYPE=<PRTYPE>],[RVRTV=<RVRTV>],[RVTM=<RVTM>,<br>[CMDMDE=<CMDMDE>]][:];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier from the “EQPT” section on page 4-27</li> <li>• &lt;AIDTYPE&gt; is the AID card type; valid values for &lt;AIDTYPE&gt; are shown in the “EQUIPMENT_TYPE” section on page 4-62</li> <li>• &lt;PROTID&gt; is the protecting card slot identifier of the protection group and is the AID from the “PR SLOT” section on page 4-31</li> <li>• &lt;PRTYPE&gt; is the protection group type; valid values for &lt;PRTYPE&gt; are shown in the “PROTECTION_GROUP” section on page 4-83</li> <li>• &lt;RVRTV&gt; is the revertive mode; valid values for &lt;RVRTV&gt; are shown in the “ON_OFF” section on page 4-76</li> <li>• &lt;RVTM&gt; is the revertive time; valid values for &lt;RVTM&gt; are shown in the “REVERTIVE_TIME” section on page 4-84</li> <li>• &lt;CMDMDE&gt; is the command mode. It is only applicable when creating a 1:1 or 1:N protection group and/or adding cards to an existing protection group (1:N). The default is NORM. Valid values are shown in the “CMD_MODE” section on page 4-54. If creating or adding cards to a protection group, specifying FRCD will require the card to be physically plugged in and in the ready state (IS).</li> </ul> |
| Input Example    | ENT-EQPT:PETALUMA:SLOT-12:118::DS1:PROTID=SLOT-13,PRTYPE=1-1,<br>RVRTV=Y,RVTM=8.5,CMDMDE=FRCD:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Errors           | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

### 3.4.73 ENT-FFP-<OCN\_TYPE>: Enter Facility Protection Group (OC3, OC12, OC48, OC192)

See Table 4-11 on page 4-5 for supported modifiers by platform.

This command creates an optical 1+1 protection.

Notes:

1. Protect AID must not be provisioned with traffic.
2. Work AID can be provisioned with traffic.
3. PROTID is a string and can have a maximum length of 32 characters.

| Section          | ENT-FFP-<OCN_TYPE> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | SONET Line Protection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Related Messages | DLT-FFP-<OCN_TYPE>                    OPR-PROTNSW-<OCN_TYPE><br>DLT-FFP-CLNT                            RLS-PROTNSW-<OCN_TYPE><br>ED-FFP-<OCN_TYPE>                    RTRV-FFP-<OCN_TYPE><br>ED-FFP-CLNT                            RTRV-FFP-CLNT<br>ENT-FFP-CLNT                          RTRV-PROTNSW-<OCN_TYPE><br>EX-SW-<OCN_BLSR>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Input Format     | ENT-FFP-<OCN_TYPE>:[<TID>]:<WORK>,<PROTECT>:<CTAG>::<br>[PROTID=<PROTID>],[RVRTV=<RVRTV>],[RVTM=<RVTM>],<br>[PSDIRN=<PSDIRN>][:];<br><br>where: <ul style="list-style-type: none"> <li>• &lt;WORK&gt; identifies a working port and is the AID from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;PROTECT&gt; identifies a protection port and is the AID from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;PROTID&gt; is the protection group identifier (protection group name); &lt;PROTID&gt; defaults to the protecting port AID of the protection group, it is a string and can have a maximum length of 32 characters.</li> <li>• &lt;RVRTV&gt; identifies a revertive mode and defaults to N (non-revertive mode); valid values for &lt;RVRTV&gt; are shown in the <a href="#">“ON_OFF” section on page 4-76</a></li> <li>• &lt;RVTM&gt; identifies a revertive time and defaults to 5.0 minutes; valid values for &lt;RVTM&gt; are shown in the <a href="#">“REVERTIVE_TIME” section on page 4-84</a></li> <li>• &lt;PSDIRN&gt; identifies the switching mode and defaults to UNI; valid values for &lt;PSDIRN&gt; are shown in the <a href="#">“UNI_BI” section on page 4-96</a></li> </ul> |
| Input Example    | ENT-FFP-OC3:PETALUMA:FAC-2-1,FAC-1-1:1:::PROTID=PROT_NAME, RVRTV=Y,RVTM=1.0,PSDIRN=BI;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### 3.4.74 ENT-FFP-CLNT: Enter Facility Protection Group Client

(Cisco ONS 15454 only)

This command creates Y cable protection on client facilities.

See the [“Provisioning Rules for MXP\\_2.5G\\_10G and TXP\\_MR\\_10G Cards” section on page 1-8](#) and the [“Provisioning Rules for TXP\\_MR\\_2.5G and TXPP\\_MR\\_2.5G Cards” section on page 1-13](#) for specific card provisioning rules.

| Section  | ENT-FFP-CLNT Description |
|----------|--------------------------|
| Category | DWDM                     |
| Security | Provisioning             |

| Section          | ENT-FFP-CLNT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | DLT-FFP-<OCN_TYPE><br>DLT-FFP-CLNT<br>DLT-LNK-<MOD2O><br>ED-CLNT<br>ED-DWDM<br>ED-FFP-<OCN_TYPE><br>ED-FFP-CLNT<br>ED-FFP-OCH<br>ED-LNK-<MOD2O><br>ED-OCH<br>ED-OMS<br>ED-OTS<br>ED-TRC-CLNT<br>ED-TRC-OCH<br>ENT-FFP-<OCN_TYPE><br>ENT-LNK-<MOD2O><br>EX-SW-<OCN_BLSR><br>OPR-LASER-OTS<br>OPR-PROTNSW-<OCN_TYPE><br>OPR-PROTNSW-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                  | OPR-PROTNSW-OCH<br>RLS-LASER-OTS<br>RLS-PROTNSW-<OCN_TYPE><br>RLS-PROTNSW-CLNT<br>RLS-PROTNSW-OCH<br>RTRV-CLNT<br>RTRV-DWDM<br>RTRV-FFP-<OCN_TYPE><br>RTRV-FFP-CLNT<br>RTRV-FFP-OCH<br>RTRV-LNK-<MOD2O><br>RTRV-OCH<br>RTRV-OMS<br>RTRV-OTS<br>RTRV-PROTNSW-<OCN_TYPE><br>RTRV-PROTNSW-CLNT<br>RTRV-PROTNSW-OCH<br>RTRV-TRC-CLNT<br>RTRV-TRC-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Input Format     | ENT-FFP-CLNT:[<TID>]:<WORKAID>,<PROTAID>:<CTAG>::<br>[PROTOTYPE=<PROTOTYPE>],[PROTID=<PROTID>],[RVRTV=<RVRTV>],[<br>RVTM=<RVTM>],[PSDIRN=<PSDIRN>][:];<br>where: <ul style="list-style-type: none"> <li>• &lt;WORKAID&gt; identifies a working port and is the AID from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;PROTAID&gt; identifies a protection port and is the AID from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;PROTOTYPE&gt; identifies the type of facility protection; valid values are shown in the <a href="#">“PROTOTYPE” section on page 4-83</a></li> <li>• &lt;PROTID&gt; protection group identifier (protection group name). Defaults to the protecting port AID of the protection group. Is a string and can have a maximum length of 32 characters; &lt;PROTID&gt; is a string</li> <li>• &lt;RVRTV&gt; identifies the revertive mode. Defaults to N (non-revertive mode); valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a></li> <li>• &lt;RVTM&gt; identifies the revertive time. Defaults to 5.0 minutes; valid values are shown in the <a href="#">“REVERTIVE_TIME” section on page 4-84</a></li> <li>• &lt;PSDIRN&gt; identifies the switching mode and defaults to UNI. Release 4.0 MXP_2.5G_10G/TXP_MR_10G cards do not support BI-DIRECTIONAL switching. Valid values for &lt;PSDIRN&gt; are shown in the <a href="#">“UNI_BI” section on page 4-96</a></li> </ul> |
| Input Example    | ENT-FFP-CLNT:CISCO:FAC-1-1,FAC-2-1:100:::PROTOTYPE=Y-CABLE,PROTID=DC-METRO-1,RVRTV=Y,RVTM=1.0,PSDIRN=BI;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

### 3.4.75 ENT-LNK-**<MOD20>**: Enter Optical Link (OCH, OMS, OTS)

(Cisco ONS 15454 only)

This command creates an optical link between two optical connection points. The optical links can be established between two OTS or two OMS of the same band, and two OCH of the same wavelength. The created optical link must be between points belonging to the same ring directionality. An optical link between two OMS or two OCH can be HITLESS if the connection is between two points from one drop to a consecutive add in the logical link.

| Section                       | ENT-LNK- <b>&lt;MOD20&gt;</b> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------|-------------------------------|------------------|---------|-----------------|---------|-----------|-------------|-----------|------------|---------------|------------------------------|--------------|--------|--------------------------------|--------|----------|--------|----------|-------------|----------|------------|-------------------|--------------|------------------|---------------|---------------|------------------|--------------|-----------------|--|
| Category                      | DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| Security                      | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| Related Messages              | <table> <tbody> <tr><td>DLT-FFP-CLNT</td><td>RLS-LASER-OTS</td></tr> <tr><td>DLT-LNK-<b>&lt;MOD20&gt;</b></td><td>RLS-PROTNSW-CLNT</td></tr> <tr><td>ED-CLNT</td><td>RLS-PROTNSW-OCH</td></tr> <tr><td>ED-DWDM</td><td>RTRV-CLNT</td></tr> <tr><td>ED-FFP-CLNT</td><td>RTRV-DWDM</td></tr> <tr><td>ED-FFP-OCH</td><td>RTRV-FFP-CLNT</td></tr> <tr><td>ED-LNK-<b>&lt;MOD20&gt;</b></td><td>RTRV-FFP-OCH</td></tr> <tr><td>ED-OCH</td><td>RTRV-LNK-<b>&lt;MOD20&gt;</b></td></tr> <tr><td>ED-OMS</td><td>RTRV-OCH</td></tr> <tr><td>ED-OTS</td><td>RTRV-OMS</td></tr> <tr><td>ED-TRC-CLNT</td><td>RTRV-OTS</td></tr> <tr><td>ED-TRC-OCH</td><td>RTRV-PROTNSW-CLNT</td></tr> <tr><td>ENT-FFP-CLNT</td><td>RTRV-PROTNSW-OCH</td></tr> <tr><td>OPR-LASER-OTS</td><td>RTRV-TRC-CLNT</td></tr> <tr><td>OPR-PROTNSW-CLNT</td><td>RTRV-TRC-OCH</td></tr> <tr><td>OPR-PROTNSW-OCH</td><td></td></tr> </tbody> </table> | DLT-FFP-CLNT | RLS-LASER-OTS | DLT-LNK- <b>&lt;MOD20&gt;</b> | RLS-PROTNSW-CLNT | ED-CLNT | RLS-PROTNSW-OCH | ED-DWDM | RTRV-CLNT | ED-FFP-CLNT | RTRV-DWDM | ED-FFP-OCH | RTRV-FFP-CLNT | ED-LNK- <b>&lt;MOD20&gt;</b> | RTRV-FFP-OCH | ED-OCH | RTRV-LNK- <b>&lt;MOD20&gt;</b> | ED-OMS | RTRV-OCH | ED-OTS | RTRV-OMS | ED-TRC-CLNT | RTRV-OTS | ED-TRC-OCH | RTRV-PROTNSW-CLNT | ENT-FFP-CLNT | RTRV-PROTNSW-OCH | OPR-LASER-OTS | RTRV-TRC-CLNT | OPR-PROTNSW-CLNT | RTRV-TRC-OCH | OPR-PROTNSW-OCH |  |
| DLT-FFP-CLNT                  | RLS-LASER-OTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| DLT-LNK- <b>&lt;MOD20&gt;</b> | RLS-PROTNSW-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| ED-CLNT                       | RLS-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| ED-DWDM                       | RTRV-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| ED-FFP-CLNT                   | RTRV-DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| ED-FFP-OCH                    | RTRV-FFP-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| ED-LNK- <b>&lt;MOD20&gt;</b>  | RTRV-FFP-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| ED-OCH                        | RTRV-LNK- <b>&lt;MOD20&gt;</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| ED-OMS                        | RTRV-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| ED-OTS                        | RTRV-OMS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| ED-TRC-CLNT                   | RTRV-OTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| ED-TRC-OCH                    | RTRV-PROTNSW-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| ENT-FFP-CLNT                  | RTRV-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| OPR-LASER-OTS                 | RTRV-TRC-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| OPR-PROTNSW-CLNT              | RTRV-TRC-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| OPR-PROTNSW-OCH               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| Input Format                  | ENT-LNK- <b>&lt;MOD20&gt;</b> :[ <b>&lt;TID&gt;</b> ]: <b>&lt;FROM&gt;</b> , <b>&lt;TO&gt;</b> : <b>&lt;CTAG&gt;</b> ::: <b>&lt;PST&gt;</b> ,[ <b>&lt;SST&gt;</b> ];<br>where: <ul style="list-style-type: none"> <li><b>&lt;FROM&gt;</b> indicates an identifier at one end of the optical link and is the AID from the <a href="#">“BAND” section on page 4-18</a></li> <li><b>&lt;TO&gt;</b> indicates an identifier at the other end of the optical link and is the AID from the <a href="#">“BAND” section on page 4-18</a></li> <li><b>&lt;PST&gt;</b> primary state; valid values are shown in the <a href="#">“PST” section on page 4-83</a></li> <li><b>&lt;SST&gt;</b> secondary state; valid values are shown in the <a href="#">“SST” section on page 4-86</a></li> </ul>                                                                                                                        |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| Input Example                 | ENT-LNK-OMS:PENNGROVE:BAND-6-1-TX,BAND-13-1-RX:<br>114:::OOS,AINS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |
| Errors                        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |               |                               |                  |         |                 |         |           |             |           |            |               |                              |              |        |                                |        |          |        |          |             |          |            |                   |              |                  |               |               |                  |              |                 |  |

### 3.4.76 ENT-OSC: Enter Optical Service Channel

(Cisco ONS 15454 only)

This command creates the OSC (optical service channel) group of the NE.

**Note**

RINGID defaults to the AID number.

| Section          | ENT-OSC Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Related Messages | DLT-OSC<br>ED-OSC<br>RTRV-OSC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Input Format     | ENT-OSC:[<TID>]:<AID>:<CTAG>:::[RINGID=<RINGID>,<br>NODEID=<NODEID>],[EAST=<EAST>,<br>[WEST=<WEST>];<br><br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies the OSC group of the NE and is the AID from the <a href="#">“OSC” section on page 4-30</a></li> <li>• &lt;RINGID&gt; identifies the OSC ring ID of the NE. It ranges from 1 to 9999. The default value is the AID number. &lt;RINGID&gt; is an integer</li> <li>• &lt;NODEID&gt; identifies the OSC node ID of the NE. It ranges from 0 to 31. &lt;NODEID&gt; is an integer</li> <li>• &lt;EAST&gt; identifies the east OC3 facility. In this release only one OC3 for east direction is supported. &lt;EAST&gt; is the AID from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;WEST&gt; identifies the east OC3 facility. In this release only one OC3 for west direction is supported. &lt;WEST&gt; is the AID from the <a href="#">“FACILITY” section on page 4-28</a></li> </ul> |
| Input Example    | ENT-OSC:PENNGROVE:OSC-1:114:::RINGID=10,NODEID=1,<br>EAST=FAC-8-1,WEST=FAC-10-1;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

### 3.4.77 ENT-UCP-CC: Enter Unified Control Plane Control Channel

(Cisco ONS 15454 only)

This command creates a UCP IP control channel.

If the CCTYPE is SCCC, the SDCC of the port should be created.

The LMP Hello parameters, CRC mode and MTU can be left NULL. The defaults will be assigned by the node.

The UCP remote cannot be provisioned by the user. The local CCID will be allocated by the node.

If the CCTYPE is routed, the remote IPCC defaults to its neighbor's nodeID.

Examples:

```
ENT-UCP-CC::CC-12:CTAG:::NBRIX=1,CCTYPE=SDCC,PORT=FAC-6-1,
LOCALCCID=12,LOCALIPCC=172.20.209.73,REMOTEIPCC=192.168.100.18,
LMPHELLOINT=2,LMPHELLODEADINT=6,MTU=1500,CRCMD=32-BIT;
```

```
ENT-UCP-CC::CC-15:CTAG:::NBRIX=8,CCTYPE=ROUTED,LOCALCCID=15,
LOCALIPCC=172.20.209.73,REMOTEIPCC=192.168.100.18,LMPHELLOINT=2,
LMPHELLODEADINT=6,MTU=1500,CRCMD=16-BIT;
```

```
ENT-UCP-CC::CC-16:CTAG:::NBRIX=8,CCTYPE=ROUTED,LOCALCCID=16,
LOCALIPCC=172.20.209.73,LMPHELLOINT=2,LMPHELLODEADINT=6,
MTU=1500,CRCMD=16-BIT;
```

## Notes:

1. If this command is sent twice, or input with invalid data, a SRQN (Status, Invalid Request) error message is returned.
2. If sending this command to provision MTU, CRCMD, or both while the IPCC type is routed (CCTYPE=ROUTED), an IIAC (Routed CC Is Not Allowed to Provision MTU and CRCMD) error message is returned.
3. The LMPHELLODEADINT interval has to be larger than the hello interval and is normally set to 3 times the hello interval. Its range is 3 seconds to 30 seconds with a default of 15 seconds.
4. If sending this command to provision a ROUTED IPCC no matter if the neighbor discovery (NDEN) is Enabled or Disabled, the REMOTEIPCC has to be specified by the user with non zeros, otherwise, an error message will be returned.
5. If sending this command to provision an SDCC IPCC while the neighbor discovery (NDEN=Y) is Enabled, the REMOTEIPCC defaults to 0.0.0.0, and the user is not allowed to specify REMOTEIPCC, otherwise, and error message (SROF, Cannot specify Remote IPCC for SDCC-IPCC when ND is enabled) will be returned.
6. If sending this command to provision an SDCC IPCC while the neighbor discovery (NDEN=N) is Disabled, the REMOTEIPCC defaults to its neighbor's node ID (IP address).
7. If sending this command to provision an SDCC IPCC with a complete result, the SDCC of the specified SONET line is created (or enabled) automatically with a DB change reporting (if the DB change report is enabled).
8. If sending this command to provision more than 16 IPCC over one NE, a (Cannot create IPCC. Max. number (16) reached) error message is returned.

| Section          | ENT-UCP-CC Description |               |
|------------------|------------------------|---------------|
| Category         | UCP                    |               |
| Security         | Provisioning           |               |
| Related Messages | DLT-UCP-CC             | REPT ALM UCP  |
|                  | DLT-UCP-IF             | REPT EVT UCP  |
|                  | DLT-UCP-NBR            | RTRV-ALM-UCP  |
|                  | ED-UCP-CC              | RTRV-COND-UCP |
|                  | ED-UCP-IF              | RTRV-UCP-CC   |
|                  | ED-UCP-NBR             | RTRV-UCP-IF   |
|                  | ED-UCP-NODE            | RTRV-UCP-NBR  |
|                  | ENT-UCP-IF             | RTRV-UCP-NODE |
|                  | ENT-UCP-NBR            |               |



| Section      | ENT-UCP-CC Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format | <p>ENT-UCP-CC:[&lt;TID&gt;]:[&lt;AID&gt;]:&lt;CTAG&gt;:::[NBRIX=&lt;NBRIX&gt;],[CCTYPE=&lt;CCTYPE&gt;],[PORT=&lt;PORT&gt;],[LOCALCCID=&lt;LOCALCCID&gt;],[LOCALIPCC=&lt;LOCALIPCC&gt;],[REMOTCCID=&lt;REMOTECCID&gt;],[REMOTEIPCC=&lt;REMOTEIPCC&gt;],[LMPHELLOINT=&lt;LMPHELLOINT&gt;],[LMPHELLODEADINT=&lt;LMPHELLODEADINT&gt;],[MTU=&lt;MTU&gt;],[CRCMD=&lt;CRCMD&gt;],[TUNMD=&lt;TUNMD&gt;][:];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates an individual IPCC ID and is the AID from the “IPCC” section on page 4-29. The default value is “local IPCC ID”</li> <li>• &lt;NBRIX&gt; indicates a neighbor within the local node and is an integer</li> <li>• &lt;CCTYPE&gt; indicates the type of the control channel; valid values for &lt;CCTYPE&gt; are shown in the “UCP_IPCC_TYPE” section on page 4-96</li> <li>• &lt;PORT&gt; indicates the port which the control channel is configured, while the CCTYPE is the type of SDCC. &lt;PORT&gt; is the AID from the “FACILITY” section on page 4-28 and the default value is “applicable only if it is SDCC type”</li> <li>• &lt;LOCALCCID&gt; indicates the local control channel ID and is an integer. The default value is “local UCP node id”</li> <li>• &lt;LOCALIPCC&gt; indicates the local IP address of the control channel and is a string. The default value is “local node id (node IP address)”</li> <li>• &lt;REMOTECCID&gt; indicates the local control channel ID and is an integer. The default value is “– undefined until discovered by LMP”</li> <li>• &lt;REMOTEIPCC&gt; indicates the remote IP address of the control channel and is a string. The default value is “– undefined for SDCC IPCC and discovered by LMP”</li> <li>• &lt;LMPHELLOINT&gt; indicates the LMP (line management protocol) interval (in milliseconds). It is the time between hello messages sent by this node, defaults to 5 (with the range of 1–10). &lt;LMPHELLOINT&gt; is an integer and the default value is “5 seconds – (1–10 seconds)”</li> <li>• &lt;LMPHELLODEADINT&gt; indicates the control channel time-out interval (in milliseconds) by the neighbor if the neighbor does not receive the hello message, and defaults to 15 (with the range of 3–30). This interval has to be at least as large as the hello interval and is normally set to 3 times the hello interval. It’s range is 3–30 seconds with a default of 15 seconds. &lt;LMPHELLODEADINT&gt; is an integer and it’s default value is “15 seconds – (3–30 seconds)”</li> <li>• &lt;MTU&gt; indicates the MTU size of this control channel. &lt;MTU&gt; is an integer and it’s default value is “1500 bytes”</li> <li>• &lt;CRCMD&gt; indicates the CRC mode for this control channel. It is applicable to IPCCs in SDCC type. Valid values for &lt;CRCMD&gt; are shown in the “UCP_CRC_MODE” section on page 4-96</li> <li>• &lt;TUNMD&gt; indicates the IP Tunneling option. It defaults to disabled and valid values are shown in the “UCP_CC_TUN_MD” section on page 4-95</li> </ul> |

| Section       | ENT-UCP-CC Description                                                                                                                                                                                       |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Example | ENT-UCP-CC:CISCO:CC-9:CTAG::NBRIX=8,CCTYPE=SDCC,PORT=FAC-2-1,LOCALCCID=9,LOCALIPCC=172.20.209.162,REMOTCCID=2,REMOTEIPCC=172.20.209.73,LMPHELLOINT=1,LMPHELLODEADINT=5,MTU=1500,CRCMD=16-BIT,TUNMD=DISABLED; |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                               |

### 3.4.78 ENT-UCP-IF: Enter Unified Control Plane Interface

(Cisco ONS 15454 only)

This command creates a UCP interface.

The CCID can be set to zero to request the use of any control channel to the neighbor for this UCP interface/data link.

The local interface ID (LOCALIFID) is used by LMP/RSVP (Line Management Protocol/Resource Reservation Protocol). If zero is passed in as the local Interface ID of the data link, then the node assigns a value for it. If the user specifies a non-zero value, then the node checks if that Interface ID is available and uses it.

If the UCP interface/data link control channel type is SDCC type, the local interface ID should be the same as CCID. Otherwise, an error message will be returned by the node.

The remote interface ID is allowed to be unspecified (by passing zero) if the NDEN is Enabled and there is a SDCC IPCC specified for this UCP Interface with the same Interface Index, or when Routed IPCC is used for this data link.

Examples:

```
ENT-UCP-IF::FAC-2-3:CTAG::NBRIX=8,CCID=2,LOCALIFID=0,REMOTEIFID=4,
TNATYPE=IPV4,TNAADDR=172.20.209.162,CORENETWORKID=3,ADMSTATE=UP;
```

```
ENT-UCP-IF::FAC-2-4:CTAG::NBRIX=8,CCID=1,LOCALIFID=0,REMOTEIFID=4,
TNATYPE=NSAP,TNAADDR=0102030405060708090A0B0C0D0E0F1011121314,
CORENETWORKID=3,ADMSTATE=UP;
```



#### Note

If this command is sent twice, or inputs invalid data, a SRQN (Status, Invalid Request) error message is returned.

| Section          | ENT-UCP-IF Description                                                                                                                                                                                                              |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | UCP                                                                                                                                                                                                                                 |
| Security         | Provisioning                                                                                                                                                                                                                        |
| Related Messages | DLT-UCP-CC REPT ALM UCP<br>DLT-UCP-IF REPT EVT UCP<br>DLT-UCP-NBR RTRV-ALM-UCP<br>ED-UCP-CC RTRV-COND-UCP<br>ED-UCP-IF RTRV-UCP-CC<br>ED-UCP-NBR RTRV-UCP-IF<br>ED-UCP-NODE RTRV-UCP-NBR<br>ENT-UCP-CC RTRV-UCP-NODE<br>ENT-UCP-NBR |

| Section       | ENT-UCP-IF Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | <p>ENT-UCP-IF:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;:::[NBRIX=&lt;NBRIX&gt;],[CCID=&lt;CCID&gt;],[LOCALIFID=&lt;LOCALIFID&gt;],[REMOTEIFID=&lt;REMOTEIFID&gt;],[TNATYPE=&lt;TNATYPE&gt;],[TNAADDR=&lt;TNAADDR&gt;],[CORENETWORKID=&lt;CORENETWORKID&gt;][:];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates the interface port index of the data link and is the AID from the “FACILITY” section on page 4-28</li> <li>• &lt;NBRIX&gt; indicates a neighbor within the local node and is an integer</li> <li>• &lt;CCID&gt; indicates the control channel ID. It can be set to zero to request the use of any control channel to the neighbor for this UCP interface/ data link. &lt;CCID&gt; is an integer. A null value defaults to “any control channel to the neighbor”</li> <li>• &lt;LOCALIFID&gt; indicates the local interface ID used by LMP/RSVP (Line Management Protocol/Resource reservation Protocol). If this attribute value is assigned by the UI, it will be ignored. &lt;LOCALIFID&gt; is an integer</li> <li>• &lt;REMOTEIFID&gt; indicates the remote interface ID on the neighbor's side. If this attribute value is passed by UI, it will be ignored. &lt;REMOTEIFID&gt; is an integer</li> <li>• &lt;TNATYPE&gt; indicates the TNA (Transport Network Administered) type and defaults to IPv4. Valid values for &lt;TNATYPE&gt; are shown in the “UCP_TNA_TYPE” section on page 4-96. The default value is “IPv4”</li> <li>• &lt;TNAADDR&gt; indicates the TNA (Transport Network Administered) IP address and defaults to IPv4 0.0.0.0. &lt;TNAADDR&gt; is a string. The default value is “0”</li> <li>• &lt;CORENETWORKID&gt; indicates the core network ID and defaults to one (1)</li> </ul> |
| Input Example | <p>ENT-UCP-IF:CISCO:FAC-2-1:CTAG:::NBRIX=12,CCID=16,LOCALIFID=16,REMOTEIFID=0,TNATYPE=IPV4,TNAADDR=172.20.209.162,CORENETWORKID=7;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Errors        | <p>Errors are listed in <a href="#">Table 7-33 on page 7-27</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### 3.4.79 ENT-UCP-NBR: Enter Unified Control Plane Neighbor

(Cisco ONS 15454 only)

This command creates a UCP neighbor.

The default value of the node name can be overwritten by the TL1 user to a string in a maximum size of 20 characters. If the node name includes non-identified TL1 characters (e.g. space), the text string format with the double quotes is required.

Notes:

1. If this command is sent twice or inputs invalid data, a SRQN (Status, Invalid Request) error message is returned.
2. If sending this command without neighbor node name in the “NAME” field, an IIAC (Neighbor Name Can Not be Empty) error message is returned.
3. If sending this command with nodeid while the neighbor discovery is enabled (NDEN=Y), an IIAC (NODEID Is Not Allowed If NDEN Is Enabled) error message is returned.
4. If sending this command to set the hello interval while the RSVP hello is disabled, an IIAC (HELLOINT Is Not Allowed If HELLOEN Is Disabled) error message is returned.

5. If provisioning a neighbor with disabled neighbor discovery (NDEN=N), and NULL nodeid, a SROF (UCP Neighbor's NodeID cannot be null when Neighbor Discovery is disabled) is returned.
6. If sending this command to create a neighbor with the neighbor node name string longer than 64 characters, an IIAC (Node Name Too Long) error message is returned.

| Section          | ENT-UCP-NBR Description |               |
|------------------|-------------------------|---------------|
| Category         | UCP                     |               |
| Security         | Provisioning            |               |
| Related Messages | DLT-UCP-CC              | REPT ALM UCP  |
|                  | DLT-UCP-IF              | REPT EVT UCP  |
|                  | DLT-UCP-NBR             | RTRV-ALM-UCP  |
|                  | ED-UCP-CC               | RTRV-COND-UCP |
|                  | ED-UCP-IF               | RTRV-UCP-CC   |
|                  | ED-UCP-NBR              | RTRV-UCP-IF   |
|                  | ED-UCP-NODE             | RTRV-UCP-NBR  |
|                  | ENT-UCP-CC              | RTRV-UCP-NODE |
|                  | ENT-UCP-IF              |               |

| Section       | ENT-UCP-NBR Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | <p>ENT-UCP-NBR:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;:::[NBRIX=&lt;NBRIX&gt;,<br/> [NOEID=&lt;NOEID&gt;],[NAME=&lt;NAME&gt;],[NDEN=&lt;NDEN&gt;,<br/> [HELLOEN=&lt;HELLOEN&gt;],[HELLOINT=&lt;HELLOINT&gt;,<br/> [REFREDEN=&lt;REFREDEN&gt;],[NUMRXMTS=&lt;NUMRXMTS&gt;][:];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates an individual neighbor index of the UCP. An available neighbor index will be assigned internally while sending this command without AID; &lt;AID&gt; is the AID from the “NBR” section on page 4-30</li> <li>• &lt;NBRIX&gt; indicates a neighbor within the local node. &lt;NBRIX &gt; is an integer and the default value is the AID number or undefined zero (0)</li> <li>• &lt;NOEID&gt; indicates the neighbor node ID as received in RSVP, LMP messages from that node and is a string</li> <li>• &lt;NAME&gt; indicates the neighbor node name. It defaults to the ASCII representation of the nodeid in this command. The default value of this node name can be overwritten by the TL1 user to a string in a maximum size of 20 characters. If the node name includes non-identified TL1 characters (e.g. space), the text string format with the double quotes is required. &lt;NAME&gt; is a String. The default value is “the ASCII representation of the nodeid”</li> <li>• &lt;NDEN&gt; indicates if the neighbor discovery is enabled or not for this neighbor and it defaults to enable (Y). The default value is “Y”. Valid values for &lt;NDEN&gt; are shown in the “ON_OFF” section on page 4-76</li> <li>• &lt;HELLOEN&gt; indicates if the RSVP hello is enabled to this neighbor or not and defaults to enable (Y). The default value is “Y”. Valid values for &lt;HELLOEN&gt; are shown in the “ON_OFF” section on page 4-76</li> <li>• &lt;HELLOINT&gt; indicates the interval between hello messages to neighbor and defaults to 5. The default value is “5”. &lt;HELLOINT&gt; is an integer</li> <li>• &lt;REFREDEN&gt; indicates if the refresh reduction is enabled or not and defaults to enable (Y). The default value is “Y”. Valid values for &lt;REFREDEN&gt; are shown in the “ON_OFF” section on page 4-76</li> <li>• &lt;NUMRXMTS&gt; indicates the maximum number of retransmits of each message and defaults to 3. The default value is “3”. &lt;NUMRXMTS&gt; is an integer</li> </ul> |
| Input Example | <p>ENT-UCP-NBR:CISCO:NBR-8:CTAG:::NBRIX=8,NOEID=192.168.100.52,<br/> NAME=NODE-A,NDEN=Y,HELLOEN=Y,HELLOINT=20,REFREDEN=Y,<br/> NUMRXMTS=3;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Errors        | <p>Errors are listed in <a href="#">Table 7-33 on page 7-27</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### 3.4.80 ENT-USER-SECU: Enter User Security

This command adds a user account. Only a Superuser can do this. Each user is configured as being at one of these four privilege levels:

1. Retrieve [RTRV]: Users possessing this security level can retrieve information from the node, but cannot modify anything. The default idle time for Retrieve is unlimited.

2. Maintenance [MAINT]: Users possessing this security level can retrieve information from the node and perform limited maintenance operations such as card resets, Manual/Force/Lockout on cross-connects or in protection groups, and BLSR maintenance. The default idle time for Maintenance is 60 minutes.
3. Provisioning [PROV]: Users possessing this security level can perform all maintenance actions, and all provisioning actions except those restricted to superusers. The default idle time for Provisioning is 30 minutes.
4. Superuser [SUPER]: Users possessing this security level can perform all PROV user actions, plus creating/deleting user security profiles, setting basic system parameters such as time/date, node name, and IP address, doing database backup & restore. The default idle time for Superuser is 15 minutes.

## Notes:

1. Passwords are masked for the following security commands: ACT-USER, ED-PID, ENT-USER-SECU and ED-USER-SECU. Access to a TL1 session via any means will have the password masked. The CTC Request History and Message Log will also show the masked commands. When a password-masked command is re-issued by double-clicking the command from CTC Request History, the password will still be masked in the CTC Request History and Message Log. The actual password that was previously issued will be sent to the NE. To use a former command as a template only, single-click the command in CTC Request History. The command will be placed in the Command Request text box, where you can edit the appropriate fields prior to re-issuing it.
2. The <UID> can be any combination of up to 10 alphanumeric characters.
3. The <PID> is a string of up to 10 characters where at least 2 characters are non-alphabetic with at least one special character (+, %, or #).
4. Although the CTC allows both <UID> and <PID> of up to 20 characters, the CTC-entered users (<UID> and <PID>) may not be valid TL1 users (e.g. if issuing an ACT-USER command and using the CTC-entered <UID> that is greater than 10 characters long, TL1 will respond with DENY (Can't Login) error message).
5. The TL1 password security is enforced as follows:
  - a. The password <PID> cannot be the same as or contain the userid (UID), for example, if the userid is CISCO25 the password cannot be CISCO25#.
  - b. The password <PID> must have one non-alphabetic and one special (+, %, or #) character.
  - c. There is no password <PID> toggling; for example, if the current password is CISCO25#, the new password cannot be CISCO25#

| Section  | ENT-USER-SECU Description |
|----------|---------------------------|
| Category | Security                  |
| Security | Superuser                 |

| Section          | ENT-USER-SECU Description                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ACT-USER<br>ALW-MSG-SECU<br>ALW-USER-SECU<br>CANC<br>CANC-USER<br>CANC-USER-SECU<br>DLT-USER-SECU<br>ED-CMD-SECU<br>ED-PID<br>ED-USER-SECU<br>INH-MSG-SECU<br>INH-USER-SECU<br>REPT ALM SECU<br>REPT EVT SECU<br>REPT EVT SESSION<br>RTRV-CMD-SECU<br>RTRV-DFLT-SECU<br>RTRV-USER-SECU<br>SET-ATTR-SECUDFLT                                                                                                                                          |
| Input Format     | ENT-USER-SECU:[<TID>]:<UID>:<CTAG>::<PID>,,<UAP>[:];<br>where: <ul style="list-style-type: none"> <li>• &lt;UID&gt; is the user identifier. The minimum &lt;UID&gt; size is 6, the maximum &lt;UID&gt; size is 10; &lt;UID&gt; is a string.</li> <li>• &lt;PID&gt; is a string.</li> <li>• &lt;UAP&gt; is the user access privilege value; valid values for &lt;UAP&gt; are shown in the <a href="#">“PRIVILEGE”</a> section on page 4-82</li> </ul> |
| Input Example    | ENT-USER-SECU:PETALUMA:CISCO15:123::PSWD11#,,MAINT;                                                                                                                                                                                                                                                                                                                                                                                                  |
| Errors           | Errors are listed in <a href="#">Table 7-33</a> on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                        |

### 3.4.81 ENT-VCG: Enter Virtual Concatenated Group

(Cisco ONS 15454 only)

This command creates a VCG object. VCG on ML-series cards supports two members and supported subrates are: STS1, STS3C, or STS12C. ML-series VCG also supports SW-LCAS or NONE. VCG on the FR\_MR-4 card supports eight members and supported substrate is limited to STS3C. The FR\_MR-4 card VCG has no LCAS support (NONE).

| Section          | ENT-VCG Description |
|------------------|---------------------|
| Category         | VCAT                |
| Security         | Provisioning        |
| Related Messages | DLT-VCG<br>RTRV-VCG |

| Section       | ENT-VCG Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | ENT-VCG:[<TID>]:<SRC>:<CTAG>:::TYPE=<TYPE>,<br>TXCOUNT=<TXCOUNT>,[CCT=<CCT>],[LCAS=<LCAS>][:];<br><br>where: <ul style="list-style-type: none"> <li>• &lt;SRC&gt; AID to address the VCG from the “FACILITY” section on page 4-28. ML-series cards use VFAC AID and the FC_MR-4 card uses FAC AID</li> <li>• &lt;TYPE&gt; type of member cross-connect; valid values are shown in the “MOD_PATH” section on page 4-73. ML-series supports STS1, STS3C, and STS12C. The FC_MR-4 card supports STS3C.</li> <li>• &lt;TXCOUNT&gt; the number of members in Tx direction; &lt;TXCOUNT&gt; is an integer. For ML-series cards, the valid value is two. For the FC_MR-4 card, the valid value is eight.</li> <li>• &lt;CCT&gt; cross-connect type for the VCG member cross-connects. &lt;CCT&gt; must be the same for all the member cross-connects of a VCG; valid values are shown in the “CCT” section on page 4-53</li> <li>• &lt;LCAS&gt; link capacity adjustment scheme; valid values are shown in the “LCAS” section on page 4-67. ML-series supports NONE or SW-LCAS. The FC_MR-4 card supports NONE.</li> </ul> |
| Input Example | ENT-VCG:NODE1:FAC-1-1:1234:::TYPE=STS3C,TXCOUNT=8,CCT=2WAY,LCAS=LCAS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## 3.4.82 ENT-WLEN: Enter Wavelength

(Cisco ONS 15454 only)

This command allocates a wavelength.



### Note

This command does not support allocating multiple wavelengths.

| Section          | ENT-WLEN Description             |
|------------------|----------------------------------|
| Category         | DWDM                             |
| Security         | Provisioning                     |
| Related Messages | DLT-WLEN<br>ED-WLEN<br>RTRV-WLEN |



| Section       | ENT-WLEN Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | ENT-WLEN:[<TID>]:<AID>:<CTAG>:::[SIZE=<SIZE>]:[<PST>],[<SST>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the wavelength AID from the “WLEN” section on page 4-37</li> <li>• &lt;SIZE&gt; is the circuit size allocated on this wavelength; valid values are shown in the “CIRCUIT_SIZE” section on page 4-53</li> <li>• &lt;PST&gt; primary state; valid values are shown in the “PST” section on page 4-83</li> <li>• &lt;SST&gt; secondary state; valid values are shown in the “SST” section on page 4-86</li> </ul> |
| Input Example | ENT-WLEN:PENNGROVE:WLEN-W-ADD-1530.33:114:::SIZE=MULTI-RATE:OOS,MT;                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Errors        | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### 3.4.83 EX-SW-<OCN\_BLSR>: Operate Protection Switch (OC12, OC48, OC192)

See Table 4-11 on page 4-5 for supported modifiers by platform.

This command exercises the algorithm for switching from a working facility to a protection facility without actually performing a switch. It is assumed that the facility being exercised is the working unit. The exercise switching success or failure result will be indicated by an automatic alarm.

Exercise switch for the SONET protection line is not supported in this release. If sending this command to the protection unit, an error message will be returned. In addition to all normal INPUT, EQUIPAGE, PRIVILEGE error codes, the following error codes are also included in this command:

SNVS (Status, Not in Valid State)

SROF (Status, Requested Operation Failed)

SSRD (Status, Switch Request Denied)

Notes:

1. If you send the EX-SW-<OCN\_BLSR> command to both east and west sides/spans of a two-fiber or four-fiber ring within a short time period (less than 30–45 seconds) the system will only execute one (WEST) side EXER-RING query, and preempt the other (EAST) side query. There will be no event messages reported for the preempted side, and it will be in APS-CLEAR switching state.

Examples of sending the EX-SW-<OCN\_BLSR> command to both east and west sides/spans of a two-fiber or four-fiber ring within a short time period (less than 30–45 seconds) are: (a) A single command with both side/span AIDs (in the list AID format) of the same two-fiber or four-fiber ring or (b) Separate queries (via TL1 or CTC, or TL1 and CTC) on both sides/spans of the same two-fiber or four-fiber ring

2. DIRN is an optional parameter. A NULL value of this parameter defaults to BTH for a two-fiber or four-fiber BLSR protection group.

DIRN follows these rules:

- TRMT will always fail for any kind of protection groups
- For two-fiber and four-fiber BLSR protection groups both the RCV and TRMT direction will fail.
- Only BTH is a valid parameter. EX-SW-<OCN\_TYPE> can be operated only on BLSR protection groups.

| Section            | EX-SW-<OCN_BLSR> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |               |                 |                    |         |                  |                 |                |                 |               |                     |                |            |               |                 |                    |               |                  |  |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------|--------------------|---------|------------------|-----------------|----------------|-----------------|---------------|---------------------|----------------|------------|---------------|-----------------|--------------------|---------------|------------------|--|
| Category           | BLSR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |                 |                    |         |                  |                 |                |                 |               |                     |                |            |               |                 |                    |               |                  |  |
| Security           | Maintenance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               |                 |                    |         |                  |                 |                |                 |               |                     |                |            |               |                 |                    |               |                  |  |
| Related Messages   | <table border="0"> <tr> <td>ALW-SWDX-EQPT</td> <td>OPR-LPBK-&lt;MOD2&gt;</td> </tr> <tr> <td>ALW-SWTOPROTN-EQPT</td> <td>REPT SW</td> </tr> <tr> <td>ALW-SWTOWKG-EQPT</td> <td>RLS-LPBK-&lt;MOD2&gt;</td> </tr> <tr> <td>DLT-&lt;MOD_RING&gt;</td> <td>RTRV-&lt;MOD_RING&gt;</td> </tr> <tr> <td>ED-&lt;MOD_RING&gt;</td> <td>RTRV-TRC-&lt;OCN_BLSR&gt;</td> </tr> <tr> <td>ENT-&lt;MOD_RING&gt;</td> <td>SW-DX-EQPT</td> </tr> <tr> <td>INH-SWDX-EQPT</td> <td>SW-TOPROTN-EQPT</td> </tr> <tr> <td>INH-SWTOPROTN-EQPT</td> <td>SW-TOWKG-EQPT</td> </tr> <tr> <td>INH-SWTOWKG-EQPT</td> <td></td> </tr> </table>                                       | ALW-SWDX-EQPT | OPR-LPBK-<MOD2> | ALW-SWTOPROTN-EQPT | REPT SW | ALW-SWTOWKG-EQPT | RLS-LPBK-<MOD2> | DLT-<MOD_RING> | RTRV-<MOD_RING> | ED-<MOD_RING> | RTRV-TRC-<OCN_BLSR> | ENT-<MOD_RING> | SW-DX-EQPT | INH-SWDX-EQPT | SW-TOPROTN-EQPT | INH-SWTOPROTN-EQPT | SW-TOWKG-EQPT | INH-SWTOWKG-EQPT |  |
| ALW-SWDX-EQPT      | OPR-LPBK-<MOD2>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |                 |                    |         |                  |                 |                |                 |               |                     |                |            |               |                 |                    |               |                  |  |
| ALW-SWTOPROTN-EQPT | REPT SW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |                 |                    |         |                  |                 |                |                 |               |                     |                |            |               |                 |                    |               |                  |  |
| ALW-SWTOWKG-EQPT   | RLS-LPBK-<MOD2>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |                 |                    |         |                  |                 |                |                 |               |                     |                |            |               |                 |                    |               |                  |  |
| DLT-<MOD_RING>     | RTRV-<MOD_RING>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |                 |                    |         |                  |                 |                |                 |               |                     |                |            |               |                 |                    |               |                  |  |
| ED-<MOD_RING>      | RTRV-TRC-<OCN_BLSR>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                 |                    |         |                  |                 |                |                 |               |                     |                |            |               |                 |                    |               |                  |  |
| ENT-<MOD_RING>     | SW-DX-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |               |                 |                    |         |                  |                 |                |                 |               |                     |                |            |               |                 |                    |               |                  |  |
| INH-SWDX-EQPT      | SW-TOPROTN-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |                 |                    |         |                  |                 |                |                 |               |                     |                |            |               |                 |                    |               |                  |  |
| INH-SWTOPROTN-EQPT | SW-TOWKG-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |                 |                    |         |                  |                 |                |                 |               |                     |                |            |               |                 |                    |               |                  |  |
| INH-SWTOWKG-EQPT   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |                 |                    |         |                  |                 |                |                 |               |                     |                |            |               |                 |                    |               |                  |  |
| Input Format       | <p>EX-SW-&lt;OCN_BLSR&gt;:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;::,&lt;SWITCHTYPE&gt;,&lt;DIRECTION&gt;;</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies the facility in the NE to which the switch request is directed. &lt;AID&gt; is from the “FACILITY” section on page 4-28. &lt;AID&gt; must not be null.</li> <li>• &lt;SWITCHTYPE&gt; is the BLSR switch type; valid values are shown in the “SWITCH_TYPE” section on page 4-88. &lt;SWITCHTYPE&gt; must not be null</li> <li>• &lt;DIRECTION&gt; valid values are shown in the “DIRECTION” section on page 4-56 and a null value defaults to RCV</li> </ul> |               |                 |                    |         |                  |                 |                |                 |               |                     |                |            |               |                 |                    |               |                  |  |
| Input Example      | EX-SW-OC48:CISCO:FAC-12-1:123::,SPAN,BTH;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |                 |                    |         |                  |                 |                |                 |               |                     |                |            |               |                 |                    |               |                  |  |
| Errors             | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |               |                 |                    |         |                  |                 |                |                 |               |                     |                |            |               |                 |                    |               |                  |  |

### 3.4.84 INH-MSG-ALL: Inhibit Message All

This command inhibits all REPT ALM and REPT EVT autonomous messages from being transmitted. See the ALW-MSG-ALL to resume these autonomous messages. When a TL1 session starts, the REPT ALM and REPT EVT messages are allowed by default.



#### Note

If this command is used twice in the same session, the SAIN (Already Inhibited) error message is reported.

| Section  | INH-MSG-ALL Description |
|----------|-------------------------|
| Category | System                  |
| Security | Retrieve                |

| Section          | INH-MSG-ALL Description                                                                                                  |
|------------------|--------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ALW-MSG-ALL<br>ALW-MSG-DBCHG<br>ED-DAT<br>ED-NE-GEN<br>ED-NE-PATH<br>ED-NE-SYCN<br>INH-MSG-DBCHG<br>INIT-SYS<br>RTRV-HDR |
|                  | RTRV-INV<br>RTRV-NE-GEN<br>RTRV-NE-IPMAP<br>RTRV-NE-PATH<br>RTRV-NE-SYCN<br>RTRV-NE-WDMANS<br>RTRV-TOD<br>SET-TOD        |
| Input Format     | INH-MSG-ALL:[<TID>]::<CTAG>[::,];                                                                                        |
| Input Example    | INH-MSG-ALL:PETALUMA::550;                                                                                               |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                           |

### 3.4.85 INH-MSG-DBCHG: Inhibit Database Change Message

This command disables REPT DBCHG.

| Section          | INH-MSG-DBCHG Description                                                                                                            |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Log                                                                                                                                  |
| Security         | Retrieve                                                                                                                             |
| Related Messages | ALW-MSG-ALL<br>ALW-MSG-DBCHG<br>ED-DAT<br>ED-NE-GEN<br>ED-NE-PATH<br>ED-NE-SYCN<br>INH-MSG-ALL<br>INIT-SYS<br>REPT DBCHG<br>RTRV-HDR |
|                  | RTRV-INV<br>RTRV-LOG<br>RTRV-NE-GEN<br>RTRV-NE-IPMAP<br>RTRV-NE-PATH<br>RTRV-NE-SYCN<br>RTRV-NE-WDMANS<br>RTRV-TOD<br>SET-TOD        |
| Input Format     | INH-MSG-DBCHG:[<TID>]::<CTAG>[::,];                                                                                                  |
| Input Example    | INH-MSG-DBCHG:CISCO::123;                                                                                                            |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                       |

### 3.4.86 INH-MSG-SECU: Inhibit Message Security

This command inhibits the REPT EVT SECU and REPT ALM SECU messages.

| Section  | INH-MSG-SECU Description |
|----------|--------------------------|
| Category | Security                 |
| Security | Superuser                |

| Section          | INH-MSG-SECU Description                                                                                                                                                                                                                                                          |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ACT-USER ENT-USER-SECU<br>ALW-MSG-SECU INH-USER-SECU<br>ALW-USER-SECU REPT ALM SECU<br>CANC REPT EVT SECU<br>CANC-USER REPT EVT SESSION<br>CANC-USER-SECU RTRV-CMD-SECU<br>DLT-USER-SECU RTRV-DFLT-SECU<br>ED-CMD-SECU RTRV-USER-SECU<br>ED-PID SET-ATTR-SECUDFLT<br>ED-USER-SECU |
| Input Format     | INH-MSG-SECU:[<TID>]::<CTAG>;                                                                                                                                                                                                                                                     |
| Input Example    | INH-MSG-SECU:PETALUMA::123;                                                                                                                                                                                                                                                       |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                    |

### 3.4.87 INH-PMREPT-ALL: Inhibit Performance Report All

This command inhibits all scheduled PM reporting. The inhibition of the PM reporting is session-based, which means the command is only effective to the TL1 session that issues this command. By default, the scheduled PM reporting is inhibited by a TL1 session.

A TL1 session for which PM reports are inhibited will include an INHMSG-PMREPT condition when issuing TL1 command RTRV-COND-ALL.

| Section          | INH-PMREPT-ALL Description                                                                                                                                                                                                    |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Performance                                                                                                                                                                                                                   |
| Security         | Retrieve                                                                                                                                                                                                                      |
| Related Messages | ALW-PMREPT-ALL RTRV-PMSCHED-<MOD2><br>INIT-REG-<MOD2> RTRV-PMSCHED-ALL<br>INIT-REG-G1000 RTRV-TH-<MOD2><br>REPT PM <MOD2> SCHED-PMREPT-<MOD2><br>RTRV-PM-<MOD2> SET-PMMODE-<STS_PATH><br>RTRV-PMMODE-<STS_PATH> SET-TH-<MOD2> |
| Input Format     | INH-PMREPT-ALL:[<TID>]::<CTAG>;                                                                                                                                                                                               |
| Input Example    | INH-PMREPT-ALL:NE-NAME::123;                                                                                                                                                                                                  |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                |

### 3.4.88 INH-SWDX-EQPT: Inhibit Switch Duplex Equipment

(Cisco ONS 15454 only)

This command inhibits automatic or manual switching on a system containing duplex equipment. Use the ALW-SWDX command to release the inhibit. This command is not used for SONET line protection switching. For SONET line/path protection switching commands, use the OPR-PROTNSW and RLS-PROTNSW commands. This command is not used for 1:1 and 1:N equipment protection switching, use ALW-SWTOPROTN, ALW-SWTOWKG, INH-SWTOPROTN, INH-SWTOWKG commands.

Notes:

1. This command applies for XC, XCVT, or XC10G equipment units only in this release.
2. When sending this command to a TCC2 card, an error message will occur because the NE treats the TCC2 as a non-revertive protection group without user control.

| Section          | INH-SWDX-EQPT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Equipment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Security         | Maintenance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Related Messages | ALW-SWDX-EQPT                      REPT EVT EQPT<br>ALW-SWTOPROTN-EQPT                REPT SW<br>ALW-SWTOWKG-EQPT                  RTRV-ALM-EQPT<br>DLT-EQPT                                RTRV-ALMTH-EQPT<br>ED-EQPT                                 RTRV-COND-EQPT<br>ENT-EQPT                                RTRV-EQPT<br>EX-SW-<OCN_BLSR>                    SET-ALMTH-EQPT<br>INH-SWTOPROTN-EQPT                 SW-DX-EQPT<br>INH-SWTOWKG-EQPT                  SW-TOPROTN-EQPT<br>REPT ALM EQPT                        SW-TOWKG-EQPT |
| Input Format     | INH-SWDX-EQPT:[<TID>]:<AID>:<CTAG>[::];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the XC/XCVT/XC10G equipment AID (Slot 8 or Slot 10) from the “EQPT” section on page 4-27</li> </ul>                                                                                                                                                                                                                                                                                                                                |
| Input Example    | INH-SWDX-EQPT:CISCO:SLOT-1:1234;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

### 3.4.89 INH-SWTOPROTN-EQPT: Inhibit Switch to Protection Equipment

(Cisco ONS 15454 only)

This command inhibits automatic or manual switching of an equipment unit to protection. Use the ALW-SWTOPROTN-EQPT command to release the inhibit.

INH-SWTOPROTN-EQPT is used for non-SONET line cards (e.g. DS1, DS3, DS3XM and EC1 cards). DS1 and DS3 cards have 1:1 and 1:N equipment protection. DS3XM and EC1 cards have only 1:1 equipment protection. When performing a lockout with this command, the traffic will be switched from the unit specified by the AID, unless the working unit being protected has failed or is missing. When performing a lock on with this command and the working unit specified in the AID is in standby, sending this command will also initiate a traffic switch. When traffic is locked on a working unit or locked out of the protection unit with this command, the protection unit will not carry traffic, even if the working unit is pulled from the system.

Sending this command to a working unit in a 1:N protection group does not prevent a protection switch from another working unit in the same protection group. All the working units must be sent this command to prevent a protection switch. If the command is sent only to a subset of the working units, only those working units will have traffic locked on.

The inhibit state is persistent over TCC2 side switches and removal/reboot of all the units in the protection group. The inhibit state can, but does not have to be persistent over a complete power cycle of the NE.

The unit specified by the AID will raise the condition of INHSWPR when this command is sent.

Notes:

1. This command only supports one value of the <DIRN> parameter - BTH. A command with any other value is considered an incorrect use of the command. An IDNV (Input, Data Not Valid) error message should be responded.
2. This command is not used for the common control (TCC2 or XC/XCVT/XC10G) cards. A command on a common control card will receive an IIAC (Input, Invalid Access Identifier) error message. To use the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
3. This command is not used for SONET (OCN) cards. A command on a SONET card will receive an IIAC (Input, Invalid Access Identifier) error message. To use a SONET card switching command, use the OPR-PROTNSW and RLS-PROTNSW commands.
4. If this command is used on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message should be received.
5. If this command is used on a card that is already in the inhibit state, the SAIN (Status, Already Inhibited) error message should be received.
6. If sending the inhibit switch to protection command to a working card when the protect card in the same protection group has already raised the condition of INHSWWKG, the SPLD (Status, Protection unit Locked) error message should be responded.
7. If sending the inhibit switch to protection command to the protect card when a working card in the same protection group has already raised the condition of INHSWWKG, the SWLD (Status, Working unit Locked) error message should be responded.
8. Sending the inhibit switch to protection command to an active protect card when the peer working card is failed or missing, the SWFA (Status, Working unit Failed) error message should be responded.
9. The following situation(s) are allowed and will not generate any error response: sending this command to missing cards as long as none of the previous error conditions apply.

| Section          | INH-SWTOPROTN-EQPT Description |                 |
|------------------|--------------------------------|-----------------|
| Category         | Equipment                      |                 |
| Security         | Maintenance                    |                 |
| Related Messages | ALW-SWDX-EQPT                  | REPT EVT EQPT   |
|                  | ALW-SWTOPROTN-EQPT             | REPT SW         |
|                  | ALW-SWTOWKG-EQPT               | RTRV-ALM-EQPT   |
|                  | DLT-EQPT                       | RTRV-ALMTH-EQPT |
|                  | ED-EQPT                        | RTRV-COND-EQPT  |
|                  | ENT-EQPT                       | RTRV-EQPT       |
|                  | EX-SW-<OCN_BLSR>               | SET-ALMTH-EQPT  |
|                  | INH-SWDX-EQPT                  | SW-DX-EQPT      |
|                  | INH-SWTOWKG-EQPT               | SW-TOPROTN-EQPT |
|                  | REPT ALM EQPT                  | SW-TOWKG-EQPT   |

| Section       | INH-SWTOPROTN-EQPT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | INH-SWTOPROTN-EQPT:[<TID>]:<AID>:<CTAG>[:<DIRN>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; This parameter can either be the working unit for which switching to protection is inhibited (lock on) or the protection unit for which carrying traffic is to be inhibited (lockout); &lt;AID&gt; is from the “EQPT” section on page 4-27</li> <li>• &lt;DIRN&gt; is the direction of the switching. The command only supports one value of the &lt;DIRN&gt; parameter - BTH. This parameter defaults to BTH; valid values for &lt;DIRN&gt; are shown in the DIRECTION, page 56</li> </ul> |
| Input Example | INH-SWTOPROTN-EQPT:CISCO:SLOT-2:123::BTH;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Errors        | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

### 3.4.90 INH-SWTOWKG-EQPT: Inhibit Switch to Working Equipment

(Cisco ONS 15454 only)

This command inhibits automatic or manual switching of an equipment unit back to the working unit. Use the ALW-SWTOWKG-EQPT command to release the inhibit.

INH-SWTOWKG-EQPT is used for non-SONET line cards (e.g. DS1, DS3, DS3XM and EC1 cards). DS1 and DS3 cards have 1:1 and 1:N equipment protection. DS3XM and EC1 cards have only 1:1 equipment protection. When performing a lock-out with this command, the traffic will be switched from the unit specified by the AID, unless the protection unit has failed or is missing. When performing a lock-on with this command and the protection unit specified in the AID is in standby, sending this command will initiate a traffic switch only when there is one working card in the protection group. In the case where there is more than one working card in the protection group, an error will be generated (see error conditions below). When traffic is locked on the protection unit or locked out of a working unit with this command, the working unit will not carry traffic, even if the protection unit is pulled from the system.

The inhibit state is persistent over TCC2 side switches and removal/reboot of all the units in the protection group. The inhibit state can but does not have to be persistent over a complete power cycle of the NE.

The unit specified by the AID will raise the condition of INHSWWKG when this command is sent.

Notes:

1. The command only supports one value of the <DIRN> parameter - BTH. A command with any other value is considered an incorrect use of the command. An IDNV (Input, Data Not Valid) error message should be responded.
2. This command is not used for the common control (TCC2 or XC/XCVT/XC10G) cards. A command on a common control card will receive an IIAC (Input, Invalid Access Identifier) error message. To use the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
3. This command is not used for SONET (OCN) cards. A command on a SONET card will receive an IIAC (Input, Invalid Access Identifier) error message. To use a SONET card switching command, use the OPR-PROTNSW and RLS-PROTNSW commands.
4. If this command is used on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message should be received.

5. If this command is used on a card that is already in the inhibit state, the SAIN (Status, Already Inhibited) error message should be received.
6. If sending this command to a working card when the protect card in the same protection group has already raised the condition of INHWP, the SPLD (Status, Protection unit Locked) error message should be received.
7. If sending the INH-SWTOWKG command to a protect card when a working card in the same protection group has already raised the condition of INHWP, the SWLD (Status, Working unit Locked) error message should be responded.
8. If sending the INH-SWTOWKG command to an active working card when the protect card has failed or is missing, the SPFA (Status, Protection unit Failed) error message should be received.
9. If sending the INH-SWTOWKG command to an active working card when the protect card is already carrying traffic (this only occurs in a 1:N protection group with N greater than one), the SPAC (Status, Protection unit Active) error message should be received.
10. The following situation is allowed and will not generate any error response: Sending this command to missing cards as long as none of the previous error conditions apply.

| Section            | INH-SWTOWKG-EQPT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |               |               |                    |         |                  |               |          |                 |         |                |          |           |                  |                |               |            |                    |                 |               |               |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|--------------------|---------|------------------|---------------|----------|-----------------|---------|----------------|----------|-----------|------------------|----------------|---------------|------------|--------------------|-----------------|---------------|---------------|
| Category           | Equipment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |               |                    |         |                  |               |          |                 |         |                |          |           |                  |                |               |            |                    |                 |               |               |
| Security           | Maintenance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |               |                    |         |                  |               |          |                 |         |                |          |           |                  |                |               |            |                    |                 |               |               |
| Related Messages   | <table border="0"> <tr> <td>ALW-SWDX-EQPT</td> <td>REPT EVT EQPT</td> </tr> <tr> <td>ALW-SWTOPROTN-EQPT</td> <td>REPT SW</td> </tr> <tr> <td>ALW-SWTOWKG-EQPT</td> <td>RTRV-ALM-EQPT</td> </tr> <tr> <td>DLT-EQPT</td> <td>RTRV-ALMTH-EQPT</td> </tr> <tr> <td>ED-EQPT</td> <td>RTRV-COND-EQPT</td> </tr> <tr> <td>ENT-EQPT</td> <td>RTRV-EQPT</td> </tr> <tr> <td>EX-SW-&lt;OCN_BLSR&gt;</td> <td>SET-ALMTH-EQPT</td> </tr> <tr> <td>INH-SWDX-EQPT</td> <td>SW-DX-EQPT</td> </tr> <tr> <td>INH-SWTOPROTN-EQPT</td> <td>SW-TOPROTN-EQPT</td> </tr> <tr> <td>REPT ALM EQPT</td> <td>SW-TOWKG-EQPT</td> </tr> </table>         | ALW-SWDX-EQPT | REPT EVT EQPT | ALW-SWTOPROTN-EQPT | REPT SW | ALW-SWTOWKG-EQPT | RTRV-ALM-EQPT | DLT-EQPT | RTRV-ALMTH-EQPT | ED-EQPT | RTRV-COND-EQPT | ENT-EQPT | RTRV-EQPT | EX-SW-<OCN_BLSR> | SET-ALMTH-EQPT | INH-SWDX-EQPT | SW-DX-EQPT | INH-SWTOPROTN-EQPT | SW-TOPROTN-EQPT | REPT ALM EQPT | SW-TOWKG-EQPT |
| ALW-SWDX-EQPT      | REPT EVT EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |               |                    |         |                  |               |          |                 |         |                |          |           |                  |                |               |            |                    |                 |               |               |
| ALW-SWTOPROTN-EQPT | REPT SW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |               |               |                    |         |                  |               |          |                 |         |                |          |           |                  |                |               |            |                    |                 |               |               |
| ALW-SWTOWKG-EQPT   | RTRV-ALM-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |               |                    |         |                  |               |          |                 |         |                |          |           |                  |                |               |            |                    |                 |               |               |
| DLT-EQPT           | RTRV-ALMTH-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |               |                    |         |                  |               |          |                 |         |                |          |           |                  |                |               |            |                    |                 |               |               |
| ED-EQPT            | RTRV-COND-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |               |                    |         |                  |               |          |                 |         |                |          |           |                  |                |               |            |                    |                 |               |               |
| ENT-EQPT           | RTRV-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |               |                    |         |                  |               |          |                 |         |                |          |           |                  |                |               |            |                    |                 |               |               |
| EX-SW-<OCN_BLSR>   | SET-ALMTH-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |               |                    |         |                  |               |          |                 |         |                |          |           |                  |                |               |            |                    |                 |               |               |
| INH-SWDX-EQPT      | SW-DX-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |               |                    |         |                  |               |          |                 |         |                |          |           |                  |                |               |            |                    |                 |               |               |
| INH-SWTOPROTN-EQPT | SW-TOPROTN-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |               |                    |         |                  |               |          |                 |         |                |          |           |                  |                |               |            |                    |                 |               |               |
| REPT ALM EQPT      | SW-TOWKG-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |               |                    |         |                  |               |          |                 |         |                |          |           |                  |                |               |            |                    |                 |               |               |
| Input Format       | INH-SWTOWKG-EQPT:[<TID>]:<AID>:<CTAG>[:<DIRN>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; This parameter can either be the protection unit for which switching back to working is inhibited (lock-on) or the working unit for which carrying traffic is to be inhibited (lockout); &lt;AID&gt; is from the “EQPT” section on page 4-27</li> <li>• &lt;DIRN&gt; is the direction of the switching. The command only supports one value of the &lt;DIRN&gt; parameter - BTH. This parameter defaults to BTH; valid values for &lt;DIRN&gt; are shown in the <a href="#">DIRECTION</a>, page 56</li> </ul> |               |               |                    |         |                  |               |          |                 |         |                |          |           |                  |                |               |            |                    |                 |               |               |
| Input Example      | INH-SWTOWKG-EQPT:CISCO:SLOT-2:123::BTH;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |               |               |                    |         |                  |               |          |                 |         |                |          |           |                  |                |               |            |                    |                 |               |               |
| Errors             | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |               |                    |         |                  |               |          |                 |         |                |          |           |                  |                |               |            |                    |                 |               |               |

### 3.4.91 INH-USER-SECU: Inhibit User Security

This command disables (without deleting) a userid, so the user is denied access to the NE. The user is disabled until re-enabled via the ALW-USER-SECU command.



**Note**

This command does not forcibly log a user off. If the user is logged in, changes do not apply until after the user has logged off.

| Section          | INH-USER-SECU Description                                                                                                                                                                                                                                                        |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Security                                                                                                                                                                                                                                                                         |
| Security         | Superuser                                                                                                                                                                                                                                                                        |
| Related Messages | ACT-USER ENT-USER-SECU<br>ALW-MSG-SECU INH-MSG-SECU<br>ALW-USER-SECU REPT ALM SECU<br>CANC REPT EVT SECU<br>CANC-USER REPT EVT SESSION<br>CANC-USER-SECU RTRV-CMD-SECU<br>DLT-USER-SECU RTRV-DFLT-SECU<br>ED-CMD-SECU RTRV-USER-SECU<br>ED-PID SET-ATTR-SECUDFLT<br>ED-USER-SECU |
| Input Format     | INH-USER-SECU:[<TID>]::<CTAG>::<UID>;<br>where: <ul style="list-style-type: none"> <li>• &lt;UID&gt; is a string</li> </ul>                                                                                                                                                      |
| Input Example    | INH-USER-SECU:PETALUMA::123::CISCO100;                                                                                                                                                                                                                                           |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                   |

### 3.4.92 INIT-REG-<MOD2>: Initialize Register (CLNT, DS1, DS3I, EC1, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command initializes the performance monitoring (PM) registers.

Notes:

1. The time period is always the current time period, and the previous time period counts are not cleared; therefore, both <MONDAT> and <MONTM> are not supported in this command.
2. Unless otherwise stated, DS1 and EC1 cards are the only cards that support the BTH, RCV, and TRMT directions. All other cards support only the RCV direction.
3. G1000 only supports BTH for DIRN, 1-DAY for TMPER, and NEND for LOCN.

| Section  | INIT-REG-<MOD2> Description |
|----------|-----------------------------|
| Category | Performance                 |
| Security | Maintenance                 |

| Section          | INIT-REG-<MOD2> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ALW-PMREPT-ALL RTRV-PMSCHED-<MOD2><br>INH-PMREPT-ALL RTRV-PMSCHED-ALL<br>INIT-REG-G1000 RTRV-TH-<MOD2><br>REPT PM <MOD2> SCHED-PMREPT-<MOD2><br>RTRV-PM-<MOD2> SET-PMMODE-<STS_PATH><br>RTRV-PMMODE-<STS_PATH> SET-TH-<MOD2>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Input Format     | INIT-REG-<MOD2>:[<TID>]:<AID>:<CTAG>::<MONTYPE>,,[<LOCN>],<br>[<DIRN>],[<TMPER>][,.,];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier. All the STS, VT1, facility and DS1 AIDs are supported; &lt;AID&gt; is from the “ALL” section on page 4-9</li> <li>• &lt;MONTYPE&gt; indicates the type of monitored parameter; valid values are shown in the “ALL_MONTYPE” section on page 4-39</li> <li>• &lt;LOCN&gt; indicates the location, in reference to the entity identified by the AID, valid values for &lt;LOCN&gt; are shown in the “LOCATION” section on page 4-68</li> <li>• &lt;DIRN&gt; is the direction of PM relative to the entity identified by the AID. &lt;DIRN&gt; defaults to ALL, which means that the command initializes all the registers irrespective of the PM direction. Valid values for &lt;DIRN&gt; are shown in the “DIRECTION” section on page 4-56.</li> <li>• &lt;TMPER&gt; indicates the accumulation time period for the PM information; valid values for &lt;TMPER&gt; are shown in the “TMPER” section on page 4-93. A null value of &lt;TMPER&gt; defaults to 15-MIN. The default value is 15-MIN.</li> </ul> |
| Input Example    | INIT-REG-OC3:CISCO:FAC-1-1:1234::CVL,,NEND,BTH,15-MIN;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Errors           | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

### 3.4.93 INIT-SYS: Initialize System

This command initializes the specified card and its associated subsystem(s).

Notes:

1. The SLOT-ALL AID and the list AID are not allowed in this command.
2. Only one level of restart is supported in this command.
3. It is important that the standby TCC2 should be up and running fully standby before this command is sent on the active TCC2 for a period of time. During this time, the system is vulnerable to traffic outages caused by timing disruptions or other causes.

| Section  | INIT-SYS Description |
|----------|----------------------|
| Category | System               |
| Security | Maintenance          |

| Section          | INIT-SYS Description                                                                                                                                                                                                                                                                           |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ACT-USER<br>ALW-MSG-ALL<br>ALW-MSG-DBCHG<br>ALW-MSG-SECU<br>ED-DAT<br>ED-NE-GEN<br>ED-NE-PATH<br>ED-NE-SYNCN<br>INH-MSG-ALL<br>INH-MSG-DBCHG<br>INH-MSG-SECU<br>RTRV-HDR<br>RTRV-INV<br>RTRV-NE-GEN<br>RTRV-NE-IPMAP<br>RTRV-NE-PATH<br>RTRV-NE-SYNCN<br>RTRV-NE-WDMANS<br>RTRV-TOD<br>SET-TOD |
| Input Format     | INIT-SYS:[<TID>]:<AID>:<CTAG>[::];<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is the access identifier of the equipment unit or slot and is from the “EQPT” section on page 4-27</li> </ul>                                                                                  |
| Input Example    | INIT-SYS:HOTWATER:SLOT-8:201;                                                                                                                                                                                                                                                                  |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                 |

### 3.4.94 OPR-ACO-ALL: Operate Alarm Cutoff All

This command cuts off the office audible alarm indication without changing the local alarm indications.

This command does not have any effect on future alarms at the NE, it directs the NE to provide conditioning only on those alarms that are currently active.

The ACO retires the Central Office (CO) alarm audible indicators without clearing the indicators that show the trouble still exists. There is no need for a RLS-ACO command.

| Section          | OPR-ACO-ALL Description                                                                                                                                                            |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Environment Alarms and Controls                                                                                                                                                    |
| Security         | Maintenance                                                                                                                                                                        |
| Related Messages | OPR-EXT-CONT<br>REPT ALM ENV<br>REPT EVT ENV<br>RLS-EXT-CONT<br>RTRV-ALM-ENV<br>RTRV-ATTR-CONT<br>RTRV-ATTR-ENV<br>RTRV-COND-ENV<br>RTRV-EXT-CONT<br>SET-ATTR-CONT<br>SET-ATTR-ENV |
| Input Format     | OPR-ACO-ALL:[<TID>]::<CTAG>;                                                                                                                                                       |
| Input Example    | OPR-ACO-ALL:CISCO::123;                                                                                                                                                            |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                     |

### 3.4.95 OPR-EXT-CONT: Operate External Control

This command operates an external control and closes the external control contact. The control can be operated momentarily or continuously.

Notes:

1. The duration has two values in this release:  
MNTY: Momentary duration  
CONTS: Continuous duration
2. In an automatic state, the contact could be opened or closed depending on the provisioned trigger.
3. RLS-EXT-CONT changes the state to automatic. Therefore, issuing an OPR-EXT-CONT command when the control is manually open and then issuing a RLS-EXT-CONT will not revert the state back to Manual Open.
4. A NULL value for the duration parameter defaults to MNTY in this release.
5. RLS-EXT-CONT is not allowed during the MNTY duration, the command is allowed for the CONTS duration. The length of the MNTY duration is set to be 2 seconds on Cisco ONS 15454.
6. RLS-EXT-CONT cannot change the state to automatic if the existing state is Manual Open.



**Caution**

Do not turn on external controls that activate a potential danger; such as, sprinklers or other controls connected to possibly hazardous systems or equipment.

| Section          | OPR-EXT-CONT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Environment Alarms and Controls                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Security         | Maintenance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Related Messages | OPR-ACO-ALL                      RTRV-ATTR-ENV<br>REPT ALM ENV                      RTRV-COND-ENV<br>REPT EVT ENV                      RTRV-EXT-CONT<br>RLS-EXT-CONT                      SET-ATTR-CONT<br>RTRV-ALM-ENV                      SET-ATTR-ENV<br>RTRV-ATTR-CONT                                                                                                                                                                                                                                                                       |
| Input Format     | OPR-EXT-CONT:[<TID>]:<AID>:<CTAG>::[<CONTTYPE>],[<DURATION>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier environment AID from the “ENV” section on page 4-26 and must not be null</li> <li>• &lt;CONTTYPE&gt; is the type of control; valid values for &lt;CONTTYPE&gt; are shown in the “CONTTYPE” section on page 4-55. A null value is equivalent to ALL.</li> <li>• Valid values for &lt;DUR&gt; are shown in the “DURATION” section on page 4-57. A null value is equivalent to ALL.</li> </ul> |
| Input Example    | OPR-EXT-CONT:CISCO:ENV-OUT-2:123::AIRCOND,CONTS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Errors           | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## 3.4.96 OPR-LASER-OTS: Operate Laser Optical Transport Section

(Cisco ONS 15454 only)

This command instructs a laser to switch on.

| Section          | OPR-LASER-OTS Description                                                                                                                                                                                                                         |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | DWDM                                                                                                                                                                                                                                              |
| Security         | Maintenance                                                                                                                                                                                                                                       |
| Related Messages | DLT-FFP-CLNT<br>DLT-LNK-<MOD2O><br>ED-CLNT<br>ED-DWDM<br>ED-FFP-CLNT<br>ED-FFP-OCH<br>ED-LNK-<MOD2O><br>ED-OCH<br>ED-OMS<br>ED-OTS<br>ED-TRC-CLNT<br>ED-TRC-OCH<br>ENT-FFP-CLNT<br>ENT-LNK-<MOD2O><br>OPR-PROTNSW-CLNT<br>OPR-PROTNSW-OCH         |
|                  | RLS-LASER-OTS<br>RLS-PROTNSW-CLNT<br>RLS-PROTNSW-OCH<br>RTRV-CLNT<br>RTRV-DWDM<br>RTRV-FFP-CLNT<br>RTRV-FFP-OCH<br>RTRV-LNK-<MOD2O><br>RTRV-OCH<br>RTRV-OMS<br>RTRV-OTS<br>RTRV-PROTNSW-CLNT<br>RTRV-PROTNSW-OCH<br>RTRV-TRC-CLNT<br>RTRV-TRC-OCH |
| Input Format     | OPR-LASER-OTS:[<TID>]:<AID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; indicates an identifier of an optical facility supporting laser; &lt;AID&gt; is the AID from the “LINE” section on page 4-29</li> </ul>          |
| Input Example    | OPR-LASER-OTS::LINE-5-2-TX:3;                                                                                                                                                                                                                     |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                    |

### 3.4.97 OPR-LNK: Operate Link

(Cisco ONS 15454 only)

This command operates the optical link (OLNK) application inside the NE to calculate all the automatic optical links between end points which can be univocally identified by the NE.

| Section          | OPR-LNK Description                                            |
|------------------|----------------------------------------------------------------|
| Category         | DWDM                                                           |
| Security         | Maintenance                                                    |
| Related Messages | DLT-LNK-<MOD2O><br>ED-LNK-<MOD2O><br>ENT-LNK-<MOD2O>           |
| Input Format     | OPR-LNK:[<TID>]:<CTAG>;                                        |
| Input Example    | OPR-LNK:PENNGROVE::114;                                        |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> . |

### 3.4.98 OPR-LPBK-<MOD2>: Operate Loopback (CLNT, DS1, DS3I, EC1, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command operates a signal loopback on an I/O card or on a cross-connect.

The optional [<LPBKTYPE>] defaults to FACILITY in this command if it is given to a port entity. It defaults to CRS if given to an STS entity.

Notes:

1. The value CRS for the LPBKTYPE parameter is applicable only for the STS modifier. The FACILITY and TERMINAL values are applicable to the ports.
2. The TERMINAL loopback type is not supported for the DS1 line of a DS3XM card.
3. Loopbacks are only allowed to be setup if the port/interface/STS\_PATH is in OOS-MT or in OOS-AINS state.
4. Cross-connect loopbacks cannot be applied to the destination end of any 1WAY cross-connect.:
5. A cross-connect loopback can be applied only on one STS path of a cross-connect.
6. FEAC loopbacks can be applied by using the LINE value for LPBKTYPE parameter and specifying the LOCN as FEND. The FEAC loopbacks are supported only on the DS3(T3) and DS1 interfaces on the DS3XM-6 card.
7. FEAC loopbacks can be applied only if the DS3 is in C-bit framing format. FEAC loopbacks will override existing loopbacks at the near end on the entity and vice-versa. This means that if a facility loopback has been applied on a port and if the FEAC loopback is applied, then the facility loopback is first released and then the far end loopback is applied.
8. The LINE value is supported only with the FEND value of the LOCN parameter. FACILITY, TERMINAL, and CRS values are not compatible with the FEND value for the LOCN parameter.
9. A Lockout of the protection command is required before putting the span of either two-fiber or four-fiber BLSR line in loopback. (a) A span lockout of one side (e.g. East side) of the two-fiber BLSR is required before operating a Facility (or Terminal) line Loopback on the same side (e.g., East side) of the ring. (b) A span lockout of one Protection side (e.g. East Protection side) of the four-fiber BLSR is required before operating a Facility (or Terminal) line Loopback on the same side Working line (e.g. East Working side) of the ring.
10. FEAC loopbacks on the DS1 interface of a DS3XM card can be applied only if a VT connection has been created on it. An attempt to operate/release FEAC loopbacks in the absence of a VT connection will lead to an error message response.

| Section          | OPR-LPBK-<MOD2> Description         |
|------------------|-------------------------------------|
| Category         | Testing                             |
| Security         | Maintenance                         |
| Related Messages | EX-SW-<OCN_BLSR><br>RLS-LPBK-<MOD2> |

| Section       | OPR-LPBK-<MOD2> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | OPR-LPBK-<MOD2>:[<TID>]:<AID>:<CTAG>::[<LOCATION>],,,<br>[<LPBKTYPE>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier from the “ALL” section on page 4-9. Valid values for AID are facility, DS1, and STS</li> <li>• &lt;LOCATION&gt; indicates the location where the operation is to be carried out. It defaults to NEND; valid values are shown in the “LOCATION” section on page 4-68</li> <li>• &lt;LPBKTYPE&gt; is a loopback type; valid values for &lt;LPBKTYPE&gt; are shown in the “LPBK_TYPE” section on page 4-68</li> </ul> |
| Input Example | OPR-LPBK-DS1:PTREYES:DS1-4-1-2-13:203::NEND,,,FACILITY;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Errors        | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### 3.4.99 OPR-PROTNSW-<OCN\_TYPE>: Operate Protection Switch (OC3, OC12, OC48, OC192)

See Table 4-11 on page 4-5 for supported modifiers by platform.

This command initiates a SONET line protection switch request. User switch requests initiated with this command remain active until they are released via the RLS-PROTNSW-OCN command or are overridden by a higher priority protection switch request.

The switch commands; MAN (Manual Switch), FRCD (Forced Switch) and LOCKOUT (Lockout) are supported by the ONS 15454.

Manual Switch of Protection Line (to Working Line). If the AID identifies the protection line, then (only in the 1+1 architecture) service will be transferred from the protection line to the working line, unless a request of equal or higher priority is in effect.

Manual Switch of Working Line (to Protection Line). If the AID identifies a working line, then service will be switched from the working line to the protection line unless a request of equal or higher priority is in effect.

Force Switch of Protection Line (to Working Line). If the AID identifies the protection line, then (only in the 1+1 architecture) service will be transferred from the protection line to the working line unless a request of equal or higher priority is in effect.

Force Switch of Working Line (to Protection Line). If the AID identifies a working line, then service will be transferred from the working line to the protection line unless a request of equal or higher priority is in effect. A lockout of protection and a signal fail of protection line have higher priority than this switch command.

Lockout of Protection Line. If the AID identifies the protection line, this switch command will prevent the working line from switching to protection line. If the working line is already on protection, then the working line will be switched back to its original working line.

Lockout of Working Line. If the AID identifies the working line, this switch command will prevent the working line from switching to protection line. If the working line is already on protection, then the working line will be switched back from protection line to its original working line.

## Notes:

1. This command is not used for the common control (TCC2 or XC/XCVT/XC10G) cards. A query on a common control card will generate an IIAC (Input, Invalid Access Identifier) error message. To use this command on the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
2. Sending this command on non-SONET (OCN) cards, an IIAC (Input, Invalid Access Identifier) error message should be received. To query on a non-SONET card switching command, use the ALW-SWTOPROTN/SWTOWKG-EQPT and INH-SWTOPROTN/SWTOWKG-EQPT commands.
3. When sending this command to query on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message will be returned.
4. When sending this command to a working card that is failed or missing, the SROF (Protection Switching Failed) error message will be returned.
5. When sending this command to a protect card that is failed or missing, the SROF (Protection Switching Failed) error message will be returned.
6. When sending this command to a card that is already in protection with a higher priority, the SSRD (Status, Switch Request Denied) error message will be returned.
7. Sending this command to an OCN line with a switching mode that is already in mode, will return a SAMS (Already in the Maintenance State) error message.
8. To get the protection switching state (manual, lockout, forced), use the RTRV-COND-ALL or RTRV-ALM-ALL commands.
9. If the far end of the same span has a higher protection switching state, for example, the near end is under Manual protection switching state, the far end is in the Forced protection switching state, the near end protection switching state will be preemptive and shown as APS\_CLEAR switching state over the CTC/TL1 interface. The RTRV-PROTNSW-OCN command is used to retrieve the current switching state of a SONET line.
10. If sending this command with EXERCISE or APS\_CLEAR switch operation, an error SROF (Invalid Protection Switch Operation) will be returned because these operations are not valid according to GR-833-CORE.  
The EX-SW-<OCN\_BLSR> is the correct command to perform the EXERCISE switch over the BLSR line.
11. Protection switch will be denied if SD/SF is already present on the switching path. If SD/SF is generated on the switching path after the switch is performed, the switch will be overwritten by the APS\_CLEAR state. This does not apply for lockout of protection and forced switch which have higher priority than SD/SF.
12. Sending the following Manual Ring switching requests on both east and west sides/spans of a two-fiber or four-fiber ring in less than 30-45 seconds, such as: (a) A single TL1 command with both side/span AIDs (in the list AID format) of the same two-fiber or four-fiber ring; (b) The separated (via TL1, or CTC, or TL1 and CTC user interfaces) queries on the both sides/spans of the same two-fiber or four-fiber ring. The system will only execute one (WEST) side MS-RING query, and preempt the other (EAST) side query. There will be no event messages coming out for the preempted side, which switching state will be in APS-CLEAR state.
13. DIRN is an optional parameter. A NULL value defaults to BTH for a BLSR protection, BTH for 1+1 BI directional protection group, and RCV for 1+1 UNI directional protection group.  
DIRN follows these rules: TRMT will always fail for any kind of protection groups. For two-fiber and four-fiber BLSR protection groups both the RCV and TRMT directions will fail.



14. DIRN is applicable for both 1+1 and BLSR protection groups. For example, OPR-PROTNSW can be performed on a BLSR span/ring as follows:  
OPR-PROTNSW-OC48::FAC-5-1:A::LOCKOUT,SPAN:BTH;
15. A lockout of the protection command is required before putting the span of either two-fiber or four-fiber BLSR line in loopback. (a) A span lockout of one side (e.g. East side) of the two-fiber BLSR is required before operating a Facility (or Terminal) line Loopback on the same side (e.g. East side) of the ring. (b) A span lockout of one Protection side (e.g. East Protection side) of the four-fiber BLSR is required before operating a Facility (or Terminal) line Loopback on the same side Working line (e.g. East Working side) of the ring.
16. A span lockout on the working unit is not supported in ONS 15454 or ONS15327.

| Section          | OPR-PROTNSW-<OCN_TYPE> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | SONET Line Protection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Security         | Maintenance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Related Messages | DLT-FFP-<OCN_TYPE>                    ENT-FFP-CLNT<br>DLT-FFP-CLNT                            EX-SW-<OCN_BLSR><br>ED-FFP-<OCN_TYPE>                    RLS-PROTNSW-<OCN_TYPE><br>ED-FFP-CLNT                            RTRV-FFP-<OCN_TYPE><br>ED-FFP-OCH                              RTRV-FFP-CLNT<br>ENT-FFP-<OCN_TYPE>                    RTRV-PROTNSW-<OCN_TYPE>                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Input Format     | OPR-PROTNSW-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>::<SW>,<br>[<SWITCHTYPE>][:<DIRECTION>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies the facility in the NE to which the switch request is directed and is from the “FACILITY” section on page 4-28</li> <li>• &lt;SW&gt; is the switch command on the facility; valid values for &lt;SW&gt; are shown in the “SW” section on page 4-88</li> <li>• &lt;SWITCHTYPE&gt; BLSR switch type; valid values are shown in the “SWITCH_TYPE” section on page 4-88</li> <li>• &lt;DIRECTION&gt; is the direction of transmission in which switching is to be made and is relative to the SONET line or path identified by the AID. Valid values are shown in the “DIRECTION” section on page 4-56. The default value is RCV</li> </ul> |
| Input Example    | OPR-PROTNSW-OC48:CHICKALUMA:FAC-6-1:204::LOCKOUT,SPAN:BTH;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Errors           | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

### 3.4.100 OPR-PROTNSW-<PATH>: Operate Protection Switch (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C, VT1, VT2)

See Table 4-11 on page 4-5 for supported modifiers by platform.

This command initiates a SONET path protection switch request. User switch requests initiated with this command (forced switch, lockout, and manual switch) remain active until they are released through the RLS-PROTNSW-<PATH> command or overridden by a higher priority protection switch request.

Notes:

1. This command applies to path protection configuration only.

2. The VTAID should be working or protect AID only.
3. If you send this command on the Drop AID, a DENY (Invalid AID, should use working/protect AID) message will be returned.
4. To get the protection switching state (manual, lockout, forced), use the RTRV-COND-ALL or RTRV-ALM-ALL commands.
5. The GR-1400 does not allow the LOCKOUT\_OF\_WORKING on the path protection WORKING path/AID. Sending this command on the path protection WORKING path, a SROF (Invalid Protection Switch Operation) is returned.
6. If sending this command with EXERCISE or APS\_CLEAR switch operation, an error SROF (Invalid Protection Switch Operation) will be returned because these operations are not valid according to GR-833-CORE.
7. Protection switch will be denied if SD/SF is already present on the switching path. If SD/SF is generated on the switching path after the switch is performed, the switch will be overwritten by the APS\_CLEAR state. This does not apply for lockout of protection and forced switch which have higher priority than SD/SF.

| Section          | OPR-PROTNSW-<PATH> Description                                                                                                                                                                                                                                                                                                                                                 |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Switch                                                                                                                                                                                                                                                                                                                                                                         |
| Security         | Maintenance                                                                                                                                                                                                                                                                                                                                                                    |
| Related Messages | REPT SW<br>RTRV-PROTNSW-<PATH><br>RLS-PROTNSW-<PATH>                                                                                                                                                                                                                                                                                                                           |
| Input Format     | OPR-PROTNSW-<PATH>:[<TID>]:<SRC>:<CTAG>::<SC>[:];<br>where: <ul style="list-style-type: none"> <li>• &lt;SRC&gt; identifies the AID “CrossConnectId1” <a href="#">section on page 4-23</a></li> <li>• &lt;SC&gt; is the switch command that is to be initiated on the paths; valid values for &lt;SC&gt; are shown in the “SW” <a href="#">section on page 4-88</a></li> </ul> |
| Input Example    | OPR-PROTNSW-ST51:CISCO:ST5-2-1-1:123::MAN;                                                                                                                                                                                                                                                                                                                                     |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                 |

### 3.4.101 OPR-PROTNSW-CLNT: Operate Protection Switch Client

(Cisco ONS 15454 only)

This command instructs the NE to initiate a Y cable protection switch request. User switch requests initiated with this command remain active until they are released via the RLS-PROTNSW-CLNT command or are overridden by a higher priority protection switch request.

The switch commands MAN (Manual Switch), FRCD (Forced Switch) and LOCKOUT (Lockout) switch command are supported by the Cisco ONS 15454.

Manual Switch of Protection Line (to Working Line) -- If the AID identifies the protection line, then service will be transferred from the protection line to the working line, unless a request of equal or higher priority is in effect.

Manual Switch of Working Line (to Protection Line) -- If the AID identifies a working line, then service will be switched from the working line to the protection line unless a request of equal or higher priority is in effect.

Force Switch of Protection Line (to Working Line) -- If the AID identifies the protection line, then service will be transferred from the protection line to the working line unless a request of equal or higher priority is in effect.

Force Switch of Working Line (to Protection Line) -- If the AID identifies a working line, then service will be transferred from the working line to the protection line unless a request of equal or higher priority is in effect. A lockout of protection and a signal fail of protection line have higher priority than this switch command.

Lockout of Protection Line -- If the AID identifies protection line, this switch command will prevent the working line from switching to protection line. If the working line is already on protection, then the working line will be switched back from protection line to its original working line.

Lockout of Working Line - If the AID identifies a working line, then this command prevents the working line from switching to protection. If the working line is already on protection, the working line will be switched back to its original working line.

If this command is used against pre-provisioned cards, the SROF (Protection Switching Failed) error will be returned.

| Section          | OPR-PROTNSW-CLNT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Security         | Maintenance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Related Messages | DLT-FFP-CLNT<br>DLT-LNK-<MOD2O><br>ED-CLNT<br>ED-DWDM<br>ED-FFP-CLNT<br>ED-FFP-OCH<br>ED-LNK-<MOD2O><br>ED-OCH<br>ED-OMS<br>ED-OTS<br>ED-TRC-CLNT<br>ED-TRC-OCH<br>ENT-FFP-CLNT<br>ENT-LNK-<MOD2O><br>OPR-LASER-OTS<br>OPR-PROTNSW-OCH<br>RLS-LASER-OTS<br>RLS-PROTNSW-CLNT<br>RLS-PROTNSW-OCH<br>RTRV-CLNT<br>RTRV-DWDM<br>RTRV-FFP-CLNT<br>RTRV-FFP-OCH<br>RTRV-LNK-<MOD2O><br>RTRV-OCH<br>RTRV-OMS<br>RTRV-OTS<br>RTRV-PROTNSW-CLNT<br>RTRV-PROTNSW-OCH<br>RTRV-TRC-CLNT<br>RTRV-TRC-OCH |
| Input Format     | OPR-PROTNSW-CLNT:[<TID>]:<AID>:<CTAG>::<SC>[:];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the AID from the “FACILITY” section on page 4-28</li> <li>• &lt;SC&gt; identifies the switch operation; valid values are shown in the “SW” section on page 4-88</li> </ul>                                                                                                                                                                                                |
| Input Example    | OPR-PROTNSW-CLNT:CISCO:FAC-1-1:100::FRCD;                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Errors           | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                               |

### 3.4.102 OPR-PROTNSW-OCH: Operate Protection Switch OCH

(Cisco ONS 15454 only)

This command operates a protection switch on the trunk port of a TXPP\_MR\_2.5G card.

| Section          | OPR-PROTNSW-OCH Description                                                                                                                                                                                                                       |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | DWDM                                                                                                                                                                                                                                              |
| Security         | Maintenance                                                                                                                                                                                                                                       |
| Related Messages | DLT-FFP-CLNT<br>DLT-LNK-<MOD2O><br>ED-CLNT<br>ED-DWDM<br>ED-FFP-CLNT<br>ED-FFP-OCH<br>ED-LNK-<MOD2O><br>ED-OCH<br>ED-OMS<br>ED-OTS<br>ED-TRC-CLNT<br>ED-TRC-OCH<br>ENT-FFP-CLNT<br>ENT-LNK-<MOD2O><br>OPR-LASER-OTS<br>OPR-PROTNSW-CLNT           |
|                  | RLS-LASER-OTS<br>RLS-PROTNSW-CLNT<br>RLS-PROTNSW-OCH<br>RTRV-CLNT<br>RTRV-DWDM<br>RTRV-FFP-CLNT<br>RTRV-FFP-OCH<br>RTRV-LNK-<MOD2O><br>RTRV-OCH<br>RTRV-OMS<br>RTRV-OTS<br>RTRV-PROTNSW-CLNT<br>RTRV-PROTNSW-OCH<br>RTRV-TRC-CLNT<br>RTRV-TRC-OCH |
| Input Format     | OPR-PROTNSW-OCH:[<TID>]:<AID>:<CTAG>[::];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates the trunk port and is the AID from the “CHANNEL” section on page 4-19</li> </ul>                                               |
| Input Example    | OPR-PROTNSW-OCH:VA454-22:CHAN-2-2:100;                                                                                                                                                                                                            |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                    |

### 3.4.103 OPR-SYNCNSW: Operate Synchronization Switch

This command initiates a switch to the reference specified by the synchronization reference number if the reference supplied is valid.

For manual types of switches the reference to which you want to switch should be of the same quality as the active reference source, otherwise the command will fail.

If you want to switch to a reference of lower quality, use the forced switch option.

The Operate Synchronization Switches are released by the RLS-SYNCNSW command or are overridden by a synchronization reference failure.

Once the switch is effective, a minor alarm “MANSWTOPRI” (Manual Switch to Primary or Secondary Reference...) will be raised for Manual switches and alarms like “FRCDSWTOPRI” (Forced Switch to Primary or Secondary Reference...) will be raised for Forced switches.

| Section  | OPR-SYNCNSW Description |
|----------|-------------------------|
| Category | Synchronization         |
| Security | Maintenance             |

| Section          | OPR-SYNCNSW Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ED-BITS<br>ED-NE-SYCN<br>ED-SYCN<br>REPT ALM BITS<br>REPT ALM SYCN<br>REPT EVT BITS<br>REPT EVT SYCN<br>RLS-SYCNNSW<br>RTRV-ALM-BITS<br>RTRV-ALM-SYCN<br>RTRV-BITS<br>RTRV-COND-BITS<br>RTRV-COND-SYCN<br>RTRV-NE-SYCN<br>RTRV-SYCN                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Input Format     | OPR-SYCNNSW:[<TID>]:[<AID>]:<CTAG>::<SWITCHTO>,[<SC>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier from the “<a href="#">SYNC_REF</a>” section on page 4-34. The default value is SYNC-NE.</li> <li>• &lt;SWITCHTO&gt; identifies the new synchronization reference that will be used and is the AID from the “<a href="#">SYCNNSW</a>” section on page 4-34</li> <li>• &lt;SC&gt; is the switch command to be issued. Only manual (MAN) and forced (FRCD) switches are allowed for this command. Valid values for &lt;SC&gt; are shown in the “<a href="#">SW</a>” section on page 4-88. The default value is “MAN”</li> </ul> |
| Input Example    | OPR-SYCNNSW:CISCO:SYNC-NE:3::PRI,MAN;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

### 3.4.104 OPR-WDMANS: Operate Wavelength Division Multiplexing Automatic Node Setup

(Cisco ONS 15454 only)

This command operates the Automatic Optical Node Setup (AONS) application inside the NE to force a recompute of the value to be assigned to all VOAs representing the Optical Path inside the node.

| Section          | OPR-WDMANS Description                                         |
|------------------|----------------------------------------------------------------|
| Category         | DWDM                                                           |
| Security         | Maintenance                                                    |
| Related Messages | —                                                              |
| Input Format     | OPR-WDMANS:[<TID>]:<CTAG>                                      |
| Input Example    | OPR-WDMANS:PENNGROVE::114;                                     |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> . |

### 3.4.105 REPT ALM <MOD2ALM>: Report Alarm (CLNT, DS1, DS3I, E100, E1000, EC1, FSTE, G1000, GIGE, OC12, OC192, OC3, OC48, OCH, OMS, OSC, OTS, POS, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, UDCDCC, UDCF, VT1, VT2, WLEN)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

Reports an alarm condition against a facility or a path.

| Section          | REPT ALM <MOD2ALM> Description |                     |
|------------------|--------------------------------|---------------------|
| Category         | Fault                          |                     |
| Security         | Retrieve                       |                     |
| Related Messages | REPT ALM BITS                  | RTRV-ALM-BITS       |
|                  | REPT ALM COM                   | RTRV-ALM-ENV        |
|                  | REPT ALM ENV                   | RTRV-ALM-EQPT       |
|                  | REPT ALM EQPT                  | RTRV-ALM-SYNCN      |
|                  | REPT ALM SYNCN                 | RTRV-ALM-UCP        |
|                  | REPT ALM UCP                   | RTRV-ATTR-CONT      |
|                  | REPT EVT <MOD2ALM>             | RTRV-ATTR-ENV       |
|                  | REPT EVT BITS                  | RTRV-COND-<MOD2ALM> |
|                  | REPT EVT COM                   | RTRV-COND-ALL       |
|                  | REPT EVT ENV                   | RTRV-COND-BITS      |
|                  | REPT EVT EQPT                  | RTRV-COND-ENV       |
|                  | REPT EVT FXFR                  | RTRV-COND-EQPT      |
|                  | REPT EVT IOSCFG                | RTRV-COND-SYNCN     |
|                  | REPT EVT SYNCN                 | RTRV-COND-UCP       |
|                  | REPT EVT UCP                   | SET-ATTR-CONT       |
|                  | RTRV-ALM-<MOD2ALM>             | SET-ATTR-ENV        |
|                  | RTRV-ALM-ALL                   |                     |

| Section        | REPT ALM <MOD2ALM> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <pre>SID DATE TIME ** ATAG REPT ALM &lt;MOD2ALM&gt; "&lt;AID&gt;:&lt;NTFCNCDE&gt;,&lt;CONDTYPE&gt;,&lt;SRVEFF&gt;,,,"[:&lt;DESC&gt;], [&lt;AIDDET&gt;]" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier from the <a href="#">“ALL” section on page 4-9</a></li> <li>• &lt;NTFCNCDE&gt; indicates a 2-letter notification code; valid values for &lt;NTFCNCDE&gt; are shown in the <a href="#">“NOTIF_CODE” section on page 4-75</a></li> <li>• &lt;CONDTYPE&gt; indicates an alarm condition; valid values for &lt;CONDTYPE&gt; are shown in the <a href="#">“Conditions” section on page 7-18</a></li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values for &lt;SRVEFF&gt; are shown in the <a href="#">“SERV_EFF” section on page 4-85</a></li> <li>• &lt;DESC&gt; is the condition description; &lt;DESC&gt; is a string and is optional</li> <li>• &lt;AIDDET&gt; specifies the AID type; valid values for &lt;AIDDET&gt; are shown in the <a href="#">“EQPT_TYPE” section on page 4-59</a>, &lt;AIDDET&gt; is optional</li> </ul> |
| Output Example | <pre>TID-000 1998-06-20 14:30:00 ** 100.100 REPT ALM CLNT “FAC-2-1:MJ,LOS,SA,,,:”\“LOSS OF SIGNAL”,OC12” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### 3.4.106 REPT ALM BITS: Report Alarm Building Integrated Timing Supply

Reports an alarm condition on a BITS facility.

| Section  | REPT ALM BITS Description |
|----------|---------------------------|
| Category | Synchronization           |
| Security | Retrieve                  |

| Section          | REPT ALM BITS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | REPT ALM <MOD2ALM>            RTRV-ALM-BITS<br>REPT ALM COM                    RTRV-ALM-ENV<br>REPT ALM ENV                    RTRV-ALM-EQPT<br>REPT ALM EQPT                   RTRV-ALM-SYNCN<br>REPT ALM SYNCN                 RTRV-ALM-UCP<br>REPT ALM UCP                    RTRV-ATTR-CONT<br>REPT EVT <MOD2ALM>            RTRV-ATTR-ENV<br>REPT EVT BITS                   RTRV-COND-<MOD2ALM><br>REPT EVT COM                   RTRV-COND-ALL<br>REPT EVT ENV                   RTRV-COND-BITS<br>REPT EVT EQPT                  RTRV-COND-ENV<br>REPT EVT FXFR                  RTRV-COND-EQPT<br>REPT EVT IOSCFG                RTRV-COND-SYNCN<br>REPT EVT SYNCN                RTRV-COND-UCP<br>REPT EVT UCP                    SET-ATTR-CONT<br>RTRV-ALM-<MOD2ALM>            SET-ATTR-ENV<br>RTRV-ALM-ALL                                                                                                   |
| Output Format    | <pre>SID DATE TIME ** ATAG REPT ALM BITS "&lt;AID&gt;:&lt;NTFCNCDE&gt;,&lt;CONDTYPE&gt;,&lt;SRVEFF&gt;,,,,:[&lt;DESC&gt;]" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier from the <a href="#">“BITS” section on page 4-19</a></li> <li>• &lt;NTFCNCDE&gt; identifies a 2-letter notification code; valid values for &lt;NTFCNCDE&gt; are shown in the <a href="#">“NOTIF_CODE” section on page 4-75</a></li> <li>• &lt;CONDTYPE&gt; indicates an alarm condition; valid values for &lt;CONDTYPE&gt; are shown in the <a href="#">“Conditions” section on page 7-18</a></li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values for &lt;SRVEFF&gt; are shown in the <a href="#">“SERV_EFF” section on page 4-85</a></li> <li>• &lt;DESC&gt; is the condition description; &lt;DESC&gt; is a string and is optional</li> </ul> |
| Output Example   | <pre>TID-000 1998-06-20 14:30:00 ** 100.100 REPT ALM BITS “BITS-1:MJ,SYNC,SA,,,,:\“LOSS OF TIMING”” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

### 3.4.107 REPT ALM COM: Report Alarm COM

Reports an alarm condition when an AID cannot be given, for example, a fan failure is reported using this message.

| Section  | REPT ALM COM Description |
|----------|--------------------------|
| Category | Fault                    |
| Security | Retrieve                 |



| Section          | REPT ALM COM Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | REPT ALM <MOD2ALM>            RTRV-ALM-BITS<br>REPT ALM BITS                    RTRV-ALM-ENV<br>REPT ALM ENV                    RTRV-ALM-EQPT<br>REPT ALM EQPT                  RTRV-ALM-SYNCN<br>REPT ALM SYNCN                RTRV-ALM-UCP<br>REPT ALM UCP                    RTRV-ATTR-CONT<br>REPT EVT <MOD2ALM>            RTRV-ATTR-ENV<br>REPT EVT BITS                  RTRV-COND-<MOD2ALM><br>REPT EVT COM                   RTRV-COND-ALL<br>REPT EVT ENV                   RTRV-COND-BITS<br>REPT EVT EQPT                  RTRV-COND-ENV<br>REPT EVT FXFR                  RTRV-COND-EQPT<br>REPT EVT IOSCFG                RTRV-COND-SYNCN<br>REPT EVT SYNCN                RTRV-COND-UCP<br>REPT EVT UCP                    SET-ATTR-CONT<br>RTRV-ALM-<MOD2ALM>            SET-ATTR-ENV<br>RTRV-ALM-ALL |
| Output Format    | <pre>SID DATE TIME ** ATAG REPT ALM COM “[&lt;AID&gt;]:&lt;NTFCNCDE&gt;,&lt;CONDTYPE&gt;,&lt;SRVEFF&gt;,,:[&lt;DESC&gt;]” ; where: • &lt;AID&gt; indicates the alarm without AID; &lt;AID&gt; is a string and is optional • &lt;NTFCNCDE&gt; indicates a notification code; valid values for &lt;NTFCNCDE&gt; are shown in the “NOTIF_CODE” section on page 4-75 • &lt;CONDTYPE&gt; indicates an alarm condition; valid values for &lt;CONDTYPE&gt; are shown in the “Conditions” section on page 7-18 • &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values for &lt;SRVEFF&gt; are shown in the “SERV_EFF” section on page 4-85 • &lt;DESC&gt; is the condition description; &lt;DESC&gt; is a string and is optional</pre>                                                          |
| Output Example   | <pre>TID-000 1998-06-20 14:30:00 ** 100.100 REPT ALM COM “COM:MJ,FAN,NSA,,,:“FAN FAILURE”” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### 3.4.108 REPT ALM ENV: Report Alarm Environment

Reports a customer-defined condition on an environmental alarm input.

| Section  | REPT ALM ENV Description        |
|----------|---------------------------------|
| Category | Environment Alarms and Controls |
| Security | Retrieve                        |

| Section          | REPT ALM ENV Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | REPT ALM <MOD2ALM>                    RTRV-ALM-BITS<br>REPT ALM BITS                            RTRV-ALM-ENV<br>REPT ALM COM                            RTRV-ALM-EQPT<br>REPT ALM EQPT                           RTRV-ALM-SYNCN<br>REPT ALM SYNCN                        RTRV-ALM-UCP<br>REPT ALM UCP                            RTRV-ATTR-CONT<br>REPT EVT <MOD2ALM>                   RTRV-ATTR-ENV<br>REPT EVT BITS                           RTRV-COND-<MOD2ALM><br>REPT EVT COM                           RTRV-COND-ALL<br>REPT EVT ENV                            RTRV-COND-BITS<br>REPT EVT EQPT                           RTRV-COND-ENV<br>REPT EVT FXFR                           RTRV-COND-EQPT<br>REPT EVT IOSCFG                        RTRV-COND-SYNCN<br>REPT EVT SYNCN                        RTRV-COND-UCP<br>REPT EVT UCP                            SET-ATTR-CONT<br>RTRV-ALM-<MOD2ALM>                   SET-ATTR-ENV<br>RTRV-ALM-ALL |
| Output Format    | SID DATE TIME<br>** ATAG REPT ALM ENV<br>“<AID>:<NTFCNCDE>,<ALMTYPE>,,[<DESC>]”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies an environmental input and is from the “ENV” section on page 4-26</li> <li>• &lt;NTFCNCDE&gt; identifies a 2-letter notification code; valid values for &lt;NTFCNCDE&gt; are shown in the “NOTIF_CODE” section on page 4-75</li> <li>• &lt;ALMTYPE&gt; abbreviated code identifying the alarm; valid values for &lt;ALMTYPE&gt; are shown in the “ENV_ALM” section on page 4-58</li> <li>• &lt;DESC&gt; is the alarm message; &lt;DESC&gt; is a string and is optional</li> </ul>                                                                                                                                                                                                                                                                                                         |
| Output Example   | TID-000 1998-06-20 14:30:00<br>** 100.100 REPT ALM ENV<br>“ENV-IN-1:MJ,OPENDR,,\“OPEN DOOR\””<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### 3.4.109 REPT ALM EQPT: Report Alarm Equipment

Reports an alarm condition against an equipment unit or slot.

| Section  | REPT ALM EQPT Description |
|----------|---------------------------|
| Category | Equipment                 |
| Security | Retrieve                  |

| Section          | REPT ALM EQPT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | REPT ALM <MOD2ALM>            RTRV-ALM-BITS<br>REPT ALM BITS                    RTRV-ALM-ENV<br>REPT ALM COM                    RTRV-ALM-EQPT<br>REPT ALM ENV                    RTRV-ALM-SYNCN<br>REPT ALM SYNCN                 RTRV-ALM-UCP<br>REPT ALM UCP                    RTRV-ATTR-CONT<br>REPT EVT <MOD2ALM>            RTRV-ATTR-ENV<br>REPT EVT BITS                   RTRV-COND-<MOD2ALM><br>REPT EVT COM                   RTRV-COND-ALL<br>REPT EVT ENV                   RTRV-COND-BITS<br>REPT EVT EQPT                  RTRV-COND-ENV<br>REPT EVT FXFR                  RTRV-COND-EQPT<br>REPT EVT IOSCFG                RTRV-COND-SYNCN<br>REPT EVT SYNCN                RTRV-COND-UCP<br>REPT EVT UCP                    SET-ATTR-CONT<br>RTRV-ALM-<MOD2ALM>            SET-ATTR-ENV<br>RTRV-ALM-ALL                                                                                                                                                                                                           |
| Output Format    | <pre>SID DATE TIME ** ATAG REPT ALM EQPT "&lt;AID&gt;:&lt;NTFCNCDE&gt;,&lt;CONDITION&gt;,&lt;SRVEFF&gt;,,:[&lt;DESC&gt;], [&lt;AIDDET&gt;]" ; where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an equipment AID SLOT {1-17} from the "EQPT" section on page 4-27</li> <li>• &lt;NTFCNCDE&gt; is the notification code; valid values for &lt;NTFCNCDE&gt; are shown in the "NOTIF_CODE" section on page 4-75</li> <li>• &lt;CONDITION&gt; is the type of alarm condition; valid values for &lt;CONDTYPE&gt; are shown in the "Conditions" section on page 7-18</li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values for &lt;SRVEFF&gt; are shown in the "SERV_EFF" section on page 4-85</li> <li>• &lt;DESC&gt; is the condition description; &lt;DESC&gt; is a string and is optional</li> <li>• &lt;AIDDET&gt; specifies the type of AID; valid values for &lt;AIDDET&gt; are shown in the "EQPT_TYPE" section on page 4-59, &lt;AIDDET&gt; is optional</li> </ul> </pre> |
| Output Example   | <pre>TID-000 1998-06-20 14:30:00 ** 100.100 REPT ALM EQPT "SLOT-7:MJ,CONTR,NSA,,,,,\\"CONTROLLER FAILURE\",TCC" ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

### 3.4.110 REPT ALM SECU: Report Alarm Security

Reports the occurrence of an alarmed security event against the NE.

Based on TR-NWT-000835, the AID of the security alarm should be the Connection IDentifier (CID) which is not currently supported.

The COM or UID is an acceptable substitute for the AID.

**Note**

The INTRUSION-PSWD condition is the only condition that is reported as a standing condition instead of a transient condition. It defaults to NA and is reported by the REPT EVT SECU message. However, it can be reprovisioned to be reported at a higher severity. If the severity of this alarm is higher than NA, it is reported by the REPT ALM SECU message.

| Section          | REPT ALM SECU Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------|--------------|--------------|---------------|---------------|------|---------------|-----------|------------------|----------------|---------------|---------------|----------------|-------------|----------------|--------|-------------------|--------------|--|
| Category         | Security                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| Security         | Superuser                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| Related Messages | <table border="0"> <tr> <td>ACT-USER</td> <td>ENT-USER-SECU</td> </tr> <tr> <td>ALW-MSG-SECU</td> <td>INH-MSG-SECU</td> </tr> <tr> <td>ALW-USER-SECU</td> <td>INH-USER-SECU</td> </tr> <tr> <td>CANC</td> <td>REPT EVT SECU</td> </tr> <tr> <td>CANC-USER</td> <td>REPT EVT SESSION</td> </tr> <tr> <td>CANC-USER-SECU</td> <td>RTRV-CMD-SECU</td> </tr> <tr> <td>DLT-USER-SECU</td> <td>RTRV-DFLT-SECU</td> </tr> <tr> <td>ED-CMD-SECU</td> <td>RTRV-USER-SECU</td> </tr> <tr> <td>ED-PID</td> <td>SET-ATTR-SECUDFLT</td> </tr> <tr> <td>ED-USER-SECU</td> <td></td> </tr> </table>                                                                                      | ACT-USER | ENT-USER-SECU | ALW-MSG-SECU | INH-MSG-SECU | ALW-USER-SECU | INH-USER-SECU | CANC | REPT EVT SECU | CANC-USER | REPT EVT SESSION | CANC-USER-SECU | RTRV-CMD-SECU | DLT-USER-SECU | RTRV-DFLT-SECU | ED-CMD-SECU | RTRV-USER-SECU | ED-PID | SET-ATTR-SECUDFLT | ED-USER-SECU |  |
| ACT-USER         | ENT-USER-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| ALW-MSG-SECU     | INH-MSG-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| ALW-USER-SECU    | INH-USER-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| CANC             | REPT EVT SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| CANC-USER        | REPT EVT SESSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| CANC-USER-SECU   | RTRV-CMD-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| DLT-USER-SECU    | RTRV-DFLT-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| ED-CMD-SECU      | RTRV-USER-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| ED-PID           | SET-ATTR-SECUDFLT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| ED-USER-SECU     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| Output Format    | <pre>SID DATE TIME ** ATAG REPT ALM SECU "&lt;AID&gt;:&lt;NOTIFCODE&gt;,&lt;SECUALMTYPE&gt;" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies an entity with the condition. It defaults to COM and is a string</li> <li>• &lt;NOTIFCODE&gt; indicates a 2-letter notification code; valid values for &lt;NOTIFCODE&gt; are shown in the <a href="#">“NOTIF_CODE”</a> section on page 4-75</li> <li>• &lt;SECUALMTYPE&gt; security alarm type; it is a subset of the CONDITION type. Valid values are shown in the <a href="#">“SECUALMTYPE”</a> section on page 4-85. For R4.6 the only allowable type is INTRUSION-PSWD.</li> </ul> |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| Output Example   | <pre>TID-000 1998-06-20 14:30:00 ** 100.100 REPT ALM SECU "COM:CR,INTRUSION-PSWD" ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |

### 3.4.111 REPT ALM SYNCN: Report Alarm Synchronization

Reports an alarm condition against a synchronization reference.

| Section  | REPT ALM SYNCN Description |
|----------|----------------------------|
| Category | Synchronization            |
| Security | Retrieve                   |

| Section          | REPT ALM SYNCN Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ALW-SWDX-EQPT RTRV-ALM-<MOD2ALM><br>ALW-SWTOPROTN-EQPT RTRV-ALM-ALL<br>ALW-SWTOWKG-EQPT RTRV-ALM-BITS<br>DLT-EQPT RTRV-ALM-ENV<br>ED-EQPT RTRV-ALM-EQPT<br>ENT-EQPT RTRV-ALM-SYNCN<br>INH-SWDX-EQPT RTRV-ALM-UCP<br>INH-SWTOPROTN-EQPT RTRV-ALMTH-EQPT<br>INH-SWTOWKG-EQPT RTRV-ATTR-CONT<br>REPT ALM <MOD2ALM> RTRV-ATTR-ENV<br>REPT ALM BITS RTRV-COND-<MOD2ALM><br>REPT ALM COM RTRV-COND-ALL<br>REPT ALM ENV RTRV-COND-BITS<br>REPT ALM EQPT RTRV-COND-ENV<br>REPT ALM UCP RTRV-COND-EQPT<br>REPT EVT <MOD2ALM> RTRV-COND-SYNCN<br>REPT EVT BITS RTRV-COND-UCP<br>REPT EVT COM RTRV-EQPT<br>REPT EVT ENV SET-ALMTH-EQPT<br>REPT EVT EQPT SET-ATTR-CONT<br>REPT EVT FXFR SET-ATTR-ENV<br>REPT EVT IOSCFG SW-DX-EQPT<br>REPT EVT SYNCN SW-TOPROTN-EQPT<br>REPT EVT UCP SW-TOWKG-EQPT                                                                                                                                                                                  |
| Output Format    | <pre>SID DATE TIME ** ATAG REPT ALM SYNCN "&lt;AID&gt;:&lt;NTFCNCDE&gt;,&lt;CONDTYPE&gt;,&lt;SRVEFF&gt;,,,,:[&lt;DESC&gt;]" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies a synchronization reference with alarm condition and is from the <a href="#">“SYNC_REF” section on page 4-34</a></li> <li>• &lt;NTFCNCDE&gt; indicates a 2-letter notification code; valid values for &lt;NTFCNCDE&gt; are shown in the <a href="#">“NOTIF_CODE” section on page 4-75</a></li> <li>• &lt;CONDTYPE&gt; indicates an alarm condition; valid values for &lt;CONDTYPE&gt; are shown in the <a href="#">“Conditions” section on page 7-18</a></li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values for &lt;SRVEFF&gt; are shown in the <a href="#">“SERV_EFF” section on page 4-85</a></li> <li>• &lt;DESC&gt; is the condition description; &lt;DESC&gt; is a string and is optional</li> </ul> |
| Output Example   | <pre>TID-000 1998-06-20 14:30:00 ** 100.100 REPT ALM SYNCN “SYNC-NE: MJ,MAN,SA,,,,:\“MANUAL SWITCH”,” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

### 3.4.112 REPT ALM UCP: Report Alarm Unified Control Plane

(Cisco ONS 15454 only)

Reports an alarm condition against a UCP object.

| Section          | REPT ALM UCP Description |                     |
|------------------|--------------------------|---------------------|
| Category         | UCP                      |                     |
| Security         | Retrieve                 |                     |
| Related Messages | DLT-UCP-CC               | REPT EVT UCP        |
|                  | DLT-UCP-IF               | RTRV-ALM-<MOD2ALM>  |
|                  | DLT-UCP-NBR              | RTRV-ALM-ALL        |
|                  | ED-UCP-CC                | RTRV-ALM-BITS       |
|                  | ED-UCP-IF                | RTRV-ALM-ENV        |
|                  | ED-UCP-NBR               | RTRV-ALM-EQPT       |
|                  | ED-UCP-NODE              | RTRV-ALM-SYNCN      |
|                  | ENT-UCP-CC               | RTRV-ALM-UCP        |
|                  | ENT-UCP-IF               | RTRV-ATTR-CONT      |
|                  | ENT-UCP-NBR              | RTRV-ATTR-ENV       |
|                  | REPT ALM <MOD2ALM>       | RTRV-COND-<MOD2ALM> |
|                  | REPT ALM BITS            | RTRV-COND-ALL       |
|                  | REPT ALM COM             | RTRV-COND-BITS      |
|                  | REPT ALM ENV             | RTRV-COND-ENV       |
|                  | REPT ALM EQPT            | RTRV-COND-EQPT      |
|                  | REPT ALM SYNCN           | RTRV-COND-SYNCN     |
|                  | REPT EVT <MOD2ALM>       | RTRV-COND-UCP       |
|                  | REPT EVT BITS            | RTRV-UCP-CC         |
|                  | REPT EVT COM             | RTRV-UCP-IF         |
|                  | REPT EVT ENV             | RTRV-UCP-NBR        |
|                  | REPT EVT EQPT            | RTRV-UCP-NODE       |
|                  | REPT EVT FXFR            | SET-ATTR-CONT       |
|                  | REPT EVT IOSCFG          | SET-ATTR-ENV        |
|                  | REPT EVT SYNCN           |                     |

| Section        | REPT ALM UCP Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <pre>SID DATE TIME ** ATAG REPT ALM UCP "&lt;AID&gt;:&lt;NTFCNCDE&gt;,&lt;CONDTYPE&gt;,&lt;SRVEFF&gt;,,:[&lt;DESC&gt;]" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies a UCP object with alarm condition and is from the <a href="#">“ALL” section on page 4-9</a></li> <li>• &lt;NTFCNCDE&gt; is a notification code; valid values for &lt;NTFCNCDE&gt; are shown in the <a href="#">“NOTIF_CODE” section on page 4-75</a></li> <li>• &lt;CONDTYPE&gt; is the type of condition to be retrieved; valid values for &lt;CONDTYPE&gt; are shown in the <a href="#">“Conditions” section on page 7-18</a></li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values for &lt;SRVEFF&gt; are shown in the <a href="#">“SERV_EFF” section on page 4-85</a></li> <li>• &lt;DESC&gt; is the condition description; &lt;DESC&gt; is a string and is optional</li> </ul> |
| Output Example | <pre>TID-000 1998-06-20 14:30:00 ** 100.100 REPT ALM UCP “CC-1:MJ,LMP-HELLODOWN,SA,,,; \“LMP HELLO FSM ON CONTROL CHANNEL DOWN\”;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### 3.4.113 REPT DBCHG: Report Database Change Message

Reports any changes on the NE that result from:

1. TL1 provisioning commands or their GUI equivalents containing the verbs: ALW, DLT, ED, ENT, INH, INIT, OPR, RLS, SET, and SW (for example, DLT-EQPT, ENT-CRS-ST51)
2. External event such as a board insertion.

| Section          | REPT DBCHG Description                     |
|------------------|--------------------------------------------|
| Category         | Log                                        |
| Security         | Retrieve                                   |
| Related Messages | ALW-MSG-DBCHG<br>INH-MSG-DBCHG<br>RTRV-LOG |

| Section        | REPT DBCHG Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <pre>SID DATE TIME A ATAG REPT DBCHG "TIME=&lt;TIME&gt;,DATE=&lt;DATE&gt;,[SOURCE=&lt;SOURCE&gt;] [USERID=&lt;USERID&gt;],DBCHGSEQ=&lt;DBCHGSEQ&gt;:&lt;COMMAND&gt;:&lt;VT&gt;" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;TIME&gt; is the time of the message triggered by the NE; &lt;TIME&gt; is a time</li> <li>• &lt;DATE&gt; is the date of the message triggered by the NE; &lt;DATE&gt; is a date</li> <li>• &lt;SOURCE&gt; is an input command CTAG if present; &lt;SOURCE&gt; is an integer and is optional</li> <li>• &lt;USERID&gt; is the user name or user identifier; &lt;USERID&gt; is a string and is optional</li> <li>• &lt;DBCHGSEQ&gt; is a sequential number of the DBCHG message; &lt;DBCHGSEQ&gt; is an integer</li> <li>• &lt;COMMAND&gt; is the input command or substitute; &lt;COMMAND&gt; is a string</li> <li>• &lt;VT&gt; is the AID from the <a href="#">"Conditions" section on page 7-18</a></li> </ul> |
| Output Example | <pre>TID-000 1998-06-20 14:30:00 A 001 REPT DBCHG "TIME=14-35-46,DATE=99-07-28,SOURCE=123,USERID=CISCO15, DBCHGSEQ=456:ENT-CRS-VT1:VT1-4-1-2-6-4" ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

### 3.4.114 REPT EVT <MOD2ALM>: Report Event (CLNT, DS1, DS3I, FSTE, G1000, GIGE, OC12, OC192, OC3, OC48, OCH, OMS, OSC, OTS, POS, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, UDCDCC, UDCF, VT1, VT2, WLEN)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

Reports the occurrence of a non-alarmed event.

| Section  | REPT EVT <MOD2ALM> Description |
|----------|--------------------------------|
| Category | Fault                          |
| Security | Retrieve                       |



| Section          | REPT EVT <MOD2ALM> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | REPT ALM <MOD2ALM>            RTRV-ALM-BITS<br>REPT ALM BITS                    RTRV-ALM-ENV<br>REPT ALM COM                    RTRV-ALM-EQPT<br>REPT ALM ENV                    RTRV-ALM-SYNCN<br>REPT ALM EQPT                   RTRV-ALM-UCP<br>REPT ALM SYNCN                 RTRV-ATTR-CONT<br>REPT ALM UCP                    RTRV-ATTR-ENV<br>REPT EVT BITS                   RTRV-COND-<MOD2ALM><br>REPT EVT COM                   RTRV-COND-ALL<br>REPT EVT ENV                    RTRV-COND-BITS<br>REPT EVT EQPT                   RTRV-COND-ENV<br>REPT EVT FXFR                   RTRV-COND-EQPT<br>REPT EVT IOSCFG                RTRV-COND-SYNCN<br>REPT EVT SYNCN                 RTRV-COND-UCP<br>REPT EVT UCP                    SET-ATTR-CONT<br>RTRV-ALM-<MOD2ALM>            SET-ATTR-ENV<br>RTRV-ALM-ALL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Output Format    | <pre>SID DATE TIME A ATAG REPT EVT &lt;MOD2ALM&gt;   "&lt;AID&gt;:&lt;CONDTYPE&gt;,&lt;CONDEFF&gt;],[&lt;LOCN&gt;],[&lt;MONVAL&gt;],   [&lt;THLEV&gt;],[&lt;TMPER&gt;]:&lt;DESC&gt;,&lt;AIDDET&gt;]" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates an event with the condition type and is from the <a href="#">“ALL” section on page 4-9</a></li> <li>• &lt;CONDTYPE&gt; indicates an event with the condition type and is a string</li> <li>• &lt;CONDEFF&gt; is the effect of the condition on the NE; valid values are shown in the <a href="#">“COND_EFF” section on page 4-54</a>, &lt;CONDEFF&gt; is optional</li> <li>• &lt;LOCN&gt; indicates the location; valid values for &lt;LOCN&gt; are shown in the <a href="#">“LOCATION” section on page 4-68</a>, &lt;LOCN&gt; is optional</li> <li>• &lt;MONVAL&gt; is the monitored value and is a float; &lt;MONVAL&gt; is an integer and is optional</li> <li>• &lt;THLEV&gt; is the threshold value and is a float; &lt;THLEV&gt; is an integer and is optional</li> <li>• &lt;TMPER&gt; is the accumulation time period for the PM information; valid values for &lt;TMPER&gt; are shown in the <a href="#">“TMPER” section on page 4-93</a>. &lt;TMPER&gt; is optional</li> <li>• &lt;DESC&gt; is the condition description; &lt;DESC&gt; is a string and is optional</li> <li>• &lt;AIDDET&gt; specifies the type of AID; valid values for &lt;AIDDET&gt; are shown in the <a href="#">“EQPT_TYPE” section on page 4-59</a>, &lt;AIDDET&gt; is optional</li> </ul> |
| Output Example   | <pre>TID-000 1998-06-20 14:30:00 A 100.100 REPT EVT DS1   "FAC-5-1:WKSWPR,TC,,FEND,,12,13,15-MIN:   \“WORKING SWITCH TO PROTECTION”,OC48” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### 3.4.115 REPT EVT BITS: Report Event BITS

Reports a non-alarmed event against a BITS facility.

| Section            | REPT EVT BITS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------|---------------|--------------|--------------|---------------|--------------|----------------|---------------|--------------|----------------|----------------|--------------|---------------|--------------------|---------------------|--------------|---------------|--------------|----------------|---------------|---------------|---------------|----------------|-----------------|-----------------|----------------|---------------|--------------|---------------|--------------------|--------------|--------------|--|
| Category           | Synchronization                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| Security           | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| Related Messages   | <table border="0"> <tr> <td>REPT ALM &lt;MOD2ALM&gt;</td> <td>RTRV-ALM-BITS</td> </tr> <tr> <td>REPT ALM BITS</td> <td>RTRV-ALM-ENV</td> </tr> <tr> <td>REPT ALM COM</td> <td>RTRV-ALM-EQPT</td> </tr> <tr> <td>REPT ALM ENV</td> <td>RTRV-ALM-SYNCN</td> </tr> <tr> <td>REPT ALM EQPT</td> <td>RTRV-ALM-UCP</td> </tr> <tr> <td>REPT ALM SYNCN</td> <td>RTRV-ATTR-CONT</td> </tr> <tr> <td>REPT ALM UCP</td> <td>RTRV-ATTR-ENV</td> </tr> <tr> <td>REPT EVT &lt;MOD2ALM&gt;</td> <td>RTRV-COND-&lt;MOD2ALM&gt;</td> </tr> <tr> <td>REPT EVT COM</td> <td>RTRV-COND-ALL</td> </tr> <tr> <td>REPT EVT ENV</td> <td>RTRV-COND-BITS</td> </tr> <tr> <td>REPT EVT EQPT</td> <td>RTRV-COND-ENV</td> </tr> <tr> <td>REPT EVT FXFR</td> <td>RTRV-COND-EQPT</td> </tr> <tr> <td>REPT EVT IOSCFG</td> <td>RTRV-COND-SYNCN</td> </tr> <tr> <td>REPT EVT SYNCN</td> <td>RTRV-COND-UCP</td> </tr> <tr> <td>REPT EVT UCP</td> <td>SET-ATTR-CONT</td> </tr> <tr> <td>RTRV-ALM-&lt;MOD2ALM&gt;</td> <td>SET-ATTR-ENV</td> </tr> <tr> <td>RTRV-ALM-ALL</td> <td></td> </tr> </table> | REPT ALM <MOD2ALM> | RTRV-ALM-BITS | REPT ALM BITS | RTRV-ALM-ENV | REPT ALM COM | RTRV-ALM-EQPT | REPT ALM ENV | RTRV-ALM-SYNCN | REPT ALM EQPT | RTRV-ALM-UCP | REPT ALM SYNCN | RTRV-ATTR-CONT | REPT ALM UCP | RTRV-ATTR-ENV | REPT EVT <MOD2ALM> | RTRV-COND-<MOD2ALM> | REPT EVT COM | RTRV-COND-ALL | REPT EVT ENV | RTRV-COND-BITS | REPT EVT EQPT | RTRV-COND-ENV | REPT EVT FXFR | RTRV-COND-EQPT | REPT EVT IOSCFG | RTRV-COND-SYNCN | REPT EVT SYNCN | RTRV-COND-UCP | REPT EVT UCP | SET-ATTR-CONT | RTRV-ALM-<MOD2ALM> | SET-ATTR-ENV | RTRV-ALM-ALL |  |
| REPT ALM <MOD2ALM> | RTRV-ALM-BITS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| REPT ALM BITS      | RTRV-ALM-ENV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| REPT ALM COM       | RTRV-ALM-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| REPT ALM ENV       | RTRV-ALM-SYNCN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| REPT ALM EQPT      | RTRV-ALM-UCP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| REPT ALM SYNCN     | RTRV-ATTR-CONT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| REPT ALM UCP       | RTRV-ATTR-ENV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| REPT EVT <MOD2ALM> | RTRV-COND-<MOD2ALM>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| REPT EVT COM       | RTRV-COND-ALL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| REPT EVT ENV       | RTRV-COND-BITS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| REPT EVT EQPT      | RTRV-COND-ENV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| REPT EVT FXFR      | RTRV-COND-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| REPT EVT IOSCFG    | RTRV-COND-SYNCN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| REPT EVT SYNCN     | RTRV-COND-UCP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| REPT EVT UCP       | SET-ATTR-CONT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| RTRV-ALM-<MOD2ALM> | SET-ATTR-ENV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| RTRV-ALM-ALL       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| Output Format      | <pre>SID DATE TIME A ATAG REPT EVT BITS "&lt;AID&gt;:&lt;CONDTYPE&gt;,&lt;CONDEFF&gt;],,,,,,:[&lt;DESC&gt;]" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates an access identifier and is from the <a href="#">“BITS” section on page 4-19</a></li> <li>• &lt;CONDTYPE&gt; indicates a condition type and the valid values are shown in the <a href="#">“Conditions” section on page 7-18</a></li> <li>• &lt;CONDEFF&gt; indicates an effect of the condition on the NE; valid values for are shown in the <a href="#">“COND_EFF” section on page 4-54</a>, &lt;CONDEFF&gt; is optional</li> <li>• &lt;DESC&gt; is the condition description; &lt;DESC&gt; is a string and is optional</li> </ul>                                                                                                                                                                                                                                                                                                                                |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |
| Output Example     | <pre>TID-000 1998-06-20 14:30:00 A 100.100 REPT EVT BITS “BITS-1:SSM-STU,TC,,,,,,:\“SYNCHRONIZED - TRACEABILITY UNKNOWN\”” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |              |               |              |                |               |               |               |                |                 |                 |                |               |              |               |                    |              |              |  |

### 3.4.116 REPT EVT COM: Report Event COM

Reports a non-alarmed event against an NE when there is no AID associated with it.

| Section          | REPT EVT COM Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Fault                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Related Messages | REPT ALM <MOD2ALM>            RTRV-ALM-BITS<br>REPT ALM BITS                    RTRV-ALM-ENV<br>REPT ALM COM                    RTRV-ALM-EQPT<br>REPT ALM ENV                    RTRV-ALM-SYNCN<br>REPT ALM EQPT                   RTRV-ALM-UCP<br>REPT ALM SYNCN                 RTRV-ATTR-CONT<br>REPT ALM UCP                    RTRV-ATTR-ENV<br>REPT EVT <MOD2ALM>            RTRV-COND-<MOD2ALM><br>REPT EVT BITS                    RTRV-COND-ALL<br>REPT EVT ENV                    RTRV-COND-BITS<br>REPT EVT EQPT                   RTRV-COND-ENV<br>REPT EVT FXFR                   RTRV-COND-EQPT<br>REPT EVT IOSCFG                RTRV-COND-SYNCN<br>REPT EVT SYNCN                 RTRV-COND-UCP<br>REPT EVT UCP                    SET-ATTR-CONT<br>RTRV-ALM-<MOD2ALM>            SET-ATTR-ENV<br>RTRV-ALM-ALL |
| Output Format    | <pre>SID DATE TIME A ATAG REPT EVT COM “[&lt;AID&gt;]:&lt;CONDTYPE&gt;,[&lt;CONDEFF&gt;],,,,,,;[&lt;DESC&gt;]” ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates this event is from the NE. &lt;AID&gt; is a string and is optional.</li> <li>• &lt;CONDTYPE&gt; indicates an event condition type. Valid values are shown in the <a href="#">“Conditions” section on page 7-18</a></li> <li>• &lt;CONDEFF&gt; indicates an effect of the condition on the NE; valid values for &lt;CONDEFF&gt; are shown in the <a href="#">“COND_EFF” section on page 4-54</a>, &lt;CONDEFF&gt; is optional</li> <li>• &lt;DESC&gt; is the description message for the condition; &lt;DESC&gt; is a string and is optional</li> </ul>                                                                     |
| Output Example   | <pre>TID-000 1998-06-20 14:30:00 A 100.100 REPT EVT COM “COM:CLDRESTART,TC,,,,,;\“COLD RESTART”,” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

### 3.4.117 REPT EVT ENV: Report Event Environment

Reports the occurrence of a non-alarmed event against an environment alarm input.

| Section  | REPT EVT ENV Description        |
|----------|---------------------------------|
| Category | Environment Alarms and Controls |
| Security | Retrieve                        |

| Section          | REPT EVT ENV Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | REPT ALM <MOD2ALM>            RTRV-ALM-BITS<br>REPT ALM BITS                    RTRV-ALM-ENV<br>REPT ALM COM                    RTRV-ALM-EQPT<br>REPT ALM ENV                    RTRV-ALM-SYNCN<br>REPT ALM EQPT                   RTRV-ALM-UCP<br>REPT ALM SYNCN                 RTRV-ATTR-CONT<br>REPT ALM UCP                    RTRV-ATTR-ENV<br>REPT EVT <MOD2ALM>            RTRV-COND-<MOD2ALM><br>REPT EVT BITS                    RTRV-COND-ALL<br>REPT EVT COM                    RTRV-COND-BITS<br>REPT EVT EQPT                   RTRV-COND-ENV<br>REPT EVT FXFR                   RTRV-COND-EQPT<br>REPT EVT IOSCFG                RTRV-COND-SYNCN<br>REPT EVT SYNCN                 RTRV-COND-UCP<br>REPT EVT UCP                    SET-ATTR-CONT<br>RTRV-ALM-<MOD2ALM>            SET-ATTR-ENV<br>RTRV-ALM-ALL |
| Output Format    | SID DATE TIME<br>A ATAG REPT EVT ENV<br>“<AID>:<ALMTYPE>,<CONDEFF>],,,,,,:[<DESC>]”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies an environmental input and is from the “ENV” section on page 4-26</li> <li>• &lt;ALMTYPE&gt; is an abbreviated code identifying the alarm and the valid values are shown in the “ENV_ALM” section on page 4-58</li> <li>• &lt;CONDEFF&gt; indicates an effect of the condition on the NE; valid values for &lt;CONDEFF&gt; are shown in the “COND_EFF” section on page 4-54, &lt;CONDEFF&gt; is optional</li> <li>• &lt;DESC&gt; is an alarm message; &lt;DESC&gt; is a string and is optional</li> </ul>                                                                                                                                                   |
| Output Example   | TID-000 1998-06-20 14:30:00<br>A 100.100 REPT EVT ENV<br>“ENV-IN-2:OPENDR,TC,,,,,:\“OPEN DOOR\””<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

### 3.4.118 REPT EVT EQPT: Report Event Equipment

Reports the occurrence of a non-alarmed event against an equipment unit or slot.

| Section  | REPT EVT EQPT Description |
|----------|---------------------------|
| Category | Equipment                 |
| Security | Retrieve                  |

| Section          | REPT EVT EQPT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | REPT ALM <MOD2ALM>            RTRV-ALM-BITS<br>REPT ALM BITS                    RTRV-ALM-ENV<br>REPT ALM COM                    RTRV-ALM-EQPT<br>REPT ALM ENV                    RTRV-ALM-SYNCN<br>REPT ALM EQPT                   RTRV-ALM-UCP<br>REPT ALM SYNCN                 RTRV-ATTR-CONT<br>REPT ALM UCP                    RTRV-ATTR-ENV<br>REPT EVT <MOD2ALM>            RTRV-COND-<MOD2ALM><br>REPT EVT BITS                   RTRV-COND-ALL<br>REPT EVT COM                    RTRV-COND-BITS<br>REPT EVT ENV                    RTRV-COND-ENV<br>REPT EVT FXFR                   RTRV-COND-EQPT<br>REPT EVT IOSCFG                RTRV-COND-SYNCN<br>REPT EVT SYNCN                 RTRV-COND-UCP<br>REPT EVT UCP                    SET-ATTR-CONT<br>RTRV-ALM-<MOD2ALM>            SET-ATTR-ENV<br>RTRV-ALM-ALL                                                                                                                                                                                                |
| Output Format    | <pre>SID DATE TIME A ATAG REPT EVT EQPT   "&lt;AID&gt;:&lt;CONDDTYPE&gt;,&lt;CONDEFF&gt;],[&lt;CONDEFF&gt;],[&lt;DESC&gt;],[&lt;AIDDET&gt;]" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates an equipment AID SLOT {1–17} and is from the <a href="#">“EQPT” section on page 4-27</a></li> <li>• &lt;CONDDTYPE&gt; indicates an event condition type; &lt;CONDDTYPE&gt; defaults to EQPT and the valid values are shown in the <a href="#">“Conditions” section on page 7-18</a></li> <li>• &lt;CONDEFF&gt; indicates an effect of the condition on the NE; valid values for &lt;CONDEFF&gt; are shown in the <a href="#">“COND_EFF” section on page 4-54</a>, &lt;CONDEFF&gt; is optional</li> <li>• &lt;DESC&gt; is the condition description; &lt;DESC&gt; is a string and is optional</li> <li>• &lt;AIDDET&gt; specifies the type of AID; valid values for &lt;AIDDET&gt; are shown in the <a href="#">“EQPT_TYPE” section on page 4-59</a>, &lt;AIDDET&gt; is optional</li> </ul> |
| Output Example   | <pre>TID-000 1998-06-20 14:30:00 A 100.100 REPT EVT EQPT   "SLOT-7:PLUGIN,TC,,,,,,,,;\“EQUIPMENT PLUG-IN”,TCC" ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### 3.4.119 REPT EVT FXFR: Report Event Software Download

Reports the FTP software download status of the start, completion, and completed percentage.

Notes:

1. The FXFR\_RSLT is only sent when the FXFR\_STATUS is COMPLD.
2. The BYTES\_XFRD is only sent when the FXFR\_STATUS is IP or COMPLD.

| Section            | REPT EVT FXFR Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------|------------|---------------|--------------------|--------------|---------------|---------------|--------------|----------------|--------------|--------------|---------------|----------------|----------------|---------------|--------------|---------------------|--------------------|---------------|---------------|----------------|--------------|---------------|--------------|----------------|---------------|-----------------|-----------------|---------------|----------------|---------------|--------------|--------------|--------------------|--|
| Category           | File Transfer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| Security           | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| Related Messages   | <table border="0"> <tr> <td>APPLY</td> <td>RTRV-ALM-ALL</td> </tr> <tr> <td>COPY-RFILE</td> <td>RTRV-ALM-BITS</td> </tr> <tr> <td>REPT ALM &lt;MOD2ALM&gt;</td> <td>RTRV-ALM-ENV</td> </tr> <tr> <td>REPT ALM BITS</td> <td>RTRV-ALM-EQPT</td> </tr> <tr> <td>REPT ALM COM</td> <td>RTRV-ALM-SYNCN</td> </tr> <tr> <td>REPT ALM ENV</td> <td>RTRV-ALM-UCP</td> </tr> <tr> <td>REPT ALM EQPT</td> <td>RTRV-ATTR-CONT</td> </tr> <tr> <td>REPT ALM SYNCN</td> <td>RTRV-ATTR-ENV</td> </tr> <tr> <td>REPT ALM UCP</td> <td>RTRV-COND-&lt;MOD2ALM&gt;</td> </tr> <tr> <td>REPT EVT &lt;MOD2ALM&gt;</td> <td>RTRV-COND-ALL</td> </tr> <tr> <td>REPT EVT BITS</td> <td>RTRV-COND-BITS</td> </tr> <tr> <td>REPT EVT COM</td> <td>RTRV-COND-ENV</td> </tr> <tr> <td>REPT EVT ENV</td> <td>RTRV-COND-EQPT</td> </tr> <tr> <td>REPT EVT EQPT</td> <td>RTRV-COND-SYNCN</td> </tr> <tr> <td>REPT EVT IOSCFG</td> <td>RTRV-COND-UCP</td> </tr> <tr> <td>REPT EVT SYNCN</td> <td>SET-ATTR-CONT</td> </tr> <tr> <td>REPT EVT UCP</td> <td>SET-ATTR-ENV</td> </tr> <tr> <td>RTRV-ALM-&lt;MOD2ALM&gt;</td> <td></td> </tr> </table>                                                                                                | APPLY | RTRV-ALM-ALL | COPY-RFILE | RTRV-ALM-BITS | REPT ALM <MOD2ALM> | RTRV-ALM-ENV | REPT ALM BITS | RTRV-ALM-EQPT | REPT ALM COM | RTRV-ALM-SYNCN | REPT ALM ENV | RTRV-ALM-UCP | REPT ALM EQPT | RTRV-ATTR-CONT | REPT ALM SYNCN | RTRV-ATTR-ENV | REPT ALM UCP | RTRV-COND-<MOD2ALM> | REPT EVT <MOD2ALM> | RTRV-COND-ALL | REPT EVT BITS | RTRV-COND-BITS | REPT EVT COM | RTRV-COND-ENV | REPT EVT ENV | RTRV-COND-EQPT | REPT EVT EQPT | RTRV-COND-SYNCN | REPT EVT IOSCFG | RTRV-COND-UCP | REPT EVT SYNCN | SET-ATTR-CONT | REPT EVT UCP | SET-ATTR-ENV | RTRV-ALM-<MOD2ALM> |  |
| APPLY              | RTRV-ALM-ALL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| COPY-RFILE         | RTRV-ALM-BITS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| REPT ALM <MOD2ALM> | RTRV-ALM-ENV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| REPT ALM BITS      | RTRV-ALM-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| REPT ALM COM       | RTRV-ALM-SYNCN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| REPT ALM ENV       | RTRV-ALM-UCP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| REPT ALM EQPT      | RTRV-ATTR-CONT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| REPT ALM SYNCN     | RTRV-ATTR-ENV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| REPT ALM UCP       | RTRV-COND-<MOD2ALM>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| REPT EVT <MOD2ALM> | RTRV-COND-ALL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| REPT EVT BITS      | RTRV-COND-BITS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| REPT EVT COM       | RTRV-COND-ENV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| REPT EVT ENV       | RTRV-COND-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| REPT EVT EQPT      | RTRV-COND-SYNCN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| REPT EVT IOSCFG    | RTRV-COND-UCP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| REPT EVT SYNCN     | SET-ATTR-CONT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| REPT EVT UCP       | SET-ATTR-ENV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| RTRV-ALM-<MOD2ALM> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| Output Format      | <p>SID DATE TIME</p> <p>A ATAG REPT EVT FXFR</p> <p>“&lt;FILENAME&gt;,&lt;FXFR_STATUS&gt;,[&lt;FXFR_RSLT&gt;],[&lt;BYTES_XFRD&gt;]”</p> <p>;</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;FILENAME&gt; when a package is being transferred between the FTP server and the controller cards, the &lt;FILENAME&gt; field will contain the string “active”. Following the transfer, if there is a second controller card on the node, the file will be copied over to the second card. While this is happening, REPT EVT FXFR messages will be generated with a filename of “standby”. &lt;FILENAME&gt; is a string</li> <li>• &lt;FXFR_STATUS&gt; indicates the file transferred status; START, or IP (In Progress), or COMPLD. Valid values for &lt;FXFR_STATUS&gt; are shown in the <a href="#">“TX_STATUS” section on page 4-94</a></li> <li>• &lt;FXFR_RSLT&gt; indicates the file transferred result; SUCCESS or FAILURE. Valid values for &lt;FXFR_RSLT&gt; are shown in the <a href="#">“TX_RSLT” section on page 4-94</a> and &lt;FXFR_RSLT&gt; is optional</li> <li>• &lt;BYTES_XFRD&gt; indicates the transferred byte count; &lt;BYTES_XFRD&gt; is a string and is optional</li> </ul> |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |
| Output Example     | <p>TID-000 1998-06-20 14:30:00</p> <p>A 100.100 REPT EVT FXFR</p> <p>“NEW.PKG,COMPLD,SUCCESS,21215147”</p> <p>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |              |            |               |                    |              |               |               |              |                |              |              |               |                |                |               |              |                     |                    |               |               |                |              |               |              |                |               |                 |                 |               |                |               |              |              |                    |  |

## 3.4.120 REPT EVT IOSCFG: Report Event IOS Config File

(Cisco ONS 15454 only)

Reports the status of copying the IOS configuration file when the COPY-IOSCFG command is issued.

Notes:

1. You can identify if this message is caused by an IOS config file downloading/uploading/merging by looking at the SRC and DEST field in the message. Refer to the COPY-IOSCFG command for more details.
2. There is no success/failure in the message to indicate the success or failure of the merge process when merging the startup IOS config file to the running config file.

| Section            | REPT EVT IOSCFG Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------|--------------------|---------------|---------------|--------------|--------------|---------------|--------------|----------------|---------------|--------------|----------------|----------------|--------------|---------------|--------------------|---------------------|---------------|---------------|--------------|----------------|--------------|---------------|---------------|----------------|---------------|-----------------|----------------|---------------|--------------|---------------|--------------------|--------------|
| Category           | IOS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
| Security           | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
| Related Messages   | <table border="0"> <tr> <td>COPY-IOSCFG</td> <td>RTRV-ALM-ALL</td> </tr> <tr> <td>REPT ALM &lt;MOD2ALM&gt;</td> <td>RTRV-ALM-BITS</td> </tr> <tr> <td>REPT ALM BITS</td> <td>RTRV-ALM-ENV</td> </tr> <tr> <td>REPT ALM COM</td> <td>RTRV-ALM-EQPT</td> </tr> <tr> <td>REPT ALM ENV</td> <td>RTRV-ALM-SYNCN</td> </tr> <tr> <td>REPT ALM EQPT</td> <td>RTRV-ALM-UCP</td> </tr> <tr> <td>REPT ALM SYNCN</td> <td>RTRV-ATTR-CONT</td> </tr> <tr> <td>REPT ALM UCP</td> <td>RTRV-ATTR-ENV</td> </tr> <tr> <td>REPT EVT &lt;MOD2ALM&gt;</td> <td>RTRV-COND-&lt;MOD2ALM&gt;</td> </tr> <tr> <td>REPT EVT BITS</td> <td>RTRV-COND-ALL</td> </tr> <tr> <td>REPT EVT COM</td> <td>RTRV-COND-BITS</td> </tr> <tr> <td>REPT EVT ENV</td> <td>RTRV-COND-ENV</td> </tr> <tr> <td>REPT EVT EQPT</td> <td>RTRV-COND-EQPT</td> </tr> <tr> <td>REPT EVT FXFR</td> <td>RTRV-COND-SYNCN</td> </tr> <tr> <td>REPT EVT SYNCN</td> <td>RTRV-COND-UCP</td> </tr> <tr> <td>REPT EVT UCP</td> <td>SET-ATTR-CONT</td> </tr> <tr> <td>RTRV-ALM-&lt;MOD2ALM&gt;</td> <td>SET-ATTR-ENV</td> </tr> </table> | COPY-IOSCFG | RTRV-ALM-ALL | REPT ALM <MOD2ALM> | RTRV-ALM-BITS | REPT ALM BITS | RTRV-ALM-ENV | REPT ALM COM | RTRV-ALM-EQPT | REPT ALM ENV | RTRV-ALM-SYNCN | REPT ALM EQPT | RTRV-ALM-UCP | REPT ALM SYNCN | RTRV-ATTR-CONT | REPT ALM UCP | RTRV-ATTR-ENV | REPT EVT <MOD2ALM> | RTRV-COND-<MOD2ALM> | REPT EVT BITS | RTRV-COND-ALL | REPT EVT COM | RTRV-COND-BITS | REPT EVT ENV | RTRV-COND-ENV | REPT EVT EQPT | RTRV-COND-EQPT | REPT EVT FXFR | RTRV-COND-SYNCN | REPT EVT SYNCN | RTRV-COND-UCP | REPT EVT UCP | SET-ATTR-CONT | RTRV-ALM-<MOD2ALM> | SET-ATTR-ENV |
| COPY-IOSCFG        | RTRV-ALM-ALL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
| REPT ALM <MOD2ALM> | RTRV-ALM-BITS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
| REPT ALM BITS      | RTRV-ALM-ENV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
| REPT ALM COM       | RTRV-ALM-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
| REPT ALM ENV       | RTRV-ALM-SYNCN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
| REPT ALM EQPT      | RTRV-ALM-UCP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
| REPT ALM SYNCN     | RTRV-ATTR-CONT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
| REPT ALM UCP       | RTRV-ATTR-ENV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
| REPT EVT <MOD2ALM> | RTRV-COND-<MOD2ALM>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
| REPT EVT BITS      | RTRV-COND-ALL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
| REPT EVT COM       | RTRV-COND-BITS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
| REPT EVT ENV       | RTRV-COND-ENV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
| REPT EVT EQPT      | RTRV-COND-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
| REPT EVT FXFR      | RTRV-COND-SYNCN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
| REPT EVT SYNCN     | RTRV-COND-UCP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
| REPT EVT UCP       | SET-ATTR-CONT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
| RTRV-ALM-<MOD2ALM> | SET-ATTR-ENV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |
| Output Format      | <pre>SID DATE TIME A ATAG REPT EVT IOSCFG "&lt;AID&gt;:&lt;SRC&gt;,&lt;DEST&gt;,&lt;STATUS&gt;,[&lt;RESULT&gt;]" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; slot AID for the equipment and is from the AID <a href="#">"EQPT" section on page 4-27</a></li> <li>• &lt;SRC&gt; specifies where the IOS config file is copied from and is a string</li> <li>• &lt;DEST&gt; specifies where the IOS config file is copied to and is a string</li> <li>• &lt;STATUS&gt; indicates the status of COPY-IOSCFG: Start, IP (In Process), or COMPLD; valid values are shown in the <a href="#">"TX_STATUS" section on page 4-94</a></li> <li>• &lt;RESULT&gt; indicates the result of COPY-IOSCFG: Success or Failure; valid values are shown in the <a href="#">"TX_RSLT" section on page 4-94</a> and &lt;RESULT&gt; is optional</li> </ul>                                                                                                                                                                                                          |             |              |                    |               |               |              |              |               |              |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                |               |              |               |                    |              |

| Section        | REPT EVT IOSCFG Description                                                                                                 |
|----------------|-----------------------------------------------------------------------------------------------------------------------------|
| Output Example | TID-000 1998-06-20 14:30:00<br>A 100.100 REPT EVT IOSCFG<br>“SLOT-1:STARTUP,IOS-CONFIG-FILE-IN-NETWORK,COMPLD,SUCCESS”<br>; |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                              |

### 3.4.121 REPT EVT SECU: Report Event Security

Reports the occurrence of a non-alarmed security event against the NE.

Based on TR-NWT-000835 in TR-NWT-000835 and the AID of the security alarm should be the Connection Identifier (CID) which is not supported in this release. The COM or UID is an acceptable substitute for the AID here. CID's will be supported in a future release.

For the rule of single failure, single message/alarm, the security alarm will not be reported as REPT ALM COM, because it is reported as REPT ALM SECU.

Because the NE sends this security message as a transient message, to make all TL1 autonomous messages consistent, the TL1 agent reports the security message into REPT EVT SECU.

| Section          | REPT EVT SECU Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------|--------------|--------------|---------------|---------------|------|---------------|-----------|------------------|----------------|---------------|---------------|----------------|-------------|----------------|--------|-------------------|--------------|--|
| Category         | Security                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| Security         | Superuser                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| Related Messages | <table> <tbody> <tr> <td>ACT-USER</td> <td>ENT-USER-SECU</td> </tr> <tr> <td>ALW-MSG-SECU</td> <td>INH-MSG-SECU</td> </tr> <tr> <td>ALW-USER-SECU</td> <td>INH-USER-SECU</td> </tr> <tr> <td>CANC</td> <td>REPT ALM SECU</td> </tr> <tr> <td>CANC-USER</td> <td>REPT EVT SESSION</td> </tr> <tr> <td>CANC-USER-SECU</td> <td>RTRV-CMD-SECU</td> </tr> <tr> <td>DLT-USER-SECU</td> <td>RTRV-DFLT-SECU</td> </tr> <tr> <td>ED-CMD-SECU</td> <td>RTRV-USER-SECU</td> </tr> <tr> <td>ED-PID</td> <td>SET-ATTR-SECUDFLT</td> </tr> <tr> <td>ED-USER-SECU</td> <td></td> </tr> </tbody> </table> | ACT-USER | ENT-USER-SECU | ALW-MSG-SECU | INH-MSG-SECU | ALW-USER-SECU | INH-USER-SECU | CANC | REPT ALM SECU | CANC-USER | REPT EVT SESSION | CANC-USER-SECU | RTRV-CMD-SECU | DLT-USER-SECU | RTRV-DFLT-SECU | ED-CMD-SECU | RTRV-USER-SECU | ED-PID | SET-ATTR-SECUDFLT | ED-USER-SECU |  |
| ACT-USER         | ENT-USER-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| ALW-MSG-SECU     | INH-MSG-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| ALW-USER-SECU    | INH-USER-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| CANC             | REPT ALM SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| CANC-USER        | REPT EVT SESSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| CANC-USER-SECU   | RTRV-CMD-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| DLT-USER-SECU    | RTRV-DFLT-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| ED-CMD-SECU      | RTRV-USER-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| ED-PID           | SET-ATTR-SECUDFLT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |
| ED-USER-SECU     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |               |              |              |               |               |      |               |           |                  |                |               |               |                |             |                |        |                   |              |  |



| Section        | REPT EVT SECU Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <pre>SID DATE TIME A ATAG REPT EVT SECU   "&lt;AID&gt;:&lt;DNFIELD&gt;,&lt;CONDEFF&gt;],,,,,,;&lt;SECURITY&gt;:&lt;DNFIELD1&gt;" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies an entity with the condition and defaults to "COM"; &lt;AID&gt; is a string</li> <li>• &lt;DNFIELD&gt; is a string</li> <li>• &lt;CONDEFF&gt; indicates an effect of the condition on the NE and valid values are shown in the "COND_EFF" section on page 4-54; &lt;CONDEFF&gt; is optional</li> <li>• &lt;SECURITY&gt; is a string</li> <li>• &lt;DNFIELD1&gt; is a string</li> </ul> |
| Output Example | <pre>TID-000 1998-06-20 14:30:00 A 100.100 REPT EVT SECU   "COM:LOGIN-FAILURE-PSWD,TC,,,,,;\\"SECURITY:   INVALID LOGIN - PASSWORD - SEE AUDIT LOG\\"" ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                |

### 3.4.122 REPT EVT SESSION: Report Event Session

Reports a non-alarmed event related to establishing a session with the NE.

Notes:

1. The WARN field may contain different information depending on the type of session-related event.
2. If the password aging feature has not been enabled (or the feature is enabled but the password is not close to expiring):
 

```
/*USER <UID> LOGGED IN <IP/SERIAL PORT*/
```
3. If the forced password feature is enforced and the user is logging in for the first time (or the password has expired):
 

```
/*PLEASE CHANGE PASSWORD BEFORE CONTINUING*/
```
4. If a session is terminated for any reason (except a user timeout), the reason for the session termination is indicated in the warning (<WARN>).

| Section  | REPT EVT SESSION Description |
|----------|------------------------------|
| Category | Security                     |
| Security | Retrieve                     |

| Section          | REPT EVT SESSION Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ACT-USER ENT-USER-SECU<br>ALW-MSG-SECU INH-MSG-SECU<br>ALW-USER-SECU INH-USER-SECU<br>CANC REPT ALM SECU<br>CANC-USER REPT EVT SECU<br>CANC-USER-SECU RTRV-CMD-SECU<br>DLT-USER-SECU RTRV-DFLT-SECU<br>ED-CMD-SECU RTRV-USER-SECU<br>ED-PID SET-ATTR-SECUDFLT<br>ED-USER-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Output Format    | <pre>SID DATE TIME A ATAG REPT EVT SESSION "&lt;AID&gt;:&lt;EXP&gt;,[&lt;PCN&gt;]" "WARN"</pre> <p>;</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies the NE with which a session is being attempted; &lt;AID&gt; is a string</li> <li>• &lt;EXP&gt; indicates whether the password is “alive” (i.e., no password updating is required at the moment), has expired, or is about to expire. Valid values are shown in the “YES_NO” section on page 4-99</li> <li>• &lt;PCN&gt; the number of days still remaining before the existing password expires This parameter appears in EXP=YES and either 1.) the warning period has not been exhausted or 2.) the user is a new user establishing a session for the first time and the forced password change policy has been turned on. &lt;PCN&gt; is a string</li> <li>• &lt;WARN&gt; Free format text containing additional information about the security event; &lt;WARN&gt; is a string</li> </ul> |
| Output Example   | <pre>TID-000 1998-06-20 14:30:00 A 100.100 REPT EVT SESSION "TCCP:YES,5-DAY" "/* USER TERRI LOGGED IN TO TCCP */"</pre> <p>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

### 3.4.123 REPT EVT SYNCN: Report Event Synchronization

Reports the occurrence of a non-alarmed event against a synchronization entity.

| Section  | REPT EVT SYNCN Description |
|----------|----------------------------|
| Category | Synchronization            |
| Security | Retrieve                   |

| Section          | REPT EVT SYNCN Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ED-BITS RTRV-ALM-ALL<br>ED-NE-SYNCN RTRV-ALM-BITS<br>ED-SYNCN RTRV-ALM-ENV<br>OPR-SYNCNSW RTRV-ALM-EQPT<br>REPT ALM <MOD2ALM> RTRV-ALM-SYNCN<br>REPT ALM BITS RTRV-ALM-UCP<br>REPT ALM COM RTRV-ATTR-CONT<br>REPT ALM ENV RTRV-ATTR-ENV<br>REPT ALM EQPT RTRV-BITS<br>REPT ALM SYNCN RTRV-COND-<MOD2ALM><br>REPT ALM UCP RTRV-COND-ALL<br>REPT EVT <MOD2ALM> RTRV-COND-BITS<br>REPT EVT BITS RTRV-COND-ENV<br>REPT EVT COM RTRV-COND-EQPT<br>REPT EVT ENV RTRV-COND-SYNCN<br>REPT EVT EQPT RTRV-COND-UCP<br>REPT EVT FXFR RTRV-NE-SYNCN<br>REPT EVT IOSCFG RTRV-SYNCN<br>REPT EVT UCP SET-ATTR-CONT<br>RLS-SYNCNSW SET-ATTR-ENV<br>RTRV-ALM-<MOD2ALM>                                                                                                                                                                                                                                                                                                                                        |
| Output Format    | SID DATE TIME<br>A ATAG REPT EVT SYNCN<br>“<AID>:<CONDTYPE>,[<CONDEFF>],,,,,,:[<DESC>],[<AIDDET>]”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies the synchronization entity with the condition and is from the <a href="#">“SYNC_REF” section on page 4-34</a></li> <li>• &lt;CONDTYPE&gt; indicates the condition type; &lt;CONDTYPE&gt; defaults to SYNCN and the valid values are shown in the <a href="#">“Conditions” section on page 7-18</a></li> <li>• &lt;CONDEFF&gt; indicates the effect of the condition on the NE; valid values for &lt;CONDEFF&gt; are shown in the <a href="#">“COND_EFF” section on page 4-54</a>, &lt;CONDEFF&gt; is optional</li> <li>• &lt;DESC&gt; is the condition description; &lt;DESC&gt; is a string and is optional</li> <li>• &lt;AIDDET&gt; specifies the type of AID; valid values for &lt;AIDDET&gt; are shown in the <a href="#">“EQPT_TYPE” section on page 4-59</a>, &lt;AIDDET&gt; is optional</li> </ul> |
| Output Example   | TID-000 1998-06-20 14:30:00<br>A 100.100 REPT EVT SYNCN<br>“SYNC-NE:SWTOINT,SC,,,,,,:\“SWITCH TO INTERNAL CLOCK”,TCC”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### 3.4.124 REPT EVT UCP: Report Event Unified Control Plane

(Cisco ONS 15454 only)

Reports the occurrence of a non-alarmed even against a UCP object.

| Section          | REPT EVT UCP Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | UCP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Related Messages | DLT-UCP-CC REPT EVT SYNCN<br>DLT-UCP-IF RTRV-ALM-<MOD2ALM><br>DLT-UCP-NBR RTRV-ALM-ALL<br>ED-UCP-CC RTRV-ALM-BITS<br>ED-UCP-IF RTRV-ALM-ENV<br>ED-UCP-NBR RTRV-ALM-EQPT<br>ED-UCP-NODE RTRV-ALM-SYNCN<br>ENT-UCP-CC RTRV-ALM-UCP<br>ENT-UCP-IF RTRV-ATTR-CONT<br>ENT-UCP-NBR RTRV-ATTR-ENV<br>REPT ALM <MOD2ALM> RTRV-COND-<MOD2ALM><br>REPT ALM BITS RTRV-COND-ALL<br>REPT ALM COM RTRV-COND-BITS<br>REPT ALM ENV RTRV-COND-ENV<br>REPT ALM EQPT RTRV-COND-EQPT<br>REPT ALM SYNCN RTRV-COND-SYNCN<br>REPT ALM UCP RTRV-COND-UCP<br>REPT EVT <MOD2ALM> RTRV-UCP-CC<br>REPT EVT BITS RTRV-UCP-IF<br>REPT EVT COM RTRV-UCP-NBR<br>REPT EVT ENV RTRV-UCP-NODE<br>REPT EVT EQPT SET-ATTR-CONT<br>REPT EVT FXFR SET-ATTR-ENV<br>REPT EVT IOSCFG                            |
| Output Format    | SID DATE TIME<br>A ATAG REPT EVT UCP<br>“<AID>:[<CONDTYPE>],<CONDEFF>,,,,,:[<DESC>]”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies a UCP object with alarm condition and is from the <a href="#">“ALL” section on page 4-9</a></li> <li>• &lt;CONDTYPE&gt; is the type of condition to be retrieved. Valid values for &lt;CONDTYPE&gt; are shown in the <a href="#">“Conditions” section on page 7-18</a>; &lt;CONDTYPE&gt; is optional</li> <li>• &lt;CONDEFF&gt; is the effect on service caused by the alarm condition; valid values for &lt;CONDEFF&gt; are shown in the <a href="#">“COND_EFF” section on page 4-54</a></li> <li>• &lt;DESC&gt; is a condition description; &lt;DESC&gt; is a string and is optional</li> </ul> |
| Output Example   | TID-000 1998-06-20 14:30:00<br>A 100.100 REPT EVT UCP<br>“CC-1:LMP-HELLODOWN,TC,,,,,:“LMP HELLO FSM ON CONTROL CHANNEL DOWN\”,”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

### 3.4.125 REPT PM <MOD2>: Report Performance Monitoring (CLNT, DS1, DS3I, EC1, FC, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

Reports autonomous monitoring statistics as a result of the schedule created by SCHED-PMREPT.

| Section          | REPT PM <MOD2> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Performance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Related Messages | ALW-PMREPT-ALL                    RTRV-PMSCHED-<MOD2><br>INH-PMREPT-ALL                    RTRV-PMSCHED-ALL<br>INIT-REG-<MOD2>                    RTRV-TH-<MOD2><br>INIT-REG-G1000                    SCHED-PMREPT-<MOD2><br>RTRV-PM-<MOD2>                    SET-PMMODE-<STS_PATH><br>RTRV-PMMODE-<STS_PATH>        SET-TH-<MOD2>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Output Format    | SID DATE TIME<br>A ATAG REPT PM <MOD2><br>“<AID>:<MONTYPE>,<MONVAL>,<VLDTY>,<LOCN>,<DIRN>,<TMPER>,<MONDAT>,<MONTM>”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; access identifier from the <a href="#">“ALL” section on page 4-9</a></li> <li>• &lt;MONTYPE&gt; type of monitored parameter; valid values are shown in the <a href="#">“ALL_MONTYPE” section on page 4-39</a></li> <li>• &lt;MONVAL&gt; measured value of monitored parameter; &lt;MONVAL&gt; is a string</li> <li>• &lt;VLDTY&gt; validity indicator for the reported PM data; valid values for &lt;VLDTY&gt; are shown in the <a href="#">“VALIDITY” section on page 4-97</a></li> <li>• &lt;LOCN&gt; indicates the location; valid values are shown in <a href="#">“LOCATION” section on page 4-68</a></li> <li>• &lt;DIRN&gt; direction of PM relative to the entity identified by the AID; valid values are shown in the <a href="#">“DIRECTION” section on page 4-56</a></li> <li>• &lt;TMPER&gt; indicates the accumulation time period for the PM data; valid values are shown in the <a href="#">“TMPER” section on page 4-93</a></li> <li>• &lt;MONDAT&gt; is the date of the beginning of the PM period specified by the TMPER parameter; &lt;MONDAT&gt; is a string</li> <li>• &lt;MONTM&gt; is the beginning time of day of the PM period specified by the TMPER parameter; &lt;MONTM&gt; is a string</li> </ul> |
| Output Example   | TID-000 1998-06-20 14:30:00<br>A 100 REPT PM CLNT<br>“FAC-3-1:CVL,10,PRTL,NEND,BTH,15-MIN,05-25,14-46”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

### 3.4.126 REPT SW: Report Switch

(Cisco ONS 15454 only)

Reports the autonomous switching of a unit in a duplex equipment pair to the standby state and its mate unit to the active state. An automatic report for the occurrence or clearance of an alarm or event that triggers the switch may be associated with the message.

| Section          | REPT SW Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Path Protection Switching                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Related Messages | ALW-SWDX-EQPT                      INH-SWTOPROTN-EQPT<br>ALW-SWTOPROTN-EQPT                INH-SWTOWKG-EQPT<br>ALW-SWTOWKG-EQPT                   SW-DX-EQPT<br>EX-SW-<OCN_BLSR>                    SW-TOPROTN-EQPT<br>INH-SWDX-EQPT                        SW-TOWKG-EQPT                                                                                                                                                                                                                                                                                  |
| Output Format    | SID DATE TIME<br>A ATAG REPT SW<br>“<ACTID>,<STDBYID>”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;ACTID&gt; identifies the equipment unit that has been placed in the active state. Parameter grouping cannot be used with this parameter; &lt;ACTID&gt; is the AID from the “EQPT” section on page 4-27</li> <li>• &lt;STDBYID&gt; identifies the equipment unit that was placed in the standby state. Parameter grouping cannot be used with this parameter; &lt;STDBYID&gt; is the AID from the “EQPT” section on page 4-27</li> </ul> |
| Output Example   | TID-000 1998-06-20 14:30:00<br>A 001 REPT SW<br>“SLOT-8,SLOT-10”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

### 3.4.127 RLS-EXT-CONT: Release External Control

This command releases a forced contact state and returns the control of the contact to an AUTOMATIC control state. In AUTOMATIC control state, the contact could be opened or closed depending on triggers that may or may not be provisioned in the NE. Therefore, issuing an RLS might not produce any contact state change.

The NE defaults to having no triggers provisioned for external controls which consequently produces default open contacts. An NE with this default provisioning will always produce an open contact with a RLS-EXT-CONT command.

Notes:

1. The duration is not supported, it defaults to CONTS.
2. In an automatic state, the contact could be opened or closed depending on the provisioned trigger. Therefore, issuing an OPR-EXT-CONT command followed by an RLS-EXT-CONT command might not produce any contact state change.

3. The RLS-EXT-CONT is not allowed during the MNTRY duration. The command is allowed for the CONTS duration. The length of MNTRY duration is set to be 2 seconds.
4. RLS-EXT-CONT cannot change the contact state to Automatic if the existing state is Manual Open.

| Section          | RLS-EXT-CONT Description                                                                                                                                                                                                                                                                                                                                       |             |               |              |               |              |               |              |               |              |              |                |  |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|--------------|----------------|--|
| Category         | Environment Alarms and Controls                                                                                                                                                                                                                                                                                                                                |             |               |              |               |              |               |              |               |              |              |                |  |
| Security         | Maintenance                                                                                                                                                                                                                                                                                                                                                    |             |               |              |               |              |               |              |               |              |              |                |  |
| Related Messages | <table border="0"> <tr> <td>OPR-ACO-ALL</td> <td>RTRV-ATTR-ENV</td> </tr> <tr> <td>OPR-EXT-CONT</td> <td>RTRV-COND-ENV</td> </tr> <tr> <td>REPT ALM ENV</td> <td>RTRV-EXT-CONT</td> </tr> <tr> <td>REPT EVT ENV</td> <td>SET-ATTR-CONT</td> </tr> <tr> <td>RTRV-ALM-ENV</td> <td>SET-ATTR-ENV</td> </tr> <tr> <td>RTRV-ATTR-CONT</td> <td></td> </tr> </table> | OPR-ACO-ALL | RTRV-ATTR-ENV | OPR-EXT-CONT | RTRV-COND-ENV | REPT ALM ENV | RTRV-EXT-CONT | REPT EVT ENV | SET-ATTR-CONT | RTRV-ALM-ENV | SET-ATTR-ENV | RTRV-ATTR-CONT |  |
| OPR-ACO-ALL      | RTRV-ATTR-ENV                                                                                                                                                                                                                                                                                                                                                  |             |               |              |               |              |               |              |               |              |              |                |  |
| OPR-EXT-CONT     | RTRV-COND-ENV                                                                                                                                                                                                                                                                                                                                                  |             |               |              |               |              |               |              |               |              |              |                |  |
| REPT ALM ENV     | RTRV-EXT-CONT                                                                                                                                                                                                                                                                                                                                                  |             |               |              |               |              |               |              |               |              |              |                |  |
| REPT EVT ENV     | SET-ATTR-CONT                                                                                                                                                                                                                                                                                                                                                  |             |               |              |               |              |               |              |               |              |              |                |  |
| RTRV-ALM-ENV     | SET-ATTR-ENV                                                                                                                                                                                                                                                                                                                                                   |             |               |              |               |              |               |              |               |              |              |                |  |
| RTRV-ATTR-CONT   |                                                                                                                                                                                                                                                                                                                                                                |             |               |              |               |              |               |              |               |              |              |                |  |
| Input Format     | RLS-EXT-CONT:[<TID>]:<AID>:<CTAG>[::,];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies the external control being released and is from the <a href="#">“ENV” section on page 4-26</a></li> </ul>                                                                                                                                    |             |               |              |               |              |               |              |               |              |              |                |  |
| Input Example    | RLS-EXT-CONT:CISCO:ENV-OUT-2:123;                                                                                                                                                                                                                                                                                                                              |             |               |              |               |              |               |              |               |              |              |                |  |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                 |             |               |              |               |              |               |              |               |              |              |                |  |

### 3.4.128 RLS-LASER-OTS: Release Laser Optical Transport Section

(Cisco ONS 15454 only)

This command instructs a laser to be switched off.

| Section          | RLS-LASER-OTS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                 |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|-----------------|------------------|---------|-----------------|---------|-----------|-------------|-----------|------------|---------------|----------------|--------------|--------|------------------|--------|----------|--------|----------|-------------|----------|------------|-------------------|--------------|------------------|-----------------|---------------|---------------|--------------|------------------|--|
| Category         | DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                 |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| Security         | Maintenance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                 |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| Related Messages | <table border="0"> <tr> <td>DLT-FFP-CLNT</td> <td>OPR-PROTNSW-OCH</td> </tr> <tr> <td>DLT-LNK-&lt;MOD2O&gt;</td> <td>RLS-PROTNSW-CLNT</td> </tr> <tr> <td>ED-CLNT</td> <td>RLS-PROTNSW-OCH</td> </tr> <tr> <td>ED-DWDM</td> <td>RTRV-CLNT</td> </tr> <tr> <td>ED-FFP-CLNT</td> <td>RTRV-DWDM</td> </tr> <tr> <td>ED-FFP-OCH</td> <td>RTRV-FFP-CLNT</td> </tr> <tr> <td>ED-LNK-&lt;MOD2O&gt;</td> <td>RTRV-FFP-OCH</td> </tr> <tr> <td>ED-OCH</td> <td>RTRV-LNK-&lt;MOD2O&gt;</td> </tr> <tr> <td>ED-OMS</td> <td>RTRV-OCH</td> </tr> <tr> <td>ED-OTS</td> <td>RTRV-OMS</td> </tr> <tr> <td>ED-TRC-CLNT</td> <td>RTRV-OTS</td> </tr> <tr> <td>ED-TRC-OCH</td> <td>RTRV-PROTNSW-CLNT</td> </tr> <tr> <td>ENT-FFP-CLNT</td> <td>RTRV-PROTNSW-OCH</td> </tr> <tr> <td>ENT-LNK-&lt;MOD2O&gt;</td> <td>RTRV-TRC-CLNT</td> </tr> <tr> <td>OPR-LASER-OTS</td> <td>RTRV-TRC-OCH</td> </tr> <tr> <td>OPR-PROTNSW-CLNT</td> <td></td> </tr> </table> | DLT-FFP-CLNT | OPR-PROTNSW-OCH | DLT-LNK-<MOD2O> | RLS-PROTNSW-CLNT | ED-CLNT | RLS-PROTNSW-OCH | ED-DWDM | RTRV-CLNT | ED-FFP-CLNT | RTRV-DWDM | ED-FFP-OCH | RTRV-FFP-CLNT | ED-LNK-<MOD2O> | RTRV-FFP-OCH | ED-OCH | RTRV-LNK-<MOD2O> | ED-OMS | RTRV-OCH | ED-OTS | RTRV-OMS | ED-TRC-CLNT | RTRV-OTS | ED-TRC-OCH | RTRV-PROTNSW-CLNT | ENT-FFP-CLNT | RTRV-PROTNSW-OCH | ENT-LNK-<MOD2O> | RTRV-TRC-CLNT | OPR-LASER-OTS | RTRV-TRC-OCH | OPR-PROTNSW-CLNT |  |
| DLT-FFP-CLNT     | OPR-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |                 |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| DLT-LNK-<MOD2O>  | RLS-PROTNSW-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |                 |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-CLNT          | RLS-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |                 |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-DWDM          | RTRV-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                 |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-FFP-CLNT      | RTRV-DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                 |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-FFP-OCH       | RTRV-FFP-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |                 |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-LNK-<MOD2O>   | RTRV-FFP-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |                 |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-OCH           | RTRV-LNK-<MOD2O>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |                 |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-OMS           | RTRV-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-OTS           | RTRV-OMS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-TRC-CLNT      | RTRV-OTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-TRC-OCH       | RTRV-PROTNSW-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                 |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ENT-FFP-CLNT     | RTRV-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |                 |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ENT-LNK-<MOD2O>  | RTRV-TRC-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |                 |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| OPR-LASER-OTS    | RTRV-TRC-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |                 |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| OPR-PROTNSW-CLNT |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |                 |                 |                  |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |

| Section       | RLS-LASER-OTS Description                                                                                                                                                                                                       |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | RLS-LASER-OTS:[<TID>]:<AID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; indicates an identifier of an optical facility supporting laser and is the AID from the “LINE” section on page 4-29</li> </ul> |
| Input Example | RLS-LASER-OTS::LINE-5-2-TX:3;                                                                                                                                                                                                   |
| Errors        | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                   |

### 3.4.129 RLS-LPBK-<MOD2>: Release Loopback (CLNT, DS1, DS3I, EC1, FC, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

See Table 4-11 on page 4-5 for supported modifiers by platform.

This command releases a signal loopback on an I/O card or a cross-connect.

Notes:

1. The value CRS for the LPBKTYPE parameter is applicable only for the STS modifier. The FACILITY and TERMINAL values for LPBKTYPE parameter are applicable to the ports.
2. The optional [<LPBKTYPE>] field defaults to the current existing loopback type.
3. The TERMINAL loopback type is not supported for a DS3XM card.
4. FEAC loopbacks can be released by specifying LINE as the loopback type and FEND as the location.
5. FEAC loopbacks on the DS1 interface of a DS3XM card can be applied only if a VT connection has been created on it. An attempt to operate/release FEAC loopbacks in the absence of a VT connection will result in an error message.

| Section          | RLS-LPBK-<MOD2> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Testing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Security         | Maintenance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Related Messages | EX-SW-<OCN_BLSR><br>OPR-LPBK-<MOD2>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Input Format     | RLS-LPBK-<MOD2>:[<TID>]:<SRC>:<CTAG>::[<LOCATION>],,,<br>[<LPBKTYPE>];<br>where: <ul style="list-style-type: none"> <li>&lt;SRC&gt; is an access identifier from the “ALL” section on page 4-9; valid values for AID are facility, DS1, and STS</li> <li>&lt;LOCATION&gt; indicates the location where the operation is to be carried out. It defaults to NEND; valid values are shown in the “LOCATION” section on page 4-68</li> <li>&lt;LPBKTYPE&gt; indicates the loopback type; valid values for &lt;LPBKTYPE&gt; are shown in the “LPBK_TYPE” section on page 4-68</li> </ul> |



| Section       | RLS-LPBK-<MOD2> Description                                    |
|---------------|----------------------------------------------------------------|
| Input Example | RLS-LPBK-DS1:PTREYES:DS1-4-1-2-13:203::,,FACILITY;             |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> . |

### 3.4.130 RLS-PROTNSW-<OCN\_TYPE>: Release Protection Switch (OC3, OC12, OC48, OC192)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command releases a SONET line protection switch request.

The release of a protection switch request is applicable only to the OPR-PROTNSW protection switch commands, the user-initiated switch protection commands.

Notes:

1. This command is not used for the common control (TCC2 or XC/XCVT/XC10G) cards. Sending a command on a common control card will generate an IIAC (Input, Invalid Access Identifier) error message. To query the common control card switching commands, use SW-DX-EQPT, ALW-SWDX-EQPT commands.
2. When sending this command on non-SONET (OCN) cards, an IIAC (Input, Invalid Access Identifier) error message should be responded. To use this command on a non-SONET card switching command, use ALW-SWTOPROTN/SWTOWKG-EQPT and INH-SWTOPROTN/SWTOWKG-EQPT commands.
3. When sending this command to query on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message should be responded.
4. When sending this command to a working card that is failed or missing, the SWFA (Status, Working unit Failed) error message should be responded.
5. When sending this command to a protect card that is failed or missing, the SPFA (Status, Protection unit Failed) error message should be responded.
6. When sending this command to a card that is not in protection, the SNPR (Status, Not in Protection State) error message should be responded.
7. Sending this command to an OCN line that is already in clear mode will return a SAMS (Already in Clear Maintenance State) error message.
8. To get the protection switching state (manual, lockout, forced), use the RTRV-COND-ALL or RTRV-ALM-ALL command.
9. DIRN is an optional parameter. A NULL value defaults to BTH for a BLSR protection, BTH for 1+1 BI directional protection group, and RCV for 1+1 UNI directional protection group.  
DIRN follows these rules: TRMT will always fail for any kind of protection groups. For two-fiber and four-fiber BLSR protection groups both the RCV and TRMT directions will fail.
10. DIRN is applicable for both 1+1 and BLSR protection groups. OPR-PROTNSW applies to a BLSR span/ring as shown by the following command:  
“RLS-PROTNSW-OC48::FAC-5-1:A::BTH;” instructs the NE to release a line protection switch request between a working line and a protection line.

| Section          | RLS-PROTNSW-<OCN_TYPE> Description                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | SONET Line Protection                                                                                                                                                                                                                                                                                                                                                                                                    |
| Security         | Maintenance                                                                                                                                                                                                                                                                                                                                                                                                              |
| Related Messages | DLT-FFP-<OCN_TYPE>                    ENT-FFP-CLNT<br>DLT-FFP-CLNT                            EX-SW-<OCN_BLSR><br>ED-FFP-<OCN_TYPE>                    OPR-PROTNSW-<OCN_TYPE><br>ED-FFP-CLNT                            RTRV-FFP-<OCN_TYPE><br>ED-FFP-OCH                              RTRV-FFP-CLNT<br>ENT-FFP-<OCN_TYPE>                   RTRV-PROTNSW-<OCN_TYPE>                                                     |
| Input Format     | RLS-PROTNSW-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[:<DIRECTION>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies the facility in the NE to which the switch request is directed and is from the “<a href="#">FACILITY</a>” section on page 4-28</li> <li>• Valid values for &lt;DIRECTION&gt; are shown in the “<a href="#">DIRECTION</a>” section on page 4-56. The default value is RCV</li> </ul> |
| Input Example    | RLS-PROTNSW-OC48:PETALUMA:FAC-6-1:209::BTH;                                                                                                                                                                                                                                                                                                                                                                              |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                           |

### 3.4.131 RLS-PROTNSW-<PATH>: Release Protection Switch (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C, VT1, VT2)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command releases a SONET path protection switch request that was established with the OPR-PROTNSW-<PATH> command. This command assumes that only one user-initiated switch is active per AID.

Notes:

1. This command applies to path protection configuration only.
2. The VTAID should be working or protect AID only.
3. If sending this command on the Drop AID, a DENY (Invalid AID, should use working/protect AID) message will be returned.
4. To get the protection switching state (manual, lockout, forced), use the RTRV-COND-ALL or RTRV-ALM-ALL command.

| Section          | RLS-PROTNSW-<PATH> Description                                                                                                                                                                              |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Switch                                                                                                                                                                                                      |
| Security         | Maintenance                                                                                                                                                                                                 |
| Related Messages | —                                                                                                                                                                                                           |
| Input Format     | RLS-PROTNSW-<PATH>:[<TID>]:<SRC>:<CTAG>[:<DIRECTION>];<br>where: <ul style="list-style-type: none"> <li>• &lt;SRC&gt; is the AID from the “<a href="#">CrossConnectId1</a>” section on page 4-23</li> </ul> |

| Section       | RLS-PROTNSW-<PATH> Description                                 |
|---------------|----------------------------------------------------------------|
| Input Example | RLS-PROTNSW-STS1:CISCO:STS-2-1-1:123;                          |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> . |

### 3.4.132 RLS-PROTNSW-CLNT: Release Protection Switch Client

(Cisco ONS 15454 only)

This command releases a Y cable protection switch on client facilities.

| Section          | RLS-PROTNSW-CLNT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|-----------------|---------------|---------|-----------------|---------|-----------|-------------|-----------|------------|---------------|----------------|--------------|--------|------------------|--------|----------|--------|----------|-------------|----------|------------|-------------------|--------------|------------------|-----------------|---------------|---------------|--------------|------------------|--|
| Category         | DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| Security         | Maintenance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| Related Messages | <table border="0"> <tr> <td>DLT-FFP-CLNT</td> <td>OPR-PROTNSW-OCH</td> </tr> <tr> <td>DLT-LNK-&lt;MOD2O&gt;</td> <td>RLS-LASER-OTS</td> </tr> <tr> <td>ED-CLNT</td> <td>RLS-PROTNSW-OCH</td> </tr> <tr> <td>ED-DWDM</td> <td>RTRV-CLNT</td> </tr> <tr> <td>ED-FFP-CLNT</td> <td>RTRV-DWDM</td> </tr> <tr> <td>ED-FFP-OCH</td> <td>RTRV-FFP-CLNT</td> </tr> <tr> <td>ED-LNK-&lt;MOD2O&gt;</td> <td>RTRV-FFP-OCH</td> </tr> <tr> <td>ED-OCH</td> <td>RTRV-LNK-&lt;MOD2O&gt;</td> </tr> <tr> <td>ED-OMS</td> <td>RTRV-OCH</td> </tr> <tr> <td>ED-OTS</td> <td>RTRV-OMS</td> </tr> <tr> <td>ED-TRC-CLNT</td> <td>RTRV-OTS</td> </tr> <tr> <td>ED-TRC-OCH</td> <td>RTRV-PROTNSW-CLNT</td> </tr> <tr> <td>ENT-FFP-CLNT</td> <td>RTRV-PROTNSW-OCH</td> </tr> <tr> <td>ENT-LNK-&lt;MOD2O&gt;</td> <td>RTRV-TRC-CLNT</td> </tr> <tr> <td>OPR-LASER-OTS</td> <td>RTRV-TRC-OCH</td> </tr> <tr> <td>OPR-PROTNSW-CLNT</td> <td></td> </tr> </table> | DLT-FFP-CLNT | OPR-PROTNSW-OCH | DLT-LNK-<MOD2O> | RLS-LASER-OTS | ED-CLNT | RLS-PROTNSW-OCH | ED-DWDM | RTRV-CLNT | ED-FFP-CLNT | RTRV-DWDM | ED-FFP-OCH | RTRV-FFP-CLNT | ED-LNK-<MOD2O> | RTRV-FFP-OCH | ED-OCH | RTRV-LNK-<MOD2O> | ED-OMS | RTRV-OCH | ED-OTS | RTRV-OMS | ED-TRC-CLNT | RTRV-OTS | ED-TRC-OCH | RTRV-PROTNSW-CLNT | ENT-FFP-CLNT | RTRV-PROTNSW-OCH | ENT-LNK-<MOD2O> | RTRV-TRC-CLNT | OPR-LASER-OTS | RTRV-TRC-OCH | OPR-PROTNSW-CLNT |  |
| DLT-FFP-CLNT     | OPR-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| DLT-LNK-<MOD2O>  | RLS-LASER-OTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-CLNT          | RLS-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-DWDM          | RTRV-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-FFP-CLNT      | RTRV-DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-FFP-OCH       | RTRV-FFP-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-LNK-<MOD2O>   | RTRV-FFP-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-OCH           | RTRV-LNK-<MOD2O>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-OMS           | RTRV-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-OTS           | RTRV-OMS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-TRC-CLNT      | RTRV-OTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-TRC-OCH       | RTRV-PROTNSW-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ENT-FFP-CLNT     | RTRV-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ENT-LNK-<MOD2O>  | RTRV-TRC-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| OPR-LASER-OTS    | RTRV-TRC-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| OPR-PROTNSW-CLNT |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| Input Format     | RLS-PROTNSW-CLNT:[<TID>]:<AID>:<CTAG>[::];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is from the <a href="#">“FACILITY” section on page 4-28</a></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| Input Example    | RLS-PROTNSW-CLNT:CISCO:FAC-1-1:100;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                 |                 |               |         |                 |         |           |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |

### 3.4.133 RLS-PROTNSW-OCH: Release Protection Switch OCH

(Cisco ONS 15454 only)

This command releases the protection switch on a TXPP\_MR\_2.5G card.

| Section  | RLS-PROTNSW-OCH Description |
|----------|-----------------------------|
| Category | DWDM                        |
| Security | Maintenance                 |

| Section          | RLS-PROTNSW-OCH Description                                                                                                                                                                                                                       |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | DLT-FFP-CLNT<br>DLT-LNK-<MOD2O><br>ED-CLNT<br>ED-DWDM<br>ED-FFP-CLNT<br>ED-FFP-OCH<br>ED-LNK-<MOD2O><br>ED-OCH<br>ED-OMS<br>ED-OTS<br>ED-TRC-CLNT<br>ED-TRC-OCH<br>ENT-FFP-CLNT<br>ENT-LNK-<MOD2O><br>OPR-LASER-OTS<br>OPR-PROTNSW-CLNT           |
|                  | OPR-PROTNSW-OCH<br>RLS-LASER-OTS<br>RLS-PROTNSW-CLNT<br>RTRV-CLNT<br>RTRV-DWDM<br>RTRV-FFP-CLNT<br>RTRV-FFP-OCH<br>RTRV-LNK-<MOD2O><br>RTRV-OCH<br>RTRV-OMS<br>RTRV-OTS<br>RTRV-PROTNSW-CLNT<br>RTRV-PROTNSW-OCH<br>RTRV-TRC-CLNT<br>RTRV-TRC-OCH |
| Input Format     | RLS-PROTNSW-OCH:[<TID>]:<AID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is the AID from the <a href="#">“CHANNEL” section on page 4-19</a></li> </ul>                                                                  |
| Input Example    | RLS-PROTNSW-OCH:VA454-22:CHAN-2-2:1;                                                                                                                                                                                                              |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                    |

### 3.4.134 RLS-SYNCNSW: Release Synchronization Switch

This command releases the previous synchronization reference provided by the OPR-SYNCNSW command.

In a non-revertive system, the use of the RLS-SYNCNSW command may not be appropriate. All the switching between synchronization references should be initiated with the OPR-SYNCNSW command.

Once a switch is released, a minor alarm “MANSWTOPRI”, (Manual Switch to Primary Reference or Secondary...) or “FRDCSWTOPRI” (Forced Switch to Primary Reference or Secondary...), will be cleared.

| Section          | RLS-SYNCNSW Description                                                                                             |
|------------------|---------------------------------------------------------------------------------------------------------------------|
| Category         | Synchronization                                                                                                     |
| Security         | Maintenance                                                                                                         |
| Related Messages | ED-BITS<br>ED-NE-SYCN<br>ED-SYCN<br>OPR-SYNCNSW<br>REPT ALM BITS<br>REPT ALM SYCN<br>REPT EVT BITS<br>REPT EVT SYCN |
|                  | RTRV-ALM-BITS<br>RTRV-ALM-SYCN<br>RTRV-BITS<br>RTRV-COND-BITS<br>RTRV-COND-SYCN<br>RTRV-NE-SYCN<br>RTRV-SYCN        |

| Section       | RLS-SYNCNSW Description                                                                                                                                                                                                      |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | RLS-SYNCNSW:[<TID>]:[<AID>]:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is the access identifier from the “<a href="#">SYNC_REF</a>” section on page 4-34. The default value is SYNC-NE.</li> </ul> |
| Input Example | RLS-SYNCNSW:CISCO:SYNC-NE:3;                                                                                                                                                                                                 |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                               |

### 3.4.135 RMV-<MOD2\_IO>: Remove (CLNT, DS1, DS3I, EC1, FC, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, T1, T3)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command removes a facility from service.

| Section          | RMV-<MOD2_IO> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |          |        |          |        |         |       |           |          |            |       |           |       |          |                |         |               |         |                 |  |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|--------|----------|--------|---------|-------|-----------|----------|------------|-------|-----------|-------|----------|----------------|---------|---------------|---------|-----------------|--|
| Category         | Ports                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |          |        |          |        |         |       |           |          |            |       |           |       |          |                |         |               |         |                 |  |
| Security         | Maintenance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |          |        |          |        |         |       |           |          |            |       |           |       |          |                |         |               |         |                 |  |
| Related Messages | <table border="0"> <tr> <td>ED-&lt;OCN_TYPE&gt;</td> <td>RTRV-DS1</td> </tr> <tr> <td>ED-DS1</td> <td>RTRV-EC1</td> </tr> <tr> <td>ED-EC1</td> <td>RTRV-FC</td> </tr> <tr> <td>ED-FC</td> <td>RTRV-FSTE</td> </tr> <tr> <td>ED-G1000</td> <td>RTRV-G1000</td> </tr> <tr> <td>ED-T1</td> <td>RTRV-GIGE</td> </tr> <tr> <td>ED-T3</td> <td>RTRV-POS</td> </tr> <tr> <td>INIT-REG-G1000</td> <td>RTRV-T1</td> </tr> <tr> <td>RST-&lt;MOD2_IO&gt;</td> <td>RTRV-T3</td> </tr> <tr> <td>RTRV-&lt;OCN_TYPE&gt;</td> <td></td> </tr> </table>                                       | ED-<OCN_TYPE> | RTRV-DS1 | ED-DS1 | RTRV-EC1 | ED-EC1 | RTRV-FC | ED-FC | RTRV-FSTE | ED-G1000 | RTRV-G1000 | ED-T1 | RTRV-GIGE | ED-T3 | RTRV-POS | INIT-REG-G1000 | RTRV-T1 | RST-<MOD2_IO> | RTRV-T3 | RTRV-<OCN_TYPE> |  |
| ED-<OCN_TYPE>    | RTRV-DS1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |          |        |          |        |         |       |           |          |            |       |           |       |          |                |         |               |         |                 |  |
| ED-DS1           | RTRV-EC1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |          |        |          |        |         |       |           |          |            |       |           |       |          |                |         |               |         |                 |  |
| ED-EC1           | RTRV-FC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |               |          |        |          |        |         |       |           |          |            |       |           |       |          |                |         |               |         |                 |  |
| ED-FC            | RTRV-FSTE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |          |        |          |        |         |       |           |          |            |       |           |       |          |                |         |               |         |                 |  |
| ED-G1000         | RTRV-G1000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |          |        |          |        |         |       |           |          |            |       |           |       |          |                |         |               |         |                 |  |
| ED-T1            | RTRV-GIGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |          |        |          |        |         |       |           |          |            |       |           |       |          |                |         |               |         |                 |  |
| ED-T3            | RTRV-POS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |          |        |          |        |         |       |           |          |            |       |           |       |          |                |         |               |         |                 |  |
| INIT-REG-G1000   | RTRV-T1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |               |          |        |          |        |         |       |           |          |            |       |           |       |          |                |         |               |         |                 |  |
| RST-<MOD2_IO>    | RTRV-T3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |               |          |        |          |        |         |       |           |          |            |       |           |       |          |                |         |               |         |                 |  |
| RTRV-<OCN_TYPE>  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |          |        |          |        |         |       |           |          |            |       |           |       |          |                |         |               |         |                 |  |
| Input Format     | RMV-<MOD2_IO>:[<TID>]:<AID>:<CTAG>::[<CMDMODE>],[<PST>],[<SST>];<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is the access identifier from the “<a href="#">ALL</a>” section on page 4-9</li> <li>&lt;CMDMODE&gt; is the command mode; valid values are shown in the “<a href="#">CMD_MODE</a>” section on page 4-54</li> <li>&lt;PST&gt; primary state; valid values are shown in the “<a href="#">PST</a>” section on page 4-83</li> <li>&lt;SST&gt; secondary state; valid values are shown in the “<a href="#">SST</a>” section on page 4-86</li> </ul> |               |          |        |          |        |         |       |           |          |            |       |           |       |          |                |         |               |         |                 |  |
| Input Example    | RMV-EC1:CISCO:FAC-1-1:1::NORM,OOS,AINS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |               |          |        |          |        |         |       |           |          |            |       |           |       |          |                |         |               |         |                 |  |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |          |        |          |        |         |       |           |          |            |       |           |       |          |                |         |               |         |                 |  |

### 3.4.136 RST-<MOD2\_IO>: Restore (CLNT, DS1, DS3I, EC1, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, T1, T3)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command provisions a facility in service.

| Section          | RST-<MOD2_IO> Description                                                                                                                                                                     |                                                                                                           |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Category         | Ports                                                                                                                                                                                         |                                                                                                           |
| Security         | Maintenance                                                                                                                                                                                   |                                                                                                           |
| Related Messages | ED-<OCN_TYPE><br>ED-DS1<br>ED-EC1<br>ED-FC<br>ED-G1000<br>ED-T1<br>ED-T3<br>INIT-REG-G1000<br>RMV-<MOD2_IO><br>RTRV-<OCN_TYPE>                                                                | RTRV-DS1<br>RTRV-EC1<br>RTRV-FC<br>RTRV-FSTE<br>RTRV-G1000<br>RTRV-GIGE<br>RTRV-POS<br>RTRV-T1<br>RTRV-T3 |
| Input Format     | RST-<MOD2_IO>:[<TID>]:<AID>:<CTAG>[::];<br>where:<br><ul style="list-style-type: none"> <li>&lt;AID&gt; is an access identifier from the <a href="#">“ALL” section on page 4-9</a></li> </ul> |                                                                                                           |
| Input Example    | RST-EC1:CISCO:FAC-1-1:1;                                                                                                                                                                      |                                                                                                           |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                |                                                                                                           |

### 3.4.137 RTRV-<MOD\_RING>: Retrieve Bidirectional Line Switched Ring

This command retrieves the BLSR information of the NE. A two-fiber or four-fiber BLSR can be retrieved.

Cisco ONS 15327 does not support four-fiber BLSR.

Output examples:

4F BLSR

```
“BLSR-43::RINGID=43,NODEID=3,MODE=4F,RVRTV=Y,RVTM=5.0,SRVRTV=Y,
SRVTM=5.0,EASTWORK=FAC-5-1,WESTWORK=FAC-6-1,EASTPROT=FAC-12-1,
WESTPROT=FAC-13-1”
```

2F BLSR

```
“BLSR-12::RINGID=12,NODEID=2,MODE=2F,RVRTV=Y,RVTM=5.0,EASTWORK=FAC-5-1,
WESTWORK=FAC-6-1”
```

Error conditions:

1. Only ALL, NULL, BLSR-ALL, or BLSR-RINGID is allowed for this command.
2. A NULL AID defaults to the AID ALL.

3. The list AID format is supported.
4. If the system fails on getting IOR, a SROF (Get IOR Failed) error message is returned.
5. If the AID is invalid, an IIAC (Invalid AID) error message is returned.
6. If the BLSR does not exist, a SRQN (BLSR Does Not Exist) error message is returned.

| Section          | RTRV-<MOD_RING> Description                                                                                                                                                                                                                                                                                                        |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | BLSR                                                                                                                                                                                                                                                                                                                               |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                           |
| Related Messages | DLT-<MOD_RING>                      EX-SW-<OCN_BLSR><br>ED-<MOD_RING>                        RTRV-TRC-<OCN_BLSR><br>ENT-<MOD_RING>                                                                                                                                                                                                 |
| Input Format     | RTRV-<MOD_RING>:[<TID>]:[<AID>]:<CTAG>[:::];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies the BLSR of the NE. Only ALL, NULL, or a list of BLSR-# in &lt;AID&gt; is allowed; &lt;AID&gt; is from the <a href="#">“AidUnionId”</a> section on page 4-15. A null value is equivalent to ALL.</li> </ul> |
| Input Example    | RTRV-BLSR:PETALUMA:ALL:123;                                                                                                                                                                                                                                                                                                        |

| Section        | RTRV-<MOD_RING> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“[&lt;AID&gt;]:[RINGID=&lt;RINGID&gt;],[NODEID=&lt;NODEID&gt;],<br/>[MODE=&lt;MODE&gt;],[RVRTV=&lt;RVRTV&gt;],[RVTM=&lt;RVTM&gt;],<br/>[SRVRTV=&lt;SRVRTV&gt;],[SRVTM=&lt;SRVTM&gt;],<br/>[EASTWORK=&lt;EASTWORK&gt;],[WESTWORK=&lt;WESTWORK&gt;],<br/>[EASTPROT=&lt;EASTPROT&gt;],[WESTPROT=&lt;WESTPROT&gt;]”<br/>;</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies the BLSR of the NE and is from the <a href="#">“AidUnionId” section on page 4-15</a></li> <li>• &lt;RINGID&gt; identifies the BLSR ringid of the NE; &lt;RINGID&gt; is a string of up to six characters, valid characters are [A–Z, 0–9]. &lt;RINGID&gt; is optional</li> <li>• &lt;NODEID&gt; identifies the BLSR node ID of the NE and ranges from 0–31; &lt;NODEID&gt; is an integer</li> <li>• &lt;MODE&gt; identifies the BLSR mode and can be 2-fiber or 4-fiber; valid values for &lt;MODE&gt; are shown in the <a href="#">“BLSR_MODE” section on page 4-50</a></li> <li>• &lt;RVRTV&gt; identifies the revertive mode; valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a></li> <li>• &lt;RVTM&gt; identifies the revertive time; valid values are shown in the <a href="#">“REVERTIVE_TIME” section on page 4-84</a></li> <li>• &lt;SRVRTV&gt; identifies the span revertive mode; valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a> and &lt;SRVRTV&gt; is optional</li> <li>• &lt;SRVTM&gt; identifies the span revertive time; valid values are shown in the <a href="#">“REVERTIVE_TIME” section on page 4-84</a>. &lt;SRVTM&gt; is optional.</li> <li>• &lt;EASTWORK&gt; identifies the east working facility and is the AID from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;WESTWORK&gt; identifies the west working facility and is the AID from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;EASTPROT&gt; identifies the east protecting facility and is the AID from the <a href="#">“FACILITY” section on page 4-28</a>; &lt;EASTPROT&gt; is optional</li> <li>• &lt;WESTPROT&gt; identifies the west protecting facility and is the AID from the <a href="#">“FACILITY” section on page 4-28</a>; &lt;WESTPROT&gt; is optional</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/>M 001 COMPLD<br/>“BLSR-43::RINGID=43,NODEID=3,MODE=4F,RVRTV=Y,RVTM=5.0,<br/>SRVRTV=Y,SRVTM=5.0,EASTWORK=FAC-5-1,WESTWORK=FAC-6-1,<br/>EASTPROT=FAC-12-1,WESTPROT=FAC-13-1”<br/>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

### 3.4.138 RTRV-<OCN\_TYPE>: Retrieve (OC3, OC12, OC48, OC192)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.



This command retrieves the attributes (i.e., service parameters) and the state of an OC-N facility.

Both RINGID and BLSRTYPE identify the OCN port connected with a BLSR. These attributes are only presented for the OC12, OC48, OC192 ports within a BLSR connection. The RTRV-<MOD\_RING> command with the AID BLSR-RINGID, can provide more information on this BLSR.

**Note**

This command does not show the WVLEN attribute if the OCN port has zero value on WVLEN.

UNI-C DCC provisioning notes:

1. The attributes DCC(Y/N) and mode (SONET/SDH) remain the same in the ED/RTRV-OCN commands when the DCC is used for UNI-C, in which case the port attribute UNIC is enabled (UNIC=Y).
2. UNI-C DCC termination ca not be deleted by the regular DCC de-provisioning command.
3. If the DCC is created under regular SONET provisioning, and this port is used by UNI-C, the port is converted as an UNI-C DCC automatically.
4. De-provisioning UNI-C IF/IB IPCC will free up DCC termination automatically.
5. The parameters ALSMODE, ALSRCINT, and ALSRCPW are only applicable for OC3-8, OC192 and OC48ELR cards.
6. SSMRCV will display the quality of the individual port.

| Section          | RTRV-<OCN_TYPE> Description                                                                                                                                                                                                  |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Ports                                                                                                                                                                                                                        |
| Security         | Retrieve                                                                                                                                                                                                                     |
| Related Messages | ED-<OCN_TYPE> RTRV-DS1<br>ED-DS1 RTRV-EC1<br>ED-EC1 RTRV-FC<br>ED-FC RTRV-FSTE<br>ED-G1000 RTRV-G1000<br>ED-T1 RTRV-GIGE<br>ED-T3 RTRV-POS<br>INIT-REG-G1000 RTRV-T1<br>RMV-<MOD2_IO> RTRV-T3<br>RST-<MOD2_IO>               |
| Input Format     | RTRV-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[:::];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier from the <a href="#">“FACILITY” section on page 4-28</a> and must not be null.</li> </ul> |
| Input Example    | RTRV-OC48:PENNGROVE:FAC-6-1:236;                                                                                                                                                                                             |

| Section       | RTRV-<OCN_TYPE> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format | <p>SID DATE TIME</p> <p>M CTAG COMPLD</p> <pre> "&lt;AID&gt;:.,[&lt;ROLE&gt;],[&lt;STATUS&gt;]:[DCC=&lt;DCC&gt;],[AREA=&lt;AREA&gt;],[ TMGREF=&lt;TMGREF&gt;],[SYNCSMSG=&lt;SYNCSMSG&gt;],[ SENDDUS=&lt;SENDDUS&gt;],[PJMON=&lt;PJMON&gt;],[SFBER=&lt;SFBER&gt;],[ SDBER=&lt;SDBER&gt;],[MODE=&lt;MODE&gt;],[WVLEN=&lt;WVLEN&gt;],[ RINGID=&lt;RINGID&gt;],[BLSRTYPE=&lt;BLSRTYPE&gt;],[MUX=&lt;MUX&gt;],[ UNIC=&lt;UNIC&gt;],[CCID=&lt;CCID&gt;],[NBRX=&lt;NBRX&gt;],[SOAK=&lt;SOAK&gt;],[ SOAKLEFT=&lt;SOAKLEFT&gt;],[SSMRCV=&lt;SSMRCV&gt;],[OSPF=&lt;OSPF&gt;],[ LDCC=&lt;LDCC&gt;],[ALSMODE=&lt;ALSMODE&gt;],[ALSRCINT=&lt;ALSRCINT&gt;],[ ALSRCPW=&lt;ALSRCPW&gt;]:&lt;PST&gt;,[&lt;SST&gt;]" </pre> <p>;</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;ROLE&gt; identifies the OCN port role (e.g. WORK or PROT); valid values for &lt;ROLE&gt; are shown in the <a href="#">“SIDE” section on page 4-86</a>, &lt;ROLE&gt; is optional</li> <li>• &lt;STATUS&gt; identifies the OCN port status (e.g. Active or Standby); valid values for &lt;STATUS&gt; are shown in the <a href="#">“STATUS” section on page 4-86</a>, &lt;STATUS&gt; is optional</li> <li>• &lt;DCC&gt; identifies the OCN port DCC connection and defaults to N; valid values for &lt;DCC&gt; are shown in the <a href="#">“EXT_RING” section on page 4-65</a>, &lt;DCC&gt; is optional</li> <li>• &lt;TMGREF&gt; identifies if an OCN port has timing reference and defaults to N; valid values for &lt;TMGREF&gt; are shown in the <a href="#">“ON_OFF” section on page 4-76</a>, &lt;TMGREF&gt; is optional</li> <li>• &lt;SYNCSMSG&gt; indicates if sync status messaging is enabled or disabled on the facility; &lt;SYNCSMSG&gt; defaults to Y and the valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a>. &lt;SYNCSMSG&gt; is optional.</li> <li>• &lt;SENDDUS&gt; indicates that the facility will send out the DUS (do not use for synchronization) value as the sync status message for that facility; &lt;SENDDUS&gt; defaults to N and the valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a>. &lt;SENDDUS&gt; is optional</li> <li>• &lt;PJMON&gt; identifies the OCN port PJMON; &lt;PJMON&gt; defaults to 0 (zero), is an integer and is optional</li> </ul> |

| Section                      | RTRV-<OCN_TYPE> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| Output Format<br>(continued) | <ul style="list-style-type: none"> <li>• &lt;SFBER&gt; identifies the OCN port SFBER and defaults to 1E-4; valid values for &lt;SFBER&gt; are shown in the “<a href="#">SF_BER</a>” section on page 4-86, &lt;SFBER&gt; is optional</li> <li>• &lt;SDBER&gt; identifies the OCN port SDBER and defaults to 1E-7; valid values for &lt;SDBER&gt; are shown in the “<a href="#">SD_BER</a>” section on page 4-85, &lt;SDBER&gt; is optional</li> <li>• &lt;MODE&gt; identifies the OCN port mode (e.g. SONET, SDH) and defaults to SONET; valid values for &lt;MODE&gt; are shown in the “<a href="#">OPTICAL_MODE</a>” section on page 4-77, &lt;MODE&gt; is optional</li> <li>• &lt;WVLEN&gt; identifies the OCN port wavelength; &lt;WVLEN&gt; is wavelength in nm (nanometer) for unit, e.g. WVLEN=1310.00 means it operates at 1310 nm in the DWM application. &lt;WVLEN&gt; is a float and is optional</li> <li>• &lt;RINGID&gt; identifies the BLSR RINGID with which the port is connected. The &lt;RINGID&gt; ranges from 0–9999; &lt;RINGID&gt; is an integer and is optional</li> <li>• &lt;BLSRTYPE&gt; identifies the BLSR type with which the port is connected. Valid values for &lt;BLSRTYPE&gt; are shown in the “<a href="#">BLSR_TYPE</a>” section on page 4-51 and &lt;BLSRTYPE&gt; is optional.</li> <li>• &lt;MUX&gt; BLSR Extension Byte. Valid values for &lt;MUX&gt; are shown in the “<a href="#">MUX_TYPE</a>” section on page 4-75; &lt;MUX&gt; is optional.</li> <li>• &lt;UNIC&gt; indicates if the port connects to the UCP; valid values are shown in the “<a href="#">ON_OFF</a>” section on page 4-76 and &lt;UNIC&gt; is optional</li> <li>• &lt;CCID&gt; indicates the UCP control channel ID; &lt;CCID&gt; is an integer and is optional</li> <li>• &lt;NBRIX&gt; indicates the UCP neighbor ID. &lt;NBRIX&gt; is an integer and is optional</li> <li>• &lt;SOAK&gt; OOS-AINS to IS transition soak time measured in 15 minute intervals. &lt;SOAK&gt; is an integer and is optional</li> <li>• &lt;SOAKLEFT&gt; time remaining for the transition from OOS-AINS to IS measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. &lt;SOAKLEFT&gt; is optional<br/>Rules for &lt;SOAKLEFT&gt; are as follows: <ul style="list-style-type: none"> <li>– When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed.</li> <li>– When the port is in OOS_AINS, but the countdown has not started due to fault signal the value will be SOAKLEFT=NOT-STARTED.</li> <li>– When the port is in OOS_AINS state and the countdown has started the value will be shown in HH-MM format.</li> </ul> </li> <li>• &lt;SSMRCV&gt; displays the quality of the individual port and is optional; valid values are shown in the “<a href="#">SYNC_CLOCK_REF_QUALITY_LEVEL</a>” section on page 4-89</li> <li>• &lt;OSPF&gt; indicates the OSPF discovery and is optional; valid values are shown in the “<a href="#">ON_OFF</a>” section on page 4-76</li> </ul> |

| Section                   | RTRV-<OCN_TYPE> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format (continued) | <ul style="list-style-type: none"> <li>• &lt;LDCC&gt; indicates the Line DCC connection of the port and is optional; valid values are shown in the “EXT_RING” section on page 4-65</li> <li>• &lt;ALSMODE&gt; this parameter is only applicable for OC3-8, OC192, and OC48ELR cards. It indicates the mode of operation for Automatic Laser Shutdown (ALS) and is optional; valid values are shown in the “ALS_MODE” section on page 4-49</li> <li>• &lt;ALSRCINT&gt; this parameter is only applicable for OC3-8, OC192, and OC48ELR cards. It indicates the ALS recovery interval which ranges from 100–300 seconds; &lt;ALSRCINT&gt; is an integer and is optional</li> <li>• &lt;ALSRCPW&gt; this parameter is only applicable for OC3-8, OC192, and OC48ELR cards. It indicates the ALS recovery pulse width which ranges from 2–100 seconds; &lt;ALSRCPW&gt; is a float and is optional</li> <li>• &lt;PST&gt; primary state; valid values for &lt;PST&gt; are shown in the “PST” section on page 4-83</li> <li>• &lt;SST&gt; secondary state; valid values are shown in the “SST” section on page 4-86 and &lt;SST&gt; is optional</li> </ul> |
| Output Example            | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD “FAC-6-1:.,WORK,ACT:DCC=Y,AREA=10.92.63.1,TMGREF=N,SYNMSG=Y, SENDDUS=N,PJMON=48,SFBER=1E-4,SDBER=1E-6,MODE=SONET, WVLEN=1310.00,RINGID=43,BLSRATYPE=WESTWORK,MUX=E2,UNIC=Y, CCID=8,NBRIX=2,SOAK=52,SOAKLEFT=12-25,SSMRCV=STU,OSPF=Y, LDCC=Y,ALSMODE=DISABLED,ALSRCINT=100,ALSRCPW=2.0:OOS, AINS” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Errors                    | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### 3.4.139 RTRV-<PATH>: Retrieve (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C, VT1, VT2)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command retrieves the attributes associated with an STS or VT path.

Supported AIDs are: ALL, SLOT-N (N=1,2,...,ALL), and STS/VT-specific AIDs

The SFBER, SDBER, RVRTV, RVTM, SWPDIP, HOLDOFFTIMER, and UPSRPTHSTATE parameters only apply to path protection.

The path trace message is a 64 character string including the terminating CR (carriage return) and LF (line feed) that is transported in the J1 byte of the SONET STS Path overhead.

The EXPTRC indicates the contents of the expected incoming path trace are provisioned by the user in the ED-STTS\_PATH command. The TRC indicates the contents of the outgoing path trace message. The INCTRC indicates the contents of the incoming path trace message.

The path trace mode has three modes: OFF, MANUAL, and AUTO. The mode defaults to OFF. The MANUAL mode performs the comparison of the received string with the user entered expected string. The AUTO mode performs the comparison of the present received string with an expected string set to a previously received string. If there is a mismatch, the TIM-P alarm is raised. When the path trace mode is in OFF mode, there is no path trace processing, and all the alarm and state conditions are reset.

When the expected string is queried under the OFF path trace mode, the expected string is a copy of the provisioned string or NULL. When an expected string is queried under the MANUAL path trace mode, the expected string is a copy of the user entered string. When an expected string is queried under the AUTO path trace mode, the expected string is a copy of the acquired received string or NULL if the string has not been acquired.

When the incoming string is queried under the OFF path trace mode, the incoming string is NULL. When an incoming string is queried under the MANUAL or AUTO path trace mode, the incoming string is a copy of the received string or NULL if the string has not been received.

J1 (EXPTRC) is implemented on the DS1/DS1N, DS3E/DS3NE, DS3XM, EC1, OC3, OC48AS and OC192.

TRC and INCTRC are supported on DS1(N), DS3(N)E, and DS3XM cards.

Notes:

1. An optional parameter BLSRPHTHTYPE is introduced into this command to provide more options to retrieve J1/C2 of a particular BLSR path. This field is valid only if the queried AID port has BLSR. The BLSRPHTHTYPE defaults to “non-pca” path type if the BLSR is switched, or defaults to all BLSR path types if there is no BLSR switching.
2. Sending this command while BLSRPHTHTYPE=PCA, whether there is BLSR switch or not, the PCA path J1/C2 data will be returned (if there is PCA circuit on the AID). Sending this command with an STS AID without circuits and no BLSR switched on the STS, an error message will be returned.
3. An optional output parameter BLSRPTHSTATE is introduced into this command output. Each J1/C2 output data of this command will include the BLSR path state information.
4. After the BLSR switching, the J1/IPPM/C2 data can be retrieved over the protection path, to provision J1 trace string, trace mode, or threshold is not allowed on the protection path.
5. HOLDOFFTIMER is not specific to a path. Instead, it is applicable to the path protection selector.

| Section          | RTRV-<PATH> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Paths                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Related Messages | ED-<MOD_PATH><br>RTRV-<PATH><br>RTRV-ST5                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Input Format     | RTRV-<PATH>:[<TID>]:<AID>:<CTAG>::<br>[BLSRPHTHTYPE=<BLSRPHTHTYPE>][:];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier from the “<a href="#">CrossConnectId1</a>” section on page 4-23 and must not be null</li> <li>• &lt;BLSRPHTHTYPE&gt; indicates the BLSR path type only if the port is on the BLSR. It defaults to “non-pca”. Valid values are shown in the “<a href="#">BLSR_PTH_TYPE</a>” section on page 4-51. A null value defaults to “non-pca”</li> </ul> |
| Input Example    | RTRV-ST51:FERNDAL5:ST5-2-1-4:238:::BLSRPHTHTYPE=NON-PCA;                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| Section       | RTRV-<PATH> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format | <p>SID DATE TIME<br/>M CTAG COMPLD</p> <pre> "&lt;AID&gt;::[LEVEL=&lt;LEVEL&gt;],[SFBER=&lt;SFBER&gt;],[SDBER=&lt;SDBER&gt;],[ RVRTV=&lt;RVRTV&gt;],[RVTM=&lt;RVTM&gt;],[SWPDIP=&lt;SWPDIP&gt;],[ HOLDOFFTIMER=&lt;HOLDOFFTIMER&gt;],[EXPTRC=&lt;EXPTRC&gt;],[ TRC=&lt;TRC&gt;],[INCTRC=&lt;INCTRC&gt;],[TRCMODE=&lt;TRCMODE&gt;],[ TACC=&lt;TACC&gt;],[TAPTYPE=&lt;TAPTYPE&gt;],[ UPSRPTHSTATE=&lt;UPSRPTHSTATE&gt;],[C2=&lt;C2&gt;],[ BLSRPTHSTATE=&lt;BLSRPTHSTATE&gt;]:[&lt;PST&gt;],[&lt;SST&gt;]" </pre> <p>;</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier from the <a href="#">“CrossConnectId1” section on page 4-23</a></li> <li>• &lt;LEVEL&gt; indicates the rate of the cross connected channel; valid values for &lt;LEVEL&gt; are shown in the <a href="#">“PATH” section on page 4-81</a>, &lt;LEVEL&gt; is optional</li> <li>• &lt;SFBER&gt; identifies the STS path SFBER which only applies to path protection; &lt;SFBER&gt; defaults to 1E-4 and valid values are shown in the <a href="#">“SF_BER” section on page 4-86</a>, &lt;SFBER&gt; is optional</li> <li>• &lt;SDBER&gt; identifies the STS path SDBER which only applies to path protection; &lt;SDBER&gt; defaults to 1E-6 and valid values are shown in the <a href="#">“SD_BER” section on page 4-85</a>, &lt;SDBER&gt; is optional</li> <li>• &lt;RVRTV&gt; identifies a revertive mode which only applies to path protection and defaults to N (non-revertive mode) when a path protection STSp is created; valid values for &lt;RVRTV&gt; are shown in the <a href="#">“ON_OFF” section on page 4-76</a> and &lt;RVRTV&gt; is optional</li> <li>• &lt;RVTM&gt; identifies a revertive time which only applies to path protection and defaults to empty because &lt;RVRTV&gt; is N when a path protection path is created; valid values for &lt;RVTM&gt; are shown in the <a href="#">“REVERTIVE_TIME” section on page 4-84</a> and &lt;RVTM&gt; is optional</li> </ul> |

| Section                      | RTRV-<PATH> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| Output Format<br>(continued) | <ul style="list-style-type: none"> <li>• &lt;SWPDIP&gt; switch on PDI-P. Applicable only to STS-level paths; valid values are shown in the “ON_OFF” section on page 4-76; &lt;SWDIP&gt; is optional</li> <li>• &lt;HOLDOFFTIMER&gt; is an integer and is optional</li> <li>• &lt;EXPTRC&gt; indicates the expected path trace message (J1) contents. The EXPTRC is any 64 character string, including the terminating CR (carriage return) and LF (line feed); &lt;EXPTRC&gt; defaults to null when a path protection STSp is created. &lt;EXPTRC&gt; is a string and is optional</li> <li>• &lt;TRC&gt; identifies the path trace message to be transmitted. The TRC is any combination of 64 characters, including the terminating CR (carriage return) and LF (line feed). The trace byte (J1) continuously transmits a 64 byte string, one byte at a time. A null value defaults to the NE transmitting null characters (Hex 00); &lt;TRC&gt; defaults to null when a path protection path is created. &lt;TRC&gt; is a string and is optional</li> <li>• &lt;INCTRC&gt; identifies the incoming path trace message contents. The INCTRC is any combination of 64 characters; &lt;INCTRC&gt; defaults to null when path protection STSp is created. &lt;INCTRC&gt; is a string and is optional</li> <li>• &lt;TRCMODE&gt; indicates the path trace mode, and defaults to the OFF mode. Applicable only to STS-level paths; valid values for &lt;TRCMODE&gt; are shown in the “TRCMODE” section on page 4-94 and &lt;TRCMODE&gt; is optional</li> <li>• &lt;TACC&gt; is the AID from the “Conditions” section on page 7-18 and is optional</li> <li>• &lt;TAPTYPE&gt; indicates the TAP type; valid values are shown in the “TAPTYPE” section on page 4-92</li> <li>• &lt;UPSRPTHSTATE&gt; indicates whether the given AID is the working or standby path of a path protection cross-connect; valid values are shown in the “STATUS” section on page 4-86</li> <li>• &lt;C2&gt; indicates C2 Byte Hex Code. Applicable only to STS-level paths; valid values are shown in the “C2_BYTE” section on page 4-52</li> <li>• &lt;BLSRPTHSTATE&gt; indicates the BLSR path state only if the port is on the BLSR. Applicable only to the STS-level paths; valid values are shown in the “BLSR_PTH_STATE” section on page 4-51 and &lt;BLSRPTHSTATE&gt; is optional</li> <li>• &lt;PST&gt; primary state; valid values are shown in the “PST” section on page 4-83. &lt;PST&gt; is optional</li> <li>• &lt;SST&gt; secondary state; valid values are shown in the “SST” section on page 4-86. &lt;SST&gt; is optional</li> </ul> |
| Output Example               | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD “STS-2-1-4::LEVEL=STS1,SFBER=1E-3,SDBER=1E-5,RVRTV=Y,RVTM=1.0, SWPDIP=Y,HOLDOFFTIMER=2000,EXPTRC=“EXPTRCSTRING”, TRC=“TRCSTRING”,INCTRC=“INCTRCSTRING”,TRCMODE=AUTO, TACC=8,TAPTYPE=DUAL,UPSRPTHSTATE=ACT,C2=0X04, BLSRPTHSTATE=PROTPHACT:OOS,AINS” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Errors                       | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

### 3.4.140 RTRV-ALM-<MOD2ALM>:Retrieve Alarm (CLNT, DS1, DS3I, EC1, FC, FSTE, G1000, GIGE, OC12, OC192, OC3, OC48, OCH, OMS, OSC, OTS, POS, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, UDCC, UDCC, UDCF, VT1, VT2, WLEN)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command retrieves and sends the current status of alarm conditions. The alarm condition or severity to be retrieved can be specified by using the input parameters as a filter.

Notes:

1. VT1-n-n-n replaces PS\_VT1-n-n-n for the VT1 alarm AID.
2. The [<AIDTYPE>] shows STS1 for STS alarms.

| Section          | RTRV-ALM-<MOD2ALM> Description |                     |
|------------------|--------------------------------|---------------------|
| Category         | Fault                          |                     |
| Security         | Retrieve                       |                     |
| Related Messages | REPT ALM <MOD2ALM>             | RTRV-ALM-BITS       |
|                  | REPT ALM BITS                  | RTRV-ALM-ENV        |
|                  | REPT ALM COM                   | RTRV-ALM-EQPT       |
|                  | REPT ALM ENV                   | RTRV-ALM-SYNCN      |
|                  | REPT ALM EQPT                  | RTRV-ALM-UCP        |
|                  | REPT ALM SYNCN                 | RTRV-ATTR-CONT      |
|                  | REPT ALM UCP                   | RTRV-ATTR-ENV       |
|                  | REPT EVT <MOD2ALM>             | RTRV-COND-<MOD2ALM> |
|                  | REPT EVT BITS                  | RTRV-COND-ALL       |
|                  | REPT EVT COM                   | RTRV-COND-BITS      |
|                  | REPT EVT ENV                   | RTRV-COND-ENV       |
|                  | REPT EVT EQPT                  | RTRV-COND-EQPT      |
|                  | REPT EVT FXFR                  | RTRV-COND-SYNCN     |
|                  | REPT EVT IOSCFG                | RTRV-COND-UCP       |
|                  | REPT EVT SYNCN                 | SET-ATTR-CONT       |
|                  | REPT EVT UCP                   | SET-ATTR-ENV        |
|                  | RTRV-ALM-ALL                   |                     |



| Section        | RTRV-ALM-<MOD2ALM> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format   | <p>RTRV-ALM-&lt;MOD2ALM&gt;:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;::[&lt;NTFCNCDE&gt;],<br/>[&lt;CONDTYPE&gt;],[&lt;SRVEFF&gt;][,.,,];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier from the “AidUnionId” section on page 4-15 and must not be null</li> <li>• &lt;NTFCNCDE&gt; is the 2-letter notification code; valid values for &lt;NTFCNCDE&gt; are shown in the “NOTIF_CODE” section on page 4-75. A null value is equivalent to ALL.</li> <li>• &lt;CONDTYPE&gt; is the alarm condition; valid values for &lt;CONDTYPE&gt; are shown in the “Conditions” section on page 7-18. A null value is equivalent to ALL.</li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values for &lt;SRVEFF&gt; are shown in the “SERV_EFF” section on page 4-85. A null value is equivalent to ALL.</li> </ul>                                                                                                                                                                                                                                                                                       |
| Input Example  | RTRV-ALM-OC12:ELDRIDGE:FAC-5-1:225::MN,SD,SA;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Output Format  | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“&lt;AID&gt;,[&lt;AIDTYPE&gt;]:&lt;NTFCNCDE&gt;,&lt;CONDTYPE&gt;,&lt;SRVEFF&gt;,<br/>[&lt;OCRDAT&gt;],[&lt;OCR TM&gt;],,:[&lt;DESC&gt;]”<br/>;<br/>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier from the “ALL” section on page 4-9</li> <li>• &lt;AIDTYPE&gt; is the type of access identifier; valid values for &lt;AIDTYPE&gt; are shown in the “MOD2ALM” section on page 4-70, &lt;AIDTYPE&gt; is optional</li> <li>• &lt;NTFCNCDE&gt; is the 2-letter notification code; valid values for &lt;NTFCNCDE&gt; are shown in the “NOTIF_CODE” section on page 4-75</li> <li>• &lt;CONDTYPE&gt; is the alarm condition; valid values for &lt;CONDTYPE&gt; are shown in the “Conditions” section on page 7-18</li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values for &lt;SRVEFF&gt; are shown in the “SERV_EFF” section on page 4-85</li> <li>• &lt;OCR DAT&gt; is a date and is optional</li> <li>• &lt;OCR TM&gt; is a time and is optional</li> <li>• &lt;DESC&gt; is the condition description; &lt;DESC&gt; is a string and is optional</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/>M 001 COMPLD<br/>“FAC-5-1,OC12:MJ,SD,SA,09-05,12-30-20,,:\n<br/>“BER AT SIGNAL DEGRADE LEVEL”,”<br/>;<br/>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Errors         | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### 3.4.141 RTRV-ALM-ALL: Retrieve Alarm All

This command retrieves and sends the current status of all active alarm conditions. The alarm condition or severity to be retrieved is specified using the input parameters as a filter.

According to GR-833, the RTRV-ALM-ALL command only reports EQPT, COM, and rr (T1, T3, OCN, EC1, STSN, VT1, DS1, G1000, ML-series, TXP and MXP) alarms.

To retrieve all the NE alarms, issue all of the following commands:

```
RTRV-ALM-ALL
RTRV-ALM-BITS
RTRV-ALM-ENV
RTRV-ALM-SYNCN
```

| Section            | RTRV-ALM-ALL Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|---------------|---------------|--------------|--------------|--------------|---------------|---------------|----------------|---------------|--------------|----------------|----------------|--------------|---------------|--------------------|---------------------|---------------|---------------|--------------|----------------|--------------|---------------|---------------|----------------|---------------|-----------------|-----------------|---------------|---------------|---------------|------------------|--------------|----------------|-------------------|--------------|--|
| Category           | Fault                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| Security           | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| Related Messages   | <table border="0"> <tr> <td>REPT ALM &lt;MOD2ALM&gt;</td> <td>RTRV-ALM-&lt;MOD2ALM&gt;</td> </tr> <tr> <td>REPT ALM BITS</td> <td>RTRV-ALM-BITS</td> </tr> <tr> <td>REPT ALM COM</td> <td>RTRV-ALM-ENV</td> </tr> <tr> <td>REPT ALM ENV</td> <td>RTRV-ALM-EQPT</td> </tr> <tr> <td>REPT ALM EQPT</td> <td>RTRV-ALM-SYNCN</td> </tr> <tr> <td>REPT ALM SECU</td> <td>RTRV-ALM-UCP</td> </tr> <tr> <td>REPT ALM SYNCN</td> <td>RTRV-ATTR-CONT</td> </tr> <tr> <td>REPT ALM UCP</td> <td>RTRV-ATTR-ENV</td> </tr> <tr> <td>REPT EVT &lt;MOD2ALM&gt;</td> <td>RTRV-COND-&lt;MOD2ALM&gt;</td> </tr> <tr> <td>REPT EVT BITS</td> <td>RTRV-COND-ALL</td> </tr> <tr> <td>REPT EVT COM</td> <td>RTRV-COND-BITS</td> </tr> <tr> <td>REPT EVT ENV</td> <td>RTRV-COND-ENV</td> </tr> <tr> <td>REPT EVT EQPT</td> <td>RTRV-COND-EQPT</td> </tr> <tr> <td>REPT EVT FXFR</td> <td>RTRV-COND-SYNCN</td> </tr> <tr> <td>REPT EVT IOSCFG</td> <td>RTRV-COND-UCP</td> </tr> <tr> <td>REPT EVT SECU</td> <td>SET-ATTR-CONT</td> </tr> <tr> <td>REPT EVT SESSION</td> <td>SET-ATTR-ENV</td> </tr> <tr> <td>REPT EVT SYNCN</td> <td>SET-ATTR-SECUDFLT</td> </tr> <tr> <td>REPT EVT UCP</td> <td></td> </tr> </table> | REPT ALM <MOD2ALM> | RTRV-ALM-<MOD2ALM> | REPT ALM BITS | RTRV-ALM-BITS | REPT ALM COM | RTRV-ALM-ENV | REPT ALM ENV | RTRV-ALM-EQPT | REPT ALM EQPT | RTRV-ALM-SYNCN | REPT ALM SECU | RTRV-ALM-UCP | REPT ALM SYNCN | RTRV-ATTR-CONT | REPT ALM UCP | RTRV-ATTR-ENV | REPT EVT <MOD2ALM> | RTRV-COND-<MOD2ALM> | REPT EVT BITS | RTRV-COND-ALL | REPT EVT COM | RTRV-COND-BITS | REPT EVT ENV | RTRV-COND-ENV | REPT EVT EQPT | RTRV-COND-EQPT | REPT EVT FXFR | RTRV-COND-SYNCN | REPT EVT IOSCFG | RTRV-COND-UCP | REPT EVT SECU | SET-ATTR-CONT | REPT EVT SESSION | SET-ATTR-ENV | REPT EVT SYNCN | SET-ATTR-SECUDFLT | REPT EVT UCP |  |
| REPT ALM <MOD2ALM> | RTRV-ALM-<MOD2ALM>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| REPT ALM BITS      | RTRV-ALM-BITS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| REPT ALM COM       | RTRV-ALM-ENV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| REPT ALM ENV       | RTRV-ALM-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| REPT ALM EQPT      | RTRV-ALM-SYNCN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| REPT ALM SECU      | RTRV-ALM-UCP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| REPT ALM SYNCN     | RTRV-ATTR-CONT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| REPT ALM UCP       | RTRV-ATTR-ENV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| REPT EVT <MOD2ALM> | RTRV-COND-<MOD2ALM>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| REPT EVT BITS      | RTRV-COND-ALL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| REPT EVT COM       | RTRV-COND-BITS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| REPT EVT ENV       | RTRV-COND-ENV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| REPT EVT EQPT      | RTRV-COND-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| REPT EVT FXFR      | RTRV-COND-SYNCN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| REPT EVT IOSCFG    | RTRV-COND-UCP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| REPT EVT SECU      | SET-ATTR-CONT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| REPT EVT SESSION   | SET-ATTR-ENV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| REPT EVT SYNCN     | SET-ATTR-SECUDFLT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| REPT EVT UCP       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| Input Format       | <p>RTRV-ALM-ALL:[&lt;TID&gt;]::&lt;CTAG&gt;:::&lt;NTFCNCDE&gt;],[&lt;CONDITION&gt;],<br/>[&lt;SRVEFF&gt;][,,,];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;NTFCNCDE&gt; is a notification code; valid values for &lt;NTFCNCDE&gt; are shown in the “<a href="#">NOTIF_CODE</a>” section on page 4-75. A null value is equivalent to ALL.</li> <li>• &lt;CONDITION&gt; is the type of alarm condition; valid values for &lt;CONDITION&gt; are shown in the “<a href="#">Conditions</a>” section on page 7-18. A null value is equivalent to ALL.</li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values for &lt;SRVEFF&gt; are shown in the “<a href="#">SERV_EFF</a>” section on page 4-85. A null value is equivalent to ALL.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                          |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |
| Input Example      | RTRV-ALM-ALL:COTATI::229::MN,PWRRESTART,NSA;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                    |               |               |              |              |              |               |               |                |               |              |                |                |              |               |                    |                     |               |               |              |                |              |               |               |                |               |                 |                 |               |               |               |                  |              |                |                   |              |  |

| Section        | RTRV-ALM-ALL Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“[&lt;AID&gt;],[&lt;AIDTYPE&gt;]:&lt;NTFCNCDE&gt;,&lt;CONDTYPE&gt;,&lt;SRVEFF&gt;,.,.,:<br/>[&lt;DESC&gt;],[&lt;AIDDET&gt;]”<br/>;<br/>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the identifier that has an alarm condition and is from the “ALL” section on page 4-9, &lt;AID&gt; is optional</li> <li>• &lt;AIDTYPE&gt; is the type of access identifier; valid values for &lt;AIDTYPE&gt; are shown in the “MOD2B” section on page 4-71, &lt;AIDTYPE&gt; is optional</li> <li>• &lt;NTFCNCDE&gt; is the notification code; valid values for &lt;NTFCNCDE&gt; are shown in the “NOTIF_CODE” section on page 4-75</li> <li>• &lt;CONDTYPE&gt; is the single type of alarm condition being reported on this particular line; valid values are shown in the “Conditions” section on page 7-18</li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values for &lt;SRVEFF&gt; are shown in the “SERV_EFF” section on page 4-85</li> <li>• &lt;DESC&gt; is the condition description; &lt;DESC&gt; is a string and is optional</li> <li>• &lt;AIDDET&gt; is the supplementary equipment identification; &lt;AIDDET&gt; is a string and is optional</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/>M 001 COMPLD<br/>“SLOT-2,EQPT:MN,PWRRESTART,NSA,.,.,:“POWER FAIL RESTART”,<br/>DS1-14”<br/>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

### 3.4.142 RTRV-ALM-BITS: Retrieve Alarm Building Integrated Timing Supply

This command retrieves and sends the current status of alarm conditions associated with the BITS facility. The alarm condition or severity retrieved is specified using the input parameters as a filter.

| Section  | RTRV-ALM-BITS Description |
|----------|---------------------------|
| Category | Synchronization           |
| Security | Retrieve                  |

| Section          | RTRV-ALM-BITS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ED-BITS<br>ED-NE-SYCN<br>ED-SYCN<br>OPR-SYCN<br>REPT ALM <MOD2ALM><br>REPT ALM BITS<br>REPT ALM COM<br>REPT ALM ENV<br>REPT ALM EQPT<br>REPT ALM SECU<br>REPT ALM SYCN<br>REPT ALM UCP<br>REPT EVT <MOD2ALM><br>REPT EVT BITS<br>REPT EVT COM<br>REPT EVT ENV<br>REPT EVT EQPT<br>REPT EVT FXFR<br>REPT EVT IOSCFG<br>REPT EVT SECU<br>REPT EVT SESSION<br>REPT EVT SYCN<br>REPT EVT UCP<br>RLS-SYCN<br>RTRV-ALM-<MOD2ALM><br>RTRV-ALM-ALL<br>RTRV-ALM-ENV<br>RTRV-ALM-EQPT<br>RTRV-ALM-SYCN<br>RTRV-ALM-UCP<br>RTRV-ATTR-CONT<br>RTRV-ATTR-ENV<br>RTRV-BITS<br>RTRV-COND-<MOD2ALM><br>RTRV-COND-ALL<br>RTRV-COND-BITS<br>RTRV-COND-ENV<br>RTRV-COND-EQPT<br>RTRV-COND-SYCN<br>RTRV-COND-UCP<br>RTRV-NE-SYCN<br>RTRV-SYCN<br>SET-ATTR-CONT<br>SET-ATTR-ENV<br>SET-ATTR-SECUDFLT                                                                                                                                                   |
| Input Format     | RTRV-ALM-BITS:[<TID>]:<AID>:<CTAG>:.[<NTFCNCDE>],<br>[<CONDTYPE>],[<SRVEFF>][,.,,];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an identifier that has an alarm condition and is from the AID <a href="#">“BITS” section on page 4-19</a>; &lt;AID&gt; must not be null</li> <li>• &lt;NTFCNCDE&gt; is a 2-letter notification code; valid values for &lt;NTFCNCDE&gt; are shown in the <a href="#">“NOTIF_CODE” section on page 4-75</a>. A null value is equivalent to ALL.</li> <li>• &lt;CONDTYPE&gt; is an alarm condition; valid values for &lt;CONDTYPE&gt; are shown in the <a href="#">“Conditions” section on page 7-18</a>. A null value is equivalent to ALL.</li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values for &lt;SRVEFF&gt; are shown in the <a href="#">“SERV_EFF” section on page 4-85</a>. A null value is equivalent to ALL.</li> </ul> |
| Input Example    | RTRV-ALM-BITS:ELVERANO:BITS-1:228::CR,LOS,SA;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Section        | RTRV-ALM-BITS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>,[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,:<br>[<DESC>]”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the identifier that has an alarm condition and is from the <a href="#">“BITS” section on page 4-19</a></li> <li>• &lt;AIDTYPE&gt; is the type of access identifier; valid values for &lt;AIDTYPE&gt; are shown in the <a href="#">“MOD2B” section on page 4-71</a> and &lt;AIDTYPE&gt; is optional</li> <li>• &lt;NTFCNCDE&gt; is the 2-letter notification code; valid values for &lt;NTFCNCDE&gt; are shown in the <a href="#">“NOTIF_CODE” section on page 4-75</a></li> <li>• &lt;CONDTYPE&gt; is the alarm condition; valid values for &lt;CONDTYPE&gt; are shown in the <a href="#">“Conditions” section on page 7-18</a></li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values for &lt;SRVEFF&gt; are shown in the <a href="#">“SERV_EFF” section on page 4-85</a></li> <li>• &lt;DESC&gt; is the condition description; &lt;DESC&gt; is a string and is optional</li> </ul> |
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“BITS-1,BITS:CR,LOS,SA,,,,:\“LOSS OF SIGNAL\”,”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

### 3.4.143 RTRV-ALM-ENV: Retrieve Alarm Environment

This command retrieves the environmental alarms.

| Section  | RTRV-ALM-ENV Description        |
|----------|---------------------------------|
| Category | Environment Alarms and Controls |
| Security | Retrieve                        |

| Section          | RTRV-ALM-ENV Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | OPR-ACO-ALL<br>OPR-EXT-CONT<br>REPT ALM <MOD2ALM><br>REPT ALM BITS<br>REPT ALM COM<br>REPT ALM ENV<br>REPT ALM EQPT<br>REPT ALM SECU<br>REPT ALM SYNCN<br>REPT ALM UCP<br>REPT EVT <MOD2ALM><br>REPT EVT BITS<br>REPT EVT COM<br>REPT EVT ENV<br>REPT EVT EQPT<br>REPT EVT FXFR<br>REPT EVT IOSCFG<br>REPT EVT SECU<br>REPT EVT SESSION<br>REPT EVT SYNCN<br>REPT EVT UCP<br>RLS-EXT-CONT<br>RTRV-ALM-<MOD2ALM><br>RTRV-ALM-ALL<br>RTRV-ALM-BITS<br>RTRV-ALM-EQPT<br>RTRV-ALM-SYNCN<br>RTRV-ALM-UCP<br>RTRV-ATTR-CONT<br>RTRV-ATTR-ENV<br>RTRV-COND-<MOD2ALM><br>RTRV-COND-ALL<br>RTRV-COND-BITS<br>RTRV-COND-ENV<br>RTRV-COND-EQPT<br>RTRV-COND-SYNCN<br>RTRV-COND-UCP<br>RTRV-EXT-CONT<br>SET-ATTR-CONT<br>SET-ATTR-ENV<br>SET-ATTR-SECUDFLT                                                                                                    |
| Input Format     | RTRV-ALM-ENV:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<ALMTYPE>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier from the “ENV” section on page 4-26; &lt;AID&gt; must not be null</li> </ul> <p><b>Note</b> For RTRV-ALM-ENV, only ENV-IN-{1-4} is a valid AID for ONS 15454 and only ENV-IN-{1-6} is a valid AID for ONS 15327. ENV-OUT-{1,6} is not a valid AID for RTRV-ALM-ENV.</p> <ul style="list-style-type: none"> <li>• &lt;NTFCNCDE&gt; is a notification code; valid values for &lt;NTFCNCDE&gt; are shown in the “NOTIF_CODE” section on page 4-75. A null value is equivalent to ALL.</li> <li>• &lt;ALMTYPE&gt; is the alarm type for the environmental alarm; valid values for &lt;ALMTYPE&gt; are shown in the “ENV_ALM” section on page 4-58. A null value is equivalent to ALL.</li> </ul> |
| Input Example    | RTRV-ALM-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| Section        | RTRV-ALM-ENV Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>:<NTFCNCDE>,<ALMTYPE>,,[<DESC>]”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier from the “ENV” section on page 4-26</li> <li>• &lt;NTFCNCDE&gt; is the notification code; valid values for &lt;NTFCNCDE&gt; are shown in the “NOTIF_CODE” section on page 4-75</li> <li>• &lt;ALMTYPE&gt; is the alarm type for the environmental alarm; valid values for &lt;ALMTYPE&gt; are shown in the “ENV_ALM” section on page 4-58</li> <li>• &lt;DESC&gt; is the alarm message; &lt;DESC&gt; is a string and is optional</li> </ul> |
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“ENV-IN-1:MJ,OPENDR,,\“OPEN DOOR\””<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### 3.4.144 RTRV-ALM-EQPT: Retrieve Alarm Equipment

This command retrieves and sends the current status of alarm conditions associated with the equipment units. The alarm condition or severity to be retrieved is specified using the input parameters as a filter.

| Section  | RTRV-ALM-EQPT Description |
|----------|---------------------------|
| Category | Equipment                 |
| Security | Retrieve                  |

| Section          | RTRV-ALM-EQPT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ALW-SWDX-EQPT REPT RMV EQPT<br>ALW-SWTOPROTN-EQPT REPT RST EQPT<br>ALW-SWTOWKG-EQPT RTRV-ALM-<MOD2ALM><br>DLT-EQPT ED-EQPT RTRV-ALM-ALL<br>ENT-EQPT RTRV-ALM-BITS<br>INH-SWDX-EQPT RTRV-ALM-ENV<br>INH-SWTOPROTN-EQPT RTRV-ALM-SYNCN<br>INH-SWTOWKG-EQPT RTRV-ALM-UCP<br>REPT ALM <MOD2ALM> RTRV-ALMTH-EQPT<br>REPT ALM BITS RTRV-ATTR-CONT<br>REPT ALM COM RTRV-ATTR-ENV<br>REPT ALM ENV RTRV-COND-<MOD2ALM><br>REPT ALM EQPT RTRV-COND-ALL<br>REPT ALM SECU RTRV-COND-BITS<br>REPT ALM SYNCN RTRV-COND-ENV<br>REPT ALM UCP RTRV-COND-EQPT<br>REPT EVT <MOD2ALM> RTRV-COND-SYNCN<br>REPT EVT BITS RTRV-COND-UCP<br>REPT EVT COM RTRV-EQPT<br>REPT EVT ENV SET-ALMTH-EQPT<br>REPT EVT EQPT SET-ATTR-CONT<br>REPT EVT FXFR SET-ATTR-ENV<br>REPT EVT IOSCFG SET-ATTR-SECUDFLT<br>REPT EVT SECU SW-DX-EQPT<br>REPT EVT SESSION SW-TOPROTN-EQPT<br>REPT EVT SYNCN SW-TOWKG-EQPT<br>REPT EVT UCP                                      |
| Input Format     | RTRV-ALM-EQPT:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<CONDTYPE>],<br>[<SRVEFF>][,.,,];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an identifier that has an alarm condition and is from the <a href="#">“EQPT” section on page 4-27</a>; &lt;AID&gt; must not be null</li> <li>• &lt;NTFCNCDE&gt; is the 2-letter notification code; valid values for &lt;NTFCNCDE&gt; are shown in the <a href="#">“NOTIF_CODE” section on page 4-75</a>. A null value is equivalent to ALL.</li> <li>• &lt;CONDTYPE&gt; is the alarm condition; valid values for &lt;CONDTYPE&gt; are shown in the <a href="#">“Conditions” section on page 7-18</a>. A null value is equivalent to ALL.</li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values for &lt;SRVEFF&gt; are shown in the <a href="#">“SERV_EFF” section on page 4-85</a>. A null value is equivalent to ALL.</li> </ul> |
| Input Example    | RTRV-ALM-EQPT:TWOROCK:SLOT-7:227::MJ,HITEMP,NSA;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |



| Section        | RTRV-ALM-EQPT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <p>SID DATE TIME<br/> M CTAG COMPLD<br/> “[&lt;AID&gt;],[&lt;AIDTYPE&gt;]:&lt;NTFCNCDE&gt;,&lt;CONDTYPE&gt;,&lt;SRVEFF&gt;,,,,:<br/> [&lt;DESC&gt;]”<br/> ;<br/> where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an identifier that has an alarm condition and is from the “EQPT” section on page 4-27; &lt;AID&gt; is optional</li> <li>• valid values for &lt;AIDTYPE&gt; are shown in the “MOD2B” section on page 4-71; &lt;AIDTYPE&gt; is optional</li> <li>• &lt;NTFCNCDE&gt; is a 2-letter notification code; valid values for &lt;NTFCNCDE&gt; are shown in the “NOTIF_CODE” section on page 4-75</li> <li>• &lt;CONDTYPE&gt; is an alarm condition; valid values for &lt;CONDTYPE&gt; are shown in the “Conditions” section on page 7-18</li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values for &lt;SRVEFF&gt; are shown in the “SERV_EFF” section on page 4-85</li> <li>• &lt;DESC&gt; is a condition description; &lt;DESC&gt; is a string and is optional</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/> M 001 COMPLD<br/> “SLOT-7,EQPT:MJ,HITEMP,NSA,,,,;\“HI TEMPERATURE\”,”<br/> ;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

### 3.4.145 RTRV-ALM-SYNCN: Retrieve Alarm Synchronization

This command retrieves and sends the current status of alarm conditions associated with a synchronization facility. The alarm condition or severity to be retrieved can be specified by using the input parameters as a filter.

| Section  | RTRV-ALM-SYNCN Description |
|----------|----------------------------|
| Category | Synchronization            |
| Security | Retrieve                   |

| Section          | RTRV-ALM-SYCN Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ED-BITS<br>ED-NE-SYCN<br>ED-SYCN<br>OPR-SYCN<br>REPT ALM <MOD2ALM><br>REPT ALM BITS<br>REPT ALM COM<br>REPT ALM ENV<br>REPT ALM EQPT<br>REPT ALM SECU<br>REPT ALM SYCN<br>REPT ALM UCP<br>REPT EVT <MOD2ALM><br>REPT EVT BITS<br>REPT EVT COM<br>REPT EVT ENV<br>REPT EVT EQPT<br>REPT EVT FXFR<br>REPT EVT IOSCFG<br>REPT EVT SECU<br>REPT EVT SESSION<br>REPT EVT SYCN<br>REPT EVT UCP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                  | RLS-SYCN<br>RTRV-ALM-<MOD2ALM><br>RTRV-ALM-ALL<br>RTRV-ALM-BITS<br>RTRV-ALM-ENV<br>RTRV-ALM-EQPT<br>RTRV-ALM-UCP<br>RTRV-ATTR-CONT<br>RTRV-ATTR-ENV<br>RTRV-BITS<br>RTRV-COND-<MOD2ALM><br>RTRV-COND-ALL<br>RTRV-COND-BITS<br>RTRV-COND-ENV<br>RTRV-COND-EQPT<br>RTRV-COND-SYCN<br>RTRV-COND-UCP<br>RTRV-NE-SYCN<br>RTRV-SYCN<br>SET-ATTR-CONT<br>SET-ATTR-ENV<br>SET-ATTR-SECUDFLT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Input Format     | RTRV-ALM-SYCN:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],<br>[<CONDTYPE>],[<SRVEFF>][,.,,];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies the access identifier from the “<a href="#">SYNC_REF</a>” section on page 4-34, &lt;AID&gt; must not be null</li> <li>• &lt;NTFCNCDE&gt; is the 2-letter notification code; valid values for &lt;NTFCNCDE&gt; are shown in the “<a href="#">NOTIF_CODE</a>” section on page 4-75. A null value is equivalent to ALL.</li> <li>• &lt;CONDTYPE&gt; is the alarm condition; valid values for &lt;CONDTYPE&gt; are shown in the “<a href="#">Conditions</a>” section on page 7-18. A null value is equivalent to ALL.</li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values for &lt;SRVEFF&gt; are shown in the “<a href="#">SERV_EFF</a>” section on page 4-85. A null value is equivalent to ALL.</li> </ul> |
| Input Example    | RTRV-ALM-SYCN:FULTON:SYNC-NE:226::CR,FAILTOSW,SA;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| Section        | RTRV-ALM-SYNCN Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>,[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<br><SRVEFF>,;,[<DESC>]”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the identifier that has an alarm condition and is from the “SYN” section on page 4-33</li> <li>• &lt;AIDTYPE&gt; is the type of access identifier: valid values for &lt;AIDTYPE&gt; are shown in the “MOD2B” section on page 4-71 and &lt;AIDTYPE&gt; is optional</li> <li>• &lt;NTFCNCDE&gt; is the 2-letter notification code; valid values for &lt;NTFCNCDE&gt; are shown in the “NOTIF_CODE” section on page 4-75</li> <li>• &lt;CONDTYPE&gt; is the alarm condition; valid values for &lt;CONDTYPE&gt; are shown in the “Conditions” section on page 7-18</li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values for &lt;SRVEFF&gt; are shown in the “SERV_EFF” section on page 4-85</li> <li>• &lt;DESC&gt; is the condition description; &lt;DESC&gt; is a string and is optional</li> </ul> |
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“SYNC-NE,SYNCN:CR,FAILTOSW,SA,;,:<br>\“FAILURE TO SWITCH TO PROTECTION\”,”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

### 3.4.146 RTRV-ALM-UCP: Retrieve Alarm Unified Control Plane

(Cisco ONS 15454 only)

This retrieves and sends the current status of all active alarm conditions against a UCP object. The alarm condition or severity to be retrieved can be specified by using the input parameters as a filter.

| Section  | RTRV-ALM-UCP Description |
|----------|--------------------------|
| Category | UCP                      |
| Security | Retrieve                 |

| Section          | RTRV-ALM-UCP Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | DLT-UCP-CC REPT EVT SESSION<br>DLT-UCP-IF REPT EVT SYNCN<br>DLT-UCP-NBR REPT EVT UCP<br>ED-UCP-CC RTRV-ALM-<MOD2ALM><br>ED-UCP-IF RTRV-ALM-ALL<br>ED-UCP-NBR RTRV-ALM-BITS<br>ED-UCP-NODE RTRV-ALM-ENV<br>ENT-UCP-CC RTRV-ALM-EQPT<br>ENT-UCP-IF RTRV-ALM-SYNCN<br>ENT-UCP-NBR RTRV-ATTR-CONT<br>REPT ALM <MOD2ALM> RTRV-ATTR-ENV<br>REPT ALM BITS RTRV-COND-<MOD2ALM><br>REPT ALM COM RTRV-COND-ALL<br>REPT ALM ENV RTRV-COND-BITS<br>REPT ALM EQPT RTRV-COND-ENV<br>REPT ALM SECU RTRV-COND-EQPT<br>REPT ALM SYNCN RTRV-COND-SYNCN<br>REPT ALM UCP RTRV-COND-UCP<br>REPT EVT <MOD2ALM> RTRV-UCP-CC<br>REPT EVT BITS RTRV-UCP-IF<br>REPT EVT COM RTRV-UCP-NBR<br>REPT EVT ENV RTRV-UCP-NODE<br>REPT EVT EQPT SET-ATTR-CONT<br>REPT EVT FXFR SET-ATTR-ENV<br>REPT EVT IOSCFG SET-ATTR-SECUDFLT<br>REPT EVT SECU                                                                        |
| Input Format     | RTRV-ALM-UCP:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],<br>[<CONDTYPE>],[<SRVEFF>][,.,,];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies a UCP object with alarm condition; &lt;AID&gt; is from the <a href="#">“UCP” section on page 4-35</a> and must not be null</li> <li>• &lt;NTFCNCDE&gt; is a notification code; valid values &lt;NTFCNCDE&gt; are shown in the <a href="#">“NOTIF_CODE” section on page 4-75</a>. A null value is equivalent to ALL</li> <li>• &lt;CONDTYPE&gt; is the type of condition to be retrieved; valid values are shown in the <a href="#">“Conditions” section on page 7-18</a>. A null value is equivalent to ALL</li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values are shown in the <a href="#">“SERV_EFF” section on page 4-85</a>. A null value is equivalent to ALL</li> </ul> |
| Input Example    | RTRV-ALM-UCP:CISCO:CC-1:123::MJ,LMP-HELLODOWN,SA;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| Section        | RTRV-ALM-UCP Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <pre>SID DATE TIME M CTAG COMPLD "&lt;AID&gt;:&lt;NTFCNCDE&gt;,&lt;CONDTYPE&gt;,&lt;SRVEFF&gt;,,,,:[&lt;DESC&gt;]" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies a UCP object with alarm condition; &lt;AID&gt; is from the <a href="#">“UCP” section on page 4-35</a></li> <li>• &lt;NTFCNCDE&gt; is a notification code; valid values are shown in the <a href="#">“NOTIF_CODE” section on page 4-75</a></li> <li>• &lt;CONDTYPE&gt; is the type of condition to be retrieved; valid values are shown in the <a href="#">“Conditions” section on page 7-18</a></li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values are shown in the <a href="#">“SERV_EFF” section on page 4-85</a></li> <li>• &lt;DESC&gt; is a condition description; &lt;DESC&gt; is a string and is optional</li> </ul> |
| Output Example | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD “CC-1:MJ,LMP-HELLODOWN,SA,,,,:\ “LMP HELLO FSM ON CONTROL CHANNEL DOWN”,” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### 3.4.147 RTRV-ALMTH-<MOD2>: Retrieve Alarm Threshold (CLNT, DS1, DS3I, EC1, FC, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STM1E, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

(Cisco ONS 15454 only)

This command retrieves the alarm threshold values. The only applicable MOD2 values are CLNT, OCH, OMS, and OTS.

| Section          | RTRV-ALMTH-<MOD2> Description                                                                                                                                                                                                                                                                                                                                                                           |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | DWDM                                                                                                                                                                                                                                                                                                                                                                                                    |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                |
| Related Messages | SET-ALMTH-<MOD2>                                                                                                                                                                                                                                                                                                                                                                                        |
| Input Format     | <pre>RTRV-ALMTH-&lt;MOD2&gt;:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;::&lt;ALMTHR&gt;[,,:];</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is from the <a href="#">“ALL” section on page 4-9</a> and must not be null</li> <li>• Valid values for &lt;ALMTHR&gt; are shown in the <a href="#">“ALM_THR” section on page 4-48</a> and &lt;ALMTHR&gt; must not be null</li> </ul> |
| Input Example    | RTRV-ALMTH-:<MOD2>::CHAN-2-2:1::OPT-HIGH;                                                                                                                                                                                                                                                                                                                                                               |

| Section        | RTRV-ALMTH-<MOD2> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>,<MOD>:<CONDTYPE>,<THLEVEL>”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is from the “ALL” section on page 4-9</li> <li>• &lt;MOD&gt; is the AID type; valid values are shown in the “MOD2” section on page 4-69</li> <li>• &lt;CONDTYPE&gt; alarm threshold condition type; valid values are shown in the “ALM_THR” section on page 4-48</li> <li>• &lt;THLEVEL&gt; is the threshold level and is a float</li> </ul> |
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“CHAN-2-2,OCH:OPT-HIGH,20”<br>;                                                                                                                                                                                                                                                                                                                                                                                                        |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                        |

### 3.4.148 RTRV-ALMTH-EQPT: Retrieve Alarm Threshold Equipment

This command retrieves the alarm thresholds for the power level monitoring on an NE.

| Section            | RTRV-ALMTH-EQPT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |               |                    |               |                  |               |          |                |         |           |          |                |               |            |                    |                 |                  |               |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|--------------------|---------------|------------------|---------------|----------|----------------|---------|-----------|----------|----------------|---------------|------------|--------------------|-----------------|------------------|---------------|
| Category           | Equipment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |               |                    |               |                  |               |          |                |         |           |          |                |               |            |                    |                 |                  |               |
| Security           | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |               |                    |               |                  |               |          |                |         |           |          |                |               |            |                    |                 |                  |               |
| Related Messages   | <table> <tbody> <tr> <td>ALW-SWDX-EQPT</td> <td>REPT ALM EQPT</td> </tr> <tr> <td>ALW-SWTOPROTN-EQPT</td> <td>REPT EVT EQPT</td> </tr> <tr> <td>ALW-SWTOWKG-EQPT</td> <td>RTRV-ALM-EQPT</td> </tr> <tr> <td>DLT-EQPT</td> <td>RTRV-COND-EQPT</td> </tr> <tr> <td>ED-EQPT</td> <td>RTRV-EQPT</td> </tr> <tr> <td>ENT-EQPT</td> <td>SET-ALMTH-EQPT</td> </tr> <tr> <td>INH-SWDX-EQPT</td> <td>SW-DX-EQPT</td> </tr> <tr> <td>INH-SWTOPROTN-EQPT</td> <td>SW-TOPROTN-EQPT</td> </tr> <tr> <td>INH-SWTOWKG-EQPT</td> <td>SW-TOWKG-EQPT</td> </tr> </tbody> </table> | ALW-SWDX-EQPT | REPT ALM EQPT | ALW-SWTOPROTN-EQPT | REPT EVT EQPT | ALW-SWTOWKG-EQPT | RTRV-ALM-EQPT | DLT-EQPT | RTRV-COND-EQPT | ED-EQPT | RTRV-EQPT | ENT-EQPT | SET-ALMTH-EQPT | INH-SWDX-EQPT | SW-DX-EQPT | INH-SWTOPROTN-EQPT | SW-TOPROTN-EQPT | INH-SWTOWKG-EQPT | SW-TOWKG-EQPT |
| ALW-SWDX-EQPT      | REPT ALM EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |               |                    |               |                  |               |          |                |         |           |          |                |               |            |                    |                 |                  |               |
| ALW-SWTOPROTN-EQPT | REPT EVT EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |               |                    |               |                  |               |          |                |         |           |          |                |               |            |                    |                 |                  |               |
| ALW-SWTOWKG-EQPT   | RTRV-ALM-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |               |                    |               |                  |               |          |                |         |           |          |                |               |            |                    |                 |                  |               |
| DLT-EQPT           | RTRV-COND-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |               |                    |               |                  |               |          |                |         |           |          |                |               |            |                    |                 |                  |               |
| ED-EQPT            | RTRV-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |               |                    |               |                  |               |          |                |         |           |          |                |               |            |                    |                 |                  |               |
| ENT-EQPT           | SET-ALMTH-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |               |                    |               |                  |               |          |                |         |           |          |                |               |            |                    |                 |                  |               |
| INH-SWDX-EQPT      | SW-DX-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |               |               |                    |               |                  |               |          |                |         |           |          |                |               |            |                    |                 |                  |               |
| INH-SWTOPROTN-EQPT | SW-TOPROTN-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |               |               |                    |               |                  |               |          |                |         |           |          |                |               |            |                    |                 |                  |               |
| INH-SWTOWKG-EQPT   | SW-TOWKG-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |               |                    |               |                  |               |          |                |         |           |          |                |               |            |                    |                 |                  |               |
| Input Format       | RTRV-ALMTH-EQPT:[<TID>]::<CTAG>::<ALMTHR>[,,:];<br>where: <ul style="list-style-type: none"> <li>• Valid values for &lt;ALMTHR&gt; are shown in the “ALM_THR” section on page 4-48 and &lt;ALMTHR&gt; must not be null</li> </ul>                                                                                                                                                                                                                                                                                                                               |               |               |                    |               |                  |               |          |                |         |           |          |                |               |            |                    |                 |                  |               |
| Input Example      | RTRV-ALMTH-EQPT:::1::BATV-HIGH;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |               |               |                    |               |                  |               |          |                |         |           |          |                |               |            |                    |                 |                  |               |

| Section        | RTRV-ALMTH-EQPT Description                                                                                                                                                                                                                                                                                                                  |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | SID DATE TIME<br>M CTAG COMPLD<br>“,<MOD2B>:<ALMTHR>,,,<DNFIELD>”<br>;<br>where: <ul style="list-style-type: none"> <li>Valid values for &lt;MOD2B&gt; are shown in the “MOD2B” section on page 4-71</li> <li>Valid values for &lt;ALMTHR&gt; are shown in the “ALM_THR” section on page 4-48</li> <li>&lt;DNFIELD&gt; is a float</li> </ul> |
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“,EQPT:BATV-HIGH,,-52.0,”<br>;                                                                                                                                                                                                                                                                |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                               |

### 3.4.149 RTRV-ATTR-CONT: Retrieve Attribute Control

This command retrieves and sends the attributes associated with an external control. These attributes are used when an external control is operated or released. To set these attributes, use the SET-ATTR-CONT command.

| Section          | RTRV-ATTR-CONT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Related Messages | OPR-ACO-ALL<br>OPR-EXT-CONT<br>REPT ALM <MOD2ALM><br>REPT ALM BITS<br>REPT ALM COM<br>REPT ALM ENV<br>REPT ALM EQPT<br>REPT ALM SECU<br>REPT ALM SYNCN<br>REPT ALM UCP<br>REPT EVT <MOD2ALM><br>REPT EVT BITS<br>REPT EVT COM<br>REPT EVT ENV<br>REPT EVT EQPT<br>REPT EVT FXFR<br>REPT EVT IOSCFG<br>REPT EVT SECU<br>REPT EVT SESSION<br>REPT EVT SYNCN<br>REPT EVT UCP<br>RLS-EXT-CONT<br>RTRV-ALM-<MOD2ALM><br>RTRV-ALM-ALL<br>RTRV-ALM-BITS<br>RTRV-ALM-ENV<br>RTRV-ALM-EQPT<br>RTRV-ALM-SYNCN<br>RTRV-ALM-UCP<br>RTRV-ATTR-ENV<br>RTRV-COND-<MOD2ALM><br>RTRV-COND-ALL<br>RTRV-COND-BITS<br>RTRV-COND-ENV<br>RTRV-COND-EQPT<br>RTRV-COND-SYNCN<br>RTRV-COND-UCP<br>RTRV-EXT-CONT<br>SET-ATTR-CONT<br>SET-ATTR-ENV<br>SET-ATTR-SECUDFLT |

| Section        | RTRV-ATTR-CONT Description                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format   | RTRV-ATTR-CONT:[<TID>]:<AID>:<CTAG>[::<CONTTYPER>];<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; identifies the external control for which attributes are being set; &lt;AID&gt; is from the “ENV” section on page 4-26 and must not be null</li> <li>&lt;CONTTYPER&gt; is the type of external control; valid values for &lt;CONTTYPER&gt; are shown in the “CONTTYPER” section on page 4-55. A null value is equivalent to ALL</li> </ul> |
| Input Example  | RTRV-ATTR-CONT:CISCO:ENV-OUT-2:123::AIRCOND;                                                                                                                                                                                                                                                                                                                                                                                                                |
| Output Format  | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>:[<CONTTYPER>]”<br>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; identifies the external control for which attributes are being set and is from the “ENV” section on page 4-26</li> <li>&lt;CONTTYPER&gt; is the type of external control; valid values are shown in the “CONTTYPER” section on page 4-55 and &lt;CONTTYPER&gt; is optional</li> </ul>                                             |
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“ENV-OUT-2:AIRCOND”<br>;                                                                                                                                                                                                                                                                                                                                                                                     |
| Errors         | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                               |

### 3.4.150 RTRV-ATTR-ENV: Retrieve Attribute Environment

This command retrieves the attributes associated with an environmental alarm.

| Section  | RTRV-ATTR-ENV Description |
|----------|---------------------------|
| Category | Environment               |
| Security | Retrieve                  |



| Section          | RTRV-ATTR-ENV Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | <pre> OPR-ACO-ALL OPR-EXT-CONT REPT ALM &lt;MOD2ALM&gt; REPT ALM BITS REPT ALM COM REPT ALM ENV REPT ALM EQPT REPT ALM SECU REPT ALM SYNCN REPT ALM UCP REPT EVT &lt;MOD2ALM&gt; REPT EVT BITS REPT EVT COM REPT EVT ENV REPT EVT EQPT REPT EVT FXFR REPT EVT IOSCFG REPT EVT SECU REPT EVT SESSION REPT EVT SYNCN REPT EVT UCP RLS-EXT-CONT RTRV-ALM-&lt;MOD2ALM&gt; RTRV-ALM-ALL RTRV-ALM-BITS RTRV-ALM-ENV RTRV-ALM-EQPT RTRV-ALM-SYNCN RTRV-ALM-UCP RTRV-ATTR-CONT RTRV-COND-&lt;MOD2ALM&gt; RTRV-COND-ALL RTRV-COND-BITS RTRV-COND-ENV RTRV-COND-EQPT RTRV-COND-SYNCN RTRV-COND-UCP RTRV-EXT-CONT SET-ATTR-CONT SET-ATTR-ENV SET-ATTR-SECUDFLT </pre>                                             |
| Input Format     | <p>RTRV-ATTR-ENV:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;:::&lt;NTFCNCDE&gt;],[&lt;ALMTYPE&gt;];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier from the “ENV” section on page 4-26 and must not be null</li> <li>• &lt;NTFCNCDE&gt; is the notification code for the environmental alarm; valid values are shown in the “NOTIF_CODE” section on page 4-75. A null value is equivalent to ALL</li> <li>• &lt;ALMTYPE&gt; is the alarm type for the environmental alarm; valid values are shown in the “ENV_ALM” section on page 4-58. A null value is equivalent to ALL</li> </ul>                                                                      |
| Input Example    | RTRV-ATTR-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Output Format    | <pre> SID DATE TIME M CTAG COMPLD “&lt;AID&gt;:[&lt;NTFCNCDE&gt;],[&lt;ALMTYPE&gt;],[&lt;DESC&gt;]” ; </pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier from the “ENV” section on page 4-26</li> <li>• &lt;NTFCNCDE&gt; is the notification code for the environmental alarm; valid values are shown in the “NOTIF_CODE” section on page 4-75, &lt;NTFCNCDE&gt; is optional</li> <li>• &lt;ALMTYPE&gt; is the alarm type for the environmental alarm; valid values are shown in the “ENV_ALM” section on page 4-58, &lt;ALMTYPE&gt; is optional</li> <li>• &lt;DESC&gt; is the alarm description; &lt;DESC&gt; is a string and is optional</li> </ul> |

| Section        | RTRV-ATTR-ENV Description                                                              |
|----------------|----------------------------------------------------------------------------------------|
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“ENV-IN-1:MJ,OPENDR,\“OPEN DOOR\””<br>; |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                         |

### 3.4.151 RTRV-BITS: Retrieve Building Integrated Timing Supply

This command retrieves the BITS configuration command.

| Section          | RTRV-BITS Description                                                                                                                                                                                                                         |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Synchronization                                                                                                                                                                                                                               |
| Security         | Retrieve                                                                                                                                                                                                                                      |
| Related Messages | ED-BITS<br>ED-NE-SYNCN<br>ED-SYNCN<br>OPR-SYNCNSW<br>REPT ALM BITS<br>REPT ALM SYNCN<br>REPT EVT BITS<br>REPT EVT SYNCN<br>RLS-SYNCNSW<br>RTRV-ALM-BITS<br>RTRV-ALM-SYNCN<br>RTRV-COND-BITS<br>RTRV-COND-SYNCN<br>RTRV-NE-SYNCN<br>RTRV-SYNCN |
| Input Format     | RTRV-BITS:[<TID>]:<AID>:<CTAG>[:::];<br>where:<br><ul style="list-style-type: none"> <li>&lt;AID&gt; is a bit access identifier from the <a href="#">“BITS” section on page 4-19</a> and must not be null</li> </ul>                          |
| Input Example    | RTRV-BITS:SONOMA:BITS-1:782;                                                                                                                                                                                                                  |

| Section        | RTRV-BITS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“&lt;AID&gt;:;[LINECDE=&lt;LINECDE&gt;],[FMT=&lt;FMT&gt;],[LBO=&lt;LBO&gt;],[<br/>[SYNCMSG=&lt;SYNCMSG&gt;],[AISTHRSHLD=&lt;AISTHRSHLD&gt;],[<br/>[SABIT=&lt;SABIT&gt;],[IMPEDANCE=&lt;IMPEDANCE&gt;]:[&lt;PST&gt;]”<br/>;<br/>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier from the “BITS” section on page 4-19</li> <li>• &lt;LINECDE&gt; is a line code; valid values for &lt;LINECDE&gt; are shown in the “LINE_CODE” section on page 4-68, &lt;LINECDE&gt; is optional</li> <li>• &lt;FMT&gt; is a frame format; valid values are shown in the “FRAME_FORMAT” section on page 4-65, &lt;FMT&gt; is optional</li> <li>• &lt;LBO&gt; indicates BITS line build-out; valid values are shown in the “BITS_LineBuildOut” section on page 4-50, &lt;LBO&gt; is optional</li> <li>• &lt;SYNCMSG&gt; indicates a sync messaging; &lt;SYNCMSG&gt; defaults to (Y) and valid values are shown in the “ON_OFF” section on page 4-76, &lt;SYNCMSG&gt; is optional</li> <li>• &lt;AIRSTHRSHLD&gt; is the AIS threshold. Valid values are shown in the “SYNC_CLOCK_REF_QUALITY_LEVEL” section on page 4-89; &lt;AIRSTHRSHLD&gt; is optional</li> <li>• &lt;SABIT&gt; when the frame format selection is E1, &lt;SABIT&gt; indicates the BIT used to receive and transmit the SSM; valid values are shown in the “SABITS” section on page 4-84. &lt;SABIT&gt; is optional</li> <li>• &lt;IMPEDANCE&gt; when the frame format selection is one of the E1 values, &lt;IMPEDANCE&gt; indicates the terminal impedance of the BITS-IN port; valid values are shown in the “IMPEDANCE” section on page 4-66. &lt;IMPEDANCE&gt; is optional</li> <li>• &lt;PST&gt; is the state; valid values are shown in the “PST” section on page 4-83, &lt;PST&gt; is optional</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/>M 001 COMPLD<br/>“BITS-1::LINECDE=AMI,FMT=ESF,LBO=0-133,SYNCMSG=Y,<br/>AISTHRSHLD=PRS,SABIT=BYTE-4,IMPEDANCE=120-OHM:IS”<br/>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

### 3.4.152 RTRV-CLNT: Retrieve Client

(Cisco ONS 15454 only)

This command retrieves client facility attributes.

See the “Provisioning Rules for MXP\_2.5G\_10G and TXP\_MR\_10G Cards” section on page 1-8 and the “Provisioning Rules for TXP\_MR\_2.5G and TXPP\_MR\_2.5G Cards” section on page 1-13 for specific card provisioning rules.

**Note**

States of primary=OOS, secondary=AINS do not apply to Ethernet mode.

| Section          | RTRV-CLNT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Related Messages | DLT-FFP-CLNT<br>DLT-LNK-<MOD2O><br>ED-CLNT<br>ED-DWDM<br>ED-FFP-CLNT<br>ED-FFP-OCH<br>ED-LNK-<MOD2O><br>ED-OCH<br>ED-OMS<br>ED-OTS<br>ED-TRC-CLNT<br>ED-TRC-OCH<br>ENT-FFP-CLNT<br>ENT-LNK-<MOD2O><br>OPR-LASER-OTS<br>OPR-PROTNSW-CLNT<br>OPR-PROTNSW-OCH<br>RLS-LASER-OTS<br>RLS-PROTNSW-CLNT<br>RLS-PROTNSW-OCH<br>RTRV-DWDM<br>RTRV-FFP-CLNT<br>RTRV-FFP-OCH<br>RTRV-LNK-<MOD2O><br>RTRV-OCH<br>RTRV-OMS<br>RTRV-OTS<br>RTRV-PROTNSW-CLNT<br>RTRV-PROTNSW-OCH<br>RTRV-TRC-CLNT<br>RTRV-TRC-OCH |
| Input Format     | RTRV-CLNT:[<TID>]:<AID>:<CTAG>;<br>where:<br><ul style="list-style-type: none"> <li>&lt;AID&gt; is the AID from the <a href="#">“FACILITY” section on page 4-28</a> and must not be null</li> </ul>                                                                                                                                                                                                                                                                                                |
| Input Example    | RTRV-CLNT:CISCO:FAC-1-1:100;                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| Section       | RTRV-CLNT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format | <pre> SID DATE TIME M CTAG COMPLD "&lt;AID&gt;:.,[&lt;ROLE&gt;],&lt;STATUS&gt;:[NAME=&lt;PORTNAME&gt;.,] [COMM=&lt;COMM&gt;.,][SFBER=&lt;SFBER&gt;.,] [SDBER=&lt;SDBER&gt;.,][ALSMODE=&lt;ALSMODE&gt;.,] [ALSRCINT=&lt;ALSRCINT&gt;.,][ALSRCPW=&lt;ALSRCPW&gt;.,] [SYNCSMSG=&lt;SYNCSMSG&gt;.,][SENDDUS=&lt;SENDDUS&gt;.,] [LSRSTAT=&lt;LSRSTAT&gt;.,][CLEI=&lt;CLEI&gt;.,][PN=&lt;PARTNUM&gt;.,] [SN=&lt;SERIALNUM&gt;.,][VENDORREV=&lt;VENDORREV&gt;.,] [PLGTYPE=&lt;PLGTYPE&gt;.,][MACADDR=&lt;MACADDR&gt;.,] [SOAK=&lt;SOAK&gt;.,][SOAKLEFT=&lt;SOAKLEFT&gt;.,][OSPF=&lt;OSPF&gt;]:&lt;PST&gt;., [&lt;SST&gt;]" ; </pre> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the facility AID from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;ROLE&gt; identifies an OCn port role (i.e. WORK or PROT); valid values for are shown in the <a href="#">“SIDE” section on page 4-86</a></li> <li>• &lt;STATUS&gt; identifies an OCn port status (i.e. Active or Standby); valid values are shown in the <a href="#">“STATUS” section on page 4-86</a></li> <li>• &lt;PORTNAME&gt; identifies the port name; &lt;PORTNAME&gt; is a string and is optional</li> <li>• &lt;COMM&gt; indicates if the GCC or DCC is enabled or disabled. The GCC can be enabled only if the digital wrapper has been enabled for the card. The default is NONE. Valid values are shown in the <a href="#">“COMM_TYPE” section on page 4-54</a>. Rules for an MXP_2.5G_10G/TXP_MR_10G client port are; only the DCC can be provisioned, if the termination mode is not transparent and the payload is SONET. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the DCC can be enabled only if the G.709 is not enabled and if the payload is SONET and the termination mode is not transparent. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the GCC can be enabled if there is no DCC and the G.709 flag is enabled.</li> </ul> |

| Section                      | RTRV-CLNT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format<br>(continued) | <ul style="list-style-type: none"> <li>• &lt;SFBER&gt; signal fail bit error ration that defaults to 1E-4; valid values are shown in the <a href="#">“SF_BER” section on page 4-86</a> and &lt;SFBER&gt; is optional</li> <li>• &lt;SDBER&gt; signal degrade bit error ratio that defaults to 1E-7; valid values are shown in the <a href="#">“SD_BER” section on page 4-85</a> and &lt;SDBER&gt; is optional</li> <li>• &lt;ALSMODE&gt; automatic laser shutdown mode that defaults to DISABLED; valid values are shown in the <a href="#">“ALS_MODE” section on page 4-49</a> and &lt;ALSMODE&gt; is optional</li> <li>• &lt;ALSRCINT&gt; ALS interval; &lt;ALSRCINT&gt; is an integer and is optional</li> <li>• &lt;ALSRCPW&gt; ALS pulse width; &lt;ALSRCPW&gt; is a float and is optional</li> <li>• &lt;SYNCMSG&gt; indicates that the facility be enabled to provide the synchronization clock. This does not apply to a TXP_MR_10G card. This applies for a MXP_2.5G_10G card only if the payload is SONET and the card termination mode is as follows:<br/> TRANSPARENT—all client ports are available for all timing selections. All trunk ports are not available.<br/> LINE—all ports are available for all timing selections. Valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a> and &lt;SYNCMSG&gt; is optional</li> <li>• &lt;SENDDUS&gt; indicates that the facility send out a do not use for sync message. This does not apply to a TXP_MR_10G card. This applies for a MXP_2.5G_10G card only if the payload is SONET and the card termination mode is as follows:<br/> TRANSPARENT—All client ports are available for all timing selections. All trunk ports are not available.<br/> LINE—All ports are available for all timing selections. Valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a> and &lt;SENDDUS&gt; is optional</li> <li>• &lt;LSRSTAT&gt; displays the laser status; valid values are shown in the <a href="#">“UP_DOWN” section on page 4-97</a> and &lt;LSRSTAT&gt; is optional</li> <li>• &lt;CLEI&gt; is the CLEI code for the SFP for the MXP_2.5G_10G card; &lt;CLEI&gt; is a string and is optional</li> <li>• &lt;PARTNUM&gt; is the part number for the SFP for the MXP_2.5G_10G card; &lt;PARTNUM&gt; is a string and is optional</li> <li>• &lt;SERIALNUM&gt; is the serial number of the SFP for the MXP_2.5G_10G card; &lt;SERIALNUM&gt; is a string and is optional</li> <li>• &lt;VENDORREV&gt; is the vendor SFP revision number; &lt;VENDORREV&gt; is a string and is optional</li> </ul> |

| Section                      | RTRV-CLNT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format<br>(continued) | <ul style="list-style-type: none"> <li>• &lt;PLGTYPE&gt; indicates the pluggable optics type; &lt;PLGTYPE&gt; is a string and is optional</li> <li>• &lt;MACADDR&gt; identifies the MAC address for the 10GE payload; &lt;MACADDR&gt; is a string and is optional</li> <li>• &lt;SOAK&gt; OOS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 translates to a soak time of 1 hour. The allowable range is 0 to 480 intervals. &lt;SOAK&gt; is an integer and is optional</li> <li>• &lt;SOAKLEFT&gt; time remaining for the transition from OOS-AINS to IS measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. &lt;SOAKLEFT&gt; is optional<br/>Rules for &lt;SOAKLEFT&gt; are as follows: <ul style="list-style-type: none"> <li>– When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed.</li> <li>– When the port is in OOS_AINS, but the countdown has not started due to fault signal the value will be SOAKLEFT=NOT-STARTED.</li> <li>– When the port is in OOS_AINS state and the countdown has started the value will be shown in HH-MM format.</li> </ul> </li> <li>• &lt;OSPF&gt; indicates the OSPF discovery only if the port COMM is DCC or GCC; valid values are shown in the “ON_OFF” section on page 4-76 and &lt;OSPF&gt; is optional</li> <li>• &lt;PST&gt; is the primary state; valid values are shown in the “PST” section on page 4-83</li> <li>• &lt;SST&gt; is the secondary state; valid values are shown in the “SST” section on page 4-86 and &lt;SST&gt; is optional</li> </ul> |
| Output Example               | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD “FAC-1-1:,,ROLE,ACT:NAME=“\NYPORT”,COMM=DCC,SFBER=1E-4, SDBER=1E-6,ALSMODE=Y,ALSRCINT=30,ALSRCPW=35.1, SYNCMSG=Y,SENDDUS=Y,LSRSTAT=UP,CLEI=ABC,PN=123,SN=123, VENDORREV=111,PLGTYPE=IC48-LR,MACADDR=00-11-22-33-44-55, SOAK=52,SOAKLEFT=12-25,OSPF=Y:IS,AINS” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Errors                       | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### 3.4.153 RTRV-CMD-SECU: Retrieve Command Security

This command retrieves the current command security level of the command specified in the AID field.

| Section  | RTRV-CMD-SECU Description |
|----------|---------------------------|
| Category | Security                  |
| Security | Administrator             |

| Section          | RTRV-CMD-SECU Description                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ACT-USER ENT-USER-SECU<br>ALW-MSG-SECU INH-MSG-SECU<br>ALW-USER-SECU INH-USER-SECU<br>CANC REPT ALM SECU<br>CANC-USER REPT EVT SECU<br>CANC-USER-SECU REPT EVT SESSION<br>DLT-USER-SECU RTRV-DFLT-SECU<br>ED-CMD-SECU RTRV-USER-SECU<br>ED-PID SET-ATTR-SECUDFLT<br>ED-USER-SECU                                                                                                                                                             |
| Input Format     | RTRV-CMD-SECU:[<TID>]:<AID>:<CTAG><br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is the access identifier string. It is the command verb along with the verb modifier(s) as it currently exists. It may be a single command or a block of commands where the block may include all commands. Only INIT-REG is supported in this release (R4.6). &lt;AID&gt; is a string and must not be null</li> </ul>                       |
| Input Example    | RTRV-CMD-SECU::INIT-REG:1;                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>:<CAP>”<br>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is the access identifier string. It is the command verb along with the verb modifier(s) as it currently exists. Only INIT-REG is supported in this release (R4.6). &lt;AID&gt; is a string</li> <li>&lt;CAP&gt; is the command access privilege; valid values are shown in the “PRIVILEGE” section on page 4-82</li> </ul> |
| Output Example   | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“INIT-REG:MAINT”<br>;                                                                                                                                                                                                                                                                                                                                                                         |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                               |

### 3.4.154 RTRV-COND-<MOD2ALM>: Retrieve Condition (CLNT, DS1, EC1, FC, FSTE, G1000, GIGE, OC12, OC192, OC3, OC48, OCH, OMS, OSC, OTS, POS, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, UDCDCC, UDCF, VT1, VT2, WLEN)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command retrieves the current standing condition and state associated with an entity.



| Section          | RTRV-COND-<MOD2ALM> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Fault                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Related Messages | REPT ALM <MOD2ALM>                    RTRV-ALM-ALL<br>REPT ALM BITS                            RTRV-ALM-BITS<br>REPT ALM COM                            RTRV-ALM-ENV<br>REPT ALM ENV                            RTRV-ALM-EQPT<br>REPT ALM EQPT                           RTRV-ALM-RING<br>REPT ALM RING                           RTRV-ALM-SYNCN<br>REPT ALM SYNCN                         RTRV-ALM-UCP<br>REPT ALM UCP                            RTRV-COND-ALL<br>REPT EVT COM                            RTRV-COND-BITS<br>REPT EVT ENV                            RTRV-COND-ENV<br>REPT EVT EQPT                           RTRV-COND-EQPT<br>REPT EVT FXFR                           RTRV-COND-RING<br>REPT EVT IOSCFG                        RTRV-COND-SYNCN<br>REPT EVT SECU                           RTRV-COND-UCP<br>REPT EVT SESSION                       SET-ATTR-CONT<br>REPT EVT SYNCN                         SET-ATTR-ENV<br>REPT EVT UCP                            SET-ATTR-SECUDFLT<br>RTRV-ALM-<MOD2ALM> |
| Input Format     | RTRV-COND-<MOD2ALM>:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>][,.,,];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the identifier that has an alarm condition; &lt;AID&gt; is from the <a href="#">“ALL” section on page 4-9</a> and must not be null</li> <li>• &lt;TYPEREQ&gt; is the type of condition to be retrieved; valid values are shown in the <a href="#">“Conditions” section on page 7-18</a>. A null value is equivalent to ALL.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Input Example    | RTRV-COND-T3:TID:FAC-2-1:229::LOS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Section        | RTRV-COND-<MOD2ALM> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“&lt;AID&gt;,&lt;AIDTYPE&gt;[:&lt;NTFCNCDE&gt;],&lt;TYPEREP&gt;,&lt;SRVEFF&gt;],<br/>[&lt;OCRDAT&gt;],[&lt;OCRTM&gt;],,,[&lt;DESC&gt;]”<br/>;<br/>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an identifier that has an alarm condition and is from the “ALL” section on page 4-9</li> <li>• Valid values for &lt;AIDTYPE&gt; are shown in the “MOD2ALM” section on page 4-70, &lt;AIDTYPE&gt; is optional</li> <li>• &lt;NTFCNCDE&gt; is a notification code; valid values are shown in the “NOTIF_CODE” section on page 4-75, &lt;NTFCNCDE&gt; is optional</li> <li>• &lt;TYPEREP&gt; is the condition itself; valid values are shown in the “Conditions” section on page 7-18</li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values are shown in the “SERV_EFF” section on page 4-85, &lt;SRVEFF&gt; is optional</li> <li>• &lt;OCRDAT&gt; is a date and is optional</li> <li>• &lt;OCRTM&gt; is a time and is optional</li> <li>• &lt;DESC&gt; is a condition description; &lt;DESC&gt; is a string and is optional</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/>M 001 COMPLD<br/>“FAC-2-1,T3:CR,LOS,SA,01-01,16-00-20,,,“LOS OF SIGNAL\””<br/>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

### 3.4.155 RTRV-COND-ALL: Retrieve Condition All

This command retrieves the current standing condition for all entities.

According to GR-833, the RTRV-COND-ALL command only reports EQPT, COM, and rr (T1, T3, OCN, EC1, STSN, VT1, DS1, ML-series, TXP and MXP) alarms.

To retrieve all the NE conditions, issue all of the following commands:

```
RTRV-COND-ALL
RTRV-COND-ENV
RTRV-COND-BITS
RTRV-COND-SYNCN
```

RTRV-COND-ALL does not return all conditions that are returned by other, more specific RTRV-COND commands. Instead it returns a subset of those conditions. This is a requirement from section 6.2.1.8.4 of GR-253-CORE. The specific requirements are R6-288, R6-289 and R6-290. Section 6.2.1.8.4 states a retrieval that returns ALL conditions from a node (RTRV-COND-ALL) must omit any conditions that are “same root cause” as other raised conditions. The section also states any retrieval of a subset of the conditions from a node, regardless of how the subsetting occurs, should not omit these “same root cause” conditions. RTRV-COND-STSN, for example, must include “same root cause” conditions in the set it returns, while RTRV-COND-ALL must not.

| Section          | RTRV-COND-ALL Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Fault                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Related Messages | REPT ALM <MOD2ALM>            RTRV-ALM-ALL<br>REPT ALM BITS                    RTRV-ALM-BITS<br>REPT ALM COM                    RTRV-ALM-ENV<br>REPT ALM ENV                    RTRV-ALM-EQPT<br>REPT ALM EQPT                   RTRV-ALM-RING<br>REPT ALM RING                   RTRV-ALM-SYNCN<br>REPT ALM SYNCN                 RTRV-ALM-UCP<br>REPT ALM UCP                    RTRV-COND-<MOD2ALM><br>REPT EVT COM                    RTRV-COND-BITS<br>REPT EVT ENV                    RTRV-COND-ENV<br>REPT EVT EQPT                   RTRV-COND-EQPT<br>REPT EVT FXFR                   RTRV-COND-RING<br>REPT EVT IOSCFG                RTRV-COND-SYNCN<br>REPT EVT SECU                   RTRV-COND-UCP<br>REPT EVT SESSION               SET-ATTR-CONT<br>REPT EVT SYNCN                 SET-ATTR-ENV<br>REPT EVT UCP                    SET-ATTR-SECUDFLT<br>RTRV-ALM-<MOD2ALM> |
| Input Format     | RTRV-COND-ALL:[<TID>]::<CTAG>::[<TYPEREQ>][,.,,];<br>where: <ul style="list-style-type: none"> <li>• &lt;TYPEREQ&gt; is the type of condition to be retrieved; valid values are shown in the <a href="#">“Conditions” section on page 7-18</a>. A null value is equivalent to ALL</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Input Example    | RTRV-COND-ALL:TID::229::LOS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| Section        | RTRV-COND-ALL Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“&lt;AID&gt;,[&lt;AIDTYPE&gt;]:[&lt;NTFCNCDE&gt;],&lt;TYPEREP&gt;,[&lt;SRVEFF&gt;],<br/>[&lt;OCRDAT&gt;],[&lt;OCRTM&gt;],,,[&lt;DESC&gt;]”<br/>;<br/>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an identifier that has an alarm condition; &lt;AID&gt; is from the <a href="#">“ALL” section on page 4-9</a></li> <li>• &lt;AIDTYPE&gt; is the type of access identifier; valid values are shown in the <a href="#">“MOD2B” section on page 4-71</a>, &lt;AIDTYPE&gt; is optional</li> <li>• &lt;NTFCNCDE&gt; is the notification code; valid values are shown in the <a href="#">“NOTIF_CODE” section on page 4-75</a>, &lt;NTFCNCDE&gt; is optional</li> <li>• &lt;TYPEREP&gt; is the type of condition to be retrieved; valid values are shown in the <a href="#">“Conditions” section on page 7-18</a></li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values are shown in the <a href="#">“SERV_EFF” section on page 4-85</a>, &lt;SRVEFF&gt; is optional</li> <li>• &lt;OCRDAT&gt; is a date and is optional</li> <li>• &lt;OCRTM&gt; is a time and is optional</li> <li>• &lt;DESC&gt; is the condition description; &lt;DESC&gt; is a string and is optional</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/>M 001 COMPLD<br/>“FAC-2-1,OC3:CR,LOS,SA,01-01,16-02-15,,,“LOS OF SIGNAL\””<br/>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

### 3.4.156 RTRV-COND-BITS: Retrieve Condition Building Integrated Timing Supply

This command retrieves the standing conditions on BITS.

| Section  | RTRV-COND-BITS Description |
|----------|----------------------------|
| Category | Synchronization            |
| Security | Retrieve                   |

| Section          | RTRV-COND-BITS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ED-BITS<br>ED-NE-SYCN<br>ED-SYCN<br>OPR-SYCN<br>REPT ALM <MOD2ALM><br>REPT ALM BITS<br>REPT ALM COM<br>REPT ALM ENV<br>REPT ALM EQPT<br>REPT ALM SECU<br>REPT ALM SYCN<br>REPT ALM UCP<br>REPT EVT <MOD2ALM><br>REPT EVT BITS<br>REPT EVT COM<br>REPT EVT ENV<br>REPT EVT EQPT<br>REPT EVT FXFR<br>REPT EVT IOSCFG<br>REPT EVT SECU<br>REPT EVT SESSION<br>REPT EVT SYCN<br>REPT EVT UCP<br>RLS-SYCN<br>RTRV-ALM-<MOD2ALM><br>RTRV-ALM-ALL<br>RTRV-ALM-BITS<br>RTRV-ALM-ENV<br>RTRV-ALM-EQPT<br>RTRV-ALM-SYCN<br>RTRV-ALM-UCP<br>RTRV-ATTR-CONT<br>RTRV-ATTR-ENV<br>RTRV-BITS<br>RTRV-COND-<MOD2ALM><br>RTRV-COND-ALL<br>RTRV-COND-ENV<br>RTRV-COND-EQPT<br>RTRV-COND-SYCN<br>RTRV-COND-UCP<br>RTRV-NE-SYCN<br>RTRV-SYCN<br>SET-ATTR-CONT<br>SET-ATTR-ENV<br>SET-ATTR-SECUDFLT |
| Input Format     | RTRV-COND-BITS:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>][,,,];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier from the “BITS” section on page 4-19 and must not be null</li> <li>• &lt;TYPEREQ&gt; is the type of condition to be retrieved; valid values are shown in the “Conditions” section on page 7-18. A null value is equivalent to ALL</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                    |
| Input Example    | RTRV-COND-BITS:TID:BITS-1:229::LOS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

| Section        | RTRV-COND-BITS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“&lt;AID&gt;,[&lt;AIDTYPE&gt;]:[&lt;NTFCNCDE&gt;],&lt;TYPEREP&gt;,[&lt;SRVEFF&gt;],<br/>[&lt;OCRDAT&gt;],[&lt;OCRTM&gt;],,,[&lt;DESC&gt;]”<br/>;<br/>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an identifier that has an alarm condition and is from the “BITS” section on page 4-19</li> <li>• &lt;AIDTYPE&gt; is the type of AID. It is always reported as BITS; valid values are shown in the “MOD2B” section on page 4-71, &lt;AIDTYPE&gt; is optional</li> <li>• &lt;NTFCNCDE&gt; is the notification code; valid values are shown in the “NOTIF_CODE” section on page 4-75, &lt;NTFCNCDE&gt; is optional</li> <li>• &lt;TYPEREP&gt; is the type of condition to be retrieved; valid values are shown in the “Conditions” section on page 7-18</li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values are shown in the “SERV_EFF” section on page 4-85, &lt;SRVEFF&gt; is optional</li> <li>• &lt;OCRDAT&gt; is a date and is optional</li> <li>• &lt;OCRTM&gt; is a time and is optional</li> <li>• &lt;DESC&gt; is a string and is optional</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/>M 001 COMPLD<br/>“BITS-1,BITS:CR,LOS,SA,01-01,16-02-15,,,\"LOS OF SIGNAL\””<br/>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

### 3.4.157 RTRV-COND-ENV: Retrieve Environmental Condition

This command retrieves the environmental conditions.

| Section  | RTRV-COND-ENV Description       |
|----------|---------------------------------|
| Category | Environment Alarms and Controls |
| Security | Retrieve                        |

| Section          | RTRV-COND-ENV Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | OPR-ACO-ALL<br>OPR-EXT-CONT<br>REPT ALM <MOD2ALM><br>REPT ALM BITS<br>REPT ALM COM<br>REPT ALM ENV<br>REPT ALM EQPT<br>REPT ALM SECU<br>REPT ALM SYNCN<br>REPT ALM UCP<br>REPT EVT <MOD2ALM><br>REPT EVT BITS<br>REPT EVT COM<br>REPT EVT ENV<br>REPT EVT EQPT<br>REPT EVT FXFR<br>REPT EVT IOSCFG<br>REPT EVT SECU<br>REPT EVT SESSION<br>REPT EVT SYNCN<br>REPT EVT UCP<br>RLS-EXT-CONT<br>RTRV-ALM-<MOD2ALM><br>RTRV-ALM-ALL<br>RTRV-ALM-BITS<br>RTRV-ALM-ENV<br>RTRV-ALM-EQPT<br>RTRV-ALM-SYNCN<br>RTRV-ALM-UCP<br>RTRV-ATTR-CONT<br>RTRV-ATTR-ENV<br>RTRV-COND-<MOD2ALM><br>RTRV-COND-ALL<br>RTRV-COND-BITS<br>RTRV-COND-EQPT<br>RTRV-COND-SYNCN<br>RTRV-COND-UCP<br>RTRV-EXT-CONT<br>SET-ATTR-CONT<br>SET-ATTR-ENV<br>SET-ATTR-SECUDFLT                                                                       |
| Input Format     | RTRV-COND-ENV:[<TID>]:<AID>:<CTAG>:.[<NTFCNCDE>],[<ALMTYPE>]<br>[,,,];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier from the “ENV” section on page 4-26 and must not be null</li> </ul> <p><b>Note</b> For RTRV-COND-ENV, only ENV-IN-{1-4} is a valid AID for ONS 15454 and only ENV-IN-{1-6} is a valid AID for ONS 15327. ENV-OUT-{1,6} is not a valid AID for RTRV-COND-ENV.</p> <ul style="list-style-type: none"> <li>• &lt;NTFCNCDE&gt; is a notification code; valid values are shown in the “NOTIF_CODE” section on page 4-75. A null value is equivalent to ALL.</li> <li>• &lt;ALMTYPE&gt; is the condition type for the environmental conditions; valid values are shown in the “ENV_ALM” section on page 4-58. A null value is equivalent to ALL.</li> </ul> |
| Input Example    | RTRV-COND-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| Section        | RTRV-COND-ENV Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>:<NTFCNCDE>,<ALMTYPE>,[<OCRDAT>],<br>[<OCRTM>],,,,[<DESC>]”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier and is from the “ENV” section on page 4-26</li> <li>• &lt;NTFCNCDE&gt; is the notification code; valid values are shown in the “NOTIF_CODE” section on page 4-75</li> <li>• &lt;ALMTYPE&gt; is an alarm type for the environmental alarm; valid values are shown in the “ENV_ALM” section on page 4-58</li> <li>• &lt;OCRDAT&gt; is a date and is optional</li> <li>• &lt;OCRTM&gt; is a time and is optional</li> <li>• &lt;DESC&gt; is the description of the condition; &lt;DESC&gt; is a string and is optional</li> </ul> |
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“ENV-IN-1:MJ,OPENDR,01-01,16-02-15,,,\\“OPEN DOOR\\””<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

### 3.4.158 RTRV-COND-EQPT: Retrieve Condition Equipment

This command retrieves the equipment conditions.

| Section  | RTRV-COND-EQPT Description |
|----------|----------------------------|
| Category | Equipment                  |
| Security | Retrieve                   |



| Section          | RTRV-COND-EQPT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ALW-SWDX-EQPT REPT EVT UCP<br>ALW-SWTOPROTN-EQPT RTRV-ALM-<MOD2ALM><br>ALW-SWTOWKG-EQPT RTRV-ALM-ALL<br>DLT-EQPT ED-EQPT RTRV-ALM-BITS<br>ENT-EQPT RTRV-ALM-ENV<br>INH-SWDX-EQPT RTRV-ALM-EQPT<br>INH-SWTOPROTN-EQPT RTRV-ALM-SYCN<br>INH-SWTOWKG-EQPT RTRV-ALM-UCP<br>REPT ALM <MOD2ALM> RTRV-ALMTH-EQPT<br>REPT ALM BITS RTRV-ATTR-CONT<br>REPT ALM COM RTRV-ATTR-ENV<br>REPT ALM ENV RTRV-COND-<MOD2ALM><br>REPT ALM EQPT RTRV-COND-ALL<br>REPT ALM SECU RTRV-COND-BITS<br>REPT ALM SYCN RTRV-COND-ENV<br>REPT ALM UCP RTRV-COND-SYCN<br>REPT EVT <MOD2ALM> RTRV-COND-UCP<br>REPT EVT BITS RTRV-EQPT<br>REPT EVT COM SET-ALMTH-EQPT<br>REPT EVT ENV SET-ATTR-CONT<br>REPT EVT EQPT SET-ATTR-ENV<br>REPT EVT FXFR SET-ATTR-SECUDFLT<br>REPT EVT IOSCFG SW-DX-EQPT<br>REPT EVT SECU SW-TOPROTN-EQPT<br>REPT EVT SESSION SW-TOWKG-EQPT<br>REPT EVT SYCN |
| Input Format     | RTRV-COND-EQPT:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>][,,,];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an identifier that has an alarm condition; &lt;AID&gt; is from the “EQPT” section on page 4-27 and must not be null</li> <li>• &lt;TYPEREQ&gt; is the type of condition to be retrieved; valid values are shown in the “Conditions” section on page 7-18. A null value is equivalent to ALL</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Input Example    | RTRV-COND-EQPT:TID:SLOT-1:229::LOS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Section        | RTRV-COND-EQPT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <p>SID DATE TIME<br/> M CTAG COMPLD<br/> “&lt;AID&gt;,[&lt;AIDTYPE&gt;]:[&lt;NTFCNCDE&gt;],&lt;TYPEREP&gt;,[&lt;SRVEFF&gt;],<br/> [&lt;OCRDAT&gt;],[&lt;OCRTM&gt;],,,[&lt;DESC&gt;]”<br/> ;<br/> where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the identifier that has an alarm condition and is from the “EQPT” section on page 4-27</li> <li>• &lt;AIDTYPE&gt; is the type of the AID. It is always reported as EQPT for the equipment condition; valid values are shown in the “MOD2B” section on page 4-71, &lt;AIDTYPE&gt; is optional</li> <li>• &lt;NTFCNCDE&gt; is the notification code; valid values are shown in the “NOTIF_CODE” section on page 4-75, &lt;NTFCNCDE&gt; is optional</li> <li>• &lt;TYPEREP&gt; is the type of condition to be retrieved; valid values are shown in the “Conditions” section on page 7-18</li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values are shown in the “SERV_EFF” section on page 4-85, &lt;SRVEFF&gt; is optional</li> <li>• &lt;OCRDAT&gt; is a date and is optional</li> <li>• &lt;OCRTM&gt; is a time and is optional</li> <li>• &lt;DESC&gt; is the condition description; &lt;DESC&gt; is a string and is optional</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/> M 001 COMPLD<br/> “SLOT-1,EQPT:CR,LOS,SA,01-01,16-02-15,,,\"LOS OF SIGNAL\"”<br/> ;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

### 3.4.159 RTRV-COND-SYCN: Retrieve Condition Synchronization

This command retrieves the synchronization condition.

| Section  | RTRV-COND-SYCN Description |
|----------|----------------------------|
| Category | Synchronization            |
| Security | Retrieve                   |

| Section          | RTRV-COND-SYCN Description                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ED-BITS<br>ED-NE-SYCN<br>ED-SYCN<br>OPR-SYCN<br>REPT ALM <MOD2ALM><br>REPT ALM BITS<br>REPT ALM COM<br>REPT ALM ENV<br>REPT ALM EQPT<br>REPT ALM SECU<br>REPT ALM SYCN<br>REPT ALM UCP<br>REPT EVT <MOD2ALM><br>REPT EVT BITS<br>REPT EVT COM<br>REPT EVT ENV<br>REPT EVT EQPT<br>REPT EVT FXFR<br>REPT EVT IOSCFG<br>REPT EVT SECU<br>REPT EVT SESSION<br>REPT EVT SYCN<br>REPT EVT UCP                                                                             |
|                  | RLS-SYCN<br>RTRV-ALM-<MOD2ALM><br>RTRV-ALM-ALL<br>RTRV-ALM-BITS<br>RTRV-ALM-ENV<br>RTRV-ALM-EQPT<br>RTRV-ALM-SYCN<br>RTRV-ALM-UCP<br>RTRV-ATTR-CONT<br>RTRV-ATTR-ENV<br>RTRV-BITS<br>RTRV-COND-<MOD2ALM><br>RTRV-COND-ALL<br>RTRV-COND-BITS<br>RTRV-COND-ENV<br>RTRV-COND-EQPT<br>RTRV-COND-UCP<br>RTRV-NE-SYCN<br>RTRV-SYCN<br>SET-ATTR-CONT<br>SET-ATTR-ENV<br>SET-ATTR-SECUDFLT                                                                                   |
| Input Format     | RTRV-COND-SYCN:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>][,.,,];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an identifier that has an alarm condition; &lt;AID&gt; is from the <a href="#">“SYNC_REF”</a> section on page 4-34 and must not be null</li> <li>• &lt;TYPEREQ&gt; is the type of condition to be retrieved; valid values are shown in the <a href="#">“Conditions”</a> section on page 7-18. A null value is equivalent to ALL</li> </ul> |
| Input Example    | RTRV-COND-SYCN:TID:SYNC-NE:229::LOS;                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| Section        | RTRV-COND-SYCN Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“&lt;AID&gt;,[&lt;AIDTYPE&gt;]:[&lt;NTFCNCDE&gt;],&lt;TYPEREP&gt;,[&lt;SRVEFF&gt;],<br/>[&lt;OCRDAT&gt;],[&lt;OCRTM&gt;],,,[&lt;DESC&gt;]”<br/>;<br/>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the identifier that has an alarm condition and is from the <a href="#">“SYN” section on page 4-33</a></li> <li>• &lt;AIDTYPE&gt; is the type of AID. It is always reported as SYCN; valid values are shown in the <a href="#">“MOD2B” section on page 4-71</a>, &lt;AIDTYPE&gt; is optional</li> <li>• &lt;NTFCNCDE&gt; is the notification code; valid values for &lt;NTFCNCDE&gt; are shown in the <a href="#">“NOTIF_CODE” section on page 4-75</a>, &lt;NTFCNCDE&gt; is optional</li> <li>• &lt;TYPEREP&gt; is the type of condition to be retrieved; valid values are shown in the <a href="#">“Conditions” section on page 7-18</a></li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values are shown in the <a href="#">“SERV_EFF” section on page 4-85</a>, &lt;SRVEFF&gt; is optional</li> <li>• &lt;OCRDAT&gt; is a date and is optional</li> <li>• &lt;OCRTM&gt; is a time and is optional</li> <li>• &lt;DESC&gt; is the condition description; &lt;DESC&gt; is a string and is optional</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/>M 001 COMPLD<br/>“SYNC-NE,SYCN:MJ,FRNGSYNC,SA,01-01,16-02-15,,,<br/>“FREE RUNNING SYNCHRONIZATION MODE””<br/>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

### 3.4.160 RTRV-COND-UCP: Retrieve Condition Unified Control Plane

(Cisco ONS 15454 only)

This command retrieves the current standing condition against a UCP object.

| Section  | RTRV-COND-UCP Description |
|----------|---------------------------|
| Category | UCP                       |
| Security | Retrieve                  |

| Section          | RTRV-COND-UCP Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | DLT-UCP-CC REPT EVT SESSION<br>DLT-UCP-IF REPT EVT SYNCN<br>DLT-UCP-NBR REPT EVT UCP<br>ED-UCP-CC RTRV-ALM-<MOD2ALM><br>ED-UCP-IF RTRV-ALM-ALL<br>ED-UCP-NBR RTRV-ALM-BITS<br>ED-UCP-NODE RTRV-ALM-ENV<br>ENT-UCP-CC RTRV-ALM-EQPT<br>ENT-UCP-IF RTRV-ALM-SYNCN<br>ENT-UCP-NBR RTRV-ALM-UCP<br>REPT ALM <MOD2ALM> RTRV-ATTR-CONT<br>REPT ALM BITS RTRV-ATTR-ENV<br>REPT ALM COM RTRV-COND-<MOD2ALM><br>REPT ALM ENV RTRV-COND-ALL<br>REPT ALM EQPT RTRV-COND-BITS<br>REPT ALM SECU RTRV-COND-ENV<br>REPT ALM SYNCN RTRV-COND-EQPT<br>REPT ALM UCP RTRV-COND-SYNCN<br>REPT EVT <MOD2ALM> RTRV-UCP-CC<br>REPT EVT BITS RTRV-UCP-IF<br>REPT EVT COM RTRV-UCP-NBR<br>REPT EVT ENV RTRV-UCP-NODE<br>REPT EVT EQPT SET-ATTR-CONT<br>REPT EVT FXFR SET-ATTR-ENV<br>REPT EVT IOSCFG SET-ATTR-SECUDFLT<br>REPT EVT SECU |
| Input Format     | RTRV-COND-UCP:[<TID>]:<AID>:<CTAG>:[:<TYPEREQ>][,.,,];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies a UCP object with alarm condition; &lt;AID&gt; is from the “UCP” section on page 4-35 and must not be NULL</li> <li>• &lt;TYPEREQ&gt; is the type of condition to be retrieved; valid values are shown in the “Conditions” section on page 7-18 and a NULL value is equivalent to ALL</li> </ul>                                                                                                                                                                                                                                                                                                                                                                              |
| Input Example    | RTRV-COND-UCP:CISCO:CC-18:123::LMP-HELLODOWN;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

| Section        | RTRV-COND-UCP Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <pre>SID DATE TIME M CTAG COMPLD "&lt;AID&gt;:[&lt;NTFCNCDE&gt;],&lt;TYPEREP&gt;,[&lt;SRVEFF&gt;],[&lt;OCRDAT&gt;],  [&lt;OCRTM&gt;],,,[&lt;DESC&gt;]" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies a UCP object with alarm condition; &lt;AID&gt; is from the <a href="#">“UCP” section on page 4-35</a></li> <li>• &lt;NTFCNCDE&gt; is a notification code; valid values are shown in the <a href="#">“NOTIF_CODE” section on page 4-75</a> and &lt;NTFCNCDE&gt; is optional</li> <li>• &lt;TYPEREP&gt; is the type of condition to be retrieved; valid values are shown in the <a href="#">“Conditions” section on page 7-18</a></li> <li>• &lt;SRVEFF&gt; is the effect on service caused by the alarm condition; valid values are shown in the <a href="#">“SERV_EFF” section on page 4-85</a> and &lt;SRVEFF&gt; is optional</li> <li>• &lt;OCRDAT&gt; is a date and is optional</li> <li>• &lt;OCRTM&gt; is a time and is optional</li> <li>• &lt;DESC&gt; is a condition description, a string and is optional</li> </ul> |
| Output Example | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD “CC-18:MN,LMP-HELLODOWN,SA,01-01,16-02-15,,, \“LMP HELLO FSM ON CONTROL CHANNEL DOWN“,” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

### 3.4.161 RTRV-CRS: Retrieve Cross Connect

This command retrieves all the cross-connections based on the required PATH types.

Notes:

1. A NULL AID defaults to ALL (NE).
2. A NULL PATH defaults to all the existing cross-connections.
3. The level in the output field is an optional field, and is used to indicate the bandwidth of the PATH cross-connection.

| Section          | RTRV-CRS Description                                                                                       |
|------------------|------------------------------------------------------------------------------------------------------------|
| Category         | Cross Connections                                                                                          |
| Security         | Retrieve                                                                                                   |
| Related Messages | DLT-CRS-<PATH>                      ENT-CRS-<PATH><br>ED-CRS-<PATH>                        RTRV-CRS-<PATH> |

| Section        | RTRV-CRS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format   | RTRV-CRS:[<TID>]:<AID>:<CTAG>:::[CRSTYPE=<CRSTYPE>][:];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates the access identifier. It can be a facility AID, an STS AID, a VT AID, or ALL AID. The ALL AID defaults to NE, which reports all the existing cross-connections of the NE. &lt;AID&gt; is from the “CrossConnectId1” section on page 4-23 and must not be NULL</li> <li>• &lt;CRSTYPE&gt; specifies the cross-connection type. It is STS or VT or both. It defaults to all existing cross-connections. Valid values for &lt;CRSTYPE&gt; are shown in the “CRS_TYPE” section on page 4-55 and a NULL value is equivalent to ALL</li> </ul>                                                                                                                     |
| Input Example  | RTRV-CRS:CISCO:ALL:123:::CRSTYPE=STS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Output Format  | SID DATE TIME<br>M CTAG COMPLD<br>“<CROSSCONNECTID>,<CROSSCONNECTID1>:<CCT>,<MOD>::<PST>,<br>[<SST>]”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;CROSSCONNECTID&gt; is the AID from the “CrossConnectId” section on page 4-20</li> <li>• &lt;CROSSCONNECTID1&gt; is the AID from the “CrossConnectId1” section on page 4-23</li> <li>• &lt;CCT&gt; identifies the cross-connection type; valid values are shown in the “CCT” section on page 4-53</li> <li>• Valid values for &lt;MOD&gt; are shown in the “MOD2” section on page 4-69</li> <li>• &lt;PST&gt; primary state; valid values are shown in the “PST” section on page 4-83</li> <li>• &lt;SST&gt; secondary state; valid values are shown in the “SST” section on page 4-86 and &lt;SST&gt; is optional</li> </ul> |
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“STS-6-1-1,STS-12-1-4:2WAY,STS3C::OOS,AINS”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Errors         | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

### 3.4.162 RTRV-CRS-<PATH>: Retrieve Cross Connect (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C, VT1, VT2)

See Table 4-11 on page 4-5 for supported modifiers by platform.

This command retrieves any connections associated with the entered AID(s) or AID range. The information on both ends is returned along with the type of connection.

Notes:

1. The path protection STS cross-connection can be retrieved by using “&” in the AID fields of this command.

- a. To retrieve a 1-way selector or 2-way selector and bridge cross-connection with:  
 from points: F1, F2  
 to points: T1  
 the output will be:  
 1-way  
 “F1&F2,T1:CCT,STS3C”  
 2-way  
 If retrieved on point F1 or F2, the output format is the same as the 1-way output.  
 If retrieved on point T1, the output will be:  
 “T1,F1&F2:CCT,STS3C”
- b. To retrieve a 1-way bridge or 2-way selector and bridge cross-connection with:  
 from point: F1  
 to points: T1, T2  
 the output will be:  
 1-way  
 “F1,T1&T2:CCT,STS3C”  
 2-way  
 “T1&T2,F1:CCT,STS3C”
- c. To retrieve a 1-way subtending path protection connection or 2-way subtending path protection cross-connection with:  
 from point: F1, F2  
 to points: T1, T2  
 the output will be:  
 1-way:  
 “F1&F2,T1&T2:CCT,STS3C”  
 2-way:  
 If retrieved on point F1 or F2, the output format is the same as the 1-way output.  
 If retrieved on point T1 or T2, the output will be:  
 “T1&T2,F1&F2:CCT,STS3C”
- d. To retrieve a 2-way selector and bridge cross-connection with:  
 ENT-CRS-<PATH>::F1&F2,S1&S2:<CTAG>::2WAY;  
 from points: F1, F2 (F1 is the working side, F2 is the protect side)  
 selector: S1, S2 (s1 is the working side, S2 is the protect side)  
 the output will be:  
 If retrieved on point F1 or F2, the output will be:  
 “F1&F2,S1&S2:CCT,STS3C”  
 If retrieved on selector S1 or S2, the output will be:  
 “S1&S2,F1&F2:CCT,STS3C”



- e. To retrieve a path protection IDRI cross-connect with:  
from points: F1, F2  
to points: T1, T2  
the output will be:  
"F1&F2,T1&T2:CCT,STS3C"
  - f. To retrieve a path protection DRI cross-connect with:  
from points: F1, F2  
to points: T1  
the output will be:  
"F1&F2,T1:CCT,STS3C"
2. All A&B AIDs in the TL1 cross-connection command are in the format of WorkingAID&ProtectAID.
  3. <PATH> does not include STS for the RTRV-CRS command because STS is not a standard designator as defined by GR-833 A-2.
  4. Both the 1WAYPCA and 2WAYPCA is used to specify a PCA cross-connection.
  5. The facility AID is only valid on slots with a G1000-4 card.
  6. The virtual facility AID (VFAC) is only valid on slots holding the ML-series card.

| Section          | RTRV-CRS-<PATH> Description                                                                                                                                                                  |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Cross Connections                                                                                                                                                                            |
| Security         | Retrieve                                                                                                                                                                                     |
| Related Messages | DLT-CRS-<PATH>                                  ENT-CRS-<PATH><br>ED-CRS-<PATH>                                                  RTRV-CRS                                                    |
| Input Format     | RTRV-CRS-<PATH>:[<TID>]:<SRC>:<CTAG>[:];<br>where:<br><ul style="list-style-type: none"> <li>• &lt;AID&gt; is from the AID <a href="#">"CrossConnectId1"</a> section on page 4-23</li> </ul> |
| Input Example    | RTRV-CRS-STS3C:KENWOOD:STS-6-1-1:223;                                                                                                                                                        |

| Section        | RTRV-CRS-<PATH> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | SID DATE TIME<br>M CTAG COMPLD<br>“<CROSSCONNECTID>,<CROSSCONNECTID1>:<CCT>,<MOD>::<br><PST>,[<SST>]”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;CROSSCONNECTID&gt; is the AID from the “CrossConnectId” section on page 4-20</li> <li>• &lt;CROSSCONNECTID1&gt; is the AID from the “CrossConnectId1” section on page 4-23</li> <li>• &lt;CCT&gt; identifies the cross-connection type; valid values are shown in the “CCT” section on page 4-53</li> <li>• Valid values for &lt;MOD&gt; are shown in the “MOD2” section on page 4-69</li> <li>• &lt;PST&gt; primary state; valid values are shown in the “PST” section on page 4-83</li> <li>• &lt;SST&gt; secondary state; valid values are shown in the “SST” section on page 4-86</li> </ul> |
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“STS-6-1-1,STS-12-1-4:2WAY,STS3C::OOS,AINS”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

### 3.4.163 RTRV-DFLT-SECU: Retrieve Default Security

(Cisco ONS 15454 only)

This command retrieves the system-wide default values associated with several security parameters.

| Section          | RTRV-DS1 Description                                                                                                                                                                                                                                                            |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Security                                                                                                                                                                                                                                                                        |
| Security         | Superuser                                                                                                                                                                                                                                                                       |
| Related Messages | ACT-USER ENT-USER-SECU<br>ALW-MSG-SECU INH-MSG-SECU<br>ALW-USER-SECU INH-USER-SECU<br>CANC REPT ALM SECU<br>CANC-USER REPT EVT SECU<br>CANC-USER-SECU REPT EVT SESSION<br>DLT-USER-SECU RTRV-CMD-SECU<br>ED-CMD-SECU RTRV-USER-SECU<br>ED-PID SET-ATTR-SECUDFLT<br>ED-USER-SECU |

| Section       | RTRV-DS1 Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | RTRV-DFLT-SECU:[<TID>]:<AID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier. It identifies the NE/NS single equipment unit. ALL is the only acceptable value. &lt;AID&gt; is a string and must not be null</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Input Example | RTRV-DFLT-SECU:CISCO:ALL:123;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Output Format | SID DATE TIME<br>M CTAG COMPLD<br>“<NE>:PAGE=<PAGE>,PCND=<PCND>,MXINV=<MXINV>,<br>DURAL=<DURAL>,TMOUT=<TMOUT>,UOUT=<UOUT>,<br>PFRCD=<PFRCD>,POLD=<POLD>,PINT=<PINT>,LOGIN=<LOGIN>,<br>PRIVLVL=<UAP>”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;NE&gt; is the node name of the NE from which the system values are retrieved; &lt;NE&gt; is a string</li> <li>• &lt;PAGE&gt; the password aging interval. It is the number of days left before a user is prompted to change their password. 0 indicates the policy is turned off; &lt;PAGE&gt; is an integer</li> <li>• &lt;PCND&gt; the number of days a password can be used before a new one is mandatory (i.e., the warning period); &lt;PCND&gt; is an integer</li> <li>• &lt;MXINV&gt; the maximum number of consecutive and invalid session setup attempts allowed to occur before an intrusion attempt is suspected (i.e., “Failed Logins Before Lockout” from CTC). 0 indicates the policy is turned off; &lt;MXINV&gt; is an integer</li> <li>• &lt;DURAL&gt; time interval (in seconds) during which a userid is locked out when an intrusion attempt is suspected (i.e., the “Lockout Duration” from CTC). If the user is locked out until unlocked by a superuser, &lt;DURAL&gt; = INFINITE; &lt;DURAL&gt; is a string</li> <li>• &lt;TMOUT&gt; an interval (in minutes) after which a session is terminated if no messages are exchanged between the user and the NE; &lt;TMOUT&gt; is an integer</li> <li>• &lt;UOUT&gt; the number of days a userid is allowed to exist, if it has never been used, before it must be suspended. If a userid has not been used in UOUT days, the user will be forced to change his password (or logout) at the next login. No other command is allowed until the password has been changed; &lt;UOUT&gt; is an integer</li> </ul> |

| Section                   | RTRV-DS1 Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format (continued) | <ul style="list-style-type: none"> <li>• &lt;PFRCD&gt; indicates a password change is required when a new user establishes a session to the NE for the first time (i.e., “Require password change on 1st login” from CTC); valid values are shown in the <a href="#">“YES_NO” section on page 4-99</a></li> <li>• &lt;POLD&gt; the number of prior passwords that cannot be reused (i.e., “Prevent reusing last X passwords” from CTC); &lt;POLD&gt; is an integer</li> <li>• &lt;PINT&gt; the number of days that must pass before a password can be changed. If PINT = 0, the policy is not enabled; &lt;PINT&gt; is an integer</li> <li>• &lt;LOGIN&gt; the number of times a user can log into an NE. &lt;LOGIN&gt; is either SINGLE or MULTIPLE. If &lt;LOGIN&gt; is SINGLE, a user can only log into an NE one time with any given userid, regardless of method of login (i.e., CTC, TL1); valid values are shown in the <a href="#">“USER_LOGINS” section on page 4-97</a></li> <li>• &lt;UAP&gt; user access privilege; valid values are shown in the <a href="#">“PRIVILEGE” section on page 4-82</a></li> </ul> |
| Output Example            | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD “TCC2:PAGE=40,PCND=5,MXINV=5,DURAL=30,TMOUT=0,UOUT=60, PFRCD=NO,POLD=5,PINT=20,LOGIN=MULTIPLE,PRIVLVL=RTRV” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Errors                    | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

### 3.4.164 RTRV-DS1: Retrieve DS1

(Cisco ONS 15454 only)

This command retrieves the test access attributes on a DS1 layer of a DS3XM card.

| Section          | RTRV-DS1 Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |                 |        |          |        |         |       |           |          |            |       |           |       |          |               |         |               |         |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------|--------|----------|--------|---------|-------|-----------|----------|------------|-------|-----------|-------|----------|---------------|---------|---------------|---------|
| Category         | Ports                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |               |                 |        |          |        |         |       |           |          |            |       |           |       |          |               |         |               |         |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |                 |        |          |        |         |       |           |          |            |       |           |       |          |               |         |               |         |
| Related Messages | <table> <tbody> <tr> <td>ED-&lt;OCN_TYPE&gt;</td> <td>RTRV-&lt;OCN_TYPE&gt;</td> </tr> <tr> <td>ED-DS1</td> <td>RTRV-EC1</td> </tr> <tr> <td>ED-EC1</td> <td>RTRV-FC</td> </tr> <tr> <td>ED-FC</td> <td>RTRV-FSTE</td> </tr> <tr> <td>ED-G1000</td> <td>RTRV-G1000</td> </tr> <tr> <td>ED-T1</td> <td>RTRV-GIGE</td> </tr> <tr> <td>ED-T3</td> <td>RTRV-POS</td> </tr> <tr> <td>RMV-&lt;MOD2_IO&gt;</td> <td>RTRV-T1</td> </tr> <tr> <td>RST-&lt;MOD2_IO&gt;</td> <td>RTRV-T3</td> </tr> </tbody> </table> | ED-<OCN_TYPE> | RTRV-<OCN_TYPE> | ED-DS1 | RTRV-EC1 | ED-EC1 | RTRV-FC | ED-FC | RTRV-FSTE | ED-G1000 | RTRV-G1000 | ED-T1 | RTRV-GIGE | ED-T3 | RTRV-POS | RMV-<MOD2_IO> | RTRV-T1 | RST-<MOD2_IO> | RTRV-T3 |
| ED-<OCN_TYPE>    | RTRV-<OCN_TYPE>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               |                 |        |          |        |         |       |           |          |            |       |           |       |          |               |         |               |         |
| ED-DS1           | RTRV-EC1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |                 |        |          |        |         |       |           |          |            |       |           |       |          |               |         |               |         |
| ED-EC1           | RTRV-FC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                 |        |          |        |         |       |           |          |            |       |           |       |          |               |         |               |         |
| ED-FC            | RTRV-FSTE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |                 |        |          |        |         |       |           |          |            |       |           |       |          |               |         |               |         |
| ED-G1000         | RTRV-G1000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |               |                 |        |          |        |         |       |           |          |            |       |           |       |          |               |         |               |         |
| ED-T1            | RTRV-GIGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |                 |        |          |        |         |       |           |          |            |       |           |       |          |               |         |               |         |
| ED-T3            | RTRV-POS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |                 |        |          |        |         |       |           |          |            |       |           |       |          |               |         |               |         |
| RMV-<MOD2_IO>    | RTRV-T1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                 |        |          |        |         |       |           |          |            |       |           |       |          |               |         |               |         |
| RST-<MOD2_IO>    | RTRV-T3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |                 |        |          |        |         |       |           |          |            |       |           |       |          |               |         |               |         |
| Input Format     | <pre>RTRV-DS1:[&lt;TID&gt;]:&lt;SRC&gt;:&lt;CTAG&gt;[:::];</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;SRC&gt; is the access identifier from the <a href="#">“DS1” section on page 4-26</a> and must not be null</li> </ul>                                                                                                                                                                                                                                                           |               |                 |        |          |        |         |       |           |          |            |       |           |       |          |               |         |               |         |
| Input Example    | <pre>RTRV-DS1:PETALUMA:DS1-2-6-12:123;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |                 |        |          |        |         |       |           |          |            |       |           |       |          |               |         |               |         |

| Section        | RTRV-DS1 Description                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <pre>SID DATE TIME M CTAG COMPLD "&lt;DS1AID&gt;::[TACC=&lt;TACC&gt;],[TAPTYPE=&lt;TAPTYPE&gt;]" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;DS1AID&gt; is the access identifier from the “DS1” section on page 4-26</li> <li>• &lt;TACC&gt; is the TAP number; &lt;TACC&gt; is an integer and is optional</li> <li>• &lt;TAPTYPE&gt; indicates the TAP type; valid values are shown in the “TAPTYPE” section on page 4-92</li> </ul> |
| Output Example | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD "DS1-2-1-6-12::TACC=8,TAPTYPE=SINGLE" ;</pre>                                                                                                                                                                                                                                                                                                                                                                  |
| Errors         | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                |

### 3.4.165 RTRV-DWDM: Retrieve Dense Wavelength Division Multiplexing

(Cisco ONS 15454 only)

This command retrieves DWDM card-level attributes.

| Section          | RTRV-DWDM Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|-----------------|---------------|---------|------------------|---------|-----------------|-------------|-----------|------------|---------------|----------------|--------------|--------|------------------|--------|----------|--------|----------|-------------|----------|------------|-------------------|--------------|------------------|-----------------|---------------|---------------|--------------|------------------|--|
| Category         | DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| Related Messages | <table border="0"> <tr> <td>DLT-FFP-CLNT</td> <td>OPR-PROTNSW-OCH</td> </tr> <tr> <td>DLT-LNK-&lt;MOD2O&gt;</td> <td>RLS-LASER-OTS</td> </tr> <tr> <td>ED-CLNT</td> <td>RLS-PROTNSW-CLNT</td> </tr> <tr> <td>ED-DWDM</td> <td>RLS-PROTNSW-OCH</td> </tr> <tr> <td>ED-FFP-CLNT</td> <td>RTRV-CLNT</td> </tr> <tr> <td>ED-FFP-OCH</td> <td>RTRV-FFP-CLNT</td> </tr> <tr> <td>ED-LNK-&lt;MOD2O&gt;</td> <td>RTRV-FFP-OCH</td> </tr> <tr> <td>ED-OCH</td> <td>RTRV-LNK-&lt;MOD2O&gt;</td> </tr> <tr> <td>ED-OMS</td> <td>RTRV-OCH</td> </tr> <tr> <td>ED-OTS</td> <td>RTRV-OMS</td> </tr> <tr> <td>ED-TRC-CLNT</td> <td>RTRV-OTS</td> </tr> <tr> <td>ED-TRC-OCH</td> <td>RTRV-PROTNSW-CLNT</td> </tr> <tr> <td>ENT-FFP-CLNT</td> <td>RTRV-PROTNSW-OCH</td> </tr> <tr> <td>ENT-LNK-&lt;MOD2O&gt;</td> <td>RTRV-TRC-CLNT</td> </tr> <tr> <td>OPR-LASER-OTS</td> <td>RTRV-TRC-OCH</td> </tr> <tr> <td>OPR-PROTNSW-CLNT</td> <td></td> </tr> </table> | DLT-FFP-CLNT | OPR-PROTNSW-OCH | DLT-LNK-<MOD2O> | RLS-LASER-OTS | ED-CLNT | RLS-PROTNSW-CLNT | ED-DWDM | RLS-PROTNSW-OCH | ED-FFP-CLNT | RTRV-CLNT | ED-FFP-OCH | RTRV-FFP-CLNT | ED-LNK-<MOD2O> | RTRV-FFP-OCH | ED-OCH | RTRV-LNK-<MOD2O> | ED-OMS | RTRV-OCH | ED-OTS | RTRV-OMS | ED-TRC-CLNT | RTRV-OTS | ED-TRC-OCH | RTRV-PROTNSW-CLNT | ENT-FFP-CLNT | RTRV-PROTNSW-OCH | ENT-LNK-<MOD2O> | RTRV-TRC-CLNT | OPR-LASER-OTS | RTRV-TRC-OCH | OPR-PROTNSW-CLNT |  |
| DLT-FFP-CLNT     | OPR-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| DLT-LNK-<MOD2O>  | RLS-LASER-OTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-CLNT          | RLS-PROTNSW-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-DWDM          | RLS-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-FFP-CLNT      | RTRV-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-FFP-OCH       | RTRV-FFP-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-LNK-<MOD2O>   | RTRV-FFP-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-OCH           | RTRV-LNK-<MOD2O>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-OMS           | RTRV-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-OTS           | RTRV-OMS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-TRC-CLNT      | RTRV-OTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-TRC-OCH       | RTRV-PROTNSW-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ENT-FFP-CLNT     | RTRV-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ENT-LNK-<MOD2O>  | RTRV-TRC-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| OPR-LASER-OTS    | RTRV-TRC-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| OPR-PROTNSW-CLNT |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| Input Format     | <pre>RTRV-DWDM:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is access identifier from the “EQPT” section on page 4-27 and must not be null</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |                 |                 |               |         |                  |         |                 |             |           |            |               |                |              |        |                  |        |          |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |

| Section       | RTRV-DWDM Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Example | RTRV-DWDM:VA454-22:SLOT-1:100;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Output Format | <pre> SID DATE TIME M CTAG COMPLD "&lt;AID&gt;:&lt;EQPTTYPE&gt;,&lt;EQUIP&gt;.,[&lt;STATUS&gt;]:[PEERID=&lt;PEERID&gt;.,] [NAME=&lt;NAME&gt;.,][TERMMODE=&lt;TERMMODE&gt;.,] [PAYLOAD=&lt;PAYLOAD&gt;.,][CARDNAME=&lt;CARDNAME&gt;.,][PWL=&lt;PWL&gt;.,] [TWL1=&lt;TWL&gt;.,][TWL2=&lt;TWL1&gt;.,][TWL3=&lt;TWL2&gt;.,][TWL4=&lt;TWL3&gt;.:] [&lt;PST&gt;.,][&lt;SST&gt;]" ; </pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier from the “EQPT” section on page 4-27 &lt;EQPTTYPE&gt; indicates the equipment type; valid values are shown in the “EQPT_TYPE” section on page 4-59</li> <li>• &lt;EQUIP&gt; indicates if the equipment unit is physically present; valid values are shown in the “EQUIP” section on page 4-62</li> <li>• &lt;STATUS&gt; indicates a status. SONET card status is shown on its card level; valid values are shown in the “STATUS” section on page 4-86 and &lt;STATUS&gt; is optional</li> <li>• &lt;PEERID&gt; is the regeneration group peer card slot. &lt;PEERID&gt; is the AID from the “EQPT” section on page 4-27 and is optional</li> <li>• &lt;NAME&gt; is a string and is optional</li> <li>• &lt;TERMMODE&gt; is the termination mode of the card; valid values are shown in the “TERM_MODE” section on page 4-92 and &lt;TERMMODE&gt; is optional</li> <li>• &lt;PAYLOAD&gt; indicates the payload for the card; valid values are shown in the “PAYLOAD” section on page 4-81 and &lt;PAYLOAD&gt; is optional</li> <li>• &lt;CARDNAME&gt; is a string and is optional</li> <li>• &lt;PWL&gt; provisioned wavelength; valid values are shown in the “OPTICAL_WLEN” section on page 4-78 and &lt;PWL&gt; is optional</li> <li>• &lt;TWL&gt; tunable wavelength 1; valid values are shown in the “OPTICAL_WLEN” section on page 4-78 and &lt;TWL&gt; is optional</li> <li>• &lt;TWL1&gt; tunable wavelength 2; valid values are shown in the “OPTICAL_WLEN” section on page 4-78 and &lt;TWL1&gt; is optional</li> <li>• &lt;TWL2&gt; tunable wavelength 3; valid values are shown in the “OPTICAL_WLEN” section on page 4-78 and &lt;TWL2&gt; is optional</li> <li>• &lt;TWL3&gt; tunable wavelength 4; valid values are shown in the “OPTICAL_WLEN” section on page 4-78 and &lt;TWL3&gt; is optional</li> <li>• &lt;PST&gt; primary state; valid values are shown in the “PST” section on page 4-83 and &lt;PST&gt; is optional</li> <li>• &lt;SST&gt; secondary state; valid values are shown in the “SST” section on page 4-86 and &lt;SST&gt; is optional</li> </ul> |

| Section        | RTRV-DWDM Description                                                                                                                                                                                                                                 |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>"SLOT-1:TXP-MR-2.5G,EQUIP,,ACT:PEERID=SLOT-2,<br>NAME="NY GROUP", TERMMODE=TRANS,PAYLOAD=OC48,<br>CARDNAME="TRUNK-1",PWL=1530.33,TWL1=1530.33,TWL2=1531.12,<br>TWL3=1532.68,TWL4=1533.47:IS,AINS"<br>; |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                        |

### 3.4.166 RTRV-EC1: Retrieve EC1

(Cisco ONS 15454 only)

This command retrieves the facility status of an EC1 card.

| Section          | RTRV-EC1 Description                                                                                                                                                                                |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Ports                                                                                                                                                                                               |
| Security         | Retrieve                                                                                                                                                                                            |
| Related Messages | ED-<OCN_TYPE> RTRV-<OCN_TYPE><br>ED-DS1 RTRV-DS1<br>ED-EC1 RTRV-FC<br>ED-FC RTRV-FSTE<br>ED-G1000 RTRV-G1000<br>ED-T1 RTRV-GIGE<br>ED-T3 RTRV-POS<br>RMV-<MOD2_IO> RTRV-T1<br>RST-<MOD2_IO> RTRV-T3 |
| Input Format     | RTRV-EC1:[<TID>]:<AID>:<CTAG>[::::];<br>where:<br><ul style="list-style-type: none"> <li>&lt;AID&gt; is from the "FACILITY" section on page 4-28 and must not be null</li> </ul>                    |
| Input Example    | RTRV-EC1:CISCO:FAC-1-1:1234;                                                                                                                                                                        |

| Section        | RTRV-EC1 Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“&lt;AID&gt;::[PJMON=&lt;PJMON&gt;],[LBO=&lt;LBO&gt;],[RXEQUAL=&lt;RXEQUAL&gt;],[SOAK=&lt;SOAK&gt;],[SOAKLEFT=&lt;SOAKLEFT&gt;],[SFBER=&lt;SFBER&gt;],[SDBER=&lt;SDBER&gt;]:&lt;PST&gt;,[&lt;SST&gt;]”<br/>;<br/>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the facility AID of an EC1 port and is from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;PJMON&gt; is the SONET pointer monitor attribute of an EC1 port; &lt;PJMON&gt; is an integer and is optional</li> <li>• &lt;LBO&gt; is the line build-out value of an EC1 port; valid values for &lt;LBO&gt; are shown in the <a href="#">“E_LBO” section on page 4-58</a>, &lt;LBO&gt; is optional</li> <li>• Valid values for &lt;RXEQUAL&gt; are shown in the <a href="#">“EXT_RING” section on page 4-65</a>, &lt;RXEQUAL&gt; is optional</li> <li>• &lt;SOAK&gt; OOS-AINS to IS transition soak time measured in 15 minute intervals; &lt;SOAK&gt; is an integer and is optional</li> <li>• &lt;SOAKLEFT&gt; time remaining for the transition from OOS-AINS to IS measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. &lt;SOAKLEFT&gt; is optional<br/>Rules for &lt;SOAKLEFT&gt; are as follows: <ul style="list-style-type: none"> <li>– When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed.</li> <li>– When the port is in OOS_AINS, but the countdown has not started due to fault signal the value will be SOAKLEFT=NOT-STARTED.</li> <li>– When the port is in OOS_AINS state and the countdown has started the value will be shown in HH-MM format.</li> </ul> </li> <li>• &lt;SFBER&gt; identifies the port SFBER and defaults to 1E-4; valid values are shown in the <a href="#">“SF_BER” section on page 4-86</a> and &lt;SFBER&gt; is optional</li> <li>• &lt;SDBER&gt; identifies the port SDBER and defaults to 1E-7; valid values are shown in the <a href="#">“SD_BER” section on page 4-85</a></li> <li>• &lt;PST&gt; primary state; valid values are shown in the <a href="#">“PST” section on page 4-83</a></li> <li>• &lt;SST&gt; secondary state; valid values are shown in the <a href="#">“SST” section on page 4-86</a> and &lt;SST&gt; is optional</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/>M 001 COMPLD<br/>“FAC-1-1::PJMON=0,LBO=0-225,RXEQUAL=Y,SOAK=52,SOAKLEFT=12-25,SFBER=1E-4,SDBER=1E-7:OOS,AINS”<br/>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |



## 3.4.167 RTRV-EQPT: Retrieve Equipment

This command retrieves protection group information and status information for all cards.

This command returns the PRTYPE, PROTID, RVTM, and RVRTV parameters for a card inside of a protection group by the following scenario:

1. A working AID/card within a 1:1 protection group should return PRTYPE, PROTID, RVTM and RVRTV.
2. A protection/AID card within a 1:1 protection group should return PRTYPE, RVTM and RVRTV.
3. A working AID/card within a 1:N protection group should return PRTYPE, PROTID, RVTM and RVRTV=Y.
4. A protection AID/card of a 1:1 protection group should return PRTYPE, RVTM and RVRTV=Y.
5. An unprotected AID/card, the AID type, equip (equip/unequip), status (act/standby) and state (IS/OOS) values.
6. Pre-provisioned cards (without being plugged in) will display OOS,AINS for PST and SST. Once the card is plugged in and has gone through it's initialization sequence the card automatically goes to IS (PST).

Error conditions:

1. The equipment is not provisioned.

| Section          | RTRV-EQPT Description                                                                                                                                                          |                                                                                                                                         |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Equipment                                                                                                                                                                      |                                                                                                                                         |
| Security         | Retrieve                                                                                                                                                                       |                                                                                                                                         |
| Related Messages | ALW-SWDX-EQPT<br>ALW-SWTOPROTN-EQPT<br>ALW-SWTOWKG-EQPT<br>DLT-EQPT<br>ED-EQPT<br>ENT-EQPT<br>INH-SWDX-EQPT<br>INH-SWTOPROTN-EQPT                                              | INH-SWTOWKG-EQPT<br>REPT ALM EQPT<br>REPT EVT EQPT<br>RTRV-ALM-EQPT<br>RTRV-COND-EQPT<br>SW-DX-EQPT<br>SW-TOPROTN-EQPT<br>SW-TOWKG-EQPT |
| Input Format     | RTRV-EQPT:[<TID>]:<AID>:<CTAG>[:::];<br>where:<br><ul style="list-style-type: none"> <li>• &lt;AID&gt; is from the “EQPT” section on page 4-27 and must not be null</li> </ul> |                                                                                                                                         |
| Input Example    | RTRV-EQPT:MIRABEL:SLOT-12:230;                                                                                                                                                 |                                                                                                                                         |

| Section       | RTRV-EQPT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format | <p>SID DATE TIME</p> <p>M CTAG COMPLD</p> <p>“&lt;AID&gt;:&lt;AIDTYPE&gt;,&lt;EQUIP&gt;,[&lt;ROLE&gt;],[&lt;STATUS&gt;]:<br/>[PROTID=&lt;PROTID&gt;],[PRTYPE=&lt;PRTYPE&gt;],<br/>[RVRTV=&lt;RVRTV&gt;],[RVTM=&lt;RVTM&gt;],[CARDNAME=&lt;CARDNAME&gt;],<br/>[IOSCFG=&lt;IOSCFG&gt;]:[&lt;PST&gt;],[&lt;SST&gt;]”</p> <p>;</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the equipment unit identifier and is from the <a href="#">“EQPT” section on page 4-27</a></li> <li>• &lt;AIDTYPE&gt; is a string</li> <li>• &lt;EQUIP&gt; indicates if the equipment unit is physically present; valid values are shown in the <a href="#">“EQUIP” section on page 4-62</a></li> <li>• &lt;ROLE&gt; indicates if the card is a working unit or a protecting unit; valid values are shown in the <a href="#">“SIDE” section on page 4-86</a>, &lt;ROLE&gt; is optional</li> <li>• &lt;STATUS&gt; indicates a status. SONET card status is shown on it’s line/port level. Valid values for &lt;STATUS&gt; are shown in the <a href="#">“STATUS” section on page 4-86</a>, &lt;STATUS&gt; is optional</li> <li>• &lt;PROTID&gt; indicates the protecting identifier; &lt;PROTID&gt; is from the <a href="#">“PR SLOT” section on page 4-31</a> and is optional</li> <li>• &lt;PRTYPE&gt; indicates the protection type; valid values are shown in the <a href="#">“PROTECTION_GROUP” section on page 4-83</a>, &lt;PRTYPE&gt; is optional</li> <li>• &lt;RVRTV&gt; indicates a revertive mode; valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a>, &lt;RVRTV&gt; is optional</li> <li>• &lt;RVTM&gt; indicates the revertive time; valid values for &lt;RVTM&gt; are shown in the <a href="#">“REVERTIVE_TIME” section on page 4-84</a>, &lt;RVTM&gt; is optional</li> <li>• &lt;CARDNAME&gt; is a string and is optional</li> <li>• &lt;IOSCFG&gt; displays the information about startup IOS config file for the ML1000-2 and ML100T-12 cards. An example of this field is “TL1,11.22.33.44//DIR/IOS.CONF,2002/1/1 9:1:1 EST”. The following information is included in this field: <ul style="list-style-type: none"> <li>1) Where the config file is from: TL1, or CTC/CTM/CLI/TCC;</li> <li>2) The host (IP address)/directory/file name, if the config file is downloaded from the network;</li> <li>3) When the startup config file is created (by copying from the network, for example).</li> </ul> This field only applies to ML1000-2 and ML100T-12 cards. &lt;IOSCFG&gt; is a String. &lt;IOSCFG&gt; is optional. </li> <li>• &lt;PST&gt; primary state; valid values are shown in the <a href="#">“PST” section on page 4-83</a>, &lt;PST&gt; is optional</li> <li>• &lt;SST&gt; secondary state; valid values are shown in the <a href="#">“SST” section on page 4-86</a>, &lt;SST&gt; is optional</li> </ul> |

| Section        | RTRV-EQPT Description                                                                                                                                                                                     |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“SLOT-12:DS1,EQUIP,,ACT:PROTID=SLOT-13,PRTYPE=1-1,RVRTV=Y,<br>RVTM=8.5,CARDNAME=DESCRIPTION,IOSCFG=<br>“IOS CONFIG INFO FOR ML SERIES CARD”:OOS,AINS”<br>; |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                            |

### 3.4.168 RTRV-EXT-CONT: Retrieve External Control

This command retrieves the control state of an external control. The command can be used to audit the result of an OPR-EXT-CONT or a RLS-EXT-CONT command.

Notes:

1. If the CONTTYPE is null, the existing conntype on this AID will be returned.
2. The duration is not supported, it defaults to CONTS.

| Section          | RTRV-EXT-CONT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Environment Alarms and Controls                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Related Messages | OPR-ACO-ALL RTRV-ATTR-CONT<br>OPR-EXT-CONT RTRV-ATTR-ENV<br>REPT ALM ENV RTRV-COND-ENV<br>REPT EVT ENV SET-ATTR-CONT<br>RLS-EXT-CONT SET-ATTR-ENV<br>RTRV-ALM-ENV                                                                                                                                                                                                                                                                                                         |
| Input Format     | RTRV-EXT-CONT:[<TID>]:<AID>:<CTAG>[::<CONTTYPE>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is from the “ENV” <a href="#">section on page 4-26</a> and must not be null.</li> </ul> <p><b>Note</b> For this command only ENV-OUT-{1-2} is a valid AID.</p> <ul style="list-style-type: none"> <li>• Valid values for &lt;CONTTYPE&gt; are shown in the “CONTTYPE” <a href="#">section on page 4-55</a>. A null value is equivalent to ALL</li> </ul> |
| Input Example    | RTRV-EXT-CONT:CISCO:ENV-OUT-2:123::AIRCOND;                                                                                                                                                                                                                                                                                                                                                                                                                               |

| Section        | RTRV-EXT-CONT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>:[<CONTTYPER>],<DUR>,[<CONTSTATE>]”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies the external control for which control state is being retrieved and is from the “ENV” section on page 4-26</li> <li>• &lt;CONTTYPER&gt; is the type of control for which control state is being retrieved; valid values are shown in the “CONTTYPER” section on page 4-55, &lt;CONTTYPER&gt; is optional</li> <li>• &lt;DUR&gt; is the duration for which the external control can be operated; valid values are shown in the “DURATION” section on page 4-57</li> <li>• &lt;CONTSTATE&gt; is the control of the external control; valid values are shown in the “CONT_MODE” section on page 4-55, &lt;CONTSTATE&gt; is optional</li> </ul> |
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“ENV-OUT-2:AIRCOND,CONTS,OPEN”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Errors         | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

### 3.4.169 RTRV-FC: Retrieve Fiber Channel Facility

This command retrieves the attributes related to the fiber channel facility.

| Section          | RTRV-FC Description                                                                                                                                                                                                      |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Ports                                                                                                                                                                                                                    |
| Security         | Provisioning                                                                                                                                                                                                             |
| Related Messages | ED-<OCN_TYPE> RTRV-DS1<br>ED-DS1 RTRV-EC1<br>ED-EC1 RTRV-FAC<br>ED-FC RTRV-FC<br>ED-G1000 RTRV-FSTE<br>ED-T1 RTRV-G1000<br>ED-T3 RTRV-GIGE<br>RMV-<MOD2_IO> RTRV-POS<br>RST-<MOD2_IO> RTRV-T1<br>RTRV-<OCN_TYPE> RTRV-T3 |
| Input Format     | RTRV-FC:[<TID>]:<AID>:<CTAG>[:];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the AID from the “FACILITY” section on page 4-28 and must not be null</li> </ul>                                      |
| Input Example    | RTRV-FC:CISCO:FAC-6-1:888;                                                                                                                                                                                               |

| Section        | RTRV-FC Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>::PAYLOAD=<PAYLOAD>,LINKRATE=<LINKRATE>,<br>LINKSTATE=<LINKSTATE>,LINKRCVRY=<LINKRCVRY>:<PST>,[<SST>]”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier from the “FACILITY” section on page 4-28</li> <li>• &lt;PAYLOAD&gt; payload type provisioned on a fiber channel port; valid values are shown in the “PAYLOAD” section on page 4-81</li> <li>• &lt;LINKRATE&gt; actual rate running on the fiber channel port. It can differ from the payload type provisioned; valid values are shown in the “FC_LINKRATE” section on page 4-65</li> <li>• &lt;LINKSTATE&gt; link state; valid values are shown in the “DIRN” section on page 4-56</li> <li>• &lt;LINKRCVRY&gt; link recovery enable or disabled; valid values are shown in the “ON_OFF” section on page 4-76</li> <li>• &lt;PST&gt; primary state; valid values are shown in the “PST” section on page 4-83</li> <li>• &lt;STS&gt; secondary state; valid values are shown in the “SST” section on page 4-86</li> </ul> |
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“FAC-6-1::PAYLOAD=1GFC,LINKRATE=1GFC,LINKSTATE=UP,<br>LINKRCVRY=Y:OOS,MT”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Errors         | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

### 3.4.170 RTRV-FFP-<OCN\_TYPE>: Retrieve Facility Protection Group (OC3, OC12, OC48, OC192)

See Table 4-11 on page 4-5 for supported modifiers by platform.

This command retrieves the optical facility protection information.

| Section          | RTRV-FFP-<OCN_TYPE> Description                                                                            |                                                                                                                              |
|------------------|------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Category         | SONET Line Protection                                                                                      |                                                                                                                              |
| Security         | Retrieve                                                                                                   |                                                                                                                              |
| Related Messages | DLT-FFP-<OCN_TYPE><br>DLT-FFP-CLNT<br>ED-FFP-<OCN_TYPE><br>ED-FFP-CLNT<br>ED-FFP-OCH<br>ENT-FFP-<OCN_TYPE> | ENT-FFP-CLNT<br>OPR-PROTNSW-<OCN_TYPE><br>RLS-PROTNSW-<OCN_TYPE><br>RTRV-FFP-CLNT<br>RTRV-FFP-OCH<br>RTRV-PROTNSW-<OCN_TYPE> |

| Section        | RTRV-FFP-<OCN_TYPE> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format   | RTRV-FFP-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[:::];<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is the optical facility AID from the <a href="#">“FACILITY” section on page 4-28</a> and must not be null</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Input Example  | RTRV-FFP-OC3:PETALUMA:FAC-1-1:1;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Output Format  | SID DATE TIME<br>M CTAG COMPLD<br>“<WORK>,<PROTECT>:::[PROTID=<PROTID>],[RVRTV=<RVRTV>,<br>[RVTM=<RVTM>],[PSDIRN=<PSDIRN>]”<br>;<br>where: <ul style="list-style-type: none"> <li>&lt;WORK&gt; identifies the working port and is the AID from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>&lt;PROTECT&gt; identifies the protection port and is the AID from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>&lt;PROTID&gt; the 1+1 protection group name; &lt;PROTID&gt; is a string and is optional</li> <li>&lt;RVRTV&gt; identifies a revertive mode and defaults to N (non-revertive mode); valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a>, &lt;RVRTV&gt; is optional</li> <li>&lt;RVTM&gt; identifies the revertive time and defaults to 5.0 minutes; valid values are shown in the <a href="#">“REVERTIVE_TIME” section on page 4-84</a>, &lt;RVTM&gt; is optional</li> <li>&lt;PSDIRN&gt; indicates the switch mode and defaults to UNI. valid values are shown in the <a href="#">“UNI_BI” section on page 4-96</a>, &lt;PSDIRN&gt; is optional</li> </ul> |
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“FAC-2-1,FAC-1-1::PROTID=PROT_NAME,RVRTV=Y,<br>RVTM=1.0,PSDIRN=BI”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

### 3.4.171 RTRV-FFP-CLNT: Retrieve Facility Protection Group Client

(Cisco ONS 15454 only)

This command retrieves Y cable protection on client facilities.

| Section  | RTRV-FFP-CLNT Description |
|----------|---------------------------|
| Category | DWDM                      |
| Security | Retrieve                  |

| Section          | RTRV-FFP-CLNT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | DLT-FFP-<OCN_TYPE>                    OPR-PROTNSW-CLNT<br>DLT-FFP-CLNT                            OPR-PROTNSW-OCH<br>DLT-LNK-<MOD2O>                        RLS-LASER-OTS<br>ED-CLNT                                    RLS-PROTNSW-<OCN_TYPE><br>ED-DWDM                                   RLS-PROTNSW-CLNT<br>ED-FFP-<OCN_TYPE>                       RLS-PROTNSW-OCH<br>ED-FFP-CLNT                              RTRV-CLNT<br>ED-FFP-OCH                                RTRV-DWDM<br>ED-LNK-<MOD2O>                         RTRV-FFP-<OCN_TYPE><br>ED-OCH                                     RTRV-FFP-OCH<br>ED-OMS                                    RTRV-LNK-<MOD2O><br>ED-OTS                                     RTRV-OCH<br>ED-TRC-CLNT                              RTRV-OMS<br>ED-TRC-OCH                               RTRV-OTS<br>ENT-FFP-<OCN_TYPE>                       RTRV-PROTNSW-<OCN_TYPE><br>ENT-FFP-CLNT                              RTRV-PROTNSW-CLNT<br>ENT-LNK-<MOD2O>                         RTRV-PROTNSW-OCH<br>OPR-LASER-OTS                            RTRV-TRC-CLNT<br>OPR-PROTNSW-<OCN_TYPE>                RTRV-TRC-OCH |
| Input Format     | RTRV-FFP-CLNT:[<TID>]:<AID>:<CTAG>[:::];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier from the <a href="#">“FACILITY” section on page 4-28</a> and must not be null</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Input Example    | RTRV-FFP-CLNT:CISCO:FAC-1-1:100;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

| Section        | RTRV-FFP-CLNT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <pre>SID DATE TIME M CTAG COMPLD "&lt;WORKAID&gt;,&lt;PROTAID&gt;::[PROTOTYPE=&lt;PROTOTYPE&gt;,&lt;br&gt;[PROTID=&lt;PROTID&gt;,&lt;br&gt;][RVRTV=&lt;RVRTV&gt;,&lt;br&gt;][RVTM=&lt;RVTM&gt;,&lt;br&gt;[PSDIRN=&lt;PSDIRN&gt;]" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;WORKAID&gt; identifies a working port and is the AID from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;PROTAID&gt; identifies a protection port and is the AID from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;PROTOTYPE&gt; identifies the type of facility protection; valid values are shown in the <a href="#">“PROTOTYPE” section on page 4-83</a> and &lt;PROTOTYPE&gt; is optional</li> <li>• &lt;PROTID&gt; Y cable protection group name; &lt;PROTID&gt; is a string and is optional</li> <li>• &lt;RVRTV&gt; identifies the revertive mode. Defaults to N (non-revertive mode); valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a> and &lt;RVRTV&gt; is optional</li> <li>• &lt;RVTM&gt; identifies the revertive time. Defaults to 5.0 minutes; valid values are shown in the <a href="#">“REVERTIVE_TIME” section on page 4-84</a> and &lt;RVTM&gt; is optional</li> <li>• &lt;PSDIRN&gt; identifies the switching mode and defaults to UNI; valid values are shown in the <a href="#">“UNI_BI” section on page 4-96</a> and &lt;PSDIRN&gt; is optional</li> </ul> |
| Output Example | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD “FAC-1-1,FAC-2-1::PROTOTYPE=Y-CABLE,PROTID=“DC-METRO”, RVRTV=N,RVTM=1.0,PSDIRN=BI” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

### 3.4.172 RTRV-FFP-OCH: Retrieve Facility Protection Group OCH

(Cisco ONS 15454 only)

This command retrieves the protection group information for the TXP\_MR\_2.5G and TXPP\_MR\_2.5G trunk port.

| Section  | RTRV-FFP-OCH Description |
|----------|--------------------------|
| Category | DWDM                     |
| Security | Retrieve                 |



| Section          | RTRV-FFP-OCH Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | DLT-FFP-<OCN_TYPE>                    OPR-PROTNSW-CLNT<br>DLT-FFP-CLNT                            OPR-PROTNSW-OCH<br>DLT-LNK-<MOD2O>                        RLS-LASER-OTS<br>ED-CLNT                                    RLS-PROTNSW-<OCN_TYPE><br>ED-DWDM                                   RLS-PROTNSW-CLNT<br>ED-FFP-<OCN_TYPE>                       RLS-PROTNSW-OCH<br>ED-FFP-CLNT                              RTRV-CLNT<br>ED-FFP-OCH                                RTRV-DWDM<br>ED-LNK-<MOD2O>                         RTRV-FFP-<OCN_TYPE><br>ED-OCH                                     RTRV-FFP-CLNT<br>ED-OMS                                    RTRV-LNK-<MOD2O><br>ED-OTS                                     RTRV-OCH<br>ED-TRC-CLNT                              RTRV-OMS<br>ED-TRC-OCH                                RTRV-OTS<br>ENT-FFP-<OCN_TYPE>                       RTRV-PROTNSW-<OCN_TYPE><br>ENT-FFP-CLNT                              RTRV-PROTNSW-CLNT<br>ENT-LNK-<MOD2O>                         RTRV-PROTNSW-OCH<br>OPR-LASER-OTS                            RTRV-TRC-CLNT<br>OPR-PROTNSW-<OCN_TYPE>                RTRV-TRC-OCH |
| Input Format     | RTRV-FFP-OCH:[<TID>]:<AID>:<CTAG>[:[:]]; <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier from the <a href="#">“CHANNEL” section on page 4-19</a> and must not be null</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Input Example    | RTRV-FFP-OCH:VA454-22:CHAN-2-2:100;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“<WORK>,<PROTECT>:::[PROTOTYPE=<PROTOTYPE>],[PROTID=<PROTID>],[<br>[RVRTV=<RVRTV>],[RVTM=<RVTM>],[PSDIRN=<PSDIRN>]”<br>; <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;WORK&gt; identifies a working port and is the AID from the <a href="#">“CHANNEL” section on page 4-19</a></li> <li>• &lt;PROTECT&gt; identifies a protection port and is the AID from the <a href="#">“CHANNEL” section on page 4-19</a></li> <li>• &lt;PROTOTYPE&gt; the protection group type and is optional</li> <li>• &lt;PROTID&gt; the protection group name; &lt;PROTID&gt; is a string and is optional</li> <li>• &lt;RVRTV&gt; the revertive mode; valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a> and &lt;RVRTV&gt; is optional</li> <li>• &lt;RVTM&gt; the revertive time; valid values are shown in the <a href="#">“REVERTIVE_TIME” section on page 4-84</a> and &lt;RVTM&gt; is optional</li> <li>• &lt;PSDIRN&gt; the direction of reversion; valid values are shown in the <a href="#">“UNI_BI” section on page 4-96</a> and &lt;PSDIRN&gt; is optional</li> </ul>                         |

| Section        | RTRV-FFP-OCH Description                                                                                                                        |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“CHAN-2-2,CHAN-2-3::PROTOTYPE=SPLITTER,PROTID=“TRUNK<br>PROTV”,RVRTV=Y,RVTM=1.0,PSDIRN=UNI”<br>; |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                  |

### 3.4.173 RTRV-FSTE: Retrieve Fast Ethernet

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command retrieves the front end port information of the ML100T-12 Ethernet card.

| Section          | RTRV-FSTE Description                                                                                                                                                                                     |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Ports                                                                                                                                                                                                     |
| Security         | Retrieve                                                                                                                                                                                                  |
| Related Messages | ED-<OCN_TYPE> RTRV-<OCN_TYPE><br>ED-DS1 RTRV-DS1<br>ED-EC1 RTRV-EC1<br>ED-FC RTRV-FC<br>ED-G1000 RTRV-G1000<br>ED-T1 RTRV-GIGE<br>ED-T3 RTRV-POS<br>RMV-<MOD2_IO> RTRV-T1<br>RST-<MOD2_IO> RTRV-T3        |
| Input Format     | RTRV-FSTE:[<TID>]:<AID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is the facility AID from the <a href="#">“FACILITY” section on page 4-28</a> and must not be null</li> </ul> |
| Input Example    | RTRV-FSTE:TID:FAC-1-1:CTAG;                                                                                                                                                                               |

| Section        | RTRV-FSTE Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <pre>SID DATE TIME M CTAG COMPLD "&lt;AID&gt;::[ADMINSTATE=&lt;ADMINSTATE&gt;],[LINKSTATE=&lt;LINKSTATE&gt;],[ MTU=&lt;MTU&gt;],[FLOWCTRL=&lt;FLOWCTRL&gt;],[DUPLEX=&lt;DUPLEX&gt;],[ SPEED=&lt;SPEED&gt;]" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the AID from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;ADMINSTATE&gt; administration type; valid values are shown in the <a href="#">“UP_DOWN” section on page 4-97</a>. &lt;ADMINSTATE&gt; is optional</li> <li>• &lt;LINKSTATE&gt; link protocol; valid values are shown in the <a href="#">“UP_DOWN” section on page 4-97</a>. &lt;LINKSTATE&gt; is optional</li> <li>• &lt;MTU&gt; maximum transport unit; &lt;MTU&gt; is an integer and is optional</li> <li>• &lt;FLOWCTRL&gt; flow control; valid values are shown in the <a href="#">“FLOW” section on page 4-65</a>. &lt;FLOWCTRL&gt; is optional</li> <li>• &lt;DUPLEX&gt; duplex mode; valid values are shown in the <a href="#">“ETHER_DUPLEX” section on page 4-64</a>. &lt;DUPLEX&gt; is optional</li> <li>• &lt;SPEED&gt; Ethernet speed; valid values are shown in the <a href="#">“ETHER_SPEED” section on page 4-64</a>. &lt;SPEED&gt; is optional</li> </ul> |
| Output Example | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD “FAC-1-1::ADMINSTATE=DOWN,LINKSTATE=DOWN,MTU=1500, FLOWCTRL=SYMMETRIC,DUPLEX=AUTO,SPEED=AUTO” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

### 3.4.174 RTRV-G1000: Retrieve G1000 Facility

(Cisco ONS 15454 only)

This command retrieves the G1000 facilities configuration.

| Section          | RTRV-G1000 Description                                                                                                                                                                                       |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Ports                                                                                                                                                                                                        |
| Security         | Retrieve                                                                                                                                                                                                     |
| Related Messages | <pre>ED-&lt;OCN_TYPE&gt; RTRV-&lt;OCN_TYPE&gt; ED-DS1 RTRV-DS1 ED-EC1 RTRV-EC1 ED-FC RTRV-FC ED-G1000 RTRV-FSTE ED-T1 RTRV-GIGE ED-T3 RTRV-POS RMV-&lt;MOD2_IO&gt; RTRV-T1 RST-&lt;MOD2_IO&gt; RTRV-T3</pre> |

| Section        | RTRV-G1000 Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format   | RTRV-G1000:[<TID>]:<AID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is from the <a href="#">“FACILITY” section on page 4-28</a> and must not be null</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Input Example  | RTRV-G1000:TID:FAC-1-1:CTAG;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Output Format  | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“&lt;AID&gt;::[MFS=&lt;MFS&gt;],[FLOW=&lt;FLOW&gt;],[LAN=&lt;LAN&gt;],[<br/>[OPTICS=&lt;OPTICS&gt;],[TRANS=&lt;TRANS&gt;],[TPORT=&lt;TPORT&gt;],[<br/>[LOWMRK=&lt;LOWMRK&gt;],[HIWMRK=&lt;HIWMRK&gt;]:[&lt;PST&gt;],[&lt;SST&gt;]”<br/>;</p> <p>where:</p> <ul style="list-style-type: none"> <li>&lt;AID&gt; is from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>Valid values for &lt;MFS&gt; are shown in the <a href="#">“MFS_TYPE” section on page 4-68</a>; &lt;MFS&gt; is optional</li> <li>Valid values for &lt;FLOW&gt; are shown in the <a href="#">“ON_OFF” section on page 4-76</a>; &lt;FLOW&gt; is optional</li> <li>Valid values for &lt;LAN&gt; are shown in the <a href="#">“FLOW” section on page 4-65</a>; &lt;LAN&gt; is optional</li> <li>&lt;OPTICS&gt; GBIC type optics; valid values for are shown in the <a href="#">“OPTICS” section on page 4-79</a>; &lt;OPTICS&gt; is optional</li> <li>&lt;TRANS&gt; transponder mode; valid values are shown in the <a href="#">“TRANS_MODE” section on page 4-93</a> and &lt;TRANS&gt; is optional</li> <li>&lt;TPORT&gt; transponding port; &lt;TPORT&gt; is from the <a href="#">“FACILITY” section on page 4-28</a> and is optional</li> <li>&lt;LOWMRK&gt; low watermark; &lt;LOWMRK&gt; is an integer and is optional</li> <li>&lt;HIWMRK&gt; high watermark: &lt;HIWMRK&gt; is an integer and is optional</li> <li>&lt;PST&gt; primary state; valid values are shown in the <a href="#">“PST” section on page 4-83</a></li> <li>&lt;SST&gt; secondary state; valid values are shown in the <a href="#">“SST” section on page 4-86</a>; &lt;SST&gt; is optional</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/>M 001 COMPLD<br/>“FAC-1-1::MFS=9032,FLOW=N,LAN=ASYMMETRIC,OPTICS=UNKNOWN,<br/>TRANS=NONE,TPORT=FAC-5-1,LOWMRK=20,HIWMRK=492:OOS,AINS”<br/>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

### 3.4.175 RTRV-GIGE: Retrieve Gigabit Ethernet

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command retrieves the front end port information for the ML1000-2 Ethernet card.

| Section          | RTRV-GIGE Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Ports                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Related Messages | ED-<OCN_TYPE> RTRV-<OCN_TYPE><br>ED-DS1 RTRV-DS1<br>ED-EC1 RTRV-EC1<br>ED-FC RTRV-FC<br>ED-G1000 RTRV-FSTE<br>ED-T1 RTRV-G1000<br>ED-T3 RTRV-POS<br>RMV-<MOD2_IO> RTRV-T1<br>RST-<MOD2_IO> RTRV-T3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Input Format     | RTRV-GIGE:[<TID>]:<AID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is from the <a href="#">“FACILITY” section on page 4-28</a> and must not be null</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Input Example    | RTRV-GIGE:TID:FAC-1-1:CTAG;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>::[ADMINSTATE=<ADMINSTATE>],[LINKSTATE=<LINKSTATE>],<br>[MTU=<MTU>],[FLOWCTRL=<FLOWCTRL>],[OPTICS=<OPTICS>],<br>[DUPLEX=<DUPLEX>],[SPEED=<SPEED>]”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the AID from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;ADMINSTATE&gt; administration type; valid values are shown in the <a href="#">“UP_DOWN” section on page 4-97</a>. &lt;ADMINSTATE&gt; is optional</li> <li>• &lt;LINKSTATE&gt; link protocol; valid values are shown in the <a href="#">“UP_DOWN” section on page 4-97</a>. &lt;LINKSTATE&gt; is optional</li> <li>• &lt;MTU&gt; maximum transport unit; &lt;MTU&gt; is an integer and is optional</li> <li>• &lt;FLOWCTRL&gt; flow control; valid values are shown in the <a href="#">“FLOW” section on page 4-65</a>. &lt;FLOWCTRL&gt; is optional</li> <li>• &lt;OPTICS&gt; is the optics type; valid values are shown in <a href="#">“OPTICS” section on page 4-79</a>. &lt;OPTICS&gt; is optional</li> <li>• &lt;DUPLEX&gt; duplex mode; valid values are shown in the <a href="#">“ETHER_DUPLEX” section on page 4-64</a>. &lt;DUPLEX&gt; is optional</li> <li>• &lt;SPEED&gt; Ethernet speed; valid values are shown in the <a href="#">“ETHER_SPEED” section on page 4-64</a>. &lt;SPEED&gt; is optional</li> </ul> |
| Output Example   | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“FAC-1-1::ADMINSTATE=DOWN,LINKSTATE=DOWN,MTU=1500,<br>FLOWCTRL=SYMMETRIC,OPTICS=1000_BASE_SX,DUPLEX=AUTO,<br>SPEED=AUTO”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

### 3.4.176 RTRV-HDR: Retrieve Header

This command retrieves the header of a TL1 response message. Used by TL1 clients to determine if the link to the NE is still active and if the NE is responding to commands.

| Section          | RTRV-HDR Description                                                                                                                         |                                                                                                                                                |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | System                                                                                                                                       |                                                                                                                                                |
| Security         | Retrieve                                                                                                                                     |                                                                                                                                                |
| Related Messages | ACT-USER<br>ALW-MSG-ALL<br>ALW-MSG-DBCHG<br>ALW-MSG-SECU<br>ED-DAT<br>ED-NE-GEN<br>ED-NE-PATH<br>ED-NE-SYNCN<br>INH-MSG-ALL<br>INH-MSG-DBCHG | INH-MSG-SECU<br>INIT-SYS<br>RTRV-INV<br>RTRV-NE-GEN<br>RTRV-NE-IPMAP<br>RTRV-NE-PATH<br>RTRV-NE-SYNCN<br>RTRV-NE-WDMANS<br>RTRV-TOD<br>SET-TOD |
| Input Format     | RTRV-HDR:[<TID>]::<CTAG>;                                                                                                                    |                                                                                                                                                |
| Input Example    | RTRV-HDR:SONOMA::232;                                                                                                                        |                                                                                                                                                |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                               |                                                                                                                                                |

### 3.4.177 RTRV-INV: Retrieve Inventory

This command retrieves a listing of the equipment inventory. For each unit in the system, it identifies the unit's firmware numbers and the unit's CLEI code.

| Section          | RTRV-INV Description                                                                                                                                                                                             |                                                                                                                                                |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | System                                                                                                                                                                                                           |                                                                                                                                                |
| Security         | Retrieve                                                                                                                                                                                                         |                                                                                                                                                |
| Related Messages | ACT-USER<br>ALW-MSG-ALL<br>ALW-MSG-DBCHG<br>ALW-MSG-SECU<br>ED-DAT<br>ED-NE-GEN<br>ED-NE-PATH<br>ED-NE-SYNCN<br>INH-MSG-ALL<br>INH-MSG-DBCHG                                                                     | INH-MSG-SECU<br>INIT-SYS<br>RTRV-HDR<br>RTRV-NE-GEN<br>RTRV-NE-IPMAP<br>RTRV-NE-PATH<br>RTRV-NE-SYNCN<br>RTRV-NE-WDMANS<br>RTRV-TOD<br>SET-TOD |
| Input Format     | RTRV-INV:[<TID>]:<AID>:<CTAG>[:::];<br>where:<br><ul style="list-style-type: none"> <li>&lt;AID&gt; is an access identifier from the <a href="#">“EQPT” section on page 4-27</a> and must not be null</li> </ul> |                                                                                                                                                |
| Input Example    | RTRV-INV:OCCIDENTAL:SLOT-15:301;                                                                                                                                                                                 |                                                                                                                                                |

| Section                   | RTRV-INV Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format             | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“&lt;AID&gt;,&lt;AIDTYPE&gt;:::[PLUGTYPE=&lt;PLUGTYPE&gt;],[PN=&lt;PN&gt;],[HWREV=&lt;HWREV&gt;],[FWREV=&lt;FWREV&gt;],[SN=&lt;SN&gt;],[CLEI=&lt;CLEI&gt;],[TWL1=&lt;TWL&gt;],[TWL2=&lt;TWL1&gt;],[TWL3=&lt;TWL2&gt;],[TWL4=&lt;TWL3&gt;],[PLUGINVENDORID=&lt;PLUGINVENDORID&gt;],[PLUGINPN=&lt;PLUGINPN&gt;],[PLUGINHWREV=&lt;PLUGINHWREV&gt;],[PLUGINFWREV=&lt;PLUGINFWREV&gt;],[PLUGINSN=&lt;PLUGINSN&gt;],[ILOSSREF=&lt;ILOSSREF&gt;],[PID=&lt;PID&gt;],[VID=&lt;VID&gt;],[FPGA=&lt;FPGA&gt;]”<br/>;</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier from the <a href="#">“EQPT” section on page 4-27</a></li> <li>• &lt;AIDTYPE&gt; specifies the type of AID and is a string</li> <li>• &lt;PLUGTYPE&gt; describes the type of plug-in; &lt;PLUGTYPE&gt; is a string and is optional</li> <li>• &lt;PN&gt; is the HW part number; &lt;PN&gt; is a string and is optional</li> <li>• &lt;HWREV&gt; is the HW Rev; &lt;HWREV&gt; is a string and is optional</li> <li>• &lt;FWREV&gt; is the firmware Rev; &lt;FWREV&gt; is a string and is optional</li> <li>• &lt;SN&gt; is the serial number; &lt;SN&gt; is a string and is optional</li> <li>• &lt;CLEI&gt; is the CLEI code for the equipment, is a string and is optional</li> </ul>                                                                                                                                                                                                                                                                                                                                                           |
| Output Format (continued) | <ul style="list-style-type: none"> <li>• &lt;TWL&gt; tunable wavelength 1; valid values are shown in the <a href="#">“OPTICAL_WLEN” section on page 4-78</a> and &lt;TWL&gt; is optional</li> <li>• &lt;TWL1&gt; tunable wavelength 2; valid values are shown in the <a href="#">“OPTICAL_WLEN” section on page 4-78</a> and &lt;TWL1&gt; is optional</li> <li>• &lt;TWL2&gt; tunable wavelength 3; valid values are shown in the <a href="#">“OPTICAL_WLEN” section on page 4-78</a> and &lt;TWL2&gt; is optional</li> <li>• &lt;TWL3&gt; tunable wavelength 4; valid values are shown in the <a href="#">“OPTICAL_WLEN” section on page 4-78</a> and &lt;TWL3&gt; is optional</li> <li>• &lt;PLUGINVERNDORID&gt; is an integer and is optional</li> <li>• &lt;PLUGINPN&gt; is a third-party plug-in module HW part number. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. &lt;PLUGINPN&gt; is a string and is optional</li> <li>• &lt;PLUGINHWREV&gt; is a third-party plug-in module hardware. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. &lt;PLUGINHWREV&gt; is a string and is optional</li> <li>• &lt;PLUGINFWREV&gt; is a third-party plug-in module firmware. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. &lt;PLUGINFWREV&gt; is a string and is optional</li> </ul> |

| Section                   | RTRV-INV Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format (continued) | <ul style="list-style-type: none"> <li>• &lt;PLUGINSN&gt; is a third-party plug-in module serial number. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. &lt;PLUGINSN&gt; is optional</li> <li>• &lt;ILOSSREF&gt; valid values are shown in the <a href="#">“REVERTIVE_TIME” section on page 4-84</a></li> <li>• &lt;PID&gt; product ID of the module; &lt;PID&gt; is a string and is optional</li> <li>• &lt;VID&gt; is a string and is optional</li> <li>• &lt;FPGA&gt; FPGA version; &lt;FPGA&gt; is a string and is optional</li> </ul> |
| Output Example            | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD “SLOT-15,OC3-IR-4::PLUGTYPE=SX-IR-SW-SN,PN=87-31-00002, HWREV=004K,FWREV=76-99-00009-004A,SN=013510, CLEI=NOCLEI,TWL1=1546.12,TWL2=1546.92,TWL3=1547.72, TWL4=1548.51,PLUGINVENDORID=012345,PLUGINPN=ABCDE, PLUGINHWREV=ABCDE,PLUGINFWREV=01-02-03,PLUGINSN=01234, ILOSSREF=1.0,PID=CISCO_ONS15454,VID=V01,FPGA=F451” ;</pre>                                                                                                                                                                                                                                                                                                    |
| Errors                    | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

### 3.4.178 RTRV-LNK: Retrieve Link

(Cisco ONS 15454 only)

This command retrieves all the (optical) links created in the NE. The ends information is returned along with the type of (optical) link.

| Section          | RTRV-LNK Description                                                                          |
|------------------|-----------------------------------------------------------------------------------------------|
| Category         | DWDM                                                                                          |
| Security         | Retrieve                                                                                      |
| Related Messages | <pre>OPR-LNK          ED-LNK-&lt;MOD2O&gt; DLT-LNK-&lt;MOD2O&gt;  ENT-LNK-&lt;MOD2O&gt;</pre> |
| Input Format     | RTRV-LNK:[<TID>]::<CTAG>;                                                                     |
| Input Example    | RTRV-LNK:PENNGROVE::114;                                                                      |



| Section        | RTRV-LNK Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“&lt;FROM&gt;,&lt;TO&gt;::[OLNKT=&lt;OLNKT&gt;],[CTYPE=&lt;CTYPE&gt;,<br/>[RDIRN=&lt;RDIRN&gt;],[BAND=&lt;BAND&gt;],[WLEN=&lt;WLEN&gt;]:&lt;PST&gt;,[&lt;SST&gt;]<br/>;<br/>where:</p> <ul style="list-style-type: none"> <li>• &lt;FROM&gt; identifies an entity at one end of the optical link and is the AID from the “ALL” section on page 4-9</li> <li>• &lt;TO&gt; identifies an entity at the other end of the optical link and is the AID from the “ALL” section on page 4-9</li> <li>• &lt;OLNKT&gt; identifies the optical link type; valid values are shown in the “OPTICAL_LINK_TYPE” section on page 4-77 and &lt;OLNKT&gt; is optional</li> <li>• &lt;CTYPE&gt; indicates if the optical link is provisioned by a user or automatically created by the NE’ valid values are shown in the “CREATION_TYPE” section on page 4-55 and &lt;CTYPE&gt; is optional</li> <li>• &lt;RDIRN&gt; are shown in the “RDIRN_MODE” section on page 4-83 and &lt;RDIRN&gt; is optional</li> <li>• &lt;BAND&gt; identifies the optical band (group of four contiguous wavelengths) for this optical link. It is present only in case of a link between two OMS entities. Valid values for &lt;BAND&gt; are shown in the “OPTICAL_BAND” section on page 4-76 and &lt;BAND&gt; is optional</li> <li>• &lt;WLEN&gt; identifies the optical wavelength. It is present only in the case of a link between two OCH entities. Valid values for &lt;WLEN&gt; are shown in the “OPTICAL_WLEN” section on page 4-78 and &lt;WLEN&gt; is optional</li> <li>• &lt;PST&gt; primary state; valid values are shown in the “PST” section on page 4-83</li> <li>• &lt;SST&gt; secondary state; valid values are shown in the “SST” section on page 4-86</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/>M 001 COMPLD<br/>“BAND-6-1-TX,BAND-13-1-RX::OLNKT=HITLESS,CTYPE=PROV,<br/>RDIRN=W_E,BAND=1530.32-1532.68,WLEN=1530.32:OOS,AINS”<br/>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### 3.4.179 RTRV-LNK-<MOD20>: Retrieve Optical Link (OCH, OMS, OTS)

(Cisco ONS 15454 only)

This command retrieves any optical link associated with the entered AIDs or AID range. The ends information is returned along with the type of optical link.

| Section  | RTRV-LNK-<MOD20> Description |
|----------|------------------------------|
| Category | DWDM                         |
| Security | Retrieve                     |

| Section          | RTRV-LNK-<MOD2O> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | DLT-FFP-CLNT<br>DLT-LNK-<MOD2O><br>ED-CLNT<br>ED-DWDM<br>ED-FFP-CLNT<br>ED-FFP-OCH<br>ED-LNK-<MOD2O><br>ED-OCH<br>ED-OMS<br>ED-OTS<br>ED-TRC-CLNT<br>ED-TRC-OCH<br>ENT-FFP-CLNT<br>ENT-LNK-<MOD2O><br>OPR-LASER-OTS<br>OPR-PROTNSW-CLNT<br>OPR-PROTNSW-OCH<br>RLS-LASER-OTS<br>RLS-PROTNSW-CLNT<br>RLS-PROTNSW-OCH<br>RTRV-CLNT<br>RTRV-DWDM<br>RTRV-FFP-CLNT<br>RTRV-FFP-OCH<br>RTRV-OCH<br>RTRV-OMS<br>RTRV-OTS<br>RTRV-PROTNSW-CLNT<br>RTRV-PROTNSW-OCH<br>RTRV-TRC-CLNT<br>RTRV-TRC-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Input Format     | RTRV-LNK-<MOD2O>:[<TID>]:<AID>:<CTAG>:::[OLNKT=<OLNKT>,<br>[CTYPE=<CTYPE>],[RDIRN=<RDIRN>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies facilities to check for optical link membership. It can be an OPTICAL_AID AID or ALL AID. The ALL AID defaults to NE which means to report all existing optical links of the NE. &lt;AID&gt; is the AID from the <a href="#">“BAND” section on page 4-18</a> and must not be null</li> <li>• &lt;OLNKT&gt; identifies the optical link type; valid values are shown in the <a href="#">“OPTICAL_LINK_TYPE” section on page 4-77</a> and &lt;OLNKT&gt; is optional</li> <li>• &lt;CTYPE&gt; indicates if the optical link is provisioned by a user or automatically created by the NE’ valid values are shown in the <a href="#">“CREATION_TYPE” section on page 4-55</a> and &lt;CTYPE&gt; is optional</li> <li>• &lt;RDIRN&gt; specifies the filter on ring directionality of the optical link; valid values are shown in the <a href="#">“RDIRN_MODE” section on page 4-83</a>. A null value is equivalent to ALL</li> </ul> |
| Input Example    | RTRV-LNK-OMS:PENNGROVE:ALL:114:::OLNKT=HITLESS,CTYPE=AUTO,RDIRN=W-E;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| Section        | RTRV-LNK-<MOD20> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <pre>SID DATE TIME M CTAG COMPLD "&lt;FROM&gt;,&lt;TO&gt;::[OLNKT=&lt;OPTICALLINKTYPE&gt;,&lt;CTYPE=&lt;CREATIONTYPE&gt;,&lt;RDIRN=&lt;RDIRN&gt;,&lt;BAND=&lt;BAND&gt;,&lt;WLEN=&lt;WLEN&gt;]:&lt;PST&gt;,&lt;SST&gt;]" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;FROM&gt; identifies an entity at one end of the optical link and is the AID from the <a href="#">“BAND” section on page 4-18</a></li> <li>• &lt;TO&gt; identifies an entity at the other end of the optical link and is the AID from the <a href="#">“BAND” section on page 4-18</a></li> <li>• &lt;OPTICALLINKTYPE&gt; identifies the optical link type; valid values are shown in the <a href="#">“OPTICAL_LINK_TYPE” section on page 4-77</a> and &lt;OPTICALLINKTYPE&gt; is optional</li> <li>• &lt;CREATIONTYPE&gt; indicates if the optical link is provisioned by a user or automatically created by the NE; valid values are shown in the <a href="#">“CREATION_TYPE” section on page 4-55</a> and &lt;CREATIONTYPE&gt; is optional</li> <li>• Valid values for &lt;RDIRN&gt; are shown in the <a href="#">“RDIRN_MODE” section on page 4-83</a> and &lt;RDIRN&gt; is optional</li> <li>• &lt;BAND&gt; identifies the optical band (group of four contiguous wavelengths) for this optical link. It is present only in case of a link between two OMS entities. Valid values for &lt;BAND&gt; are shown in the <a href="#">“OPTICAL_BAND” section on page 4-76</a> and &lt;BAND&gt; is optional</li> <li>• &lt;WLEN&gt; identifies the optical wavelength. It is present only in the case of a link between two OCH entities. Valid values for &lt;WLEN&gt; are shown in the <a href="#">“OPTICAL_WLEN” section on page 4-78</a> and &lt;WLEN&gt; is optional</li> <li>• &lt;PST&gt; primary state; valid values are shown in the <a href="#">“PST” section on page 4-83</a></li> <li>• &lt;SST&gt; secondary state; valid values are shown in the <a href="#">“SST” section on page 4-86</a></li> </ul> |
| Output Example | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD "BAND-6-1-TX,BAND-13-1-RX::OLNKT=HITLESS,CTYPE=PROV, RDIRN=W_E,BAND=1530.32,WLEN=1530.32:OOS,AINS" ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

### 3.4.180 RTRV-LOG: Retrieve Log

This command retrieves the alarm log of the NE.



#### Note

The only option reported for LOGNM is ALARM.

| Section          | RTRV-LOG Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Log                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Security         | Superuser                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Related Messages | ALW-MSG-DBCHG<br>INH-MSG-DBCHG<br>REPT DBCHG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Input Format     | RTRV-LOG:[<TID>]::<CTAG>::<LOGNM>;<br>where: <ul style="list-style-type: none"> <li>&lt;LOGNM&gt; is the log name - ALARM; &lt;LOGNM&gt; is a string and must not be null</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Input Example    | RTRV-LOG:CISCO::123::ALARM;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>,<ALMNUMBER>:CURRENT=<CURRENT>,<br>[PREVIOUS=<PREVIOUS>,<CONDITION>,<SRVEFF>],[TIME=<OCRTIME>,<br>[DATE=<OCRDAT>]:<ALMDESCR>”<br>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is an access identifier from the <a href="#">“ALL” section on page 4-9</a></li> <li>&lt;ALMNUMBER&gt; is an alarm number of the log and is an integer</li> <li>&lt;CURRENT&gt; is a current severity; valid values are shown in the <a href="#">“NOTIF_CODE” section on page 4-75</a></li> <li>&lt;PREVIOUS&gt; is a previous severity; valid values are shown in the <a href="#">“COND_EFF” section on page 4-54</a>, &lt;PREVIOUS&gt; is optional</li> <li>&lt;CONDITION&gt; is a condition; valid values are shown in the <a href="#">“Conditions” section on page 7-18</a></li> <li>&lt;SRVEFF&gt; is a service effect; valid values are shown in the <a href="#">“SERV_EFF” section on page 4-85</a></li> <li>&lt;OCRTIME&gt; is the time an alarm is triggered and is optional</li> <li>&lt;OCRDAT&gt; is the date an alarm is triggered and is optional</li> <li>&lt;ALMDESCR&gt; is the alarm description and is a string</li> </ul> |
| Output Example   | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“FAC-3-1,18:CURRENT=MJ,PREVIOUS=CL,EOC,NSA,<br>TIME=16-33-04,DATE=1971-02-03:\“SDCC TERMINATION FAILURE\””<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### 3.4.181 RTRV-MAP-NETWORK: Retrieve Map Network

This command retrieves all the NE attributes which are reachable from the GNE (gateway NE). The NE attributes include the node IP address (IPADDR), node name (TID), and the product type of the NE (PRODUCT).

**Note**

The product type field in the response will be displayed as “unknown” for nodes that are not running the same version of software.

| Section          | RTRV-MAP-NETWORK Description                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Network                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Related Messages | RTRV-MAP-IPMAP                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Input Format     | RTRV-MAP-NETWORK:[<TID>]::<CTAG>;                                                                                                                                                                                                                                                                                                                                                                                              |
| Input Example    | RTRV-MAP-NETWORK:CISCO::123;                                                                                                                                                                                                                                                                                                                                                                                                   |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“<IPADDR>,<NODENAME>,<PRODUCT>”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;IPADDR&gt; indicates the node IP address and is a string</li> <li>• &lt;NODENAME&gt; indicates the node name (TID) and is a string</li> <li>• &lt;PRODUCT&gt; indicates the product type of the NE; valid values are shown in the <a href="#">“PRODUCT_TYPE”</a> section on page 4-82</li> </ul> |
| Output Example   | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“172.20.222.225,TID-000,15454”<br>;                                                                                                                                                                                                                                                                                                                                             |
| Errors           | Errors are listed in <a href="#">Table 7-33</a> on page 7-27.                                                                                                                                                                                                                                                                                                                                                                  |

### 3.4.182 RTRV-NE-GEN: Retrieve Network Element General

This command retrieves the general NE attributes.

| Section          | RTRV-NE-GEN Description                                                                                                                                                                                                                                                                     |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | System                                                                                                                                                                                                                                                                                      |
| Security         | Retrieve                                                                                                                                                                                                                                                                                    |
| Related Messages | ACT-USER<br>ALW-MSG-ALL<br>ALW-MSG-DBCHG<br>ALW-MSG-SECU<br>ED-DAT<br>ED-NE-GEN<br>ED-NE-PATH<br>ED-NE-SYNCN<br>INH-MSG-ALL<br>INH-MSG-DBCHG<br>INH-MSG-SECU<br>INIT-SYS<br>RTRV-HDR<br>RTRV-INV<br>RTRV-NE-IPMAP<br>RTRV-NE-PATH<br>RTRV-NE-SYNCN<br>RTRV-NE-WDMANS<br>RTRV-TOD<br>SET-TOD |

| Section        | RTRV-NE-GEN Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format   | RTRV-NE-GEN:[<TID>]::<CTAG>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Input Example  | RTRV-NE-GEN:CISCO::123;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Output Format  | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“[IPADDR=&lt;IPADDR&gt;],[IPMASK=&lt;IPMASK&gt;],[DEFRTR=&lt;DEFRTR&gt;],[<br/>IIOPPORT=&lt;IIOPPORT&gt;],[NTP=&lt;NTP&gt;],[NAME=&lt;NAME&gt;],[<br/>SWVER=&lt;SWVER&gt;],[LOAD=&lt;LOAD&gt;],[PROTSWVER=&lt;PROTSWVER&gt;],[<br/>PROTLOAD=&lt;PROTLOAD&gt;],[DEFDESC=&lt;DEFDESC&gt;]<br/>[PLATFORM=&lt;PLATFORM&gt;]”<br/>;<br/>where:</p> <ul style="list-style-type: none"> <li>• &lt;IPADDR&gt; indicates the node IP address; &lt;IPADDR&gt; is a string and is optional</li> <li>• &lt;IPMASK&gt; indicates the node IP mask; &lt;IPMASK&gt; is a string and is optional</li> <li>• &lt;DEFRTR&gt; indicates the node default router; &lt;DEFRTR&gt; is a string and is optional</li> <li>• &lt;IIOPPORT&gt; indicates the node IIOPPORT port; &lt;IIOPPORT&gt; is an integer and is optional</li> <li>• &lt;NTP&gt; indicates the node’s NTP timing source address; &lt;NTP&gt; is a string and is optional</li> <li>• &lt;NAME&gt; is the node name; &lt;NAME&gt; is a string and is optional</li> <li>• &lt;SWVER&gt; is the software version; &lt;SWVER&gt; is a string and is optional</li> <li>• &lt;LOAD&gt; is a string and is optional</li> <li>• &lt;PROTSWVER&gt; is protect software version; &lt;PROTSWVER&gt; is a string and is optional</li> <li>• &lt;PROTLOAD&gt; is a string and is optional</li> <li>• &lt;DEFDESC&gt; is a string and is optional</li> <li>• &lt;PLATFORM&gt; is the NE platform type; &lt;PLATFORM&gt; is a string and is optional</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/>M 001 COMPLD<br/>“IPADDR=192.168.100.52,IPMASK=255.255.255.0,DEFRTR=192.168.100.1,<br/>IIOPPORT=57970,NTP=192.168.100.52,NAME=“NODENAME”,<br/>SWVER=2.01.03,LOAD=02.13-E09A-08.15,PROTSWVER=2.01.02,<br/>PROTLOAD=02.12-E09A-09.25,DEFDESC=“NE DEFAULTS FEATURE”,<br/>PLATFORM=15454-ANSI”<br/>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

### 3.4.183 RTRV-NE-IPMAP: Retrieve Network Element IPMAP

This command retrieves the IP address and node name of the NEs that have the DCC connection with this NE.

**Note**

This command only reports the active DCC link. If there is no active DCC link on the port (or the node), the command will return COMPLD without IPMAP information.

| Section          | RTRV-NE-IPMAP Description                                                                                                                                                                                                                                                                                                                                                                                |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Network                                                                                                                                                                                                                                                                                                                                                                                                  |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                 |
| Related Messages | ACT-USER<br>ALW-MSG-ALL<br>ALW-MSG-DBCHG<br>ALW-MSG-SECU<br>ED-DAT<br>ED-NE-GEN<br>ED-NE-PATH<br>ED-NE-SYCN<br>INH-MSG-ALL<br>INH-MSG-DBCHG<br>INH-MSG-SECU<br>INIT-SYS<br>RTRV-HDR<br>RTRV-INV<br>RTRV-MAP-NETWORK<br>RTRV-NE-GEN<br>RTRV-NE-PATH<br>RTRV-NE-SYCN<br>RTRV-NE-WDMANS<br>RTRV-TOD<br>SET-TOD                                                                                              |
| Input Format     | RTRV-NE-IPMAP:[<TID>]:[<AID>]:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the port of an NE carrying the DCC connection; &lt;AID&gt; is from the <a href="#">“FACILITY” section on page 4-28</a> and a null value is equivalent to ALL</li> </ul>                                                                                                                          |
| Input Example    | RTRV-NE-IPMAP:CISCO:FAC-12-1:123;                                                                                                                                                                                                                                                                                                                                                                        |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>:<IPADDR>,<NODENAME>”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the port of an NE carrying a DCC connection and is from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;IPADDR&gt; indicates the NE IP address and is a string</li> <li>• &lt;NODENAME&gt; indicates the NE node name and is a string</li> </ul> |
| Output Example   | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“FAC-12-1:172.20.208.225,NODENAME2”<br>;                                                                                                                                                                                                                                                                                                                  |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                           |

### 3.4.184 RTRV-NE-PATH: Retrieve Network Element Path

This command retrieves the path-level attributes on an NE.

| Section          | RTRV-NE-PATH Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |              |             |          |               |          |              |          |        |             |           |               |            |               |             |                |             |          |               |         |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------|-------------|----------|---------------|----------|--------------|----------|--------|-------------|-----------|---------------|------------|---------------|-------------|----------------|-------------|----------|---------------|---------|
| Category         | System                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |              |             |          |               |          |              |          |        |             |           |               |            |               |             |                |             |          |               |         |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |              |             |          |               |          |              |          |        |             |           |               |            |               |             |                |             |          |               |         |
| Related Messages | <table border="0"> <tr> <td>ACT-USER</td> <td>INH-MSG-SECU</td> </tr> <tr> <td>ALW-MSG-ALL</td> <td>INIT-SYS</td> </tr> <tr> <td>ALW-MSG-DBCHG</td> <td>RTRV-HDR</td> </tr> <tr> <td>ALW-MSG-SECU</td> <td>RTRV-INV</td> </tr> <tr> <td>ED-DAT</td> <td>RTRV-NE-GEN</td> </tr> <tr> <td>ED-NE-GEN</td> <td>RTRV-NE-IPMAP</td> </tr> <tr> <td>ED-NE-PATH</td> <td>RTRV-NE-SYNCN</td> </tr> <tr> <td>ED-NE-SYNCN</td> <td>RTRV-NE-WDMANS</td> </tr> <tr> <td>INH-MSG-ALL</td> <td>RTRV-TOD</td> </tr> <tr> <td>INH-MSG-DBCHG</td> <td>SET-TOD</td> </tr> </table> | ACT-USER | INH-MSG-SECU | ALW-MSG-ALL | INIT-SYS | ALW-MSG-DBCHG | RTRV-HDR | ALW-MSG-SECU | RTRV-INV | ED-DAT | RTRV-NE-GEN | ED-NE-GEN | RTRV-NE-IPMAP | ED-NE-PATH | RTRV-NE-SYNCN | ED-NE-SYNCN | RTRV-NE-WDMANS | INH-MSG-ALL | RTRV-TOD | INH-MSG-DBCHG | SET-TOD |
| ACT-USER         | INH-MSG-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |              |             |          |               |          |              |          |        |             |           |               |            |               |             |                |             |          |               |         |
| ALW-MSG-ALL      | INIT-SYS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |              |             |          |               |          |              |          |        |             |           |               |            |               |             |                |             |          |               |         |
| ALW-MSG-DBCHG    | RTRV-HDR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |              |             |          |               |          |              |          |        |             |           |               |            |               |             |                |             |          |               |         |
| ALW-MSG-SECU     | RTRV-INV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |              |             |          |               |          |              |          |        |             |           |               |            |               |             |                |             |          |               |         |
| ED-DAT           | RTRV-NE-GEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |          |              |             |          |               |          |              |          |        |             |           |               |            |               |             |                |             |          |               |         |
| ED-NE-GEN        | RTRV-NE-IPMAP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |              |             |          |               |          |              |          |        |             |           |               |            |               |             |                |             |          |               |         |
| ED-NE-PATH       | RTRV-NE-SYNCN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |              |             |          |               |          |              |          |        |             |           |               |            |               |             |                |             |          |               |         |
| ED-NE-SYNCN      | RTRV-NE-WDMANS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |              |             |          |               |          |              |          |        |             |           |               |            |               |             |                |             |          |               |         |
| INH-MSG-ALL      | RTRV-TOD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |              |             |          |               |          |              |          |        |             |           |               |            |               |             |                |             |          |               |         |
| INH-MSG-DBCHG    | SET-TOD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |              |             |          |               |          |              |          |        |             |           |               |            |               |             |                |             |          |               |         |
| Input Format     | RTRV-NE-PATH:[<TID>]::<CTAG>[:::];                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          |              |             |          |               |          |              |          |        |             |           |               |            |               |             |                |             |          |               |         |
| Input Example    | RTRV-NE-PATH::CTAG;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |              |             |          |               |          |              |          |        |             |           |               |            |               |             |                |             |          |               |         |
| Output Format    | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“[PDIP=&lt;PDIP&gt;]”<br/>;<br/>where:</p> <ul style="list-style-type: none"> <li>• &lt;PDIP&gt; flag used to indicate whether PDI-P should be generated on the outgoing VT-structured STSs. PDI-P is specified in GR-253 (Issue2 Rev2 1999) CR6-261 (6.2.1.4.1); valid values are shown in the “ON_OFF” section on page 4-76. &lt;PDIP&gt; is optional</li> </ul>                                                                                                                                                       |          |              |             |          |               |          |              |          |        |             |           |               |            |               |             |                |             |          |               |         |
| Output Example   | <p>TID-000 1998-06-20 14:30:00<br/>M 001 COMPLD<br/>“PDIP=Y”<br/>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |              |             |          |               |          |              |          |        |             |           |               |            |               |             |                |             |          |               |         |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |              |             |          |               |          |              |          |        |             |           |               |            |               |             |                |             |          |               |         |

### 3.4.185 RTRV-NE-SYNCN: Retrieve Network Element Synchronization

This command retrieves the synchronization attributes of the NE.

Notes:

1. Although mixed mode timing is supported in this release, it is not recommended. See the “[Mixed Mode Timing Support](#)” section on page 1-19 for more information.
2. The existing external and line modes have the same functionality in all 3.x releases:
  - External mode: the node derives its timing from the BITS inputs.
  - Line mode: the node derives its timing from the SONET line(s).
  - Mixed mode: the node derives its timing from the BITS input or SONET lines.



| Section          | RTRV-NE-SYNCN Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Synchronization                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Related Messages | ACT-USER REPT EVT BITS<br>ALW-MSG-ALL REPT EVT SYNCN<br>ALW-MSG-DBCHG RLS-SYNCNSW<br>ALW-MSG-SECU RTRV-ALM-BITS<br>ED-BITS RTRV-ALM-SYNCN<br>ED-DAT RTRV-BITS<br>ED-NE-GEN RTRV-COND-BITS<br>ED-NE-PATH RTRV-COND-SYNCN<br>ED-NE-SYNCN RTRV-HDR<br>ED-SYNCN RTRV-INV<br>INH-MSG-ALL RTRV-NE-GEN<br>INH-MSG-DBCHG RTRV-NE-IPMAP<br>INH-MSG-SECU RTRV-NE-PATH<br>INIT-SYS RTRV-NE-WDMANS<br>OPR-SYNCNSW RTRV-SYNCN<br>REPT ALM BITS RTRV-TOD<br>REPT ALM SYNCN SET-TOD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Input Format     | RTRV-NE-SYNCN:[<TID>]::<CTAG>[[:]];                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Input Example    | RTRV-NE-SYNCN:CISCO::123;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“:.[TMMD=<TMMD>],[SSMGEN=<SSMGEN>],[QRES=<QRES>,<br>[RVRTV=<RVRTV>],[RVTM=<RVTM>]”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;TMMD&gt; is a timing mode; valid values are shown in the <a href="#">“TIMING_MODE” section on page 4-92</a>, &lt;TMMD&gt; is optional</li> <li>• &lt;SSMGEN&gt; is an SSM generator; valid values are shown in the <a href="#">“SYNC_GENERATION” section on page 4-89</a>, &lt;SSMGEN&gt; is optional</li> <li>• &lt;QRES&gt; is a quality of RES; valid values are shown in the <a href="#">“SYNC_QUALITY_LEVEL” section on page 4-89</a>, &lt;QRES&gt; is optional</li> <li>• &lt;RVRTV&gt; is a revertive mode; valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a>, &lt;RVRTV&gt; is optional</li> <li>• &lt;RVTM&gt; is a revertive time; valid values are shown in the <a href="#">“REVERTIVE_TIME” section on page 4-84</a>, &lt;RVTM&gt; is optional</li> </ul> |
| Output Example   | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“.:TMMD=LINE,SSMGEN=GEN1,QRES=ABOVE-PRS,RVRTV=Y,RVTM=8.0”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### 3.4.186 RTRV-NE-WDMANS: Retrieve NE Wavelength Division Multiplexing Automatic Node Setup

(Cisco ONS 15454 only)

This command retrieves the optical node setup (WDMANS) application ports involved in node setup regulation.

| Section          | RTRV-NE-WDMANS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |              |             |          |               |          |              |          |        |             |           |               |            |              |            |              |             |          |               |         |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------|-------------|----------|---------------|----------|--------------|----------|--------|-------------|-----------|---------------|------------|--------------|------------|--------------|-------------|----------|---------------|---------|
| Category         | DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |              |             |          |               |          |              |          |        |             |           |               |            |              |            |              |             |          |               |         |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |              |             |          |               |          |              |          |        |             |           |               |            |              |            |              |             |          |               |         |
| Related Messages | <table border="0"> <tr> <td>ACT-USER</td> <td>INH-MSG-SECU</td> </tr> <tr> <td>ALW-MSG-ALL</td> <td>INIT-SYS</td> </tr> <tr> <td>ALW-MSG-DBCHG</td> <td>RTRV-HDR</td> </tr> <tr> <td>ALW-MSG-SECU</td> <td>RTRV-INV</td> </tr> <tr> <td>ED-DAT</td> <td>RTRV-NE-GEN</td> </tr> <tr> <td>ED-NE-GEN</td> <td>RTRV-NE-IPMAP</td> </tr> <tr> <td>ED-NE-PATH</td> <td>RTRV-NE-PATH</td> </tr> <tr> <td>ED-NE-SYCN</td> <td>RTRV-NE-SYCN</td> </tr> <tr> <td>INH-MSG-ALL</td> <td>RTRV-TOD</td> </tr> <tr> <td>INH-MSG-DBCHG</td> <td>SET-TOD</td> </tr> </table>                                                                                                | ACT-USER | INH-MSG-SECU | ALW-MSG-ALL | INIT-SYS | ALW-MSG-DBCHG | RTRV-HDR | ALW-MSG-SECU | RTRV-INV | ED-DAT | RTRV-NE-GEN | ED-NE-GEN | RTRV-NE-IPMAP | ED-NE-PATH | RTRV-NE-PATH | ED-NE-SYCN | RTRV-NE-SYCN | INH-MSG-ALL | RTRV-TOD | INH-MSG-DBCHG | SET-TOD |
| ACT-USER         | INH-MSG-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |          |              |             |          |               |          |              |          |        |             |           |               |            |              |            |              |             |          |               |         |
| ALW-MSG-ALL      | INIT-SYS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |              |             |          |               |          |              |          |        |             |           |               |            |              |            |              |             |          |               |         |
| ALW-MSG-DBCHG    | RTRV-HDR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |              |             |          |               |          |              |          |        |             |           |               |            |              |            |              |             |          |               |         |
| ALW-MSG-SECU     | RTRV-INV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |              |             |          |               |          |              |          |        |             |           |               |            |              |            |              |             |          |               |         |
| ED-DAT           | RTRV-NE-GEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |              |             |          |               |          |              |          |        |             |           |               |            |              |            |              |             |          |               |         |
| ED-NE-GEN        | RTRV-NE-IPMAP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          |              |             |          |               |          |              |          |        |             |           |               |            |              |            |              |             |          |               |         |
| ED-NE-PATH       | RTRV-NE-PATH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |          |              |             |          |               |          |              |          |        |             |           |               |            |              |            |              |             |          |               |         |
| ED-NE-SYCN       | RTRV-NE-SYCN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |          |              |             |          |               |          |              |          |        |             |           |               |            |              |            |              |             |          |               |         |
| INH-MSG-ALL      | RTRV-TOD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |              |             |          |               |          |              |          |        |             |           |               |            |              |            |              |             |          |               |         |
| INH-MSG-DBCHG    | SET-TOD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |              |             |          |               |          |              |          |        |             |           |               |            |              |            |              |             |          |               |         |
| Input Format     | RTRV-NE-WDMANS:[<TID>]::<CTAG>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |              |             |          |               |          |              |          |        |             |           |               |            |              |            |              |             |          |               |         |
| Input Example    | RTRV-NE-WDMANS:PENNGROVE::114;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |              |             |          |               |          |              |          |        |             |           |               |            |              |            |              |             |          |               |         |
| Output Format    | <pre>SID DATE TIME M CTAG COMPLD "&lt;AID&gt;,&lt;AIDTYPE&gt;::[REGULATED=&lt;REGULATED&gt;]" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the port regulated AID from the <a href="#">“ALL” section on page 4-9</a></li> <li>• &lt;AIDTYPE&gt; is the type of AID of the retrieved port; valid values are shown in the <a href="#">“MOD2” section on page 4-69</a></li> <li>• &lt;REGULATED&gt; is the status of the port after a node setup regulation that states if it was regulated or not; valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a> and &lt;REGULATED&gt; is optional</li> </ul> |          |              |             |          |               |          |              |          |        |             |           |               |            |              |            |              |             |          |               |         |
| Output Example   | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD "CHAN-16-1-RX,OCH::REGULATED=Y" ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          |              |             |          |               |          |              |          |        |             |           |               |            |              |            |              |             |          |               |         |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |              |             |          |               |          |              |          |        |             |           |               |            |              |            |              |             |          |               |         |

### 3.4.187 RTRV-OCH: Retrieve Optical Channel

(Cisco ONS 15454 only)

This command retrieves the attributes (service parameters) and state of an OCH facility.

See the “Provisioning Rules for MXP\_2.5G\_10G and TXP\_MR\_10G Cards” section on page 1-8 and the “Provisioning Rules for TXP\_MR\_2.5G and TXPP\_MR\_2.5G Cards” section on page 1-13 for specific card provisioning rules.

**Note**

States of primary=OOS and secondary=AINS do not apply to Ethernet mode.

| Section          | RTRV-OCH Description                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Related Messages | DLT-FFP-CLNT OPR-PROTNSW-OCH<br>DLT-LNK-<MOD2O> RLS-LASER-OTS<br>ED-CLNT RLS-PROTNSW-CLNT<br>ED-DWDM RLS-PROTNSW-OCH<br>ED-FFP-CLNT RTRV-CLNT<br>ED-FFP-OCH RTRV-DWDM<br>ED-LNK-<MOD2O> RTRV-FFP-CLNT<br>ED-OCH RTRV-FFP-OCH<br>ED-OMS RTRV-LNK-<MOD2O><br>ED-OTS RTRV-OMS<br>ED-TRC-CLNT RTRV-OTS<br>ED-TRC-OCH RTRV-PROTNSW-CLNT<br>ENT-FFP-CLNT RTRV-PROTNSW-OCH<br>ENT-LNK-<MOD2O> RTRV-TRC-CLNT<br>OPR-LASER-OTS RTRV-TRC-OCH<br>OPR-PROTNSW-CLNT |
| Input Format     | RTRV-OCH:[<TID>]:<AID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier from the “CHANNEL” section on page 4-19 and must not be null</li> </ul>                                                                                                                                                                                                                                                          |
| Input Example    | RTRV-OCH:PENNGROVE:CHAN-6-2:236;                                                                                                                                                                                                                                                                                                                                                                                                                       |

| Section       | RTRV-OCH Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format | <pre> SID DATE TIME M CTAG COMPLD "&lt;AID&gt;:.,[&lt;ROLE&gt;],[&lt;STATUS&gt;]:[RDIRN=&lt;RDIRN&gt;,) [OPTYPE=&lt;OPTICALPORTTYPE&gt;],[OPWR=&lt;POWER&gt;,) [EXPWLEN=&lt;EXPWLEN&gt;],[ACTWLEN=&lt;ACTWLEN&gt;],[ILOSS=&lt;ILOSS&gt;,) [VOAMODE=&lt;VOAMODE&gt;],[VOAATTN=&lt;VOAATTN&gt;,) [VOAPWR=&lt;VOAPWR&gt;],[VOAREFATTN=&lt;VOAREFATTN&gt;,) [VOAREFPWR=&lt;VOAREFPWR&gt;],[REFOPWR=&lt;REFOPWR&gt;,) [CALOPWR=&lt;CALOPWR&gt;],[CHPOWER=&lt;CHPOWER&gt;,) [NAME=&lt;PORTNAME&gt;],[SFBER=&lt;SFBER&gt;],[SDBER=&lt;SDBER&gt;,) [ALSMODE=&lt;ALSMODE&gt;],[ALSRCINT=&lt;ALSRCINT&gt;,) [ALSRCPW=&lt;ALSRCPW&gt;],[COMM=&lt;COMM&gt;],[GCCRATE=&lt;GCCRATE&gt;,) [DWRAP=&lt;DWRAP&gt;],[FEC=&lt;FEC&gt;],[OSFBER=&lt;OSFBER&gt;,) [OSDBER=&lt;OSDBER&gt;],[MACADDR=&lt;MACADDR&gt;,) [SYNMSG=&lt;SYNMSG&gt;],[SENDDUS=&lt;SENDDUS&gt;,) [LSRSTAT=&lt;LSRSTAT&gt;],[SOAK=&lt;SOAK&gt;],[SOAKLEFT=&lt;SOAKLEFT&gt;,) [OSPF=&lt;OSPF&gt;]:&lt;PST&gt;,[&lt;SST&gt;]" ; </pre> |

| Section                      | RTRV-OCH Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format<br>(continued) | <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier and is from the “CHANNEL” section on page 4-19</li> <li>• &lt;ROLE&gt; identifies an OCH port role (WORK or PROT); valid values are shown in the “SIDE” section on page 4-86 and &lt;ROLE&gt; is optional</li> <li>• &lt;STATUS&gt; the port status; valid values are shown in the “STATUS” section on page 4-86 and &lt;STATUS&gt; is optional</li> <li>• &lt;RDIRN&gt; identifies the ring directionality of the optical channel; valid values are shown in the “RDIRN_MODE” section on page 4-83 and &lt;RDIRN&gt; is optional</li> <li>• &lt;OPTICALPORTTYPE&gt; identifies the optical port type. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. Valid values are shown in the “OPTICAL_PORT_TYPE” section on page 4-77 and &lt;OPTICALPORTTYPE&gt; is optional</li> <li>• &lt;POWER&gt; identifies the optical power measured at this port. It can be input or output power according to port type. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. &lt;POWER&gt; is a string and is optional</li> <li>• &lt;EXPWLEN&gt; defines the expected value of wavelength for this port. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. Valid values for &lt;EXPWLEN&gt; are shown in the “OPTICAL_WLEN” section on page 4-78 and &lt;EXPWLEN&gt; is optional</li> <li>• &lt;ACTWLEN&gt; identifies the manufacturing optical wavelength for this port. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. Valid values are shown in the “OPTICAL_WLEN” section on page 4-78 and &lt;ACTWLEN&gt; is optional</li> <li>• &lt;ILOSS&gt; identifies the insertion loss. It applies only to output ports. &lt;ILOSS&gt; is expressed in dBm. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. &lt;ILOSS&gt; is a string and is optional</li> <li>• &lt;VOAMODE&gt; identifies the working control mode of the VOA. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. Valid values are shown in the “VOA_CNTR_MODE” section on page 4-97 and &lt;VOAMODE&gt; is optional</li> <li>• &lt;VOAATTN&gt; identifies the transmit power attenuation for the variable optical attenuation (VOA). It is expressed in dBm. The range for MXP_2.5G_10G/TXP_MR_10G cards is -24.0 to +2.0 dBm. &lt;VOAATTN&gt; is a string and is optional</li> </ul> |

| Section                      | RTRV-OCH Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| Output Format<br>(continued) | <ul style="list-style-type: none"> <li>• &lt;VOAPWR&gt; indicates the value of calibrated output power that the VOA is going to set as result of its attenuation. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. &lt;VOAPWR&gt; is a float expressed in dBm, is a string and is optional</li> <li>• &lt;VOAREFATTN&gt; indicates the value of reference attenuation for the VOA. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. &lt;VOAREFATTN&gt; is a float expressed in dBm, is a string and is optional</li> <li>• &lt;VOAREFPWR&gt; indicates the value of reference output power that the VOA is going to set as result of its attenuation. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. &lt;VOAREFPWR&gt; is a float expressed in dBm, is a string and is optional</li> <li>• &lt;REFOPWR&gt; indicates the value of the calculated optical power expected for the output line which is added to the user-provided calibration value to have the total expected output power. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. &lt;REFOPWR&gt; is a float expressed in dBm, is a string and is optional</li> <li>• &lt;CALOPWR&gt; indicates the value of the calibrated optical power expected for the output channel which is provided by the user to add to the calculated value to have the total expected output power. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. &lt;CALOPWR&gt; is a float expressed in dBm, is a string and is optional. The default is 0 dBm</li> <li>• &lt;CHPOWER&gt; indicates the value of per channel optical power expected to the OCH DROP port in an optical AD-4C unit; &lt;CHPOWER&gt; is a float expressed in dBm, and is optional. Valid values are shown in the <a href="#">“REVERTIVE_TIME” section on page 4-84</a></li> <li>• &lt;PORTNAME&gt; indicates the port name. &lt;PORTNAME&gt; is a string and is optional</li> <li>• &lt;SFBER&gt; identifies the SFBER for the SONET payload; valid values are shown in the <a href="#">“SF_BER” section on page 4-86</a></li> <li>• &lt;SDBER&gt; identifies the SDBER for the SONET payload; valid values are shown in the <a href="#">“SD_BER” section on page 4-85</a></li> <li>• &lt;ALSMODE&gt; indicates if the Automatic Laser Shutdown is enabled or disabled; valid values are shown in the <a href="#">“ALS_MODE” section on page 4-49</a> and &lt;ALSMODE&gt; is optional</li> <li>• &lt;ALSRCINT&gt; indicates the ALS recovery interval. Range is 20–300 seconds; &lt;ALSRCINT&gt; is an integer and is optional</li> <li>• &lt;ALSRCPW&gt; indicates the ALS recovery pulse width. The range is 2–100 seconds, in increments of 100ms, e.g. -30.1; &lt;ALSRCPW&gt; is a float and is optional</li> </ul> |

| Section                      | RTRV-OCH Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| Output Format<br>(continued) | <ul style="list-style-type: none"> <li>• &lt;COMM&gt; indicates if the GCC or DCC is enabled or disabled. The GCC can be enabled only if the digital wrapper has been enabled for the card. The default is NONE. Valid values are shown in the <a href="#">“COMM_TYPE” section on page 4-54</a>. Rules for an MXP_2.5G_10G/TXP_MR_10G client port are; only the DCC can be provisioned, if the termination mode is not transparent and the payload is SONET. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the DCC can be enabled only if the G.709 is not enabled and if the payload is SONET and the termination mode is not transparent. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the GCC can be enabled if there is no DCC and the G.709 flag is enabled. &lt;COMM&gt; is optional</li> <li>• &lt;GCCRATE&gt; indicates the data rate of the GCC traffic. Valid values are shown in the <a href="#">“GCCRATE” section on page 4-66</a>. The default is 192Kbps. For MXP_2.5G_10G/TXP_MR_10G cards this applies only to the DWDM port. The 576K option is not supported for this release. &lt;GCCRATE&gt; is optional</li> <li>• &lt;DWRAP&gt; is the G.709 digital wrapper. It is either on or off. The system default is ON. For MXP_2.5G_10G/TXP_MR_10G cards, this applies only to the DWDM port. To enable G.709 there should be no GCC on the DWDM port. To disable G.709 there should be no GCC on the DWDM port. The FEC should be turned to off; valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a> and &lt;DWRAP&gt; is optional</li> <li>• &lt;FEC&gt; is the Forward Error Correction. It can be enabled only if the G.709 is turned ON. The system default is ON. For MXP_2.5G_10G/TXP_MR_10G cards this applies only to the DWDM port. The FEC level PM and thresholds apply if the FEC is turned on; valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a> and &lt;FEC&gt; is optional</li> <li>• &lt;OSFBER&gt; identifies the SFBER for the OTN level; valid values are shown in the <a href="#">“SF_BER” section on page 4-86</a> and &lt;OSFBER&gt; is optional</li> <li>• &lt;OSDBER&gt; identifies the SDBER for the OTN level; valid values are shown in the <a href="#">“SD_BER” section on page 4-85</a> and &lt;OSDBER&gt; is optional</li> <li>• &lt;MACADDR&gt; identifies the MAC address for the 10GE payload; &lt;MACADDR&gt; is a string and is optional</li> <li>• &lt;SYNCMSG&gt; indicates that the facility be enabled to provide the synchronization clock. This does not apply to a TXPD-10G card. This applies to an MXP_2.5G_10G card, only if the payload is SONET and the card termination mode is as follows:<br/> TRANSPARENT - All Client ports are available for all timing selections. All Trunk ports are not available.<br/> LINE - All ports are available for all-timing selections.<br/> Valid values for &lt;SYNCMSG&gt; are shown in the <a href="#">“ON_OFF” section on page 4-76</a> and &lt;SYNCMSG&gt; is optional</li> <li>• &lt;SENDDUS&gt; indicates that the facility send out a Do not Use for Sync message. This does not apply to a TXPD-10G card. This applies to a MXP_2.5G_10G card, only if the payload is SONET and the card termination mode is as follows:<br/> TRANSPARENT - All Client ports are available for all timing selections. All Trunk ports are not available.<br/> LINE - All ports are available for all-timing selections.<br/> Valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a> and &lt;SENDDUS&gt; is optional</li> </ul> |

| Section                      | RTRV-OCH Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format<br>(continued) | <ul style="list-style-type: none"> <li>• &lt;LSRSTAT&gt; indicates the laser status. If the laser is shut down it shows DOWN. If it has not been shut down it shows UP. Valid values are shown in the “UP_DOWN” section on page 4-97 and &lt;LSRSTAT&gt; is optional</li> <li>• &lt;SOAK&gt; OOS-AINS to IS transition soak time measured in 15-minute intervals; &lt;SOAK&gt; is an integer and is optional</li> <li>• &lt;SOAKLEFT&gt; time remaining for the transition from OOS-AINS to IS measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. &lt;SOAKLEFT&gt; is optional<br/>Rules for &lt;SOAKLEFT&gt; are as follows: <ul style="list-style-type: none"> <li>– When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed.</li> <li>– When the port is in OOS_AINS, but the countdown has not started due to fault signal the value will be SOAKLEFT=NOT-STARTED.</li> <li>– When the port is in OOS_AINS state and the countdown has started the value will be shown in HH-MM format.</li> </ul> </li> <li>• &lt;OSPF&gt; indicates the OSPF discovery (only if the port COMM is DCC or GCC); valid values are shown in the “ON_OFF” section on page 4-76 and &lt;OSPF&gt; is optional</li> <li>• &lt;PST&gt; primary state; valid values are shown in the “PST” section on page 4-83</li> <li>• &lt;SST&gt; secondary state; valid values are shown in the “SST” section on page 4-86</li> </ul> |
| Output Example               | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD “CHAN-6-1:.,WORK,ACT:RDIRN=W-E,OPTYPE=DROP,OPWR=10.0, EXPWLEN=1530.33,ACTWLEN=1530.33,ILOSS=1.0,VOAMODE=ATTN, VOAATTN=0.5,VOAPWR=0.0,VOAREFATTN=3.5,VOAREFPWR=5.0, REFOPWR=10.5,CALOPWR=0,CHPOWER=2.0,NAME=“NYPORT”, SFBER=1E-4,SDBER=1E-5,ALSMODE=MAN,ALSRCINT=30, ALSRCPW=40.1,COMM=GCC,GCCRATE=192K,DWRAP=Y,FEC=Y, OSFBER=1E-4,OSDBER=1E-5,MACADDR=00-0E-AA-BB-CC-FF, SYNCSMSG=Y,SENDDUS=Y,LSRSTAT=UP,SOAK=52,SOAKLEFT=12-25, OSPF=Y:OOS,AINS” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Errors                       | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

### 3.4.188 RTRV-OMS: Retrieve Optical Multiplex Section

(Cisco ONS 15454 only)

This command retrieves the attributes (service parameters) and state of an OMS facility.

| Section  | RTRV-OMS Description |
|----------|----------------------|
| Category | DWDM                 |
| Security | Retrieve             |



| Section          | RTRV-OMS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | DLT-FFP-CLNT<br>DLT-LNK-<MOD2O><br>ED-CLNT<br>ED-DWDM<br>ED-FFP-CLNT<br>ED-FFP-OCH<br>ED-LNK-<MOD2O><br>ED-OCH<br>ED-OMS<br>ED-OTS<br>ED-TRC-CLNT<br>ED-TRC-OCH<br>ENT-FFP-CLNT<br>ENT-LNK-<MOD2O><br>OPR-LASER-OTS<br>OPR-PROTNSW-CLNT<br>OPR-PROTNSW-OCH<br>RLS-LASER-OTS<br>RLS-PROTNSW-CLNT<br>RLS-PROTNSW-OCH<br>RTRV-CLNT<br>RTRV-DWDM<br>RTRV-FFP-CLNT<br>RTRV-FFP-OCH<br>RTRV-LNK-<MOD2O><br>RTRV-OCH<br>RTRV-OTS<br>RTRV-PROTNSW-CLNT<br>RTRV-PROTNSW-OCH<br>RTRV-TRC-CLNT<br>RTRV-TRC-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Input Format     | RTRV-OMS:[<TID>]:<AID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is the AID from the <a href="#">“BAND” section on page 4-18</a> and must not be null</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Input Example    | RTRV-OMS:PENNGROVE:BAND-6-1-RX:236;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>::RDIRN=<RDIRN>,OPTYPE=<OPTICALPORTTYPE>,<br>[OPWR=<POWER>],[EXPBAND=<EXPBAND>],[ACTBAND=<ACTBAND>],<br>[ILOSS=<ILOSS>],[VOAMODE=<VOAMODE>],[VOAATTN=<VOAATTN>],<br>[VOAPWR=<VOAPWR>],[VOAREFATTN=<VOAREFATTN>],<br>[VOAREFPWR=<VOAREFPWR>],[REFOPWR=<REFOPWR>],<br>[CALOPWR=<CALOPWR>],[CHPOWER=<CHPOWER>]:<PST>,<SST>”<br>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is an AID from the <a href="#">“BAND” section on page 4-18</a></li> <li>&lt;RDIRN&gt; identifies the ring directionality of the optical line; valid values are shown in the <a href="#">“RDIRN_MODE” section on page 4-83</a></li> <li>&lt;OPTICALPORTTYPE&gt; identifies the optical port type; valid values are shown in the <a href="#">“OPTICAL_PORT_TYPE” section on page 4-77</a></li> <li>&lt;POWER&gt; identifies the optical power measured at this port. It can be the input or output power according to port type. &lt;POWER&gt; is expressed in dBm, is a string and is optional</li> <li>&lt;EXPBAND&gt; identifies the expected value of band for this port; valid values are shown in the <a href="#">“OPTICAL_BAND” section on page 4-76</a> and &lt;BAND&gt; is optional</li> <li>&lt;ACTBAND&gt; identifies the manufacturing optical band (group of four contiguous wavelengths) for this port; valid values are shown in the <a href="#">“OPTICAL_BAND” section on page 4-76</a> and &lt;ACTBAND&gt; is optional</li> </ul> |

| Section                      | RTRV-OMS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format<br>(continued) | <ul style="list-style-type: none"> <li>• &lt;ILOSS&gt; identifies the insertion loss. It is applicable to output ports. &lt;ILOSS&gt; is expressed in dBm, is a string and is optional</li> <li>• &lt;VOAMODE&gt; identifies the working control mode of the VOA; valid values are shown in the “VOA_CNTR_MODE” section on page 4-97 and &lt;VOAMODE&gt; is optional</li> <li>• &lt;VOAATTN&gt; indicates the value of calibrated attenuation for the VOA; &lt;VOAATTN&gt; is a float expressed in dBm, is a string and is optional</li> <li>• &lt;VOAPWR&gt; indicates the value of calibrated output power that the VOA is going to set as a result of its attenuation; &lt;VOAPWR&gt; is a float expressed in dBm, is a string and is optional</li> <li>• &lt;VOAREFATTN&gt; indicates the value of reference attenuation for the VOA; &lt;VOAREFATTN&gt; is a float expressed in dBm, is a string and is optional</li> <li>• &lt;VOAREFPWR&gt; indicates the value of reference output power that the VOA is going to sent as a result of its attenuation; &lt;VOAREFPWR&gt; is a float expressed in dBm, is a string and is optional</li> <li>• &lt;REFOPWR&gt; indicates the value of the calculated optical power expected for the output line which is added to the user-provided calibration value to have the total expected output power; &lt;REFOPWR&gt; is a float expressed in dBm, is a string and is optional</li> <li>• &lt;CALOPWR&gt; indicates the value of the calibrated optical power expected for the output line added to the calculated value which equals the total expected output power; &lt;CALOPWR&gt; is a float expressed in dBm, is a string and is optional</li> <li>• &lt;CHPOWER&gt; indicates the value of per channel optical power expected to the OMS port in an optical Mux/Demux unit; &lt;CHPOWER&gt; is a float expressed in dBm, is a string and is optional</li> <li>• &lt;PST&gt; primary state; valid values are shown in the “PST” section on page 4-83</li> <li>• &lt;SST&gt; secondary state; valid values are shown in the “SST” section on page 4-86 and &lt;SST&gt; is optional</li> </ul> |
| Output Example               | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD “BAND-6-1-RX::RDIRN=W-E,OPTYPE=ADD,OPWR=10.0, EXPBAND=UNKNOWN,ACTBAND=1530.33_1531.12,ILOSS=1.0, VOAMODE=ATTN,VOAATTN=0.5,VOAPWR=0.0, VOAREFATTN=3.5,VOAREFPWR=5.0,REFOPWR=10.5,CALOPWR=0.5, CHPOWER=2.0:OOS,AINS” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Errors                       | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### 3.4.189 RTRV-OSC: Retrieve Optical Service Channel

(Cisco ONS 15454 only)

This command retrieves all the OSC (optical service channel) information of the NE.

| Section          | RTRV-OSC Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Related Messages | DLT-OSC<br>ED-OSC<br>ENT-OSC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Input Format     | RTRV-OSC:[<TID>]:<AID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; identifies the OSC group of the NE. Only ALL or Null or a single “OSC-#” in “AID” is allowed. A null value is equivalent to ALL. &lt;AID&gt; is from the “OSC” section on page 4-30 and must not be null</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Input Example    | RTRV-OSC:PENNGROVE:OSC-1:114;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>:[RINGID=<RINGID>],[NODEID=<NODEID>],[EAST=<EAST>],[WEST=<WEST>]”<br>;<br>where: <ul style="list-style-type: none"> <li>&lt; AID&gt; identifies the OSC group of the NE and is from the “OSC” section on page 4-30</li> <li>&lt;RINGID&gt; identifies the OSC ring ID of the NE. &lt;RINGID&gt; is a string of up to six characters, valid characters are [A–Z,0–9]. &lt;RINGID&gt; is a string and the default value is “# of aid OSC-#”. &lt;RINGID&gt; is an integer and is optional</li> <li>&lt;NODEID&gt; identifies the OSC node ID of the NE. It ranges from 0 to 31. &lt;NODEID&gt; is an integer and is optional</li> <li>&lt;EAST&gt; identifies the east OC3 facility and is the AID from the “FACILITY” section on page 4-28. In this release, only one OC3 for the east direction is supported; &lt;EAST&gt; is optional</li> <li>&lt;WEST&gt; identifies the east OC3 facility and is the AID from the “FACILITY” section on page 4-28. In this release only one OC3 for the west direction is supported; &lt;WEST&gt; is optional</li> </ul> |
| Output Example   | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“OSC-1::RINGID=10,NODEID=1,EAST=FAC-8-1,WEST=FAC-10-1”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Errors           | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

### 3.4.190 RTRV-OTS: Retrieve Optical Transport System

(Cisco ONS 15454 only)

This command retrieves the attributes (service parameters) and state of an OTS facility.

| Section          | RTRV-OTS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|-----------------|---------------|---------|------------------|---------|-----------------|-------------|-----------|------------|-----------|----------------|---------------|--------|--------------|--------|------------------|--------|----------|-------------|----------|------------|-------------------|--------------|------------------|-----------------|---------------|---------------|--------------|------------------|--|
| Category         | DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| Related Messages | <table border="0"> <tr> <td>DLT-FFP-CLNT</td> <td>OPR-PROTNSW-OCH</td> </tr> <tr> <td>DLT-LNK-&lt;MOD2O&gt;</td> <td>RLS-LASER-OTS</td> </tr> <tr> <td>ED-CLNT</td> <td>RLS-PROTNSW-CLNT</td> </tr> <tr> <td>ED-DWDM</td> <td>RLS-PROTNSW-OCH</td> </tr> <tr> <td>ED-FFP-CLNT</td> <td>RTRV-CLNT</td> </tr> <tr> <td>ED-FFP-OCH</td> <td>RTRV-DWDM</td> </tr> <tr> <td>ED-LNK-&lt;MOD2O&gt;</td> <td>RTRV-FFP-CLNT</td> </tr> <tr> <td>ED-OCH</td> <td>RTRV-FFP-OCH</td> </tr> <tr> <td>ED-OMS</td> <td>RTRV-LNK-&lt;MOD2O&gt;</td> </tr> <tr> <td>ED-OTS</td> <td>RTRV-OCH</td> </tr> <tr> <td>ED-TRC-CLNT</td> <td>RTRV-OMS</td> </tr> <tr> <td>ED-TRC-OCH</td> <td>RTRV-PROTNSW-CLNT</td> </tr> <tr> <td>ENT-FFP-CLNT</td> <td>RTRV-PROTNSW-OCH</td> </tr> <tr> <td>ENT-LNK-&lt;MOD2O&gt;</td> <td>RTRV-TRC-CLNT</td> </tr> <tr> <td>OPR-LASER-OTS</td> <td>RTRV-TRC-OCH</td> </tr> <tr> <td>OPR-PROTNSW-CLNT</td> <td></td> </tr> </table> | DLT-FFP-CLNT | OPR-PROTNSW-OCH | DLT-LNK-<MOD2O> | RLS-LASER-OTS | ED-CLNT | RLS-PROTNSW-CLNT | ED-DWDM | RLS-PROTNSW-OCH | ED-FFP-CLNT | RTRV-CLNT | ED-FFP-OCH | RTRV-DWDM | ED-LNK-<MOD2O> | RTRV-FFP-CLNT | ED-OCH | RTRV-FFP-OCH | ED-OMS | RTRV-LNK-<MOD2O> | ED-OTS | RTRV-OCH | ED-TRC-CLNT | RTRV-OMS | ED-TRC-OCH | RTRV-PROTNSW-CLNT | ENT-FFP-CLNT | RTRV-PROTNSW-OCH | ENT-LNK-<MOD2O> | RTRV-TRC-CLNT | OPR-LASER-OTS | RTRV-TRC-OCH | OPR-PROTNSW-CLNT |  |
| DLT-FFP-CLNT     | OPR-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| DLT-LNK-<MOD2O>  | RLS-LASER-OTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-CLNT          | RLS-PROTNSW-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-DWDM          | RLS-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-FFP-CLNT      | RTRV-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-FFP-OCH       | RTRV-DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-LNK-<MOD2O>   | RTRV-FFP-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-OCH           | RTRV-FFP-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-OMS           | RTRV-LNK-<MOD2O>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-OTS           | RTRV-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-TRC-CLNT      | RTRV-OMS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ED-TRC-OCH       | RTRV-PROTNSW-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ENT-FFP-CLNT     | RTRV-PROTNSW-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| ENT-LNK-<MOD2O>  | RTRV-TRC-CLNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| OPR-LASER-OTS    | RTRV-TRC-OCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| OPR-PROTNSW-CLNT |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| Input Format     | <p>RTRV-OTS:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;;</p> <p>where:</p> <ul style="list-style-type: none"> <li>&lt;AID&gt; is the AID from the “LINE” section on page 4-29 and must not be null</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| Input Example    | RTRV-OTS:PENNGROVE:LINE-6-1-RX:236;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |
| Output Format    | <pre> SID DATE TIME M CTAG COMPLD “&lt;AID&gt;:RDIRN=&lt;RDIRN&gt;,OPTYPE=&lt;OPTICALPORTTYPE&gt;, [OPWR=&lt;POWER&gt;],[ILOSS=&lt;ILOSS&gt;],[VOAMODE=&lt;VOAMODE&gt;], [VOAATTN=&lt;VOAATTN&gt;],[VOAPWR=&lt;VOAPWR&gt;], [VOAREFATTN=&lt;VOAREFATTN&gt;],[VOAREFPWR=&lt;VOAREFPWR&gt;], [LASERST=&lt;LASERST&gt;],[OSRI=&lt;OSRI&gt;],[ALSMODE=&lt;ALSMODE&gt;], [ALSRCINT=&lt;ALSRCINT&gt;],[ALSRCPW=&lt;ALSRCPW&gt;], [AMPLMODE=&lt;AMPLMODE&gt;],[GAIN=&lt;GAIN&gt;],[EXPGAIN=&lt;EXPGAIN&gt;], [REFOPWR=&lt;REFOPWR&gt;],[CALOPWR=&lt;CALOPWR&gt;], [REFTILT=&lt;REFTILT&gt;],[CALTILT=&lt;CALTILT&gt;],[DCULOSS=&lt;DCULOSS&gt;], [AWGST=&lt;AWGST&gt;],[HEATST=&lt;HEATST&gt;]:&lt;PST&gt;,[&lt;SST&gt;] ; </pre>                                                                                                                                                                                                                     |              |                 |                 |               |         |                  |         |                 |             |           |            |           |                |               |        |              |        |                  |        |          |             |          |            |                   |              |                  |                 |               |               |              |                  |  |

| Section                      | RTRV-OTS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| Output Format<br>(continued) | <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the AID from the <a href="#">“LINE” section on page 4-29</a></li> <li>• &lt;RDIRN&gt; identifies the ring directionality of the optical line; valid values are shown in the <a href="#">“RDIRN_MODE” section on page 4-83</a></li> <li>• &lt;OPTICALPORTTYPE&gt; identifies the optical port type; valid values are shown in the <a href="#">“OPTICAL_PORT_TYPE” section on page 4-77</a></li> <li>• &lt;POWER&gt; identifies the optical power measured at this port. It can be the input or output power according to port type; &lt;POWER&gt; is a string and is optional</li> <li>• &lt;ILOSS&gt; identifies the insertion loss. It applies only to output ports; &lt;ILOSS&gt; is a string and is optional</li> <li>• &lt;VOAMODE&gt; identifies the working control mode of the VOA; valid values are shown in the <a href="#">“VOA_CNTR_MODE” section on page 4-97</a> and &lt;VOAMODE&gt; is optional</li> <li>• &lt;VOAATTN&gt; indicates the value of calibrated attenuation for the VOA; &lt;VOAATTN&gt; is a float expressed in dBm, is a string and is optional</li> <li>• &lt;VOAPWR&gt; indicates the value of calibrated output power that the VOA is going to set as a result of its attenuation; &lt;VOAPWR&gt; is a float expressed in dBm, is a string and is optional</li> <li>• &lt;VOAREFATTN&gt; indicates the value of reference attenuation for the VOA; &lt;VOAREFATTN&gt; is a float expressed in db, is a string and is optional</li> <li>• &lt;VOAREFPWR&gt; indicates the value of reference output power that the VOA is going to set as a result of its attenuation; &lt;VOAREFPWR&gt; is a float expressed in dBm, a string and is optional</li> <li>• &lt;LASERST&gt; indicates the value of the laser status; valid values are shown in the <a href="#">“LASER_STATUS” section on page 4-67</a> and &lt;LASERST&gt; is optional</li> <li>• &lt;OSRI&gt; indicates the OSRI enable or disable feature. It is an optional parameter present only on a port where the safety is supported; valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a> and &lt;OSRI&gt; is optional</li> <li>• &lt;ALSMODE&gt; indicates if the Automatic Laser Shutdown is enabled or disabled; valid values are shown in the <a href="#">“ALS_MODE” section on page 4-49</a>; &lt;ALSMODE&gt; is optional</li> <li>• &lt;ALSRCINT&gt; indicates the ALS recovery interval. The range is 20–300 seconds; &lt;ALSRCINT&gt; is an integer and is optional</li> <li>• &lt;ALSRCPW&gt; indicates the ALS recovery pulse width. The range is 2–100 seconds, in increments of 100ms, e.g. 30.1; &lt;ALSRCPW&gt; is a string and is optional</li> </ul> |

| Section                      | RTRV-OTS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format<br>(continued) | <ul style="list-style-type: none"> <li>• &lt;AMPLMODE&gt; indicates the optical amplification control mode; valid values are shown in the <a href="#">“AMPL_MODE” section on page 4-50</a> and &lt;AMPLMODE&gt; is optional</li> <li>• &lt;GAIN&gt; indicates the value of the gain of the amplifier. &lt;GAIN&gt; defaults to 21 dB for pre-amplifier and to 20 dB for booster amplifier. &lt;GAIN&gt; is a string and is optional.</li> <li>• &lt;EXPGAIN&gt; indicates the gain expected value to be reached from an amplifier when the node works in a DWDM access network; &lt;EXPGAIN&gt; is a float expressed in dB, is a string and is optional</li> <li>• &lt;REFOPWR&gt; indicates the value of the calculated optical power expected for the output line which is added to the user-provided calibration value to have the total expected output power; &lt;REFOPWR&gt; is a float expressed in dBm, a string and optional</li> <li>• &lt;CALOPWR&gt; indicates the value of the calibrated optical power expected for the output line added to the calculated value which equals the total expected output power; &lt;CALOPWR&gt; is a float expressed in dBm, is a string and is optional. The default is 0 dBm</li> <li>• &lt;REFTILT&gt; indicates the calculated tilt value to be added with the user-provided calibration value; &lt;REFTILT&gt; is a float expressed in dBm, is a string and is optional</li> <li>• &lt;CALTILT&gt; indicates the amplifier calibration tilt offset to be added to the calculated reference value; &lt;CALTILT&gt; is a float expressed in dBm and is optional. Defaults to 0 dBm</li> <li>• &lt;DCULOSS&gt; indicates the value of insertion loss associated to DCU in between the two stages of a pre-amplifier unit; &lt;DCULOSS&gt; is a float expressed in dBm and is optional</li> <li>• &lt;AWGST&gt; indicates the status assumed by AWG; valid values are shown in the <a href="#">“AWG_STATUS” section on page 4-50</a> and &lt;AWGST&gt; is optional</li> <li>• &lt;HEATST&gt; indicates the status assumed by the heater; valid values are shown in the <a href="#">“HEATER_STATUS” section on page 4-66</a> and &lt;HEATST&gt; is optional</li> <li>• &lt;PST&gt; primary state; valid values are shown in the <a href="#">“PST” section on page 4-83</a></li> <li>• &lt;SST&gt; secondary state; valid values are shown in the <a href="#">“SST” section on page 4-86</a> and &lt;SST&gt; is optional</li> </ul> |
| Output Example               | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD “LINE-6-1-RX:RDIRN=W-E,OPTYPE=IN,OPWR=10.0,ILOSS=1.0, VOAMODE=ATTN,VOAATTN=0.5,VOAPWR=0.0,VOAREFATTN=3.5, VOAREFPWR=5.0,LASERST=APR,OSRI=Y,ALSMODE=Y,ALSRCINT=30, ALSRCPW=40.1,AMPLMODE=GAIN,GAIN=3.0,EXPGAIN=3.0, REFOPWR=10.0,CALOPWR=0.0,REFTILT=3.0,CALTILT=0.0,DCULOSS=1.2, AWGST=WARM-UP,HEATST=ON:OOS,AINS” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Errors                       | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### 3.4.191 RTRV-PM-<MOD2>: Retrieve Performance (CLNT, DS1, DS3I, EC1, FC, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command retrieves the values of PM parameters for a specified card type.

<MONTYPE>, <MONLEV>, <MONDAT> and <MONTM> are supported in this release.

<MONLEV> is in the format of LEV-DIRN. Valid values for <DIRN> are shown in the [“DIRN” section on page 4-56](#).

The format of <MONDAT> is MM-DD, where MM (month of the year) ranges from 1–12 and DD (day of the month) ranges from 1–31.

The format for <MONTM> is HH-MM, where HH (hour of the day) ranges from 0–23 and MM (minute of the hour) ranges from 0–59.

Notes:

1. If there are no errors to report, the response will be COMPLD (completed).
2. If the <TMPPER> is 1-DAY, <MONTM> is not applicable (null), and is treated as null if <MONTM> is not null.
3. A null value for <MONLEV> defaults to 1-UP.
4. A null value for <MONDAT> defaults to the current date (MM-DD).
5. A null value for <MONTM> defaults to the current time (HH-MM).
6. Unless otherwise stated, DS1 cards are the only cards that support the BTH, RCV, and TRMT directions. All other cards only support the RCV direction.
7. After the BLSR switching, the working path is switched out, the traffic goes through the protection path, and the IPPM can be retrieved from the protection STS path.
8. If there is a STS PCA on the protection path, during the BLSR switching, the PCA path is pre-emptive; sending this command on the protection path after BLSR switch, the command returns the PMs off the protection path, not from the PCA path.
9. Some MOD2 entities; for example, OCH, CLNT, and Optical (OCn), support negative MONTYPE values. By default, this command defaults to 0–UP (return MONTYPES where the MONVAL is 0 or higher). To retrieve the negative values, you must issue 0–DN in the MONLEV field.

The rules are as follows: Client port only–Laser and SONET PM’s are applicable and will be displayed. If the card payload is in SONET mode, then SONET PM’s will be displayed, provided the MONLEV criteria is met.

Trunk port Laser PM’s are always available. Laser PM’s are only for Near End. If G.709 is enabled, then the OTN PM’s will be displayed. If G.709 is enabled and FEC is enabled, then the FEC PM’s will be displayed. If the card payload is in SONET mode, then SONET PM’s will be displayed. All PM MONVALUES should pass the MONLEV filter criteria.

10. For DWDM cards, the MONLEV filter criteria will not support a floating point. It will be returned and interpreted as an integer.

| Section  | RTRV-PM-<MOD2> Description |
|----------|----------------------------|
| Category | Performance                |
| Security | Retrieve                   |

| Section          | RTRV-PM-<MOD2> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ALW-PMREPT-ALL                      RTRV-PMSCHED-<MOD2><br>INH-PMREPT-ALL                      RTRV-PMSCHED-ALL<br>INIT-REG-<MOD2>                      RTRV-TH-<MOD2><br>INIT-REG-G1000                      SCHED-PMREPT-<MOD2><br>REPT PM <MOD2>                      SET-PMMODE-<STS_PATH><br>RTRV-PMMODE-<STS_PATH>          SET-TH-<MOD2>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Input Format     | RTRV-PM-<MOD2>:[<TID>]:<AID>:<CTAG>::[<MONTYPE>],<br>[<MONLEV>],[<LOCN>],[<DIRN>],[<TMPER>],[<DATE>],[<TIME>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier. All the STS, VT1, FACILITY and DS1 AIDs are supported; &lt;AID&gt; is from the “<a href="#">ALL</a>” section on page 4-9 and must not be null</li> <li>• &lt;MONTYPE&gt; indicates the type of the monitored parameter; valid values are shown in the “<a href="#">ALL_MONTYPE</a>” section on page 4-39. A null value is equivalent to ALL</li> <li>• &lt;MONLEV&gt; specifies the discriminating level for the requested monitored parameter. &lt;MONLEV&gt; is in the format of LEVEL-DIRN where LEVEL is the measured value of the monitored parameter (MONVAL) and valid values for DIRN are shown in the “<a href="#">DIRN</a>” section on page 4-56. A null value for &lt;MONLEV&gt; defaults to 1-UP. &lt;MONLEV&gt; is a string</li> <li>• &lt;LOCN&gt; indicates the location; valid values are shown in the “<a href="#">LOCATION</a>” section on page 4-68. A null value defaults to NEND</li> <li>• &lt;DIRN&gt; is the direction of PM relative to the entity identified by the AID. &lt;DIRN&gt; defaults to ALL, which means that the command initializes all the registers irrespective of the PM direction. Valid values for &lt;DIRN&gt; are shown in the “<a href="#">DIRECTION</a>” section on page 4-56.</li> <li>• &lt;TMPER&gt; indicates the accumulation time period for the PM information. If the &lt;TMPER&gt; is 1-DAY, &lt;MONTM&gt; is not applicable (null), and is treated as null if &lt;MONTM&gt; is not null. Valid values for &lt;TMPER&gt; are shown in the “<a href="#">TMPER</a>” section on page 4-93. A null value defaults to 15-MIN</li> <li>• &lt;DATE&gt; is the beginning date of the PM or storage register period specified in &lt;TMPER&gt;. The format of &lt;MONDAT&gt; is MM-DD, where MM (month of year) ranges from 1-12 and DD (day of month) ranges from 1-31. A null value for &lt;MONDAT&gt; defaults to the current date</li> <li>• &lt;TIME&gt; is the beginning time of day of the PM or storage register period specified in &lt;TMPER&gt;. The format for &lt;MONTM&gt; is HH-MM, where HH (hour of day) ranges from 0-23 and MM (minute of hour) ranges from 0-59. A null value for &lt;MONTM&gt; defaults to the current time (HH-MM)</li> </ul> |
| Input Example    | RTRV-PM-T1:TID:FAC-2-1:123::CVL,10-UP,NEND,BTH,15-MIN,04-11,12-45;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |



| Section        | RTRV-PM-<MOD2> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“&lt;AID&gt;,[&lt;AIDTYPE&gt;]:&lt;MONTYPE&gt;,&lt;MONVAL&gt;,[&lt;VLDTY&gt;],<br/>[&lt;LOCN&gt;],[&lt;DIRN&gt;],[&lt;TMPER&gt;],[&lt;MONDAT&gt;],[&lt;MONTM&gt;]”<br/>;</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier from the “ALL” section on page 4-9</li> <li>• &lt;AIDTYPE&gt; specifies the type of AID; valid values are shown in the “MOD2B” section on page 4-71, &lt;AIDTYPE&gt; is optional</li> <li>• &lt;MONTYPE&gt; indicates the type of monitored parameter; valid values are shown in the “ALL_MONTYPE” section on page 4-39</li> <li>• &lt;MONVAL&gt; is the measured value of the monitored parameter and is a string</li> <li>• &lt;VLDTY&gt; is the validity indicator of historical monitoring information; valid values are shown in the “VALIDITY” section on page 4-97, &lt;VLDTY&gt; is optional</li> <li>• &lt;LOCN&gt; indicates the location; valid values are shown in the “LOCATION” section on page 4-68, &lt;LOCN&gt; is optional</li> <li>• &lt;DIRN&gt; is the direction of PM relative to the entity identified by the AID; valid values are shown in the “DIRECTION” section on page 4-56, &lt;DIRN&gt; is optional</li> <li>• &lt;TMPER&gt; indicates the accumulation time period for the PM information; valid values are shown in the “TMPER” section on page 4-93, &lt;TMPER&gt; is optional</li> <li>• &lt;MONDAT&gt; is the beginning date of the PM or storage register period specified in &lt;TMPER&gt;. The format of &lt;MONDAT&gt; is MM-DD, where MM (month of year) ranges from 1–12 and DD (day of month) ranges from 1–31. &lt;MONDAT&gt; is a string and is optional</li> <li>• &lt;MONTM&gt; is the beginning time of the day of the PM or storage register period specified in &lt;TMPER&gt;. The format for &lt;MONTM&gt; is HH-MM, where HH (hour of day) ranges from 0–23 and MM (minute of hour) ranges from 0–59. &lt;MONTM&gt; is a string and is optional.</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/>M 001 COMPLD<br/>“FAC-2-1,DS1-14:CVL,21,COMPL,NEND,BTN,15-MIN,04-11,12-45”<br/>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

### 3.4.192 RTRV-PMMODE-<STS\_PATH>: Retrieve Performance Mode of PM Data Collection (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command retrieves the type of PM mode that has been previously set in the NE. This command can be used to identify whether the PM parameters are Section, Line or Path type, and to identify whether or not the PM are being collected by the NE.

This command returns the categories that are enabled only.

The PM mode and state of an entity is set by using the SET-PMMODE command.

Notes:

1. This near end monitoring of the intermediate-path PM (IPPM) only supports OC-3, OC-12, OC-48, OC-48AS, OC-192, and EC-1 on STS Path.
2. The far end PM data collection is not supported in this release (R4.6).
3. This release of software will support only the Path (P) mode type PM parameters with this command, that is, this command will not be applicable for Line (L) and Section (S) mode types. It should be noted that the PM monitoring for Line (L) and Section (S) are supported by the ONS 15454, and the storing PM data is always performed.
4. This command only returns the categories that are enabled (pmstate is ON), and does not return the categories that are disabled (pmstate is OFF).

| Section          | RTRV-PMMODE-<STS_PATH> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Performance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Related Messages | ALW-PMREPT-ALL RTRV-PMSCHED-<MOD2><br>INH-PMREPT-ALL RTRV-PMSCHED-ALL<br>INIT-REG-<MOD2> RTRV-TH-<MOD2><br>INIT-REG-G1000 SCHED-PMREPT-<MOD2><br>REPT PM <MOD2> SET-PMMODE-<STS_PATH><br>RTRV-PM-<MOD2> SET-TH-<MOD2>                                                                                                                                                                                                                                                                                                                                                                                                     |
| Input Format     | RTRV-PMMODE-<STS_PATH>:[<TID>]:<SRC>:<CTAG>::<LOCN>;<br>where: <ul style="list-style-type: none"> <li>• &lt;SRC&gt; is the AID from the <a href="#">“CrossConnectId” section on page 4-20</a>; &lt;SRC&gt; must not be null</li> <li>• &lt;LOCN&gt; identifies the location from where the PM mode is being retrieved; valid values are shown in the <a href="#">“LOCATION” section on page 4-68</a>. &lt;LOCN&gt; must not be null</li> </ul>                                                                                                                                                                            |
| Input Example    | RTRV-PMMODE-STS1:CISCO:STS-4-1-2:123::NEND;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“<CROSSCONNECTID>:[<LOCN>],<MODETYPE>”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;CROSSCONNECTID&gt; is the AID from the <a href="#">“CrossConnectId” section on page 4-20</a></li> <li>• &lt;LOCN&gt; identifies the location from where the PM mode is being retrieved; valid values are shown in the <a href="#">“LOCATION” section on page 4-68</a>. &lt;LOCN&gt; is optional.</li> <li>• &lt;MODETYPE&gt; identifies whether or not the PM mode type is turned on or off; valid values are shown in the <a href="#">“PM_MODE” section on page 4-82</a></li> </ul> |

| Section        | RTRV-PMMODE-<STS_PATH> Description                                     |
|----------------|------------------------------------------------------------------------|
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“STS-4-1-2:NEND,P”<br>; |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .         |

### 3.4.193 RTRV-PMSCHED-<MOD2>:Retrieve Performance Monitoring Schedule (CLNT, DS1, DS3I, EC1, FC, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command retrieves the PM reporting schedule that was set for the NE by the SCHED-PMREPT command.

| Section          | RTRV-PMSCHED-<MOD2> Description                                                                                                                                                                                            |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Performance                                                                                                                                                                                                                |
| Security         | Retrieve                                                                                                                                                                                                                   |
| Related Messages | ALW-PMREPT-ALL RTRV-PMSCHED-ALL<br>INH-PMREPT-ALL RTRV-TH-<MOD2><br>INIT-REG-<MOD2> RTRV-TH-ALL<br>REPT PM <MOD2> SCHED-PMREPT-<MOD2><br>RTRV-PM-<MOD2> SET-PMMODE-<STS_PATH><br>RTRV-PMMODE-<STS_PATH> SET-TH-<MOD2>      |
| Input Format     | RTRV-PMSCHED-<MOD2>:[<TID>]:<AID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is an access identifier from the <a href="#">“ALL” section on page 4-9</a>; &lt;AID&gt; must not be null</li> </ul> |
| Input Example    | RTRV-PMSCHED-OC3:CISCO-NODE:FAC-3-1:123;                                                                                                                                                                                   |

| Section        | RTRV-PMSCHED-<MOD2> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“&lt;AID&gt;,[&lt;AIDTYPE&gt;]:&lt;REPTINVL&gt;,&lt;REPTDAT&gt;,&lt;REPTTM&gt;,<br/>[&lt;NUMINVL&gt;],[&lt;MONLEV&gt;],&lt;LOCN&gt;,,[&lt;TMPER&gt;],[&lt;TMOFST&gt;],<br/>[&lt;INHMODE&gt;]”<br/>;<br/>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; access identifier from the “ALL” section on page 4-9</li> <li>• &lt;AIDTYPE&gt; type of access identifier; valid values are shown in the “MOD2” section on page 4-69. &lt;AIDTYPE&gt; is optional</li> <li>• &lt;REPTINVL&gt; interval between PM reports; &lt;REPTINVL&gt; is a string</li> <li>• &lt;REPTDAT&gt; date for the next report; &lt;REPTDAT&gt; is a string</li> <li>• &lt;REPTTM&gt; the time of day for the next PM report; &lt;REPTTM&gt; is a string</li> <li>• &lt;NUMINVL&gt; remaining number of intervals over which PM is being reported; &lt;NUMINVL&gt; is an integer and is optional</li> <li>• &lt;MONLEV&gt; discriminating level for the requested monitored parameter; &lt;MONLEV&gt; is a string and is optional</li> <li>• &lt;LOCN&gt; location being performance-monitored and refers to the entity identified by the AID; valid values are shown in the “LOCATION” section on page 4-68</li> <li>• &lt;TMPER&gt; accumulation time period for the PM information; valid values are shown in the “TMPER” section on page 4-93 and &lt;TMPER&gt; is optional</li> <li>• &lt;TMOFST&gt; is the time offset from the end of the last complete accumulation time period to the beginning of the accumulation period specified by TMPER parameter. &lt;TMOFST&gt; is a string and is optional</li> <li>• &lt;INHMODE&gt; describes whether the reporting of PM data is inhibited (via the INH-PMREPT-ALL command) or is allowed (via the ALW-PMREPT-ALL command); valid values are shown in the “INH_MODE” section on page 4-66</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/>M 001 COMPLD<br/>“FAC-3-1,OC3:30-MIN,5-25,14-46,100,,1-UP,NEND,,15-MIN,0-0-15,ALW”<br/>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

### 3.4.194 RTRV-PMSCHED-ALL: Retrieve Performance Schedule All

This command retrieves all the PM reporting schedules that were set for the NE by the SCHED-PMREPT command.

| Section  | RTRV-PMSCHED-ALL Description |
|----------|------------------------------|
| Category | Performance                  |
| Security | Retrieve                     |

| Section          | RTRV-PMSCHED-ALL Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | ALW-PMREPT-ALL RTRV-PMSCHED-<MOD2><br>INH-PMREPT-ALL RTRV-TH-<MOD2><br>INIT-REG-<MOD2> RTRV-TH-ALL<br>REPT PM <MOD2> SCHED-PMREPT-<MOD2><br>RTRV-PM-<MOD2> SET-PMMODE-<STS_PATH><br>RTRV-PMMODE-<STS_PATH> SET-TH-<MOD2>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Input Format     | RTRV-PMSCHED-ALL:[<TID>]::<CTAG>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Input Example    | RTRV-PMSCHED-ALL:CISCO-NODE::123;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>,<AIDTYPE>]:<REPTINVL>,<REPTDAT>,<REPTTM>,<br>[<NUMINVL>],,<MONLEV>],<LOCN>,,<TMPER>],<TMOFST>,<br>[<INHMODE>]”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; access identifier from the <a href="#">“ALL” section on page 4-9</a></li> <li>• &lt;AIDTYPE&gt; type of access identifier; valid values are shown in the <a href="#">“MOD2” section on page 4-69</a>. &lt;AIDTYPE&gt; is optional</li> <li>• &lt;REPTINVL&gt; interval between PM reports; &lt;REPTINVL&gt; is a string</li> <li>• &lt;REPTDAT&gt; date for the next report; &lt;REPTDAT&gt; is a string</li> <li>• &lt;REPTTM&gt; the time of day for the next PM report; &lt;REPTTM&gt; is a string</li> <li>• &lt;NUMINVL&gt; remaining number of intervals over which PM is being reported; &lt;NUMINVL&gt; is an integer and is optional</li> <li>• &lt;MONLEV&gt; discriminating level for the requested monitored parameter; &lt;MONLEV&gt; is a string and is optional</li> <li>• &lt;LOCN&gt; location being performance-monitored and refers to the entity identified by the AID; valid values are shown in the <a href="#">“LOCATION” section on page 4-68</a></li> <li>• &lt;TMPER&gt; accumulation time period for the PM information; valid values are shown in the <a href="#">“TMPER” section on page 4-93</a> and &lt;TMPER&gt; is optional</li> <li>• &lt;TMOFST&gt; is the time offset from the end of the last complete accumulation time period to the beginning of the accumulation time period specified by the TMPER parameter; &lt;TMOFST&gt; is a string</li> <li>• &lt;INHMODE&gt; describes whether the reporting of PM data is inhibited (via the INH-PMREPT-ALL command) or is allowed (via the ALW-PMREPT-ALL command); valid values are shown in the <a href="#">“INH_MODE” section on page 4-66</a></li> </ul> |
| Output Example   | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“FAC-3-1,OC3:30-MIN,5-25,14-46,100,,1-UP,NEND,,15-MIN,0-0-15,ALW”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

### 3.4.195 RTRV-POS: Retrieve Packet Over SONET

This command retrieves the back end port information for the ML-series Ethernet cards when the back end port is working in POS mode.


**Note**

Because the back end port is virtual, the Virtual Facility (VFAC) AID should be used when issuing the command.

| Section          | RTRV-POS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Ports                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Related Messages | ED-<OCN_TYPE> RTRV-<OCN_TYPE><br>ED-DS1 RTRV-DS1<br>ED-EC1 RTRV-EC1<br>ED-FAC RTRV-FAC<br>ED-FC RTRV-FC<br>ED-G1000 RTRV-FSTE<br>ED-T1 RTRV-G1000<br>ED-T3 RTRV-GIGE<br>RMV-<MOD2_IO> RTRV-T1<br>RST-<MOD2_IO> RTRV-T3                                                                                                                                                                                                                                                                                                           |
| Input Format     | RTRV-POS:[<TID>]:<AID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is the access identifier from the <a href="#">“FACILITY” section on page 4-28</a> and must not be null</li> </ul>                                                                                                                                                                                                                                                                                                                    |
| Input Example    | RTRV-POS:TID:VFAC-1-1:CTAG;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>::[ADMINSTATE=<ADMINSTATE>],[LINKSTATE=<LINKSTATE>],[MTU=<MTU>]”<br>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is the access identifier from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>&lt;ADMINSTATE&gt; administration speed; valid values are shown in the <a href="#">“UP_DOWN” section on page 4-97</a> and &lt;ADMINSTATE&gt; is optional</li> <li>&lt;MTU&gt; maximum transport unit; &lt;MTU&gt; is an integer and is optional</li> </ul> |
| Output Example   | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“VFAC-1-1::ADMINSTATE=DOWN,LINKSTATE=DOWN,MTU=1500”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### 3.4.196 RTRV-PROTNSW-<OCN\_TYPE>: Retrieve Protection Switch (OC3, OC12, OC48, OC192)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command retrieves the switching state of a SONET line specified in the AID.

| Section          | RTRV-PROTNSW-<OCN_TYPE> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | SONET Line Protection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Related Messages | DLT-FFP-<OCN_TYPE>                    ENT-FFP-CLNT<br>DLT-FFP-CLNT                            OPR-PROTNSW-<OCN_TYPE><br>ED-FFP-<OCN_TYPE>                      RLS-PROTNSW-<OCN_TYPE><br>ED-FFP-CLNT                             RTRV-FFP-<OCN_TYPE><br>ED-FFP-OCH                              RTRV-FFP-CLNT<br>ENT-FFP-<OCN_TYPE>                    RTRV-FFP-OCH                                                                                                                                                                   |
| Input Format     | RTRV-PROTNSW-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[:::];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates the entity in the NE and is from the “FACILITY” section on <a href="#">page 4-28</a>; &lt;AID&gt; must not be null</li> </ul>                                                                                                                                                                                                                                                                             |
| Input Example    | RTRV-PROTNSW-OC48:CISCO:FAC-5-1:123;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>:<SC>,[<SWITCHTYPE>]”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates the entity in the NE and is from the “FACILITY” section on <a href="#">page 4-28</a></li> <li>• &lt;SC&gt; is the switch operation on the path/AID; valid values are shown in the “SW” section on <a href="#">page 4-88</a></li> <li>• Valid values for &lt;SWITCHTYPE&gt; are shown in the “SWITCH_TYPE” section on <a href="#">page 4-88</a>; &lt;SWITCHTYPE&gt; is optional</li> </ul> |
| Output Example   | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“FAC-5-1:MAN,MANWKSWBK”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

### 3.4.197 RTRV-PROTNSW-<PATH>: Retrieve Protection Switch (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C, VT1, VT2)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command retrieves the switching state of a SONET path protection STS or VT path specified in the AID. Because the GR-1400 does not allow the LOCKOUT\_OF\_WORKING on the path protection WORKING path/AID, the “AID:LOCKOUT,LOCKOUTOFWK” is not presented in this protection switch retrieval result.

| Section          | RTRV-PROTNSW-<PATH> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Switch                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Related Messages | OPR-PROTNSW-<PATH>                      RLS-PROTNSW-<PATH><br>REPT SW                                                                                                                                                                                                                                                                                                                                                                                                            |
| Input Format     | RTRV-PROTNSW-<PATH>:[<TID>]:<SRC>:<CTAG>[:::];<br>where: <ul style="list-style-type: none"> <li>&lt;SRC&gt; is the AID from the “CrossConnectId” section on page 4-20; &lt;SRC&gt; must not be null</li> </ul>                                                                                                                                                                                                                                                                   |
| Input Example    | RTRV-PROTNSW-ST51:CISCO:STS-5-1-1:123;                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“<CROSSCONNECTID>:<SC>,[<SWITCHTYPE>]”<br>;<br>where: <ul style="list-style-type: none"> <li>&lt;CROSSCONNECTID&gt; is the AID from the “CrossConnectId” section on page 4-20</li> <li>&lt;SC&gt; is the switch operation on the path/AID; valid values are shown in the “SW” section on page 4-88</li> <li>Valid values for &lt;SWITCHTYPE&gt; are shown in the “SWITCH_TYPE” section on page 4-88: &lt;SWITCHTYPE&gt; is optional</li> </ul> |
| Output Example   | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“STS-5-1-1:MAN,MANWKSWBK”<br>;                                                                                                                                                                                                                                                                                                                                                                                                    |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                   |

### 3.4.198 RTRV-PROTNSW-CLNT: Retrieve Protection Switch Client

(Cisco ONS 15454 only)

This command retrieves protection switch status of client facilities.

| Section  | RTRV-PROTNSW-CLNT Description |
|----------|-------------------------------|
| Category | DWDM                          |
| Security | Retrieve                      |



| Section          | RTRV-PROTNSW-CLNT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | DLT-FFP-CLNT<br>DLT-LNK-<MOD2O><br>ED-CLNT<br>ED-DWDM<br>ED-FFP-CLNT<br>ED-FFP-OCH<br>ED-LNK-<MOD2O><br>ED-OCH<br>ED-OMS<br>ED-OTS<br>ED-TRC-CLNT<br>ED-TRC-OCH<br>ENT-FFP-CLNT<br>ENT-LNK-<MOD2O><br>OPR-LASER-OTS<br>OPR-PROTNSW-CLNT<br>OPR-PROTNSW-OCH<br>RLS-LASER-OTS<br>RLS-PROTNSW-CLNT<br>RLS-PROTNSW-OCH<br>RTRV-CLNT<br>RTRV-DWDM<br>RTRV-FFP-CLNT<br>RTRV-FFP-OCH<br>RTRV-LNK-<MOD2O><br>RTRV-OCH<br>RTRV-OMS<br>RTRV-OTS<br>RTRV-PROTNSW-OCH<br>RTRV-TRC-CLNT<br>RTRV-TRC-OCH |
| Input Format     | RTRV-PROTNSW-CLNT:[<TID>]:<AID>:<CTAG>[:::];<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is from the <a href="#">“FACILITY”</a> section on page 4-28 and must not be null</li> </ul>                                                                                                                                                                                                                                                                                      |
| Input Example    | RTRV-PROTNSW-CLNT:CISCO:FAC-1-1:100;                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>:<SC>,[<SWITCHTYPE>]”<br>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is from the <a href="#">“FACILITY”</a> section on page 4-28</li> <li>Valid values for &lt;SC&gt; are shown in the <a href="#">“SW”</a> section on page 4-88</li> <li>Valid values for &lt;SWITCHTYPE&gt; are shown in the <a href="#">“SWITCH_TYPE”</a> section on page 4-88 and &lt;SWITCHTYPE&gt; is optional</li> </ul>                                 |
| Output Example   | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“FAC-1-1:FRCD,MANWKSWBK”<br>;                                                                                                                                                                                                                                                                                                                                                                                                               |
| Errors           | Errors are listed in <a href="#">Table 7-33</a> on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                              |

### 3.4.199 RTRV-PROTNSW-OCH: Retrieve Protection Switch OCH

(Cisco ONS 15454 only)

This command retrieves the protection switch status of a TXPP\_MR\_2.5G card.

| Section  | RTRV-PROTNSW-OCH Description |
|----------|------------------------------|
| Category | DWDM                         |
| Security | Retrieve                     |

| Section          | RTRV-PROTNSW-OCH Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | DLT-FFP-CLNT<br>DLT-LNK-<MOD2O><br>ED-CLNT<br>ED-DWDM<br>ED-FFP-CLNT<br>ED-FFP-OCH<br>ED-LNK-<MOD2O><br>ED-OCH<br>ED-OMS<br>ED-OTS<br>ED-TRC-CLNT<br>ED-TRC-OCH<br>ENT-FFP-CLNT<br>ENT-LNK-<MOD2O><br>OPR-LASER-OTS<br>OPR-PROTNSW-CLNT<br>OPR-PROTNSW-OCH<br>RLS-LASER-OTS<br>RLS-PROTNSW-CLNT<br>RLS-PROTNSW-OCH<br>RTRV-CLNT<br>RTRV-DWDM<br>RTRV-FFP-CLNT<br>RTRV-FFP-OCH<br>RTRV-LNK-<MOD2O><br>RTRV-OCH<br>RTRV-OMS<br>RTRV-OTS<br>RTRV-PROTNSW-CLNT<br>RTRV-TRC-CLNT<br>RTRV-TRC-OCH |
| Input Format     | RTRV-PROTNSW-OCH:[<TID>]:<AID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is from the “CHANNEL” section on page 4-19 and must not be null</li> </ul>                                                                                                                                                                                                                                                                                                              |
| Input Example    | RTRV-PROTNSW-OCH:VA454-22:CHAN-2-2:100;                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>:<SW>,<SWTYPE>”<br>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is from the “CHANNEL” section on page 4-19</li> <li>&lt;SW&gt; indicates the switch operation; valid value are shown in the “SW” section on page 4-88</li> <li>&lt;SWTYPE&gt; indicates the switch type operation; valid values are shown in the “SWITCH_TYPE” section on page 4-88</li> </ul>                                                                    |
| Output Example   | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“CHAN-2-2:FRCD,FRCDWKSWBK”<br>;                                                                                                                                                                                                                                                                                                                                                                                                              |
| Errors           | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                               |

### 3.4.200 RTRV-PTHTRC-<STS\_PATH>: Retrieve Path Trace (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C)

See Table 4-11 on page 4-5 for supported modifiers by platform.

This command retrieves the contents of the SONET path trace message that is transported in the J1 byte of the SONET STS Path.

The path trace message is a 64-character string with the last two characters reserved for the terminating CR (carriage return) and the LF (line feed). The message can be an incoming path trace message, an expected incoming path trace message, or an outgoing path trace message which is inserted into the path overhead of the outgoing signal.

The path trace mode has three modes: OFF, MANUAL, and AUTO. The path trace mode defaults to OFF mode. The MANUAL mode performs the comparison of the received string with the user-entered expected string. The AUTO mode performs the comparison of the present received string with an expected string set to a previously received string. If there is a mismatch, the TIM-P alarm is raised. When the path trace mode is in OFF mode, there is no path trace processing, and all the alarm and state conditions are reset.

When the expected string is queried under the OFF path trace mode, the expected string is a copy of the provisioned string or NULL. When an expected string is queried under the MANUAL path trace mode, the expected string is a copy of the user-entered string. When an expected string is queried under the AUTO path trace mode, the expected string is a copy of the acquired received string or NULL if the string has not been acquired.

When the incoming string is queried under the OFF path trace mode, the incoming string is NULL. When an incoming string is queried under the MANUAL or AUTO path trace mode, the incoming string is a copy of the received string or NULL if the string has not been received.

When the transmitted string is queried under the OFF, MANUAL or AUTO path trace mode, the transmitted string is the provisioned transmit string.

Notes:

1. A null value for the <MSGTYPE> defaults to INCTRC.
2. Only the NEND of the <LOCN> value is supported. A null value of the <LOCN> defaults to NEND.
3. Sending a FEND of the <LOCN> with this command, an “unsupported locn value” error message will display.
4. J1 (EXPTRC/INCTRC) is implemented on the DS1/DS1N, DS3E/DS3NE, DS3XM, EC1, OC3, OC48AS and OC192 cards.
5. TRC is supported only on DS1(N), DS3(N)E, and DS3XM cards.
6. The virtual facility AID (VFAC) is only valid on slots holding ML-series cards.
7. After the BLSR switch, the working path is switched out and the traffic goes through the protection path. The J1 trace message can be retrieved from the protection STS path.
8. If there is an STS PCA on the protection path during the BLSR switch, the PCA path is pre-emptive. If this command is sent on the protection path after a BLSR switch, the command will return the trace message off of the protection path and not from the PCA path.

| Section          | RTRV-PTHTRC-<STS_PATH> Description |
|------------------|------------------------------------|
| Category         | Trace                              |
| Security         | Retrieve                           |
| Related Messages | —                                  |

| Section        | RTRV-PTHTRC-<STS_PATH> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format   | RTRV-PTHTRC-<STS_PATH>:[<TID>]:<SRC>:<CTAG>::<br>[<MSGTYPE>][:<LOCN>];<br>where: <ul style="list-style-type: none"> <li>• &lt;SRC&gt; is an access identifier from the “CrossConnectId” section on page 4-20 and must not be null</li> <li>• &lt;MSGTYPE&gt; is the type of trace message to be retrieved; valid values are shown in the “MSGTYPE” section on page 4-74 and a null value defaults to INCTRC. A null value is equivalent to ALL.</li> <li>• &lt;LOCN&gt; is the location of the trace message; valid values are shown in the “LOCATION” section on page 4-68. A null value is equivalent to ALL.</li> </ul> |
| Input Example  | RTRV-PTHTRC-STS1:CISCO:STS-2-1-1:123::EXPTRC:NEND;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Output Format  | SID DATE TIME<br>M CTAG COMPLD<br>“<TRACMSG>”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;TRACMSG&gt; is the Path Trace message returned to the requester. The message should be up 64 characters in length. The user is allowed to enter up to 62 characters, the last two characters are reserved for the terminating CR (carriage return) and LF (line feed); &lt;TRACMSG&gt; is a string</li> </ul>                                                                                                                                                                                                    |
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“TRACMSG”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

### 3.4.201 RTRV-STTS: Retrieve STS

This command retrieves the attributes associated with an STS path based on the granularity level of NE/SLOT-specific STSs.

Supported AIDs are ALL, SLOT-N (N=1,2,...,ALL), STS-<SLOT>[-<PORT>]-<STS NUMBER>.

The SFBER, SDBER, RVRTV, RVTM, SWPDIP, HOLDOFFTIMER, AND UPSRPTHSTATE parameters only apply to path protection.

The path trace message is a 64 character string including the terminating CR (carriage return) and LF (line feed) that is transported in the J1 byte of the SONET STS Path overhead.

The EXPTRC indicates the contents of the expected incoming path trace are provisioned by the user in the ED-STTS\_PATH command. The TRC indicates the contents of the outgoing path trace message. The INCTRC indicates the contents of the incoming path trace message.

The path trace mode has three modes: OFF, MANUAL, and AUTO. The mode defaults to OFF. The MANUAL mode performs the comparison of the received string with the user entered expected string. The AUTO mode performs the comparison of the present received string with an expected string set to a previously received string. If there is a mismatch, the TIM-P alarm is raised. When the path trace mode is in OFF mode, there is no path trace processing, and all the alarm and state conditions are reset.

When the expected string is queried under the OFF path trace mode, the expected string is a copy of the provisioned string or NULL. When an expected string is queried under the MANUAL path trace mode, the expected string is a copy of the user entered string. When an expected string is queried under the AUTO path trace mode, the expected string is a copy of the acquired received string or NULL if the string has not been acquired.

When the incoming string is queried under the OFF path trace mode, the incoming string is NULL. When an incoming string is queried under the MANUAL or AUTO path trace mode, the incoming string is a copy of the received string or NULL if the string has not been received.

J1 (EXPTRC) is implemented on the DS1/DS1N, DS3E/DS3NE, DS3XM, EC1, OC3, OC48AS and OC192.

TRC and INCTRC are supported on DS1(N), DS3(N)E, and DS3XM cards.

| Section          | RTRV-STS Description                                                                                                                                                                                             |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Paths                                                                                                                                                                                                            |
| Security         | Retrieve                                                                                                                                                                                                         |
| Related Messages | RTRV-PTHTRC-<STS_PATH>                                                                                                                                                                                           |
| Input Format     | RTRV-STS:[<TID>]:<AID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier from the <a href="#">“AidUnionId” section on page 4-15</a> and must not be null</li> </ul> |
| Input Example    | RTRV-STS:TID:STS-2-1-1:1;                                                                                                                                                                                        |

| Section       | RTRV-ST5 Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format | <p>SID DATE TIME<br/>M CTAG COMPLD</p> <pre> "&lt;AID&gt;:[LEVEL=&lt;LEVEL&gt;],[SFBER=&lt;SFBER&gt;],[SDBER=&lt;SDBER&gt;], [RVRTV=&lt;RVRTV&gt;],[RVTM=&lt;RVTM&gt;],[SWPDIP=&lt;SWPDIP&gt;], [HOLDOFFTIMER=&lt;HOLDOFFTIMER&gt;], [EXPTRC=&lt;EXPTRC&gt;],[TRC=&lt;TRC&gt;],[INCTRC=&lt;INCTRC&gt;], [TRCMODE=&lt;TRCMODE&gt;],[TACC=&lt;TACC&gt;],[TAPTYPE=&lt;TAPTYPE&gt;], [UPSRPTHSTATE=&lt;UPSRPTHSTATE&gt;],[C2=&lt;C2&gt;], [BLSRPTHSTATE=&lt;BLSRPTHSTATE&gt;]:[&lt;PST&gt;],[&lt;SST&gt;]" </pre> <p>;</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier from the <a href="#">“AidUnionId” section on page 4-15</a></li> <li>• &lt;LEVEL&gt; indicates the rate of the cross connected channel. Applicable only to STS paths (STS<sub>n</sub>); valid values for &lt;LEVEL&gt; are shown in the <a href="#">Table 7-33 on page 7-27</a>, &lt;LEVEL&gt; is optional</li> <li>• &lt;SFBER&gt; identifies the STS path SFBER which only applies to path protection; &lt;SFBER&gt; defaults to 1E-4 and valid values are shown in the <a href="#">Table 7-33 on page 7-27</a>, &lt;SFBER&gt; is optional</li> <li>• &lt;SDBER&gt; identifies the STS path SDBER which only applies to path protection; &lt;SDBER&gt; defaults to 1E-6 and valid values are shown in the <a href="#">Table 7-33 on page 7-27</a>, &lt;SDBER&gt; is optional</li> <li>• &lt;RVRTV&gt; identifies a revertive mode which only applies to path protection and defaults to N (non-revertive mode) when a path protection STSp is created; valid values for &lt;RVRTV&gt; are shown in the <a href="#">Table 7-33 on page 7-27</a> and &lt;RVRTV&gt; is optional</li> <li>• &lt;RVTM&gt; identifies a revertive time which only applies to path protection and defaults to empty because &lt;RVRTV&gt; is N when a path protection STSp is created; valid values for &lt;RVTM&gt; are shown in the <a href="#">Table 7-33 on page 7-27</a> and &lt;RVTM&gt; is optional</li> </ul> |

| Section                      | RTRV-STs Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format<br>(continued) | <ul style="list-style-type: none"> <li>• Valid values for &lt;SWPDIP&gt; are shown in the <a href="#">Table 7-33 on page 7-27</a>; &lt;SWDIP&gt; is optional</li> <li>• &lt;HOLDOFFTIMER&gt; is an integer and is optional</li> <li>• &lt;EXPTRC&gt; indicates the expected path trace message (J1) contents. The EXPTRC is any 64 character string, including the terminating CR (carriage return) and LF (line feed); &lt;EXPTRC&gt; defaults to null when a path protection STSp is created. &lt;EXPTRC&gt; is a string and is optional</li> <li>• &lt;TRC&gt; identifies the path trace message to be transmitted. The TRC is any combination of 64 characters, including the terminating CR (carriage return) and LF (line feed). The trace byte (J1) continuously transmits a 64 byte string, one byte at a time. A null value defaults to the NE transmitting null characters (Hex 00); &lt;TRC&gt; defaults to null when a path protection STSp is created. &lt;TRC&gt; is a string and is optional</li> <li>• &lt;INCTRC&gt; identifies the incoming path trace message contents. The INCTRC is any combination of 64 characters; &lt;INCTRC&gt; defaults to null when path protection STSp is created. &lt;INCTRC&gt; is a string and is optional</li> <li>• &lt;TRCMODE&gt; indicates the path trace mode, and defaults to the OFF mode when a path protection STSp is created; valid values for &lt;TRCMODE&gt; are shown in the <a href="#">Table 7-33 on page 7-27</a> and &lt;TRCMODE&gt; is optional</li> <li>• &lt;TACC&gt; is the AID from the <a href="#">Table 7-33 on page 7-27</a> and is optional</li> <li>• &lt;TAPTYPE&gt; is the TAP type; valid values are shown in the “TAPTYPE” section on page 4-92</li> <li>• &lt;UPSRPTHSTATE&gt; indicates whether the given AID is the working or standby path of a path protection cross-connect; valid values are shown in the <a href="#">Table 7-33 on page 7-27</a> and &lt;UPSRPTHSTATE&gt; is optional</li> <li>• &lt;C2&gt; indicates C2 Byte Hex Code and is only applicable to STS-level paths; valid values are shown in the <a href="#">Table 7-33 on page 7-27</a> and &lt;C2&gt; is optional</li> <li>• &lt;BLSRPTHSTATE&gt; indicates the BLSR path state only if the port is on the BLSR. Applicable only to STS-level paths; valid values are shown in the <a href="#">Table 7-33 on page 7-27</a> and &lt;BLSRPTHSTATE&gt; is optional</li> <li>• &lt;PST&gt; primary state; valid values are shown in the <a href="#">Table 7-33 on page 7-27</a></li> <li>• &lt;SST&gt; secondary state; valid values are shown in the <a href="#">Table 7-33 on page 7-27</a>. &lt;SST&gt; is optional</li> </ul> |
| Output Example               | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD “STS-2-1-4::LEVEL=STS3C,SFBER=1E-3,SDBER=1E-5,RVRTV=Y, RVTM=1.0,SWPDIP=Y,HOLDOFFTIMER=2000, EXPTRC=“EXPTRCSTRING”,TRC=“TRCSTRING”, INCTRC=“INCTRCSTRING”,TRCMODE=AUTO,TACC=8, TAPTYPE=SINGLE,UPSRPTHSTATE=ACT,C2=0X04, BLSRPTHSTATE=PROTPHACT:OOS,AINS” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Errors                       | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## 3.4.202 RTRV-SYNCN: Retrieve Synchronization

This command retrieves the synchronization reference list used to determine the sources for the NE's reference clock and the BITS output clock. For each clock, up to three synchronization sources may be specified (e.g. PRIMARY, SECOND, THIRD).

Notes:

1. To retrieve/set the timing mode, SSM message Set or Quality of RES information, use the RTRV-NE-SYNCN and ED-NE-SYNCN commands.
2. The output example shown here is under line timing mode.

| Section          | RTRV-SYNCN Description                                                                                                                                                                                                                                          |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Synchronization                                                                                                                                                                                                                                                 |
| Security         | Retrieve                                                                                                                                                                                                                                                        |
| Related Messages | ED-BITS<br>ED-NE-SYNCN<br>ED-SYNCN<br>OPR-SYNCNSW<br>REPT ALM BITS<br>REPT ALM SYNCN<br>REPT EVT BITS<br>REPT EVT SYNCN<br>RLS-SYNCNSW<br>RTRV-ALM-BITS<br>RTRV-ALM-SYNCN<br>RTRV-BITS<br>RTRV-COND-BITS<br>RTRV-COND-SYNCN<br>RTRV-NE-SYNCN                    |
| Input Format     | RTRV-SYNCN:[<TID>]:<AID>:<CTAG>[:::];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies the synchronization reference to retrieve; &lt;AID&gt; is from the "SYNC_REF" section on page 4-34, is listable and must not be null</li> </ul> |
| Input Example    | RTRV-SYNCN:BOYES:SYNC-NE:234;                                                                                                                                                                                                                                   |



| Section        | RTRV-SYNCN Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“&lt;AID&gt;:&lt;REF&gt;,&lt;REFVAL&gt;,[&lt;PROTECTSTATUS&gt;],[&lt;QREF&gt;],[&lt;STATUS&gt;]”<br/>;<br/>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the synchronization reference to be modified and is from the “<a href="#">SYNC_REF</a>” section on page 4-34</li> <li>• &lt;REF&gt; is the rank of the synchronization reference and is from the “<a href="#">SYNCSW</a>” section on page 4-34</li> <li>• &lt;REFVAL&gt; is the value of the synchronization reference and is from the “<a href="#">SYN_SRC</a>” section on page 4-34</li> <li>• &lt;PROTECTSTATUS&gt; indicates whether the working or protect card (in a protection group) provides timing. This parameter has no significance if the reference source is BITS or INTERNAL and is left blank. Valid values are shown in the “<a href="#">SIDE</a>” section on page 4-86 and &lt;PROTECTSTATUS&gt; is optional</li> <li>• &lt;QREF&gt; is the quality of the reference source; valid values are shown in the “<a href="#">SYNC_CLOCK_REF_QUALITY_LEVEL</a>” section on page 4-89, &lt;QREF&gt; is optional</li> <li>• &lt;STATUS&gt; is the active status of the synchronization source; valid values are shown in the “<a href="#">STATUS</a>” section on page 4-86, &lt;STATUS&gt; is optional</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/>M 001 COMPLD<br/>“SYNC-NE:PRI,FAC-1-2,WORK,PRS,ACT”<br/>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### 3.4.203 RTRV-T1: Retrieve T1 Facility

This command retrieves the DS-1 facilities configuration.

(The facilities are on the XTC card for the ONS 15327)

| Section          | RTRV-T1 Description                                                                                        |                                                                                                                   |
|------------------|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Category         | Ports                                                                                                      |                                                                                                                   |
| Security         | Retrieve                                                                                                   |                                                                                                                   |
| Related Messages | ED-<OCN_TYPE><br>ED-DS1<br>ED-EC1<br>ED-FC<br>ED-G1000<br>ED-T1<br>ED-T3<br>RMV-<MOD2_IO><br>RST-<MOD2_IO> | RTRV-<OCN_TYPE><br>RTRV-DS1<br>RTRV-EC1<br>RTRV-FC<br>RTRV-FSTE<br>RTRV-G1000<br>RTRV-GIGE<br>RTRV-POS<br>RTRV-T3 |

| Section       | RTRV-T1 Description                                                                                                                                                                                                            |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | RTRV-T1:[<TID>]:<AID>:<CTAG>[:...];<br>where: <ul style="list-style-type: none"><li>• &lt;AID&gt; is an access identifier from the “FACILITY” section on page 4-28 and must not be null</li></ul> |
| Input Example | RTRV-T1:TID:FAC-2-1:1223;                                                                                                                                                                                                      |

| Section       | RTRV-T1 Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format | <p>SID DATE TIME<br/>M CTAG COMPLD</p> <pre>“&lt;AID&gt;:;[LINECDE=&lt;LINECDE&gt;],[FMT=&lt;FMT&gt;],[LBO=&lt;LBO&gt;],[ TAPTYPE=&lt;TAPTYPE&gt;],[SOAK=&lt;SOAK&gt;],[SOAKLEFT=&lt;SOAKLEFT&gt;],[ SFBER=&lt;SFBER&gt;],[SDBER=&lt;SDBER&gt;]:&lt;PST&gt;,[&lt;SST&gt;]” ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;LINECDE&gt; is a line code; valid values are shown in the <a href="#">“LINE_CODE” section on page 4-68</a>, &lt;LINECDE&gt; is optional</li> <li>• &lt;FMT&gt; is a frame format; valid values are shown in the <a href="#">“FRAME_FORMAT” section on page 4-65</a>, &lt;FMT&gt; is optional</li> <li>• &lt;LBO&gt; is a line buildout; valid values are shown in the <a href="#">“LINE_BUILDOUT” section on page 4-67</a>, &lt;LBO&gt; is optional</li> <li>• &lt;TACC&gt; defines the STS as a test access port with a selected unique TAP number. The TAP number ranges from 1–999. When TACC is 0, the TAP is deleted. &lt;TACC&gt; is from the <a href="#">“Conditions” section on page 7-18</a> and &lt;TACC&gt; is optional</li> <li>• &lt;TAPTYPE&gt; indicates the TAP type; valid values are shown in the <a href="#">“TAPTYPE” section on page 4-92</a> and &lt;TAPTYPE&gt; is optional</li> <li>• &lt;SOAK&gt; OOS-AINS to IS transition soak time measured in 15 minute intervals; &lt;SOAK&gt; is an integer and is optional</li> <li>• &lt;SOAKLEFT&gt; time remaining for the transition from OOS-AINS to IS measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. &lt;SOAKLEFT&gt; is optional<br/>Rules for &lt;SOAKLEFT&gt; are as follows: <ul style="list-style-type: none"> <li>– When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed.</li> <li>– When the port is in OOS_AINS, but the countdown has not started due to fault signal the value will be SOAKLEFT=NOT-STARTED.</li> <li>– When the port is in OOS_AINS state and the countdown has started the value will be shown in HH-MM format.</li> </ul> </li> <li>• &lt;SFBER&gt; identifies the port SFBER and defaults to 1E-4; valid values are shown in the <a href="#">“SF_BER” section on page 4-86</a> and &lt;SFBER&gt; is optional</li> <li>• &lt;SDBER&gt; identifies the port SDBER and defaults to 1E-7; valid values are shown in the <a href="#">“SD_BER” section on page 4-85</a></li> <li>• &lt;PST&gt; primary state; valid values are shown in the <a href="#">“PST” section on page 4-83</a></li> <li>• &lt;SST&gt; secondary state; valid values are shown in the <a href="#">“SST” section on page 4-86</a> and &lt;SST&gt; is optional</li> </ul> |

| Section        | RTRV-T1 Description                                                                                                                                                        |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“FAC-2-1::LINECDE=AMI,FMT=ESF,LBO=0-131,TACC=8,TAPTYPE=DUAL,<br>SOAK=52,SOAKLEFT=12-25,SFBER=1E-4,SDBER=1E-7:OOS,AINS”<br>; |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                             |

### 3.4.204 RTRV-T3: Retrieve T3

This command retrieves the facility properties of a DS3 and a DS3XM card.

(The facilities are on the XTC card for the ONS 15327)

Notes:

1. CTC can set the FMT attribute of a DS3(N)E line to autoprovision to set the framing based on the framing is coming in. This would result in the FMT field being blanked out for a few seconds blanked forever for a preprovisioned DS3(N)E card on CTC.
2. The autoprovision is not considered a valid DS3 framing type. It is used only to trigger an autosense and subsequent autoprovisioning of a valid DS3 framing type (unframed, M23, C-BIT).
3. TL1 does not have the autoprovision mode according to GR-199. TL1 maps/returns the autoprovision to be unframed.

| Section          | RTRV-T3 Description                                                                                                                                                                                                 |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Ports                                                                                                                                                                                                               |
| Security         | Retrieve                                                                                                                                                                                                            |
| Related Messages | ED-<OCN_TYPE> RTRV-<OCN_TYPE><br>ED-DS1 RTRV-DS1<br>ED-EC1 RTRV-EC1<br>ED-FC RTRV-FC<br>ED-G1000 RTRV-FSTE<br>ED-T1 RTRV-G1000<br>ED-T3 RTRV-GIGE<br>RMV-<MOD2_IO> RTRV-POS<br>RST-<MOD2_IO> RTRV-T1                |
| Input Format     | RTRV-T3:[<TID>]:<AID>:<CTAG>[:::];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the access identifier from the <a href="#">“FACILITY” section on page 4-28</a> and must not be null</li> </ul> |
| Input Example    | RTRV-T3:CISCO:FAC-1-2:123;                                                                                                                                                                                          |

| Section       | RTRV-T3 Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| Output Format | <p>           SID DATE TIME<br/>           M CTAG COMPLD<br/>           “&lt;AID&gt;::[FMT=&lt;FMT&gt;],[LINECDE=&lt;LINECDE&gt;],[LBO=&lt;LBO&gt;,<br/>           [INHFELPBK=&lt;INHFELPBK&gt;],[TACC=&lt;TAP&gt;],[TAPTYPE=&lt;TAPTYPE&gt;,<br/>           [SOAK=&lt;SOAK&gt;],[SOAKLEFT=&lt;SOAKLEFT&gt;,<br/>           [SFBER=&lt;SFBER&gt;],[SDBER=&lt;SDBER&gt;]:&lt;PST&gt;,[&lt;SST&gt;]”<br/>           ;         </p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier from the <a href="#">“FACILITY” section on page 4-28</a></li> <li>• &lt;FMT&gt; is a frame format; valid values are shown in the <a href="#">“DS_LINE_TYPE” section on page 4-57</a>, &lt;FMT&gt; is optional</li> <li>• &lt;LINECDE&gt; is a line code; valid values are shown in the <a href="#">“DS_LINE_CODE” section on page 4-57</a>, &lt;LINECDE&gt; is optional</li> <li>• &lt;LBO&gt; is a line buildout; valid values are shown in the <a href="#">“E_LBO” section on page 4-58</a>, &lt;LBO&gt; is optional</li> <li>• &lt;INHFELPBK&gt; identifies the far end loopback inhibition attribute of the port. If it is Y, the automatic far end loopbacks are inhibited. It is either on or off. The system default is Y. &lt;INHFELPBK&gt; is optional and valid values are shown in the <a href="#">“ON_OFF” section on page 4-76</a></li> <li>• &lt;TACC&gt; defines the STS as a test access port with a selected unique TAP number. The TAP number ranges from 1–999. When TACC is 0, the TAP is deleted. &lt;TACC&gt; is from the <a href="#">“Conditions” section on page 7-18</a> and is optional</li> <li>• &lt;TAPTYPE&gt; indicates the TAP type; valid values are shown in the <a href="#">“TAPTYPE” section on page 4-92</a> and &lt;TAPTYPE&gt; is optional</li> <li>• &lt;SOAK&gt; OOS-AINS to IS transition soak time measured in 15 minute intervals; &lt;SOAK&gt; is an integer and is optional</li> <li>• &lt;SOAKLEFT&gt; time remaining for the transition from OOS-AINS to IS measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. &lt;SOAKLEFT&gt; is optional<br/>           Rules for &lt;SOAKLEFT&gt; are as follows:           <ul style="list-style-type: none"> <li>– When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed.</li> <li>– When the port is in OOS_AINS, but the countdown has not started due to fault signal the value will be SOAKLEFT=NOT-STARTED.</li> <li>– When the port is in OOS_AINS state and the countdown has started the value will be shown in HH-MM format.</li> </ul> </li> <li>• &lt;SFBER&gt; identifies the port SFBER and defaults to 1E-4; valid values are shown in the <a href="#">“SF_BER” section on page 4-86</a> and &lt;SFBER&gt; is optional</li> <li>• &lt;SDBER&gt; identifies the port SDBER and defaults to 1E-7; valid values are shown in the <a href="#">“SD_BER” section on page 4-85</a></li> <li>• &lt;PST&gt; primary state; valid values are shown in the <a href="#">“PST” section on page 4-83</a></li> <li>• &lt;SST&gt; secondary state; valid values are shown in the <a href="#">“SST” section on page 4-86</a></li> </ul> |

| Section        | RTRV-T3 Description                                                                                                                                                                             |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“FAC-1-2::FMT=C-BIT,LINECDE=B3ZS,LBO=0-225,INHFELPBK=N,<br>TACC=8,TAPTYPE=SINGLE,SOAK=52,SOAKLEFT=12-25,<br>SFBER=1E-4,SDBER=1E-7:OOS,AINS”<br>; |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                  |

### 3.4.205 RTRV-TACC: Retrieve Test Access

This command retrieves details associated with a TAP. The TAP is identified by the TAP number. The ALL input TAP value means that the command will return all the configured TACCs in the NE.

| Section          | RTRV-TACC Description                                                                                                                                                                                                                                                                                                                                                         |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Test Access                                                                                                                                                                                                                                                                                                                                                                   |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                      |
| Related Messages | CHG-ACCMD-<MOD_TACC><br>CONN-TACC-<MOD_TACC><br>DISC-TACC                                                                                                                                                                                                                                                                                                                     |
| Input Format     | RTRV-TACC:[<TID>]:<TAP>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>&lt;TAP&gt; indicates the assigned numeric number for the AID being used as a TAP. The TAP number must be an integer with a range of 1–999. The ALL TAP value means that the command will return all the configured TACCs in the NE. &lt;TAP&gt; is a string and must not be null</li> </ul> |
| Input Example    | RTRV-TACC:CISCO:241:CTAG;                                                                                                                                                                                                                                                                                                                                                     |

| Section        | RTRV-TACC Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“&lt;TAP&gt;:&lt;TACC_AIDA&gt;,&lt;TACC_AIDB&gt;,[&lt;MD&gt;],[&lt;CROSSCONNECTID1&gt;],<br/>[&lt;CROSSCONNECTID2&gt;]”<br/>;<br/>where:</p> <ul style="list-style-type: none"> <li>• &lt;TAP&gt; indicates the assigned numeric number for the AID being used as a TAP; &lt;TAP&gt; is a string</li> <li>• &lt;TACC_AIDA&gt; is the A path of the test access point, i.e., the first STS/VT path of the TAP; &lt;TACC_AIDA&gt; is from the “CrossConnectId” section on page 4-20</li> <li>• &lt;TACC_AIDB&gt; is the B path of the test access point, i.e., the second STS/VT path of the TAP. For a single FAD TAP this path will be empty; &lt;TACC_AIDB&gt; is from the “CrossConnectId” section on page 4-20</li> <li>• &lt;MD&gt; indicates the test access mode. It identifies the status of the circuit connected to the TACC. Valid values are shown in the “TACC_MODE” section on page 4-91</li> <li>• &lt;CROSSCONNECTID1&gt; is the E path of the cross-connect; CROSSCONNECTID1 is the AID from the “CrossConnectId” section on page 4-20 and is optional</li> <li>• &lt;CROSSCONNECTID2&gt; is the F path of the cross-connect; &lt;CROSSCONNECTID2&gt; is the AID from the “CrossConnectId” section on page 4-20 and is optional</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/>M 001 COMPLD<br/>“241:STS-2-1-1,STS-2-2,MONE,STS-12-1-1,STS-13-1-1”<br/>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### 3.4.206 RTRV-TH-<MOD2>: Retrieve Threshold (CLNT, DS1, DS3I, EC1, FC, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command retrieves the threshold level of one or more monitored parameters.

Notes:

1. After the BLSR switching, the working path is switched out, the traffic goes through the protection path and the threshold can be retrieved from the protection path.
2. If there is a STS PCA on the protection path, during the BLSR switching, the PCA path is pre-emptive; sending this command on the protection path after BLSR switch, the command returns the PMs off the protection path, not from the PCA path.

The message is issued to retrieve the thresholds for PM and the alarm thresholds. If it is used to retrieve the alarm thresholds, the time-period is not applicable.

The presentation rules are as follows: Client port only–Laser, Alarm and SONET Thresholds are applicable and will be displayed. Laser and alarm thresholds are only for Near End. If the card payload is in SONET mode, then SONET Thresholds will be displayed. The Receiver Temperature Montypes (RXT) are only applicable to the Trunk Port. The Transceiver Voltage Montypes (XCVR) are not applicable, though it is displayed or handled.

Laser and Alarm thresholds are always available. Laser and alarm thresholds are only for Near End. If G.709 is enabled, then the OTN thresholds will be displayed. If G.709 is enabled and FEC is enabled, then the FEC thresholds will be displayed. If the card payload is in SONET mode, then SONET Thresholds will be displayed. The Transceiver Voltage Montypes (XCVR) are not applicable, though it is displayed or handled.

See the “[Provisioning Rules for MXP\\_2.5G\\_10G and TXP\\_MR\\_10G Cards](#)” section on page 1-8 and the “[Provisioning Rules for TXP\\_MR\\_2.5G and TXPP\\_MR\\_2.5G Cards](#)” section on page 1-13 for specific card provisioning rules.

| Section          | RTRV-TH-<MOD2> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Performance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Related Messages | ALW-PMREPT-ALL                      RTRV-PMSCHED-<MOD2><br>INH-PMREPT-ALL                      RTRV-PMSCHED-ALL<br>INIT-REG-<MOD2>                      RTRV-TH-ALL<br>REPT PM <MOD2>                      SCHED-PMREPT-<MOD2><br>RTRV-PM-<MOD2>                      SET-PMMODE-<STS_PATH><br>RTRV-PMMODE-<STS_PATH>           SET-TH-<MOD2>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Input Format     | RTRV-TH-<MOD2>:[<TID>]:<AID>:<CTAG>::<br>[<MONTYPE>],[<LOCN>],<TMPER>[:];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier from the “<a href="#">ALL</a>” section on page 4-9 and must not be null</li> <li>• &lt;MONTYPE&gt; is the monitored type and defaults to CVL; valid values are shown in the “<a href="#">ALL_MONTYPE</a>” section on page 4-39. A null value is equivalent to ALL.</li> </ul> <p><b>Note</b> &lt;MONTYPE&gt; defaults to: CVL for OCN, EC1 and DSN, ESP for STSp, UASV for VT1, AISSP for DS1 layer of DS3XM. LOCN defaults to NEND. TMPER defaults to 15 minutes.</p> <ul style="list-style-type: none"> <li>• &lt;LOCN&gt; is the location; valid values are shown in the “<a href="#">LOCATION</a>” section on page 4-68. A null value is equivalent to ALL</li> <li>• &lt;TMPER&gt; indicates the accumulation time period; valid values are shown in the “<a href="#">TMPER</a>” section on page 4-93 and &lt;TMPER&gt; must not be null</li> </ul> |
| Input Example    | RTRV-TH-T3:CISCO:FAC-1-3:1234::CVL,NEND,15-MIN;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |



| Section        | RTRV-TH-<MOD2> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“&lt;AID&gt;,[&lt;AIDTYPE&gt;]:&lt;MONTYPE&gt;,[&lt;LOCN&gt;],,&lt;THLEV&gt;,[&lt;TMPER&gt;]”<br/>;<br/>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is from the “ALL” section on page 4-9</li> <li>• &lt;AIDTYPE&gt; specifies the type of AID; valid values are shown in the “MOD2B” section on page 4-71, &lt;AIDTYPE&gt; is optional</li> <li>• &lt;MONTYPE&gt; indicates the monitored type; valid values are shown in the “ALL_MONTYPE” section on page 4-39</li> <li>• &lt;LOCN&gt; is a location; valid values are shown in the “LOCATION” section on page 4-68, &lt;LOCN&gt; is optional</li> <li>• &lt;THLEV&gt; is the threshold value and is a float; &lt;THLEV&gt; is an integer</li> <li>• &lt;TMPER&gt; is the accumulation time period for the PM information; valid values are shown in the “TMPER” section on page 4-93, &lt;TMPER&gt; is optional</li> </ul> |
| Output Example | <p>TID-0001998-06-20 14:30:00<br/>M 001 COMPLD<br/>“FAC-1-3,DS3:CVL,NEND,,1,15-MIN”<br/>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Errors         | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

### 3.4.207 RTRV-TH-ALL: Retrieve Threshold ALL

See Table 4-11 on page 4-5 for supported modifiers by platform.

This command retrieves the threshold level of all monitored parameters on the NE.

Notes:

1. After the BLSR switching, the working path is switched out, the traffic goes through the protection path and the threshold can be retrieved from the protection STS path.
2. If there is a STS PCA on the protection path, during the BLSR switching, the PCA path is pre-emptive; sending this command on the protection path after BLSR switch, the command returns the PMs off the protection path, not from the PCA path.
3. Multiple RTRV completion codes will be seen after the execution of this command according to GR-1831-CORE for bulk retrievals. The final completion code after the multiple RTRV codes is COMPLD.
4. Some monitored types are not available for some cards or cross-connect types. In that case, a 0 value will be displayed for the monitored type. This will happen only in the scenario where a user requests the thresholds of a specific monitored parameter on the NE and the monitored type does not apply to that card or cross-connect type. When the user does not filter by monitored type, the applicable thresholds will be retrieved.
5. If the user requests the thresholds of a particular monitored type and if the monitored type is not applicable to some of the entities, DENY will not be returned.

See the “[Provisioning Rules for MXP\\_2.5G\\_10G and TXP\\_MR\\_10G Cards](#)” section on page 1-8 and the “[Provisioning Rules for TXP\\_MR\\_2.5G and TXPP\\_MR\\_2.5G Cards](#)” section on page 1-13 for specific card provisioning rules.

| Section          | RTRV-TH-ALL Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Performance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Related Messages | ALW-PMREPT-ALL                      RTRV-PMSCHED-<MOD2><br>INH-PMREPT-ALL                      RTRV-PMSCHED-ALL<br>INIT-REG-<MOD2>                      RTRV-TH-<MOD2><br>REPT PM <MOD2>                      SCHED-PMREPT-<MOD2><br>RTRV-PM-<MOD2>                      SET-PMMODE-<STS_PATH><br>RTRV-PMMODE-<STS_PATH>           SET-TH-<MOD2>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Input Format     | RTRV-TH-ALL:[<TID>]:<AID>::<CTAG>::<br>[<MONTYPE>],[<LOCATION>],[<TMPER>][:];<br>where: <ul style="list-style-type: none"> <li>• &lt;MONTYPE&gt; is the monitored type; valid values are shown in the “<a href="#">ALL_MONTYPE</a>” section on page 4-39. A null value defaults to ALL.</li> <li>• &lt;LOCATION&gt; is the location; valid values are shown in the “<a href="#">LOCATION</a>” section on page 4-68. A null value defaults to NEND</li> <li>• &lt;TMPER&gt; indicates the accumulation time period; valid values are shown in the “<a href="#">TMPER</a>” section on page 4-93 and a null value defaults to 15-MIN</li> </ul>                                                                                                                                                                                                                                 |
| Input Example    | RTRV-TH-ALL:CHARGERS6::123::CVL,NEND,15-MIN;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>,<AIDTYPE>:<MONTYPE>,<LOCATION>,<THLEV>,<TMPER>”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the AID from the “<a href="#">AidUnionId</a>” section on page 4-15</li> <li>• &lt;AIDTYPE&gt; specifies the type of AID; valid values are shown in the “<a href="#">MOD2B</a>” section on page 4-71</li> <li>• &lt;MONTYPE&gt; indicates the monitored type; valid values are shown in the “<a href="#">ALL_MONTYPE</a>” section on page 4-39</li> <li>• &lt;LOCATION&gt; is a location; valid values are shown in the “<a href="#">LOCATION</a>” section on page 4-68</li> <li>• &lt;THLEV&gt; is the threshold value and is a float</li> <li>• &lt;TMPER&gt; is the accumulation time period for the PM information; valid values are shown in the “<a href="#">TMPER</a>” section on page 4-93</li> </ul> |
| Output Example   | TID-0001998-06-20 14:30:00<br>M 001 COMPLD<br>“FAC-1-1,DS3:CVL,NEND,,1,15-MIN”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

### 3.4.208 RTRV-TOD: Retrieve Time of Day

This command retrieves the system date and time at the instant when the command was executed. The time returned is in Coordinated Universal Time (UTC).

| Section          | RTRV-TOD Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | System                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Related Messages | ACT-USER<br>ALW-MSG-ALL<br>ALW-MSG-DBCHG<br>ALW-MSG-SECU<br>ED-DAT<br>ED-NE-GEN<br>ED-NE-PATH<br>ED-NE-SYNCN<br>INH-MSG-ALL<br>INH-MSG-DBCHG<br>INH-MSG-SECU<br>INIT-SYS<br>RTRV-HDR<br>RTRV-INV<br>RTRV-NE-GEN<br>RTRV-NE-IPMAP<br>RTRV-NE-PATH<br>RTRV-NE-SYNCN<br>RTRV-NE-WDMANS<br>SET-TOD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Input Format     | RTRV-TOD:[<TID>]::<CTAG>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Input Example    | RTRV-TOD:CAZADERO::230;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“<YEAR>,<MONTH>,<DAY>,<HOUR>,<br><MINUTE>,<SECOND>,<TMTYPE>”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;YEAR&gt; is the current calendar year and is a string</li> <li>• &lt;MONTH&gt; is the month of the year and ranges from 01–12; &lt;MONTH&gt; is a string</li> <li>• &lt;DAY&gt; is the day of the month and ranges from 01–31; &lt;DAY&gt; is a string</li> <li>• &lt;HOUR&gt; is the hour of the day and ranges from 00–23; &lt;HOUR&gt; is a string</li> <li>• &lt;MINUTE&gt; is the minute of the hour and ranges from 00–59; &lt;MINUTE&gt; is a string</li> <li>• &lt;SECOND&gt; is the second of the minute and ranges from 00–59; &lt;SECOND&gt; is a string</li> <li>• &lt;TMTYPE&gt; identifies the time zone and is a string</li> </ul> |
| Output Example   | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“1998,05,08,17,01,33,UTC”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

### 3.4.209 RTRV-TRC-<OCN\_BLSR>: Retrieve Trace Client (OC12, OC192, OC48)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command retrieves the valid J1 expected trace string, retrieved trace string, trace mode, C2 byte, and STS bandwidth of the OCn port only if the port has a BLSR.



**Note** This command only applies to OC48AS and OC192 cards.



**Note** Sending this command over unsupported BLSR path trace cards, or unequipped cards will result in a J1 Trace Not Supported On This Card (IIAC) error.

| Section          | RTRV-TRC-<OCN_BLSR> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | BLSR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Related Messages | DLT-<MOD_RING>                      EX-SW-<OCN_BLSR><br>ED-<MOD_RING>                        RTRV-<MOD_RING><br>ENT-<MOD_RING>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Input Format     | RTRV-TRC-<OCN_BLSR>[:<TID>]:<AID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is the AID from the <a href="#">“FACILITY” section on page 4-28</a> and must not be null</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Input Example    | RTRV-TRC-OC48:CISCO:FAC-6-1:238;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>::[LEVEL=<LEVEL>],[EXPTRC=<EXPTRC>],[INCTRC=<INCTRC>],[TRCMODE=<TRCMODE>],[C2=<C2>]”<br>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is an access identifier from the <a href="#">“STS” section on page 4-31</a></li> <li>&lt;LEVEL&gt; indicates the rate of the cross connected channel; valid values are shown in the <a href="#">Table 7-33 on page 7-27</a>. &lt;LEVEL&gt; is optional</li> <li>&lt;EXPTRC&gt; indicates the expected path trace message (J1) contents. &lt;EXPTRC&gt; is any 64-character string, including the terminating CR (carriage return) and LF (line feed). &lt;EXPTRC&gt; is a string and is optional</li> <li>&lt;INCTRC&gt; indicates the incoming path trace message contents. &lt;INCTRC&gt; is any 64-character string, including the CR and LF. &lt;INCTRC&gt; is a string and is optional</li> <li>&lt;TRCMODE&gt; indicates the trace mode; valid values are shown in the <a href="#">“TRCMODE” section on page 4-94</a> and &lt;TRCMODE&gt; is optional</li> <li>&lt;C2&gt; indicates C2 Byte Hex Code; valid values are shown in the <a href="#">“C2_BYTE” section on page 4-52</a> and &lt;C2&gt; is optional</li> </ul> |

| Section        | RTRV-TRC-<OCN_BLSR> Description                                                                                                               |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“STS-6-1-25::LEVEL=STS1,EXPTRC=“EXPTRCSTRING”,INCTRC=“INCTRCSTRING”,TRCMODE=AUTO,C2=0X04”<br>; |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                |

### 3.4.210 RTRV-TRC-CLNT: Retrieve Trace Client

(Cisco ONS 15454 only)

This command retrieves the SONET J0 Section sent trace string, expected trace string, received trace string, trace mode, and the trace level for the client facility.

The following rules apply: Client port–only J0 Section trace applies.

Depending on the settings, the following filtering applies: If no TRCLEVEL is provided, all TRCLEVELS are reported as applicable. If TRCLEVEL is provided and no MSGTYPE is provided, all applicable MSGTYPES for the given level is displayed. If no MSGTYPE is provided, all MSGTYPES are reported as applicable. If a MSGTYPE is provided without a TRCLEVEL, then the given MSGTYPE for all TRCLEVELS are displayed.

| Section          | RTRV-TRC-CLNT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Related Messages | DLT-FFP-CLNT<br>DLT-LNK-<MOD2O><br>ED-CLNT<br>ED-DWDM<br>ED-FFP-CLNT<br>ED-FFP-OCH<br>ED-LNK-<MOD2O><br>ED-OCH<br>ED-OMS<br>ED-OTS<br>ED-TRC-CLNT<br>ED-TRC-OCH<br>ENT-FFP-CLNT<br>ENT-LNK-<MOD2O><br>OPR-LASER-OTS<br>OPR-PROTNSW-CLNT<br>OPR-PROTNSW-OCH<br>RLS-LASER-OTS<br>RLS-PROTNSW-CLNT<br>RLS-PROTNSW-OCH<br>RTRV-CLNT<br>RTRV-DWDM<br>RTRV-FFP-CLNT<br>RTRV-FFP-OCH<br>RTRV-LNK-<MOD2O><br>RTRV-OCH<br>RTRV-OMS<br>RTRV-OTS<br>RTRV-PROTNSW-CLNT<br>RTRV-PROTNSW-OCH<br>RTRV-TRC-OCH |

| Section        | RTRV-TRC-CLNT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format   | <p>RTRV-TRC-CLNT:[&lt;TID&gt;]:&lt;SRC&gt;:&lt;CTAG&gt;::[&lt;MSGTYPE&gt;],<br/>[&lt;TRCLEVEL&gt;][:];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;SRC&gt; is the AID from the “FACILITY” section on page 4-28 and must not be null</li> <li>• &lt;MSGTYPE&gt; is the type of trace message to be retrieved; valid values for are shown in the “MSGTYPE” section on page 4-74. A null value is equivalent to ALL</li> <li>• &lt;TRCLEVEL&gt; is the level at which the trace information is handled; valid values are shown in the “TRCLEVEL” section on page 4-93 and a null value is equivalent to ALL</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Input Example  | RTRV-TRC-CLNT:CISCO:FAC-2-1:100::EXPTRC,J0;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Output Format  | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“&lt;AID&gt;,&lt;MOD&gt;::[TRCLEVEL=&lt;TRCLEVEL&gt;],[EXPTRC=&lt;EXPTRC&gt;],<br/>[TRC=&lt;TRC&gt;],[INCTRC=&lt;INCTRC&gt;],[TRCMODE=&lt;TRCMODE&gt;],<br/>[TRCFORMAT=&lt;TRCFORMAT&gt;]”<br/>;</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is from the “FACILITY” section on page 4-28</li> <li>• &lt;MOD&gt; indicates the AID type which is CLNT in this instance; valid values are shown in the “MOD2” section on page 4-69</li> <li>• Valid values for &lt;TRCLEVEL&gt; are shown in the “TRCLEVEL” section on page 4-93 and &lt;TRCLEVEL&gt; is optional</li> <li>• &lt;EXPTRC&gt; is a string and is optional</li> <li>• &lt;TRC&gt; is a string and is optional</li> <li>• &lt;INCTRC&gt; is a string and is optional</li> <li>• &lt;TRCMODE&gt; identifies the trace mode; valid values are shown in the “TRCMODE” section on page 4-94 and &lt;TRCMODE&gt; is optional</li> <li>• &lt;TRCFORMAT&gt; identifies the trace format; valid values are shown in the “TRCFORMAT” section on page 4-93 and &lt;TRCFORMAT&gt; is optional</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/>M 001 COMPLD<br/>“FAC-2-1,CLNT::TRCLEVEL=J0,EXPTRC=“AAA”,TRC=“AAA”,<br/>INCTRC=“AAA”,TRCMODE=MAN,TRCFORMAT=16-BYTE”<br/>;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Errors         | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

### 3.4.211 RTRV-TRC-OCH: Retrieve Trace Optical Channel

(Cisco ONS 15454 only)

This command retrieves the sent trace string, expected trace string, received trace string, trace mode, and the trace level for the SONET J0 Section, the TTI PATH and SECTION monitoring levels of the DWDM facility.

The following rules apply: Client port—only the J0 Section trace applies. The J0 Section trace applies only if the card termination mode is not transparent and the payload is SONET/SDH. On the DWDM port the J0 Section trace, the TTI Path, Section trace monitoring point traces are allowed. The J0 Section trace is allowed only if the payload for the card is set to SONET/SDH. The J0 Section trace is allowed only if the card termination mode is not transparent. The TTI Path, Section trace is allowed only if the G.709 (DWRAP) is enabled.

Depending on the settings, the following filtering applies: If no TRCLEVEL is provided, all TRCLEVELS are reported as applicable. If TRCLEVEL is provided and no MSGTYPE is provided, all applicable MSGTYPES for the given level is displayed. If no MSGTYPE is provided, all MSGTYPES are reported as applicable. If a MSGTYPE is provided with out a TRCLEVEL, then the given MSGTYPE for all TRCLEVELS are displayed.

| Section          | RTRV-TRC-OCH Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Related Messages | DLT-FFP-CLNT<br>DLT-LNK-<MOD2O><br>ED-CLNT<br>ED-DWDM<br>ED-FFP-CLNT<br>ED-FFP-OCH<br>ED-LNK-<MOD2O><br>ED-OCH<br>ED-OMS<br>ED-OTS<br>ED-TRC-CLNT<br>ED-TRC-OCH<br>ENT-FFP-CLNT<br>ENT-LNK-<MOD2O><br>OPR-LASER-OTS<br>OPR-PROTNSW-CLNT<br>OPR-PROTNSW-OCH<br>RLS-LASER-OTS<br>RLS-PROTNSW-CLNT<br>RLS-PROTNSW-OCH<br>RTRV-CLNT<br>RTRV-DWDM<br>RTRV-FFP-CLNT<br>RTRV-FFP-OCH<br>RTRV-LNK-<MOD2O><br>RTRV-OCH<br>RTRV-OMS<br>RTRV-OTS<br>RTRV-PROTNSW-CLNT<br>RTRV-PROTNSW-OCH<br>RTRV-TRC-CLNT                                                                                                        |
| Input Format     | RTRV-TRC-OCH:[<TID>]:<SRC>:<CTAG>::[<MSGTYPE>],[<TRCLEVEL>][:];<br>where: <ul style="list-style-type: none"> <li>• &lt;SRC&gt; is the AID from the “CHANNEL” section on page 4-19 and must not be null</li> <li>• &lt;MSGTYPE&gt; is the type of trace message to be retrieved. Valid values for &lt;MSGTYPE&gt; are shown in the “MSGTYPE” section on page 4-74. A null value is equivalent to ALL</li> <li>• &lt;TRCLEVEL&gt; is the level at which the trace information is handled. Valid values are shown in the “TRCLEVEL” section on page 4-93 and a null value is equivalent to ALL</li> </ul> |
| Input Example    | RTRV-TRC-OCH:CISCO:CHAN-2-2:100::EXPTRC,TTI-PM;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| Section        | RTRV-TRC-OCH Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <pre>SID DATE TIME M CTAG COMPLD "&lt;CHANNEL&gt;,&lt;MOD&gt;::[TRCLEVEL=&lt;TRCLEVEL&gt;,&lt;br&gt; [EXPTRC=&lt;EXPTRC&gt;],[TRC=&lt;TRC&gt;],[INCTRC=&lt;INCTRC&gt;,&lt;br&gt; [TRCMODE=&lt;TRCMODE&gt;],[TRCFORMAT=&lt;TRCFORMAT&gt;]" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;CHANNEL&gt; is the AID from the “CHANNEL” section on page 4-19</li> <li>• &lt;MOD&gt; indicates the AID type; valid values are shown in the “MOD2” section on page 4-69</li> <li>• Valid values for &lt;TRCLEVEL&gt; are shown in the “TRCLEVEL” section on page 4-93 and &lt;TRCLEVEL&gt; is optional</li> <li>• &lt;EXPTRC&gt; is a string and is optional</li> <li>• &lt;TRC&gt; is a string and is optional</li> <li>• &lt;INCTRC&gt; is a string and is optional</li> <li>• &lt;TRCMODE&gt; indicates the trace mode; valid values are shown in the “TRCMODE” section on page 4-94 and &lt;TRCMODE&gt; is optional</li> <li>• &lt;TRCFORMAT&gt; is the size of the trace message. In SONET mode, only 1 or 16 bytes are applicable for the J0 section trace. The TT1 level trace is only 64 bytes. Valid values are shown in the “TRCFORMAT” section on page 4-93 and &lt;TRCFORMAT&gt; is optional</li> </ul> |
| Output Example | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD "CHAN-2-2,OCH::TRCLEVEL=TTI-PM,EXPTRC=\“AAA\”,TRC=\“AAA\”,&lt;br&gt; INCTRC=\“AAA\”,TRCMODE=MAN,TRCFORMAT=64-BYTE" ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### 3.4.212 RTRV-UCP-CC: Retrieve Unified Control Plane Control Channel

(Cisco ONS 15454 only)

This command creates a UCP IP control channel attributes.

The ALL AID is used for UCP retrieving command input only. A NULL AID in the IPCC’s retrieval command defaults to the ALL AID, which returns all the IPCCs of the node.

Retrieve all of the UCP IPCCs example:

```
RTRV-UCP-CC:::A;
```

Notes:

1. If the control channel is not found, a SRQN (Status, Invalid Request) error message is returned.
2. If the IPCC type is ROUTED (CCTYPE=ROUTED), both MTU and CRCMD fields are grayed out.



| Section          | RTRV-UCP-CC Description                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | UCP                                                                                                                                                                                                                                                                                                                                                                                                            |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                       |
| Related Messages | DLT-UCP-CC                      ENT-UCP-NBR<br>DLT-UCP-IF                      REPT ALM UCP<br>DLT-UCP-NBR                      REPT EVT UCP<br>ED-UCP-CC                        RTRV-ALM-UCP<br>ED-UCP-IF                        RTRV-COND-UCP<br>ED-UCP-NBR                      RTRV-UCP-IF<br>ED-UCP-NODE                     RTRV-UCP-NBR<br>ENT-UCP-CC                       RTRV-UCP-NODE<br>ENT-UCP-IF |
| Input Format     | RTRV-UCP-CC:[<TID>]:[<AID >]:<CTAG>[:];<br>where:<br><AID> indicates an individual IPCC ID. The ALL AID is used for UCP retrieving command input only. A NULL AID in the IPCCs retrieval command defaults to the ALL AID which returns all the IPCCs of the node. <AID> is from the <a href="#">“IPCC” section on page 4-29</a> and a null value is equivalent to ALL                                          |
| Input Example    | RTRV-UCP-CC:CISCO:CC-9:CTAG;                                                                                                                                                                                                                                                                                                                                                                                   |

| Section       | RTRV-UCP-CC Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format | <p>SID DATE TIME<br/>M CTAG COMPLD</p> <pre>“[&lt;AID&gt;]::NBRIX=&lt;NBRIX&gt;,CCTYPE=&lt;CCTYPE&gt;,[PORT=&lt;PORT&gt;], LOCALCCID=&lt;LOCALCCID&gt;,LOCALIPCC=&lt;LOCALIPCC&gt;, REMOTECCID=&lt;REMOTECCID&gt;,[REMOTEIPCC=&lt;REMOTEIPCC&gt;], LMPHELLOINT=&lt;LMPHELLOINT&gt;, OPERLMPHELLOINT=&lt;OPERLMPHELLOINT&gt;, LMPHELLODEADINT=&lt;LMPHELLODEADINT&gt;, OPERLMPHELLODEADINT=&lt;OPERLMPHELLODEADINT&gt;, [TUNMD=&lt;TUNMD&gt;],[MTU=&lt;MTU&gt;],[CRCMD=&lt;CRCMD&gt;]”</pre> <p>;</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates an individual IPCC ID; &lt;AID&gt; is from the <a href="#">“IPCC” section on page 4-29</a> and &lt;AID&gt; is optional</li> <li>• &lt;NBRIX&gt; indicates the neighbor node index and is an integer</li> <li>• &lt;CCTYPE&gt; indicates the type of the control channel; valid values are shown in the <a href="#">“UCP_IPCC_TYPE” section on page 4-96</a></li> <li>• &lt;PORT&gt; indicates the port which the control channel is configured, while the CCTYPE is the type of SDCC; &lt;PORT&gt; is from the <a href="#">“FACILITY” section on page 4-28</a> and is optional</li> <li>• &lt;LOCALCCID&gt; indicates the local control channel ID and is an integer</li> <li>• &lt;LOCALIPCC&gt; indicates the local IP address of the control channel and is a string</li> <li>• &lt;REMOTECCID&gt; indicates the remote control channel ID and is an integer</li> <li>• &lt;REMOTEIPCC&gt; indicates the remote IP address of the control channel; &lt;REMOTEIPCC&gt; is a string and is optional</li> <li>• &lt;LMPHELLOINT&gt; indicates the provisioned interval between hello messages sent by this node. &lt;LMPHELLOINT&gt; has a range of 1–10 seconds with a default of 5 seconds; &lt;LMPHELLOINT&gt; is an integer</li> <li>• &lt;OPERLMPHELLOINT&gt; indicates the LMP hello interval negotiated between a node and its neighbor and the negotiated value is used during operation. This value is the negotiated, operational value of LMP Hello interval. This value is initialized to the hello Interval at the time of IPCC creation and is updated after the negotiation is done with the neighbor; &lt;OPERLMPHELLOINT&gt; is a float</li> <li>• &lt;LMPHELLODEADINT&gt; indicates the control channel time-out interval (in milliseconds) by the neighbor if the neighbor does not receive the hello message, and defaults to 15 (with the range of 3–30). This interval has to be at least as large as the hello interval and is normally set to 3 times the hello interval. Its range is 3 seconds to 30 seconds with a default of 15 seconds. &lt;LMPHELLODEADINT&gt; is an integer</li> <li>• &lt;OPERLMPHELLODEADINT&gt; indicates the operational value of the LMP interval negotiated between this node and its neighbor. This value is initialized to the helloDeadInterval at the time of IPCC creation and is updated after the negotiation is done with the neighbor; &lt;OPERLMPHELLODEADINT&gt; is a float</li> </ul> |

| Section                   | RTRV-UCP-CC Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format (continued) | <ul style="list-style-type: none"> <li>• &lt;TUNMD&gt; indicates the IP tunneling option. It defaults to disabled; valid values are shown in the “UCP_CC_TUN_MD” section on page 4-95 and &lt;TUNMD&gt; is optional</li> <li>• &lt;MTU&gt; indicates the MTU size of this control channel; &lt;MTU&gt; is an integer and is optional</li> <li>• &lt;CRCMD&gt; indicates the CRC mode for this control channel. It is applicable to IPCCs in SDCC type; valid values are shown in the “UCP_CRC_MODE” section on page 4-96 and &lt;CRCMD&gt; is optional</li> </ul> |
| Output Example            | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD “CC-9::NBRIX=8,CCTYPE=SDCC,PORT=FAC-2-1,LOCALCCID=9, LOCALIPCC=172.20.209.31,REMOTEECCID=2, REMOTEIPCC=172.20.209.15,LMPHELLOINT=10, OPERLMPHELLOINT=10.00,LMPHELLODEADINT=30, OPERLMPHELLODEADINT=30.00,TUNMD=DISABLED, MTU=1500,CRCMD=16-BIT” ;</pre>                                                                                                                                                                                                                                                             |
| Errors                    | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### 3.4.213 RTRV-UCP-IF: Retrieve Unified Control Plane Interface

(Cisco ONS 15454 only)

This command retrieves UCP interface attributes.

The local interface ID (LOCALIFID) is used by LMP/RSVP (Line Management Protocol/Resource reservation Protocol). If zero is passed in as the local Interface ID of the data link, then the node assigns a value for it. If the user specifies a non-zero value, then the node checks if that Interface ID is available and uses it.

If the UCP interface/data link control channel type is SDCC type, the local interface ID should be same as CCID.

Retrieve all of the UCP interfaces example:

```
RTRV-UCP-IF::A;
```



**Note**

If this command is sent twice or inputs invalid data, as SRQN (Status, Invalid Request) error message is returned.

| Section  | RTRV-UCP-IF Description |
|----------|-------------------------|
| Category | UCP                     |
| Security | Retrieve                |

| Section          | RTRV-UCP-IF Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Messages | DLT-UCP-CC REPT ALM UCP<br>DLT-UCP-IF REPT EVT UCP<br>DLT-UCP-NBR RTRV-ALM-UCP<br>ED-UCP-CC RTRV-CKT-ORIG<br>ED-UCP-IF RTRV-CKT-TERM<br>ED-UCP-NBR RTRV-COND-UCP<br>ED-UCP-NODE RTRV-UCP-CC<br>ENT-UCP-CC RTRV-UCP-NBR<br>ENT-UCP-IF RTRV-UCP-NODE<br>ENT-UCP-NBR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Input Format     | RTRV-UCP-IF:[<TID>]:[<AID>]:<CTAG>[:[::]]; <p>where:</p> <ul style="list-style-type: none"> <li>&lt;AID&gt; indicates the interface port index of the data link; &lt;AID&gt; is from the <a href="#">“FACILITY” section on page 4-28</a> and a null value is equivalent to ALL</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Input Example    | RTRV-UCP-IF:CISCO:FAC-2-1:CTAG;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“[<AID>]::NBRIX=<NBRIX>,CCID=<CCID>,LOCALIFID=<LOCALIFID>,<br>REMOTEIFID=<REMOTEIFID>,TNATYPE=<TNATYPE>,<br>TNAADDR=<TNAADDR>,CORENETWORKID=<CORENETWORKID>”<br>; <p>where:</p> <ul style="list-style-type: none"> <li>&lt;AID&gt; indicates the interface port index of the data link; &lt;AID&gt; is from the <a href="#">“FACILITY” section on page 4-28</a> and is optional</li> <li>&lt;NBRIX&gt; indicates a neighbor within the local node; &lt;NBRIX&gt; is an integer</li> <li>&lt;CCID&gt; indicates the control channel ID and is an integer</li> <li>&lt;LOCALIFID&gt; indicates the local interface ID used by LMP/RSVP (line management protocol/resource reservation protocol); &lt;LOCALIFID&gt; is an integer</li> <li>&lt;REMOTEIFID&gt; indicates the interface ID on the neighbor’s side and in an integer</li> <li>&lt;TNATYPE&gt; indicates the TNA (transport network administered) type; valid values are shown in the <a href="#">“UCP_TNA_TYPE” section on page 4-96</a></li> <li>&lt;TNAADDR&gt; indicates the TNA IP address and is a string</li> <li>&lt;CORENETWORKID&gt; indicates the core network ID and is an integer</li> </ul> |
| Output Example   | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“FAC-2-1::NBRIX=12,CCID=16,LOCALIFID=16,REMOTEIFID=5,<br>TNATYPE=IPV4,TNAADDR=172.20.209.73,CORENETWORKID=9”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### 3.4.214 RTRV-UCP-NBR: Retrieve Unified Control Plane Neighbor

(Cisco ONS 15454 only)

This command retrieves a UCP neighbor.

The default value of the node name can be overwritten by the TL1 user to a string in a maximum size of 20 characters. If the node name includes non-identified TL1 characters (e.g. space), the text string format with the double quotes is required.

The ALL AID is used for UCP retrieving command input only. A NULL AID in the retrieval command defaults to the ALL AID, which returns all the UCP neighbors of the node.

Retrieve all the UCP neighbors example:

```
RTRV-UCP-NBR:::A;
```

| Section          | RTRV-UCP-NBR Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |             |            |              |             |              |           |              |           |               |            |             |             |             |            |               |            |  |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------|------------|--------------|-------------|--------------|-----------|--------------|-----------|---------------|------------|-------------|-------------|-------------|------------|---------------|------------|--|
| Category         | UCP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |             |            |              |             |              |           |              |           |               |            |             |             |             |            |               |            |  |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |             |            |              |             |              |           |              |           |               |            |             |             |             |            |               |            |  |
| Related Messages | <table> <tbody> <tr> <td>DLT-UCP-CC</td> <td>ENT-UCP-NBR</td> </tr> <tr> <td>DLT-UCP-IF</td> <td>REPT ALM UCP</td> </tr> <tr> <td>DLT-UCP-NBR</td> <td>REPT EVT UCP</td> </tr> <tr> <td>ED-UCP-CC</td> <td>RTRV-ALM-UCP</td> </tr> <tr> <td>ED-UCP-IF</td> <td>RTRV-COND-UCP</td> </tr> <tr> <td>ED-UCP-NBR</td> <td>RTRV-UCP-CC</td> </tr> <tr> <td>ED-UCP-NODE</td> <td>RTRV-UCP-IF</td> </tr> <tr> <td>ENT-UCP-CC</td> <td>RTRV-UCP-NODE</td> </tr> <tr> <td>ENT-UCP-IF</td> <td></td> </tr> </tbody> </table> | DLT-UCP-CC | ENT-UCP-NBR | DLT-UCP-IF | REPT ALM UCP | DLT-UCP-NBR | REPT EVT UCP | ED-UCP-CC | RTRV-ALM-UCP | ED-UCP-IF | RTRV-COND-UCP | ED-UCP-NBR | RTRV-UCP-CC | ED-UCP-NODE | RTRV-UCP-IF | ENT-UCP-CC | RTRV-UCP-NODE | ENT-UCP-IF |  |
| DLT-UCP-CC       | ENT-UCP-NBR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |            |             |            |              |             |              |           |              |           |               |            |             |             |             |            |               |            |  |
| DLT-UCP-IF       | REPT ALM UCP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |             |            |              |             |              |           |              |           |               |            |             |             |             |            |               |            |  |
| DLT-UCP-NBR      | REPT EVT UCP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |             |            |              |             |              |           |              |           |               |            |             |             |             |            |               |            |  |
| ED-UCP-CC        | RTRV-ALM-UCP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |             |            |              |             |              |           |              |           |               |            |             |             |             |            |               |            |  |
| ED-UCP-IF        | RTRV-COND-UCP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |            |             |            |              |             |              |           |              |           |               |            |             |             |             |            |               |            |  |
| ED-UCP-NBR       | RTRV-UCP-CC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |            |             |            |              |             |              |           |              |           |               |            |             |             |             |            |               |            |  |
| ED-UCP-NODE      | RTRV-UCP-IF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |            |             |            |              |             |              |           |              |           |               |            |             |             |             |            |               |            |  |
| ENT-UCP-CC       | RTRV-UCP-NODE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |            |             |            |              |             |              |           |              |           |               |            |             |             |             |            |               |            |  |
| ENT-UCP-IF       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |            |             |            |              |             |              |           |              |           |               |            |             |             |             |            |               |            |  |
| Input Format     | <p>RTRV-UCP-NBR:[&lt;TID&gt;]:[&lt;AID&gt;]:&lt;CTAG&gt;[:::];</p> <p>where:</p> <ul style="list-style-type: none"> <li>&lt;AID&gt; indicates an individual neighbor AID of the UCP; &lt;AID&gt; is from the “NBR” section on page 4-30 and a null value is equivalent to ALL</li> </ul>                                                                                                                                                                                                                          |            |             |            |              |             |              |           |              |           |               |            |             |             |             |            |               |            |  |
| Input Example    | RTRV-UCP-NBR:CISCO:NBR-8:CTAG;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |            |             |            |              |             |              |           |              |           |               |            |             |             |             |            |               |            |  |

| Section        | RTRV-UCP-NBR Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <pre>SID DATE TIME M CTAG COMPLD "&lt;AID&gt;::[NBRIX=&lt;NBRIX&gt;],[NODEID=&lt;NODEID&gt;],[NAME=&lt;NAME&gt;],[ NDEN=&lt;NDEN&gt;],[HELLOEN=&lt;HELLOEN&gt;],[HELLOINT=&lt;HELLOINT&gt;],[ REFREDEN=&lt;REFREDEN&gt;],[NUMRXMTS=&lt;NUMRXMTS&gt;]" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates an individual neighbor AID of the UCP. The ALL AID and NODEID (IP address, e.g. "AAA.BB.CC.D") are used for UCP retrieving command input only; &lt;AID&gt; is from the "NBR" section on page 4-30</li> <li>• &lt;NBRIX&gt; indicates a neighbor within the local node; &lt;NBRIX&gt; is an integer and is optional</li> <li>• &lt;NODEID&gt; indicates the neighbor node ID as received in RSVP, LMP messages from that node; &lt;NODEID&gt; is a string and is optional</li> <li>• &lt;NAME&gt; is a string and is optional</li> <li>• &lt;NDEN&gt; indicates if the neighbor discovery is enabled or not for this neighbor; valid values are shown in the "ON_OFF" section on page 4-76 and &lt;NDEN&gt; is optional</li> <li>• &lt;HELLOEN&gt; indicates if the RSVP hello is enabled to this neighbor or not; valid values are shown in the "ON_OFF" section on page 4-76 and &lt;HELLOEN&gt; is optional</li> <li>• &lt;HELLOINT&gt; indicates the interval between hello messages to the neighbor; &lt;HELLOINT&gt; is an integer and is optional</li> <li>• &lt;REFREDEN&gt; indicates if the refresh reduction is enabled or not; valid values are shown in the "ON_OFF" section on page 4-76 and &lt;REFREDEN&gt; is optional</li> <li>• &lt;NUMRXMTS&gt; indicates the maximum number of retransmits of each message; &lt;NUMRXMTS&gt; is not editable, is an integer and is optional</li> </ul> |
| Output Example | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD "NBR-8::NBRIX=8,NODEID=192.168.100.52,NAME=NODE-B, NDEN=Y,HELLOEN=Y,HELLOINT=20,REFREDEN=N,NUMRXMTS=3" ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

### 3.4.215 RTRV-UCP-NODE: Retrieve Unified Control Plane Node

(Cisco ONS 15454 only)

This command retrieves UCP node level attributes.

The NODEID is the unique number used to identify the local node in LMP, RSVP messages sent to the neighbors. It defaults to the local ethernet interface address (ISA).

The retry initial interval (in seconds) is used for that have been released by the net work side. This interval has a range of 60 seconds (1 minute) to 1800 seconds (30 minutes), with a default value of 180 seconds.

The retry max interval (in seconds) is used for released circuits. The node will back off exponentially from the initial retry interval to this maximum value of 600 seconds (10 minutes).

The restart time is used to be signaled to neighbors. It indicates the time taken by this node (in seconds) to restart. This timer has a range of 1 second to 10 seconds with a default of 5 seconds.

The recovery time is used to be signaled to neighbors. It indicates the time taken by this node (in seconds) to re-sync path, reservation state with a given neighbor. This timer has a range of 300 seconds (5 minutes) to 1800 seconds (30 minutes) and a default value of 600 seconds (10 minutes).

The transmit interval is used to retransmit un-acknowledged messages. This timer has a range of 1 second to 7 seconds with a default value of 1 second.

The refresh interval is used to refresh path, reservation state. This interval has a range of 30 seconds to 4060800 seconds (47 days) with a default value of 30 seconds.

The timeout RESV interval is used to wait for a reservation message in response to a PATH message. This interval has a range of 10–180 seconds with a default value of 60 seconds.

The timeout RESV CONF interval is used to wait for a RESV CONF message in response to a RESV message. This interval has a range of 10–180 seconds with a default value of 60 seconds.

The Source Deletion in progress is a timeout interval while the source is in the progress of cleanly deleting a call. This interval has a range of 10–180 seconds with a default of 60 seconds.

The Destination Deletion progress is a timeout interval while the destination is in the progress of cleanly deleting a call. This interval has a range of 10–180 seconds with a default value of 60 seconds.

Notes:

1. If the retry initial interval is set to zero, it will be interpreted as having the retry procedure disable.
2. The retry maximum interval has to be set to a higher value than the initial retry interval.

| Section          | RTRV-UCP-NODE Description                                                                                                                                                                                                                                               |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | UCP                                                                                                                                                                                                                                                                     |
| Security         | Retrieve                                                                                                                                                                                                                                                                |
| Related Messages | DLT-UCP-CC<br>DLT-UCP-IF<br>DLT-UCP-NBR<br>ED-UCP-CC<br>ED-UCP-IF<br>ED-UCP-NBR<br>ED-UCP-NODE<br>ENT-UCP-CC<br>ENT-UCP-IF<br>ENT-UCP-NBR<br>ENT-UCP-NBR<br>REPT ALM UCP<br>REPT EVT UCP<br>RTRV-ALM-UCP<br>RTRV-COND-UCP<br>RTRV-UCP-CC<br>RTRV-UCP-IF<br>RTRV-UCP-NBR |
| Input Format     | RTRV-UCP-NODE:[<TID>]::<CTAG>[:::];                                                                                                                                                                                                                                     |
| Input Example    | RTRV-UCP-NODE:CISCO::CTAG;                                                                                                                                                                                                                                              |

| Section        | RTRV-UCP-NODE Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <p>SID DATE TIME<br/>M CTAG COMPLD<br/>“:[NODEID=&lt;NODEID&gt;],[INITRETRY=&lt;INITRETRY&gt;],[<br/>[MAXRETRY=&lt;MAXRETRY&gt;],[RESTARTTM=&lt;RESTARTTM&gt;],[<br/>[RECOVTM=&lt;RECOVTM&gt;],[RXMTINT=&lt;RXMTINT&gt;],[<br/>[RFRSHINT=&lt;RFRSHINT&gt;],[RESVTIMEOUT=&lt;RESVTIMEOUT&gt;],[<br/>[RESVCONFTIMEOUT=&lt;RESVCONFTIMEOUT&gt;],[<br/>[SOURCEDIP=&lt;SOURCEDIP&gt;],[DESTINATIONDIP=&lt;DESTINATIONDIP&gt;]”<br/>;</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;NODEID&gt; indicates the node IP address, is a string and is optional</li> <li>• &lt;INITRETRY&gt; indicates the circuit retry initial interval (in seconds); &lt;INITRETRY&gt; is an integer and is optional</li> <li>• &lt;MAXRETRY&gt; indicates the circuit retry maximum retry interval (in seconds); &lt;MAXRETRY&gt; is an integer and is optional</li> <li>• &lt;RESTARTTM&gt; indicates the restart time taken by the local node; &lt;RESTARTTM&gt; is an integer and is optional</li> <li>• &lt;RECOVTM&gt; indicates the time taken by the local node to re-synchronize the path, reservation state with a given neighbor; &lt;RECOVTM&gt; is an integer and is optional</li> <li>• &lt;RXMTINT&gt; indicates the interval for re-transmitting un-acknowledged messages; &lt;RXMTINT&gt; is an integer and is optional</li> <li>• &lt;RFRSHINT&gt; indicates the interval for refreshing path, reservation state; &lt;RFRSHINT&gt; is an integer and is optional</li> <li>• &lt;RESVTIMEOUT&gt; indicates the timeout interval for waiting for a reservation message in response to a PATH message; &lt;RESVTIMEOUT&gt; is an integer and is optional</li> <li>• &lt;RESVCONFTIMEOUT&gt; indicates the timeout interval for waiting for a RESV CONF message in response to a RESV message; &lt;RESVCONFTIMEOUT&gt; is an integer and is optional</li> <li>• &lt;SOURCEDIP&gt; indicates the timeout interval of the SourceDip (Source Deletion in Progress) while the source is in the process of cleanly deleting a call; &lt;SOURCEDIP&gt; is an integer and is optional</li> <li>• &lt;DESTINATIONDIP&gt; indicates the timeout interval of the DestinationDip (Destination Deletion in Progress) while the destination is in the process of cleanly deleting a call; &lt;DESTINATIONDIP&gt; is an integer and is optional</li> </ul> |
| Output Example | <p>TID-000 1998-06-20 14:30:00<br/>M 001 COMPLD<br/>“:[NODEID=192.168.100.52,INITRETRY=180,MAXRETRY=600,<br/>RESTARTTM=5,RECOVTM=600,RXMTINT=1,RFRSHINT=30,<br/>RESVTIMEOUT=60,RESVCONFTIMEOUT=60,<br/>SOURCEDIP=60,DESTINATIONDIP=60”</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |



### 3.4.216 RTRV-USER-SECU: Retrieve User Security

This command retrieves the security information of a specified user or list of users. The keyword ALL can be used to obtain a list of all users. For security reasons the password cannot be retrieved.

A Superuser can retrieve any user's security information. A user with MAINT, PROV, or RTRV privileges can only retrieve their own information.



#### Note

When using the keyword ALL, all users created for the system are displayed. This includes users created outside of the TL1 environment (i.e., userids/passwords greater than 10 characters in length). Although displayed via the RTRV-USER-SECU command, these users will not be able to log into the TL1 environment.

| Section          | RTRV-USER-SECU Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |               |              |              |               |               |      |               |           |               |                |                  |               |               |             |                |        |                   |              |  |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------|--------------|--------------|---------------|---------------|------|---------------|-----------|---------------|----------------|------------------|---------------|---------------|-------------|----------------|--------|-------------------|--------------|--|
| Category         | Security                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |               |              |              |               |               |      |               |           |               |                |                  |               |               |             |                |        |                   |              |  |
| Security         | Superuser                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |          |               |              |              |               |               |      |               |           |               |                |                  |               |               |             |                |        |                   |              |  |
| Related Messages | <table border="0"> <tr> <td>ACT-USER</td> <td>ENT-USER-SECU</td> </tr> <tr> <td>ALW-MSG-SECU</td> <td>INH-MSG-SECU</td> </tr> <tr> <td>ALW-USER-SECU</td> <td>INH-USER-SECU</td> </tr> <tr> <td>CANC</td> <td>REPT ALM SECU</td> </tr> <tr> <td>CANC-USER</td> <td>REPT EVT SECU</td> </tr> <tr> <td>CANC-USER-SECU</td> <td>REPT EVT SESSION</td> </tr> <tr> <td>DLT-USER-SECU</td> <td>RTRV-CMD-SECU</td> </tr> <tr> <td>ED-CMD-SECU</td> <td>RTRV-DFLT-SECU</td> </tr> <tr> <td>ED-PID</td> <td>SET-ATTR-SECUDFLT</td> </tr> <tr> <td>ED-USER-SECU</td> <td></td> </tr> </table> | ACT-USER | ENT-USER-SECU | ALW-MSG-SECU | INH-MSG-SECU | ALW-USER-SECU | INH-USER-SECU | CANC | REPT ALM SECU | CANC-USER | REPT EVT SECU | CANC-USER-SECU | REPT EVT SESSION | DLT-USER-SECU | RTRV-CMD-SECU | ED-CMD-SECU | RTRV-DFLT-SECU | ED-PID | SET-ATTR-SECUDFLT | ED-USER-SECU |  |
| ACT-USER         | ENT-USER-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |               |              |              |               |               |      |               |           |               |                |                  |               |               |             |                |        |                   |              |  |
| ALW-MSG-SECU     | INH-MSG-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |               |              |              |               |               |      |               |           |               |                |                  |               |               |             |                |        |                   |              |  |
| ALW-USER-SECU    | INH-USER-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |               |              |              |               |               |      |               |           |               |                |                  |               |               |             |                |        |                   |              |  |
| CANC             | REPT ALM SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |               |              |              |               |               |      |               |           |               |                |                  |               |               |             |                |        |                   |              |  |
| CANC-USER        | REPT EVT SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |               |              |              |               |               |      |               |           |               |                |                  |               |               |             |                |        |                   |              |  |
| CANC-USER-SECU   | REPT EVT SESSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |               |              |              |               |               |      |               |           |               |                |                  |               |               |             |                |        |                   |              |  |
| DLT-USER-SECU    | RTRV-CMD-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |               |              |              |               |               |      |               |           |               |                |                  |               |               |             |                |        |                   |              |  |
| ED-CMD-SECU      | RTRV-DFLT-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          |               |              |              |               |               |      |               |           |               |                |                  |               |               |             |                |        |                   |              |  |
| ED-PID           | SET-ATTR-SECUDFLT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |               |              |              |               |               |      |               |           |               |                |                  |               |               |             |                |        |                   |              |  |
| ED-USER-SECU     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |          |               |              |              |               |               |      |               |           |               |                |                  |               |               |             |                |        |                   |              |  |
| Input Format     | RTRV-USER-SECU:[<TID>]:<UID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>&lt;UID&gt; the user ID or the keyword ALL. A non-superuser can only specify their own user ID; &lt;UID&gt; is a string and must not be null</li> </ul>                                                                                                                                                                                                                                                                                                                                       |          |               |              |              |               |               |      |               |           |               |                |                  |               |               |             |                |        |                   |              |  |
| Input Example    | RTRV-USER-SECU::CISCO15:1;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |               |              |              |               |               |      |               |           |               |                |                  |               |               |             |                |        |                   |              |  |

| Section        | RTRV-USER-SECU Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | SID DATE TIME<br>M CTAG COMPLD<br>“<UID>:,<PRIVILEGE>:LOGGEDIN=<LOGGEDIN>,<br>[NUMSESSIONS=<NUMSESS>],[LOCKEDOUT=<LOCKEDOUT>,<br>[DISABLED=<DISABLED>]”<br>;<br>where: <ul style="list-style-type: none"> <li>• &lt;UID&gt; the user ID that was retrieved; &lt;UID&gt; is a string</li> <li>• &lt;PRIVILEGE&gt; the privilege of the user; valid values are shown in the <a href="#">“PRIVILEGE” section on page 4-82</a></li> <li>• &lt;LOGGEDIN&gt; indicates if the user is logged in to the NE; valid values are shown in the <a href="#">“YES_NO” section on page 4-99</a></li> <li>• &lt;NUMSESS&gt; the number of active sessions for that user (the number of times the user is currently logged into the NE). If &lt;LOGGEDIN&gt; is NO, then &lt;NUMSESS&gt; is not present. &lt;NUMSESS&gt; is an integer and is optional</li> <li>• &lt;LOCKEDOUT&gt; indicates if the user is locked out of the NE; valid values are shown in the <a href="#">“YES_NO” section on page 4-99</a></li> <li>• &lt;DISABLED&gt; indicates if the user is disabled; valid values are shown in the <a href="#">“YES_NO” section on page 4-99</a>. &lt;DISABLED&gt; is optional</li> </ul> |
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“CISCO15:.,SUPER:LOGGEDIN=YES,NUMSESSIONS=1,LOCKEDOUT=NO,<br>DISABLED=NO”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### 3.4.217 RTRV-VCG: Retrieve Virtual Concatenated Group

(Cisco ONS 15454 only)

This command retrieves all the attributes provisioned for a VCG.

| Section          | RTRV-VCG Description                                                                                                                                                                                                        |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | VCAT                                                                                                                                                                                                                        |
| Security         | Retrieve                                                                                                                                                                                                                    |
| Related Messages | DLT-VCG<br>ENT-VCG                                                                                                                                                                                                          |
| Input Format     | RTRV-VCG:[<TID>]:<SRC>:<CTAG>[:::];<br>where: <ul style="list-style-type: none"> <li>• &lt;SRC&gt; AID to address the VCG from the <a href="#">“FACILITY” section on page 4-28</a>; &lt;SRC&gt; must not be null</li> </ul> |
| Input Example    | RTRV-VCG:NODE1:FAC-1-1:1234;                                                                                                                                                                                                |

| Section        | RTRV-VCG Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <pre>SID DATE TIME M CTAG COMPLD "&lt;SRC&gt;.:TYPE=&lt;TYPE&gt;,TXCOUNT=&lt;TXCOUNT&gt;,CCT=&lt;CCT&gt;, LCAS=&lt;LCAS&gt;" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;SRC&gt; AID to address the VCG from the <a href="#">“FACILITY” section on page 4-28</a>. The ML-series cards use the VFAC AID and the FC-MR4 card uses the FAC AID</li> <li>• &lt;TYPE&gt; type of VCG member cross-connect; valid values are shown in the <a href="#">“MOD_PATH” section on page 4-73</a></li> <li>• &lt;TXCOUNT&gt; the number of VCG members in Tx direction; &lt;TXCOUNT&gt; is an integer. For the ML-series cards the only valid value is 2. For the FC-MR4 card the only valid value is 8</li> <li>• &lt;CCT&gt; cross-connect type for the VCG member cross-connect; valid values are shown in the <a href="#">“CCT” section on page 4-53</a></li> <li>• &lt;LCAS&gt; line capacity adjustment scheme mode of the VCG; valid values are shown in the <a href="#">“LCAS” section on page 4-67</a>. The ML-series cards support NONE or SW-LCAS. The FC-MR4 card supports NONE</li> </ul> |
| Output Example | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD “FAC-1-1::TYPE=STS3C,TXCOUNT=8,CCT=2WAY,LCAS=LCAS” ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

### 3.4.218 RTRV-VT: RTRV VT

This command retrieves the attributes associated with a VT path based on the granularity level of NE/Slot-specific VTs.

Supported AIDs are ALL, SLOT-N (N=1,2,...ALL), VT-<SLOT>[-<PORT>]-<STS NUMBER>-<VT GROUP>-<VT NUMBER>.



#### Note

The RVRTV, RVTM, HOLDOFFTIMER and UPSRPTHSTATE parameters only apply to path protection.

| Section          | RTRV-VT Description |
|------------------|---------------------|
| Category         | Paths               |
| Security         | Retrieve            |
| Related Messages | —                   |

| Section        | RTRV-VT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format   | RTRV-VT:[<TID>]:<AID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is an access identifier from the <a href="#">“AidUnionId”</a> section on page 4-15 and must not be null</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Input Example  | RTRV-VT:TID:VT1-1-1-1-1:1;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Output Format  | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>::[LEVEL=<LEVEL>],[RVRTV=<RVRTV>],[RVTM=<RVTM>],[<br>HOLDOFFTIMER=<HOLDOFFTIMER>],[TACC=<TACC>],[<br>TAPTYPE=<TAPTYPE>],[UPSRPTHSTATE=<UPSRPTHSTATE>]:[<PST>],<br><SST>”<br>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is an access identifier from the <a href="#">“AidUnionId”</a> section on page 4-15</li> <li>&lt;LEVEL&gt; indicates the rate of the cross-connected channel. Applicable only to VT1 path; valid values are shown in the <a href="#">“VT_PATH”</a> section on page 4-98</li> <li>&lt;RVRTV&gt; identifies a revertive mode which only applies to path protection and defaults to N (non-revertive mode) when a path protection is created; valid values for &lt;RVRTV&gt; are shown in the <a href="#">“ON_OFF”</a> section on page 4-76 and &lt;RVRTV&gt; is optional</li> <li>&lt;RVTM&gt; identifies a revertive time which only applies to path protection and defaults to empty because &lt;RVRTV&gt; is N when a path protection is created; valid values for &lt;RVTM&gt; are shown in the <a href="#">“REVERTIVE_TIME”</a> section on page 4-84 and &lt;RVTM&gt; is optional</li> <li>&lt;HOLDOFFTIMER&gt; is an integer and is optional</li> <li>&lt;TACC&gt; test access; &lt;TACC&gt; is an integer and is optional</li> <li>&lt;TAPTYPE&gt; indicates TAP type; valid values are shown in the <a href="#">“TAPTYPE”</a> section on page 4-92. &lt;TAPTYPE&gt; is optional</li> <li>&lt;UPSRPTHSTATE&gt; indicates whether a given AID is the working or standby path of a path protection cross-connect; valid values are shown in the <a href="#">“STATUS”</a> section on page 4-86 and &lt;UPSRPTHSTATE&gt; is optional</li> <li>&lt;PST&gt; primary state; valid values are shown in the <a href="#">“PST”</a> section on page 4-83. &lt;PST&gt; is optional</li> <li>&lt;SST&gt; secondary state; valid values are shown in the <a href="#">“SST”</a> section on page 4-86. &lt;SST&gt; is optional</li> </ul> |
| Output Example | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“VT1-1-1-1-1-1::LEVEL=VT1,RVRTV=Y,RVTM=1.0,<br>HOLDOFFTIMER=2000,TACC=8,TAPTYPE=SINGLE,<br>UPSRPTHSTATE=ACT:OOS,AINS”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Errors         | Errors are listed in <a href="#">Table 7-33</a> on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## 3.4.219 RTRV-WDMANS: Retrieve Wavelength Division Multiplexing Automatic Node Setup

(Cisco ONS 15454 only)

This command edits the automatic optical node setup (AONS) application attributes.

| Section          | RTRV-WDMANS Description                                                                                                                                                                            |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | DWDM                                                                                                                                                                                               |
| Security         | Retrieve                                                                                                                                                                                           |
| Related Messages | ED-WDMANS<br>RTRV-NE-WDMANS                                                                                                                                                                        |
| Input Format     | RTRV-WDMANS:[<TID>]:<AID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the AID from the <a href="#">“WDMANS”</a> section on page 4-36 and must not be null</li> </ul> |
| Input Example    | RTRV-WDMANS:PENNGROVE:WDMANS-W:114;                                                                                                                                                                |

| Section        | RTRV-WDMANS Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Format  | <pre>SID DATE TIME M CTAG COMPLD "&lt;AID&gt;::[POWER-IN=&lt;POWERIN&gt;],[POWER-OUT=&lt;POWEROUT&gt;],[ POWER-EXP=&lt;POWEREXP&gt;],[POWER-DROP=&lt;POWERDROP&gt;],[ SYS-TYPE=&lt;SYSTYPE&gt;],[APC-ENABLE=&lt;APCENABLE&gt;],[ RING-TYPE=&lt;RINGTYPE&gt;]" ;</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the WDMANS AID from the <a href="#">“WDMANS” section on page 4-36</a></li> <li>• &lt;POWERIN&gt; input power for the OADM section of an OADM optical network element; &lt;POWERIN&gt; is a float expressed in dBm, is a string and is optional</li> <li>• &lt;POWEROUT&gt; is the output power for OADM or Mux/Demux of HUB, TERMINAL or OADM optical NE; &lt;POWEROUT&gt; is a float expressed in dBm, is a string and is optional</li> <li>• &lt;POWEREXP&gt; is the express power for the Mux/Demux section of HUB or TERMINAL optical NE; &lt;POWEREXP&gt; is a float expressed in dBm, is a string and is optional</li> <li>• &lt;POWERDROP&gt; is the drop power for the Mux/Demux section of a HUB or TERMINAL optical NE; &lt;POWERDROP&gt; is a float expressed in dBm, is a string and is optional</li> <li>• &lt;STSYPE&gt; is the type of interconnected fiber between two adjacent nodes and the length category between them; valid values are shown in the <a href="#">“SYS_TYPE” section on page 4-90</a> and &lt;SYSTYPE&gt; is optional</li> <li>• &lt;APCENABLE&gt; is the enable/disable of the automatic power control application; valid values are shown in the <a href="#">“EXT_RING” section on page 4-65</a> and &lt;APCENABLE&gt; is optional</li> <li>• &lt;RINGTYPE&gt; is the type of the network where the DWDM node is installed; valid values are shown in the <a href="#">“DWDM_RING_TYPE” section on page 4-58</a> and &lt;RINGTYPE&gt; is optional</li> </ul> |
| Output Example | <pre>TID-000 1998-06-20 14:30:00 M 001 COMPLD "WDMANS-W::POWER-IN=10.0,POWER-OUT=10.0,POWER-EXP=10.0, POWER-DROP=10.0, SYS-TYPE=SMF-28-SR,APC-ENABLE=Y, RING-TYPE=METRO-CORE" ;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Errors         | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

### 3.4.220 RTRV-WLEN: Retrieve Wavelength

(Cisco ONS 15454 only)

This command retrieves the wavelength provisioning information.

| Section          | RTRV-WLEN Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | DWDM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Security         | Retrieve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Related Messages | DLT-WLEN<br>ED-WLEN<br>ENT-WLEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Input Format     | RTRV-WLEN:[<TID>]:<AID>:<CTAG>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is the wavelength AID from the “WLEN” section on page 4-37 and must not be null</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                             |
| Input Example    | RTRV-WLEN:PENNGROVE:WLEN-W-ADD-1530.33:114;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Output Format    | SID DATE TIME<br>M CTAG COMPLD<br>“<AID>::[SIZE=<SIZE>]:[<PST>],[<SST>]”<br>;<br>where: <ul style="list-style-type: none"> <li>&lt;AID&gt; is the wavelength AID from the “WLEN” section on page 4-37</li> <li>&lt;SIZE&gt; is the circuit size allocates on this wavelength; valid values are shown in the “CIRCUIT_SIZE” section on page 4-53 and &lt;SIZE&gt; is optional</li> <li>&lt;PST&gt; primary state; valid values are shown in the “PST” section on page 4-83</li> <li>&lt;SST&gt; secondary state; valid values are shown in the “SST” section on page 4-86</li> </ul> |
| Output Example   | TID-000 1998-06-20 14:30:00<br>M 001 COMPLD<br>“WLEN-W-ADD-1530.33::SIZE=MULTI-RATE:OOS,AINS”<br>;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Errors           | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### 3.4.221 SCHED-PMREPT-<MOD2>: Schedule Performance Monitoring Report (CLNT, DS1, DS3I, FC, EC1, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STM1E, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

See Table 4-11 on page 4-5 for supported modifiers by platform.

This command schedules/reschedules the NE to report the performance monitoring data for a line facility or for an STS/VT path periodically, using the automatic REPT PM message. This command can also remove the previously created schedule.

The automatic performance monitoring reporting scheduled by this command is inhibited by default. ALW-PMREPT-ALL can be used to allow the NE to send the performance monitoring report. INH-PMREPT-ALL can be used to stop the NE from sending the performance monitoring report. The schedules created for the NE can be retrieved by RTRV-PMSCHED command.

The deletion of the schedule for the automatic performance monitoring reporting can be done by issuing SCHED-PMREPT-<MOD2> with the <NUMREPT> parameter equal to zero.

## Notes:

1. The current maximum number of schedules allowed to be created for a NE is 1000. If this number of schedules has been created for the NE, an error message “Reach Limits Of MAX Schedules Allowed. Can Not Add More” will be returned if another schedule creation is attempted on the NE. Frequent use of automatic performance monitoring reporting will significantly degrade the performance of the NE.
2. A schedule cannot be created if the card associated with the schedule is not provisioned, or if the cross-connection associated with the schedule has not been created. However, a schedule is allowed to be deleted even if a card is not provisioned, or if the cross-connection has not been created.
3. The number of outstanding performance monitoring reports counter <NUMREPT> will not be decremented, and the scheduled automatic performance monitoring reporting will not start if the card associated with the schedule is not physically plugged into the slot.
4. An expired schedule would not be automatically removed. The SCHED-PMREPT command has to be issued with the <NUMREPT> parameter equal to zero in order to delete the expired schedule.
5. Identical schedules for an NE is not allowed. Two schedules are considered identical if they have the same AID, MOD2 type, performance monitor type, performance monitor level, location, direction and time period.

An error message “Duplicate Schedule” is returned when trying to create a schedule which is a duplicate of a existing schedule. However, if the existing schedule expires (with the parameter <NUMINVL> equal to zero when retrieved by the RTRV-PMSCHED command, i.e., no more performance monitoring reporting sent) the new schedule with the identical parameter will replace the existing schedule.

6. When a electrical or optical card is unprovisioned by the DLT-EQPT command, or a cross-connection is deleted by the DLT-CRS command, the schedules associated with that card or that cross-connection will be removed silently by the NE. This removal prevents another type of card or cross-connection with the same AID to be provisioned on the NE, and prevents the NE from trying to send automatic performance monitoring reports based on the existing schedules.

The card or cross connect can be unprovisioned or deleted through CTC. The schedules associated with that card or that cross-connection will also be removed silently by the NE.

7. When creating schedules on an ONS 15327 XTC card, only schedules against the working XTC card (in Slot 6) are allowed. An error message “Can Not Create Schedule On Protect Card” will be returned if you try to create a schedule on protect XTC card in Slot 5.

| Section          | SCHED-PMREPT-<MOD2> Description |                       |
|------------------|---------------------------------|-----------------------|
| Category         | Performance                     |                       |
| Security         | Maintenance                     |                       |
| Related Messages | ALW-PMREPT-ALL                  | RTRV-PMSCHED-<MOD2>   |
|                  | INH-PMREPT-ALL                  | RTRV-PMSCHED-ALL      |
|                  | INIT-REG-<MOD2>                 | RTRV-TH-<MOD2>        |
|                  | REPT PM <MOD2>                  | RTRV-TH-ALL           |
|                  | RTRV-PM-<MOD2>                  | SET-PMMODE-<STS_PATH> |
|                  | RTRV-PMMODE-<STS_PATH>          | SET-TH-<MOD2>         |



| Section      | SCHED-PMREPT-<MOD2> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format | <p>SCHED-PMREPT-&lt;MOD2&gt;:[&lt;TID&gt;]:&lt;SRC&gt;:&lt;CTAG&gt;:[&lt;REPTINVL&gt;],<br/> [&lt;REPTSTATM&gt;],[&lt;NUMREPT&gt;],[&lt;MONLEV&gt;],[&lt;LOCN&gt;],[&lt;TMPER&gt;],<br/> [&lt;TMOFST&gt;];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;SRC&gt; is from the <a href="#">“ALL” section on page 4-9</a></li> <li>• &lt;REPTINVL&gt; specifies how often a performance monitoring report is generated. The format for &lt;REPTINVL&gt; is VAL-UN; valid values for VAL (value) are: <ul style="list-style-type: none"> <li>- 1-31 if UN (units of time) is DAY</li> <li>- 1-24 if UN is HR</li> <li>- 1-1440 if UN is MIN</li> </ul> </li> </ul> <p>Examples are: 10-DAY, 12-HR, or 100-MIN. A null value for the input would default to 15-MIN. &lt;REPTINVL&gt; is a string</p> <p><b>Note</b> The minimum time for processing PM schedules is every five minutes. A &lt;REPTINVL&gt; value of less than five minutes will process every five minutes.</p> <ul style="list-style-type: none"> <li>• &lt;REPTSTATM&gt; starting time for the performance monitoring report. The format is HOD-MOH, where HOD (hour of day) ranges from 0-25, and MOH (minute of hour) ranges from 0-59. If the input value of the starting time is smaller than the current time; for example, the input value is 5-30 (5:30 in the morning) and the current time is 10:30, then the reporting will be scheduled to start at 5:30 the next day. A null value defaults to the current time of day; &lt;REPTSTATM&gt; is a string</li> </ul> |

| Section                     | SCHED-PMREPT-<MOD2> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format<br>(continued) | <ul style="list-style-type: none"> <li>• &lt;NUMREPT&gt; the number of reports that the schedule is expected to produce. A value of 0 is used to delete an existing identical schedule (see Note 5 above). If &lt;NUMREPT&gt; is null the schedule will be in effect forever until it is deleted. The value of &lt;NUMREPT&gt; will continue to be decremented even though the automatic performance monitoring reporting is inhibited; &lt;NUMREPT&gt; is an integer</li> <li>• &lt;MONLEV&gt; discriminating level for the requested monitored parameter. It applies to all MONTYPE of the scheduled performance monitoring report. The format is LEV-DIRN; valid values for LEV are decimal numbers, and valid values for DIRN are as follows: UP Monitored parameter with values equal to or greater than the value of LEV will be reported. DN Monitored parameter with values equal to or less than the value of LEV will be reported. The null input defaults to 1-UP; &lt;MONLEV&gt; is a string</li> <li>• &lt;LOCN&gt; the location being performance-monitored. The valid value is NEND or FEND. A null input defaults to NEND. FEND is not supported by all MOD2 types; valid values are shown in the “LOCATION” section on page 4-68</li> <li>• &lt;TMPER&gt; the accumulation time period. It defaults to 15-MIN; valid values are shown in the “TMPER” section on page 4-93</li> <li>• &lt;TMOFST&gt; the time offset from the end of the last complete accumulation time period to the beginning of the accumulation time period specified in TMPER. The format for is DAY-HR-MIN, where DAYS (days) range from 0–99, HR (hours) range from 0–23, and MIN (minutes) range from 0–59. A null value defaults to 0-0-0. Grouping of this parameter is not supported. &lt;TMOFST&gt; is a String.</li> </ul> |
| Input Example               | SCHED-PMREPT-OC3:NE-NAME:FAC-3-1:<br>123::60-MIN,15-30,100,,1-UP,NEND,,15-MIN,0-0-15;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Errors                      | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

### 3.4.222 SET-ALMTH-<MOD2>: Set Alarm Threshold (CLNT, DS1, DS3I, FC, EC1, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STM1E, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

(Cisco ONS 15454 only)

This command sets the alarm thresholds on the following cards/ports/channels:

MXP\_2.5G\_10G/TXP\_MR\_10G, optical service channel, optical amplifier, dispersion compensation units, multiplex/demultiplex and OADM.

The only applicable MOD2 values are CLNT/OCH/OMS/OTS.

| Section          | SET-ALMTH-<MOD2> Description |
|------------------|------------------------------|
| Category         | DWDM                         |
| Security         | Provisioning                 |
| Related Messages | RTRV-ALMTH-<MOD2>            |

| Section       | SET-ALMTH-<MOD2> Description                                                                                                                                                                                                                                                                                                                                            |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | SET-ALMTH-<MOD2>:[<TID>]:<AID>:<CTAG>::<CONDTYPE>,<THLEV>[,,,];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is from the “ALL” section on page 4-9</li> <li>• &lt;CONDTYPE&gt; is the alarm threshold montype; valid values are shown in the “ALM_THR” section on page 4-48</li> <li>• &lt;THLEV&gt; is the threshold value and is a float</li> </ul> |
| Input Example | SET-ALMTH-<MOD2>::FAC-1-1:1::OPT-LOW,10;                                                                                                                                                                                                                                                                                                                                |
| Errors        | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                           |

### 3.4.223 SET-ALMTH-EQPT: Set Alarm Equipment

(Cisco ONS 15454 only)

This command sets the alarm thresholds to manage the power level monitoring on an NE.

| Section               | SET-ALMTH-EQPT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |          |                    |               |                  |               |          |                 |         |                |          |           |               |            |                    |                 |                       |               |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|--------------------|---------------|------------------|---------------|----------|-----------------|---------|----------------|----------|-----------|---------------|------------|--------------------|-----------------|-----------------------|---------------|
| Category              | Equipment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |          |                    |               |                  |               |          |                 |         |                |          |           |               |            |                    |                 |                       |               |
| Security              | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |          |                    |               |                  |               |          |                 |         |                |          |           |               |            |                    |                 |                       |               |
| Related Messages      | <table> <tbody> <tr> <td>ALW-SWDX-EQPT</td> <td>ALM EQPT</td> </tr> <tr> <td>ALW-SWTOPROTN-EQPT</td> <td>REPT EVT EQPT</td> </tr> <tr> <td>ALW-SWTOWKG-EQPT</td> <td>RTRV-ALM-EQPT</td> </tr> <tr> <td>DLT-EQPT</td> <td>RTRV-ALMTH-EQPT</td> </tr> <tr> <td>ED-EQPT</td> <td>RTRV-COND-EQPT</td> </tr> <tr> <td>ENT-EQPT</td> <td>RTRV-EQPT</td> </tr> <tr> <td>INH-SWDX-EQPT</td> <td>SW-DX-EQPT</td> </tr> <tr> <td>INH-SWTOPROTN-EQPT</td> <td>SW-TOPROTN-EQPT</td> </tr> <tr> <td>INH-SWTOWKG-EQPT REPT</td> <td>SW-TOWKG-EQPT</td> </tr> </tbody> </table> | ALW-SWDX-EQPT | ALM EQPT | ALW-SWTOPROTN-EQPT | REPT EVT EQPT | ALW-SWTOWKG-EQPT | RTRV-ALM-EQPT | DLT-EQPT | RTRV-ALMTH-EQPT | ED-EQPT | RTRV-COND-EQPT | ENT-EQPT | RTRV-EQPT | INH-SWDX-EQPT | SW-DX-EQPT | INH-SWTOPROTN-EQPT | SW-TOPROTN-EQPT | INH-SWTOWKG-EQPT REPT | SW-TOWKG-EQPT |
| ALW-SWDX-EQPT         | ALM EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |          |                    |               |                  |               |          |                 |         |                |          |           |               |            |                    |                 |                       |               |
| ALW-SWTOPROTN-EQPT    | REPT EVT EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |          |                    |               |                  |               |          |                 |         |                |          |           |               |            |                    |                 |                       |               |
| ALW-SWTOWKG-EQPT      | RTRV-ALM-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |          |                    |               |                  |               |          |                 |         |                |          |           |               |            |                    |                 |                       |               |
| DLT-EQPT              | RTRV-ALMTH-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |          |                    |               |                  |               |          |                 |         |                |          |           |               |            |                    |                 |                       |               |
| ED-EQPT               | RTRV-COND-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |          |                    |               |                  |               |          |                 |         |                |          |           |               |            |                    |                 |                       |               |
| ENT-EQPT              | RTRV-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |          |                    |               |                  |               |          |                 |         |                |          |           |               |            |                    |                 |                       |               |
| INH-SWDX-EQPT         | SW-DX-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |          |                    |               |                  |               |          |                 |         |                |          |           |               |            |                    |                 |                       |               |
| INH-SWTOPROTN-EQPT    | SW-TOPROTN-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |          |                    |               |                  |               |          |                 |         |                |          |           |               |            |                    |                 |                       |               |
| INH-SWTOWKG-EQPT REPT | SW-TOWKG-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |          |                    |               |                  |               |          |                 |         |                |          |           |               |            |                    |                 |                       |               |
| Input Format          | SET-ALMTH-EQPT:[<TID>]::<CTAG>::<ALMTHTYPE>,<THLEV>[,,,];<br>where: <ul style="list-style-type: none"> <li>• Valid values for &lt;ALMTHTYPE&gt; are shown in the “ALM_THR” section on page 4-48</li> <li>• &lt;THLEV&gt; is a float</li> </ul>                                                                                                                                                                                                                                                                                                                   |               |          |                    |               |                  |               |          |                 |         |                |          |           |               |            |                    |                 |                       |               |
| Input Example         | SET-ALMTH-EQPT:::1::BATV-HIGH,-53.5;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |               |          |                    |               |                  |               |          |                 |         |                |          |           |               |            |                    |                 |                       |               |
| Errors                | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |          |                    |               |                  |               |          |                 |         |                |          |           |               |            |                    |                 |                       |               |

### 3.4.224 SET-ATTR-CONT: Set Attribute Control

This command sets the attributes associated with an external control. The attributes are used when an external control is operated or released. To send the attributes, use the RTRV-ATTR-CONT command.

Notes:

1. If the <CONTTYPE> parameter is not specified, the control specified by <AID> is unprovisioned.

2. A control should be unprovisioned before it is reprovisioned to another type of control.

| Section          | SET-ATTR-CONT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Related Messages | OPR-ACO-ALL<br>OPR-EXT-CONT<br>REPT ALM <MOD2ALM><br>REPT ALM BITS<br>REPT ALM COM<br>REPT ALM ENV<br>REPT ALM EQPT<br>REPT ALM SECU<br>REPT ALM SYNCN<br>REPT ALM UCP<br>REPT EVT <MOD2ALM><br>REPT EVT BITS<br>REPT EVT COM<br>REPT EVT ENV<br>REPT EVT EQPT<br>REPT EVT FXFR<br>REPT EVT IOSCFG<br>REPT EVT SECU<br>REPT EVT SESSION<br>REPT EVT SYNCN<br>REPT EVT UCP<br>RLS-EXT-CONT<br>RTRV-ALM-<MOD2ALM><br>RTRV-ALM-ALL<br>RTRV-ALM-BITS<br>RTRV-ALM-ENV<br>RTRV-ALM-EQPT<br>RTRV-ALM-SYNCN<br>RTRV-ALM-UCP<br>RTRV-ATTR-CONT<br>RTRV-ATTR-ENV<br>RTRV-COND-<MOD2ALM><br>RTRV-COND-ALL<br>RTRV-COND-BITS<br>RTRV-COND-ENV<br>RTRV-COND-EQPT<br>RTRV-COND-SYNCN<br>RTRV-COND-UCP<br>RTRV-EXT-CONT<br>SET-ATTR-ENV<br>SET-ATTR-SECUDFLT |
| Input Format     | SET-ATTR-CONT:[<TID>]:<AID>:<CTAG>[:<CONTTYPER>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies the external control for which attributes are being retrieved and is from the “ENV” section on page 4-26</li> <li>• &lt;CONTTYPER&gt; is the type of control for which the attribute is being retrieved; valid values are shown in the “CONTTYPER” section on page 4-55. The default value is MISC</li> </ul>                                                                                                                                                                                                                                                                                                     |
| Input Example    | SET-ATTR-CONT:CISCO:ENV-OUT-1:123::AIRCOND;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Errors           | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

### 3.4.225 SET-ATTR-ENV: Set Attribute Environment

This command sets the attributes associated with an external control.

Notes:

1. If the <NTFCNCDE>, <ALMTYPE>, and <ALMMSG> parameters are omitted, the environmental alarm specified by <AID> is unprovisioned.
2. An alarm should be unprovisioned and you should wait for any raised alarm to clear before reprovisioning the alarm to another alarm type.

| Section          | SET-ATTR-ENV Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Related Messages | OPR-ACO-ALL<br>OPR-EXT-CONT<br>REPT ALM <MOD2ALM><br>REPT ALM BITS<br>REPT ALM COM<br>REPT ALM ENV<br>REPT ALM EQPT<br>REPT ALM SECU<br>REPT ALM SYNCN<br>REPT ALM UCP<br>REPT EVT <MOD2ALM><br>REPT EVT BITS<br>REPT EVT COM<br>REPT EVT ENV<br>REPT EVT EQPT<br>REPT EVT FXFR<br>REPT EVT IOSCFG<br>REPT EVT SECU<br>REPT EVT SESSION<br>REPT EVT SYNCN<br>REPT EVT UCP<br>RLS-EXT-CONT<br>RTRV-ALM-<MOD2ALM><br>RTRV-ALM-ALL<br>RTRV-ALM-BITS<br>RTRV-ALM-ENV<br>RTRV-ALM-EQPT<br>RTRV-ALM-SYNCN<br>RTRV-ALM-UCP<br>RTRV-ATTR-CONT<br>RTRV-ATTR-ENV<br>RTRV-COND-<MOD2ALM><br>RTRV-COND-ALL<br>RTRV-COND-BITS<br>RTRV-COND-ENV<br>RTRV-COND-EQPT<br>RTRV-COND-SYNCN<br>RTRV-COND-UCP<br>RTRV-EXT-CONT<br>SET-ATTR-CONT<br>SET-ATTR-SECUDFLT |
| Input Format     | SET-ATTR-ENV:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],<br>[<ALMTYPE>],[<ALMMSG>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; is an access identifier from the “ENV” section on page 4-26 and must not be null</li> <li>• &lt;NTFCNCDE&gt; is a notification code; valid values are shown in the “NOTIF_CODE” section on page 4-75. &lt;NTFCNCDE&gt; must not be null</li> <li>• &lt;ALMTYPE&gt; is an alarm type for the environmental alarm; valid values are shown in the “ENV_ALM” section on page 4-58. &lt;ALMTYPE&gt; must not be null</li> <li>• &lt;ALMMSG&gt; is an alarm message and is a string. &lt;ALMMSG&gt; must not be null</li> </ul>                                                                           |
| Input Example    | SET-ATTR-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR,\“OPEN DOOR\”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Errors           | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

### 3.4.226 SET-ATTR-SECUDFLT: Set Attribute Security Default

This command sets the system-wide default values associated with several security parameters.

The following parameters are set on a system-wide basis for all users and all privilege levels: MXINV, DURAL, UOUT, PFRCD, POLD, PINT, and LOGIN. The PRIVLVL keyword cannot be used to set these parameters for a specific privilege level.

The following parameters are set on a privilege-level basis: PAGE, PCND, and TMOU. If any of these values are specified, the PRIVLVL keyword must also be present. If none of these parameters are specified, the PRIVLVL keyword cannot be used.

**Note**

Password aging can only be enabled/disabled for all privilege levels. The PRIVLVL keyword cannot be used with PAGE=0 to disable a specific user privilege level.

When system-level and privilege-level keywords are combined in the same command, system-level parameters are still set for all privilege levels, regardless of the value specified by PRIVLVL. Privilege-level parameters are only set for the privilege level specified by PRIVLVL.

**Note**

If PAGE and PINT both have values greater than 0, PINT must be less than PAGE.

The order of keywords is not restricted. Commas are only needed to separate keywords. If no keywords are specified, all parameters are left as is.

| Section          | SET-ATTR-SECUDFLT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Security                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Security         | Superuser                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Related Messages | ACT-USER REPT EVT IOSCFG<br>ALW-MSG-SECU REPT EVT SECU<br>ALW-USER-SECU REPT EVT SESSION<br>CANC REPT EVT SYNCN<br>CANC-USER REPT EVT UCP<br>CANC-USER-SECU RTRV-ALM-<MOD2ALM><br>DLT-USER-SECU RTRV-ALM-ALL<br>ED-CMD-SECU RTRV-ALM-BITS<br>ED-PID RTRV-ALM-ENV<br>ED-USER-SECU RTRV-ALM-EQPT<br>ENT-USER-SECU RTRV-ALM-SYNCN<br>INH-MSG-SECU RTRV-ALM-UCP<br>INH-USER-SECU RTRV-ATTR-CONT<br>REPT ALM <MOD2ALM> RTRV-ATTR-ENV<br>REPT ALM BITS RTRV-CMD-SECU<br>REPT ALM COM RTRV-COND-<MOD2ALM><br>REPT ALM ENV RTRV-COND-ALL<br>REPT ALM EQPT RTRV-COND-BITS<br>REPT ALM SYNCN RTRV-COND-ENV<br>REPT ALM UCP RTRV-COND-EQPT<br>REPT EVT <MOD2ALM> RTRV-COND-SYNCN<br>REPT EVT BITS RTRV-COND-UCP<br>REPT EVT COM RTRV-DFLT-SECU<br>REPT EVT ENV RTRV-USER-SECU<br>REPT EVT EQPT SET-ATTR-CONT<br>REPT EVT FXFR SET-ATTR-ENV |

| Section       | SET-ATTR-SECUDFLT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | <pre>SET-ATTR-SECUDFLT:[&lt;TID&gt;]::&lt;CTAG&gt;::[PAGE=&lt;PAGE&gt;],[PCND=&lt;PCND&gt;],[ MXINV=&lt;MXINV&gt;],[DURAL=&lt;DURAL&gt;],[TMOUT=&lt;TMOUT&gt;],[ UOUT=&lt;UOUT&gt;],[PFRCD=&lt;PFRCD&gt;],[POLD=&lt;POLD&gt;],[PINT=&lt;PINT&gt;],[ LOGIN=&lt;LOGIN&gt;],[PRIVLVL=&lt;UAP&gt;];</pre> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;PAGE&gt; the password aging interval. It is the number of days left before a user is prompted to change their password. 0 indicates the policy is turned off; &lt;PAGE&gt; is an integer</li> <li>• &lt;PCND&gt; the number of days a password can be used before a new one is mandatory (i.e., the warning period); &lt;PCND&gt; is an integer</li> <li>• &lt;MXINV&gt; the maximum number of consecutive and invalid session setup attempts allowed to occur before an intrusion attempt is suspected (i.e., “Failed Logins Before Lockout” from CTC). 0 indicates the policy is turned off; &lt;MXINV&gt; is an integer</li> <li>• &lt;DURAL&gt; time interval (in seconds) during which a userid is locked out when an intrusion attempt is suspected (i.e., the “Lockout Duration” from CTC). If the user is locked out until unlocked by a superuser, &lt;DURAL&gt;=INFINITE; &lt;DURAL&gt; is a string</li> <li>• &lt;TMOUT&gt; an interval (in minutes) after which a session is terminated if no messages are exchanged between the user and the NE; &lt;TMOUT&gt; is an integer</li> <li>• &lt;UOUT&gt; the number of days a userid is allowed to exist, if it has never been used, before it must be suspended. If a userid has not been used in UOUT days, the user will be forced to change his password (or logout) at the next login. No other command is allowed until the password has been changed; &lt;UOUT&gt; is an integer</li> <li>• &lt;PFRCD&gt; indicates a password change is required when a new user establishes a session to the NE for the first time (i.e., “Require password change on 1st login” from CTC); valid values are shown in the <a href="#">“YES_NO” section on page 4-99</a></li> <li>• &lt;POLD&gt; the number of prior passwords that cannot be reused (i.e., “Prevent reusing last X passwords” from CTC); &lt;POLD&gt; is an integer</li> <li>• &lt;PINT&gt; the number of days that must pass before a password can be changed. If PINT=0, the policy is not enabled; &lt;PINT&gt; is an integer</li> <li>• &lt;LOGIN&gt; the number of times a user can log into an NE. &lt;LOGIN&gt; is either SINGLE or MULTIPLE. If &lt;LOGIN&gt; is SINGLE, a user can only log into an NE one time with any given userid, regardless of method of login (i.e., CTC, TL1); valid values are shown in the <a href="#">“USER_LOGINS” section on page 4-97</a></li> <li>• &lt;UAP&gt; user access privilege; valid values are shown in the <a href="#">“PRIVILEGE” section on page 4-82</a></li> </ul> |
| Input Example | <pre>SET-ATTR-SECUDFLT:CISCO::123::PAGE=45,PCND=5,MXINV=5,DURAL=30, TMOUT=0,UOUT=20,PFRCD=NO,POLD=5,PINT=20,LOGIN=MULTIPLE, PRIVLVL=RTRV;</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Errors        | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

### 3.4.227 SET-PMMODE-<STS\_PATH>: Set Performance Mode of PM Data Collection (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command sets the mode and turns the PM data collection mode on or off. The Cisco ONS 15454 is capable of collecting and storing section, line and path PM data.

The PM mode and state of an entity are retrieved by using the RTRV-PMMODE command.

Notes:

1. The near end monitoring of the intermediate-path PM (IPPM) only supports OC-3, OC-12, OC-48, OC-48AS, OC-192, and EC-1 on STS Path.
2. The far end PM data collection is not supported for the ONS 15454 in this release.
3. This release of software will support only the Path (P) mode type PM parameters with this command, that is, this command is not applicable for Line (L) and Section (S) mode types.

The PM monitoring for Line (L) and Section (S) are supported by the ONS 15454, and the storing PM data is always performed.

| Section          | SET-PMMODE-<STS_PATH> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Performance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Related Messages | ALW-PMREPT-ALL                    RTRV-PMSCHED-<MOD2><br>INH-PMREPT-ALL                    RTRV-PMSCHED-ALL<br>INIT-REG-<MOD2>                    RTRV-TH-<MOD2><br>REPT PM <MOD2>                    RTRV-TH-ALL<br>RTRV-PM-<MOD2>                    SCHED-PMREPT-<MOD2><br>RTRV-PMMODE-<STS_PATH>        SET-TH-<MOD2>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Input Format     | SET-PMMODE-<STS_PATH>:[<TID>]:<SRC>:<br><CTAG>::<LOCN>,<MODETYPE>,<PMSTATE>;<br>where: <ul style="list-style-type: none"> <li>• &lt;SRC&gt; is the AID from the <a href="#">“CrossConnectId” section on page 4-20</a></li> <li>• &lt;LOCN&gt; identifies the location to which the PM mode is to be set and only supports near end PM data collection; valid values are shown in the <a href="#">“LOCATION” section on page 4-68</a></li> <li>• &lt;MODETYPE&gt; identifies the type of PM parameters; only the Path (P) PM parameter is supported and valid values are shown in the <a href="#">“PM_MODE” section on page 4-82</a></li> <li>• &lt;PMSTATE&gt; directs the named PM mode type to turn On or Off and a null value defaults to On; valid values are shown in the <a href="#">“PM_STATE” section on page 4-82</a></li> </ul> |
| Input Example    | SET-PMMODE-STs1:CISCO:STs-4-1-2:123::NEND,P,ON;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |



### 3.4.228 SET-TH-<MOD2>: Set Threshold (CLNT, DS1, DS3I, EC1, FC, G1000, OC3, OC12, OC48, OC192, OCH, OMS, OTS, STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C, T1, T3, VT1)

See [Table 4-11 on page 4-5](#) for supported modifiers by platform.

This command sets the threshold for PM and sets the alarm thresholds for the MXP\_2.5G\_10G/TXP\_MR\_10G cards. If this command is used to set the alarm thresholds, the time-period is not applicable.

The rules are as follows: The PM Thresholds have a default of NEND for the location. The Alarm Thresholds do not require or interpret the location. The TMPER is not applicable to alarm thresholds. The TMPER default is 15-MIN. The client ports only accept SONET, Laser and alarm MONTYPES. The trunk ports accept SONET, Laser, alarm, FEC, OTN and 8B10B MONTYPES.

See the “[Provisioning Rules for MXP\\_2.5G\\_10G and TXP\\_MR\\_10G Cards](#)” section on page 1-8 and the “[Provisioning Rules for TXP\\_MR\\_2.5G and TXPP\\_MR\\_2.5G Cards](#)” section on page 1-13 for specific card provisioning rules.

| Section          | SET-TH-<MOD2> Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Performance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Related Messages | ALW-PMREPT-ALL                      RTRV-PMSCHED-<MOD2><br>INH-PMREPT-ALL                      RTRV-PMSCHED-ALL<br>INIT-REG-<MOD2>                      RTRV-TH-<MOD2><br>REPT PM <MOD2>                      RTRV-TH-ALL<br>RTRV-PM-<MOD2>                      SCHED-PMREPT-<MOD2><br>RTRV-PMMODE-<STS_PATH>        SET-PMMODE-<STS_PATH>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Input Format     | SET-TH-<MOD2>:[<TID>]:<AID>:<CTAG>::<br><MONTYPE>,<THLEV>,[<LOCN>],[<TMPER>];<br>where: <ul style="list-style-type: none"> <li>• &lt;AID&gt; indicates the access identifier. All the STS, VT1, Facility and DS1 AIDs are supported and &lt;AID&gt; is from the “<a href="#">ALL</a>” section on page 4-9</li> <li>• &lt;MONTYPE&gt; is the monitored value; valid values are shown in the “<a href="#">ALL_MONTYPE</a>” section on page 4-39</li> <li>• &lt;THLEV&gt; is the threshold value and is a float; &lt;THLEV&gt; is an integer</li> <li>• &lt;LOCN&gt; is the location; valid values are shown in the “<a href="#">LOCATION</a>” section on page 4-68</li> <li>• &lt;TMPER&gt; indicates the accumulation time period for the PM information; valid values are shown in the “<a href="#">TMPER</a>” section on page 4-93</li> </ul> |
| Input Example    | SET-TH-T3:CISCO:FAC-1-1:123::CVL,12,NEND,,15-MIN;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

### 3.4.229 SET-TOD: Set Time of Day

This command sets the system date and time for the NE. The year should be entered using four digits while the hour should be entered using a 24-hour time period (i.e., military time).

| Section          | SET-TOD Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          |              |             |          |               |          |              |          |        |             |           |               |            |              |             |               |             |                |               |          |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------|-------------|----------|---------------|----------|--------------|----------|--------|-------------|-----------|---------------|------------|--------------|-------------|---------------|-------------|----------------|---------------|----------|
| Category         | System                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |              |             |          |               |          |              |          |        |             |           |               |            |              |             |               |             |                |               |          |
| Security         | Provisioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |              |             |          |               |          |              |          |        |             |           |               |            |              |             |               |             |                |               |          |
| Related Messages | <table border="0"> <tr> <td>ACT-USER</td> <td>INH-MSG-SECU</td> </tr> <tr> <td>ALW-MSG-ALL</td> <td>INIT-SYS</td> </tr> <tr> <td>ALW-MSG-DBCHG</td> <td>RTRV-HDR</td> </tr> <tr> <td>ALW-MSG-SECU</td> <td>RTRV-INV</td> </tr> <tr> <td>ED-DAT</td> <td>RTRV-NE-GEN</td> </tr> <tr> <td>ED-NE-GEN</td> <td>RTRV-NE-IPMAP</td> </tr> <tr> <td>ED-NE-PATH</td> <td>RTRV-NE-PATH</td> </tr> <tr> <td>ED-NE-SYNCN</td> <td>RTRV-NE-SYNCN</td> </tr> <tr> <td>INH-MSG-ALL</td> <td>RTRV-NE-WDMANS</td> </tr> <tr> <td>INH-MSG-DBCHG</td> <td>RTRV-TOD</td> </tr> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ACT-USER | INH-MSG-SECU | ALW-MSG-ALL | INIT-SYS | ALW-MSG-DBCHG | RTRV-HDR | ALW-MSG-SECU | RTRV-INV | ED-DAT | RTRV-NE-GEN | ED-NE-GEN | RTRV-NE-IPMAP | ED-NE-PATH | RTRV-NE-PATH | ED-NE-SYNCN | RTRV-NE-SYNCN | INH-MSG-ALL | RTRV-NE-WDMANS | INH-MSG-DBCHG | RTRV-TOD |
| ACT-USER         | INH-MSG-SECU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |              |             |          |               |          |              |          |        |             |           |               |            |              |             |               |             |                |               |          |
| ALW-MSG-ALL      | INIT-SYS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |              |             |          |               |          |              |          |        |             |           |               |            |              |             |               |             |                |               |          |
| ALW-MSG-DBCHG    | RTRV-HDR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |              |             |          |               |          |              |          |        |             |           |               |            |              |             |               |             |                |               |          |
| ALW-MSG-SECU     | RTRV-INV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |              |             |          |               |          |              |          |        |             |           |               |            |              |             |               |             |                |               |          |
| ED-DAT           | RTRV-NE-GEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          |              |             |          |               |          |              |          |        |             |           |               |            |              |             |               |             |                |               |          |
| ED-NE-GEN        | RTRV-NE-IPMAP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |              |             |          |               |          |              |          |        |             |           |               |            |              |             |               |             |                |               |          |
| ED-NE-PATH       | RTRV-NE-PATH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |              |             |          |               |          |              |          |        |             |           |               |            |              |             |               |             |                |               |          |
| ED-NE-SYNCN      | RTRV-NE-SYNCN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |              |             |          |               |          |              |          |        |             |           |               |            |              |             |               |             |                |               |          |
| INH-MSG-ALL      | RTRV-NE-WDMANS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |          |              |             |          |               |          |              |          |        |             |           |               |            |              |             |               |             |                |               |          |
| INH-MSG-DBCHG    | RTRV-TOD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |              |             |          |               |          |              |          |        |             |           |               |            |              |             |               |             |                |               |          |
| Input Format     | <p>SET-TOD:[&lt;TID&gt;]::&lt;CTAG&gt;::&lt;YEAR&gt;,&lt;MONTH&gt;,&lt;DAY&gt;,&lt;HOUR&gt;,&lt;MINUTE&gt;,&lt;SECOND&gt;,[&lt;DIFFERENCE&gt;][:DST=&lt;DST&gt;];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;YEAR&gt; is the current calendar year and is an integer</li> <li>• &lt;MONTH&gt; is the month of the year and ranges from 01–12; &lt;MONTH&gt; is an integer</li> <li>• &lt;DAY&gt; is the day of the month and ranges from 01–31; &lt;DAY&gt; is an integer</li> <li>• &lt;HOUR&gt; is the hour of the day and ranges from 00–24; &lt;HOUR&gt; is an integer</li> <li>• &lt;MINUTE&gt; is the minute of the hour and ranges from 00–60; &lt;MINUTE&gt; is an integer</li> <li>• &lt;SECOND&gt; is the second of the minute and ranges from 00–59; second is an integer</li> <li>• &lt;DIFFERENCE&gt; is the number of minutes off UTC and is an integer</li> <li>• &lt;DST&gt; identifies if the time is a Daylight Saving Time (Y) or not (N); valid values are shown in the “ON_OFF” section on page 4-76</li> </ul> |          |              |             |          |               |          |              |          |        |             |           |               |            |              |             |               |             |                |               |          |
| Input Example    | SET-TOD:CAZADERO::240::1998,05,08,13,18,55,480:DST=Y;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |              |             |          |               |          |              |          |        |             |           |               |            |              |             |               |             |                |               |          |
| Errors           | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |          |              |             |          |               |          |              |          |        |             |           |               |            |              |             |               |             |                |               |          |

### 3.4.230 SW-DX-EQPT: Switch Duplex Equipment

(Cisco ONS 15454 only)

This command switches an XC/XCVT/XC10G card with the mate card within the NE.



#### Note

If sending a mode parameter with a value other than NORM, FRCD, or NULL, the IDNV (Input, Data Not Valid) error message will be returned.

| Section            | SW-DX-EQPT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |                 |                  |               |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|--------------------|---------------|------------------|---------|----------|---------------|---------|-----------------|----------|----------------|------------------|-----------|---------------|----------------|--------------------|-----------------|------------------|---------------|
| Category           | Equipment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |                 |                  |               |
| Security           | Maintenance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |                 |                  |               |
| Related Messages   | <table border="0"> <tr> <td>ALW-SWDX-EQPT</td> <td>REPT ALM EQPT</td> </tr> <tr> <td>ALW-SWTOPROTN-EQPT</td> <td>REPT EVT EQPT</td> </tr> <tr> <td>ALW-SWTOWKG-EQPT</td> <td>REPT SW</td> </tr> <tr> <td>DLT-EQPT</td> <td>RTRV-ALM-EQPT</td> </tr> <tr> <td>ED-EQPT</td> <td>RTRV-ALMTH-EQPT</td> </tr> <tr> <td>ENT-EQPT</td> <td>RTRV-COND-EQPT</td> </tr> <tr> <td>EX-SW-&lt;OCN_BLSR&gt;</td> <td>RTRV-EQPT</td> </tr> <tr> <td>INH-SWDX-EQPT</td> <td>SET-ALMTH-EQPT</td> </tr> <tr> <td>INH-SWTOPROTN-EQPT</td> <td>SW-TOPROTN-EQPT</td> </tr> <tr> <td>INH-SWTOWKG-EQPT</td> <td>SW-TOWKG-EQPT</td> </tr> </table> | ALW-SWDX-EQPT | REPT ALM EQPT | ALW-SWTOPROTN-EQPT | REPT EVT EQPT | ALW-SWTOWKG-EQPT | REPT SW | DLT-EQPT | RTRV-ALM-EQPT | ED-EQPT | RTRV-ALMTH-EQPT | ENT-EQPT | RTRV-COND-EQPT | EX-SW-<OCN_BLSR> | RTRV-EQPT | INH-SWDX-EQPT | SET-ALMTH-EQPT | INH-SWTOPROTN-EQPT | SW-TOPROTN-EQPT | INH-SWTOWKG-EQPT | SW-TOWKG-EQPT |
| ALW-SWDX-EQPT      | REPT ALM EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |                 |                  |               |
| ALW-SWTOPROTN-EQPT | REPT EVT EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |                 |                  |               |
| ALW-SWTOWKG-EQPT   | REPT SW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |                 |                  |               |
| DLT-EQPT           | RTRV-ALM-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |                 |                  |               |
| ED-EQPT            | RTRV-ALMTH-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |                 |                  |               |
| ENT-EQPT           | RTRV-COND-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |                 |                  |               |
| EX-SW-<OCN_BLSR>   | RTRV-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |                 |                  |               |
| INH-SWDX-EQPT      | SET-ALMTH-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |                 |                  |               |
| INH-SWTOPROTN-EQPT | SW-TOPROTN-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |                 |                  |               |
| INH-SWTOWKG-EQPT   | SW-TOWKG-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |                 |                  |               |
| Input Format       | <p>SW-DX-EQPT:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;::[&lt;MODE&gt;][,];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies the equipment (XC/XCVT/XC10G) unit in the NE that is to be switched with its mate unit; &lt;AID&gt; is from the “EQPT” section on page 4-27</li> <li>• Valid values for &lt;MODE&gt; are shown in the “CMD_MODE” section on page 4-54</li> </ul>                                                                                                                                                                                                                |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |                 |                  |               |
| Input Example      | SW-DX-EQPT:CISCO:SLOT-1:123::FRCD;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |                 |                  |               |
| Errors             | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |                 |                  |               |

### 3.4.231 SW-TOPROTN-EQPT: Switch to Protection Equipment

(Cisco ONS 15454 only)

This command performs an equipment unit protection switch.

This command is used for non-SONET line cards (e.g. DS1, DS3, DS3XM, and EC1). DS1 and DS3 cards have 1:1 and 1:N equipment protection. DS3XM and EC1 cards have only 1:1 equipment protection.

This command will switch the traffic from the working card specified in the AID to the protect card.

There is a priority for the switch to protection commands. In a 1:N protection group with  $N > 1$ , consider two working cards - A and B. Card A is switched to the protect card with the SW-TOPROTN command. If card B is pulled from the system, the protect card will carry the traffic of card B and card A will raise the FAILTOSW condition and carry traffic. When card B is replaced and the revert timer expires, card B will carry traffic and card A will switch to the protect card. The FAILTOSW condition on card A will be cleared. Note:1:N protection groups in the system are always revertive.

In a revertive protection group, the unit specified by the AID will raise the standing condition of WKSWPR if the command were executed without an error. In a non-revertive protection group, the unit specified by the AID will raise the transient condition of WKSWPR if the command were executed without an error.

Notes:

1. The default PROTID is the protecting unit if there is only one protection unit per protection group in the NE, otherwise a DENY error message will be responded.

2. This command only supports one value of the <DIRN> parameter - BTH or null. A command with any other value is considered an incorrect use of the command. An IDNV (Input, Data Not Valid) error message will be responded.
3. This command is not used for the common control (TCC2 or XC/XCVT/XC10G) cards. A command on a common control card will generate an IIAC (Input, Invalid Access Identifier) error message. To use the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
4. This command is not used for SONET (OCN) cards. A command on a SONET card will generate an IIAC (Input, Invalid Access Identifier) error message. To use a SONET card switching command, use the OPR-PROTNSW and RLS-PROTNSW commands.
5. If this command is used on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message will be responded.
6. If this command is sent to a missing working card, the SWFA (Status, Working Unit Failed) error message will be responded.
7. If this command is used on a protection card, the IIAC (Input, Invalid Access Identifier) error message will be responded.
8. If sending a mode parameter with a value other than NORM, FRCD, or null, the IDNV (Input, Data Not Valid) error message will be responded.
9. If sending the SW-TOPROTN command to a working card when the working card has raised INHSWPR, the SWLD (Status, Working Unit Locked) error message will be responded.
10. If sending the SW-TOPROTN command to a working card when the protection card has raised INHSWPR, the SPLD (Status, Protection Unit Locked) error message will be responded.
11. If sending the SW-TOPROTN command to an active working card when the protect card is already carrying traffic. This only occurs in a 1:N protection group with N greater than one, the SNVS (Status, Not in Valid State) error message will be responded.
12. If sending the SW-TOPROTN command to an active working card when the protect card is failed or missing, the SPFA (Status, Protection Unit Failed) error message will be responded.
13. If sending this command to a standby working card, the SNVS (Status, Not in Valid State) error message will be responded.

| Section          | SW-TOPROTN-EQPT Description |                 |
|------------------|-----------------------------|-----------------|
| Category         | Equipment                   |                 |
| Security         | Maintenance                 |                 |
| Related Messages | ALW-SWDX-EQPT               | REPT ALM EQPT   |
|                  | ALW-SWTOPROTN-EQPT          | REPT EVT EQPT   |
|                  | ALW-SWTOWKG-EQPT            | REPT SW         |
|                  | DLT-EQPT                    | RTRV-ALM-EQPT   |
|                  | ED-EQPT                     | RTRV-ALMTH-EQPT |
|                  | ENT-EQPT                    | RTRV-COND-EQPT  |
|                  | EX-SW-<OCN_BLSR>            | RTRV-EQPT       |
|                  | INH-SWDX-EQPT               | SET-ALMTH-EQPT  |
|                  | INH-SWTOPROTN-EQPT          | SW-DX-EQPT      |
|                  | INH-SWTOWKG-EQPT            | SW-TOWKG-EQPT   |

| Section       | SW-TOPROTN-EQPT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Format  | <p>SW-TOPROTN-EQPT:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;::[&lt;MODE&gt;],<br/>[&lt;PROTID&gt;],[&lt;DIRN&gt;];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; is the parameter that specifies the working unit which will have traffic switched to protection and is from the “EQPT” section on page 4-27</li> <li>• &lt;MODE&gt; is the parameter that will only support the NORM value. The null value for &lt;MODE&gt; will default to NORM. Sending the FRCD value for &lt;MODE&gt; will generate the same switching behavior as sending the NORM value. Valid values are shown in the “CMD_MODE” section on page 4-54</li> <li>• &lt;PROTID&gt; identifies the protection unit to be switched when there is more than one protection unit within the NE; &lt;PROTID&gt; is from the “PR SLOT” section on page 4-31</li> <li>• &lt;DIRN&gt; is the direction of transmission in which switching is to be made. The command only supports one value of the &lt;DIRN&gt; parameter - BTH. This parameter defaults to BTH; valid values for &lt;DIRN&gt; are shown in the “DIRECTION” section on page 4-56</li> </ul> |
| Input Example | SW-TOPROTN-EQPT:CISCO:SLOT-1:123::FRCD,SLOT-3,BTH;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Errors        | Errors are listed in Table 7-33 on page 7-27.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### 3.4.232 SW-TOWKG-EQPT: Switch to Working Equipment

(Cisco ONS 15454 only)

This command switches the protected working unit back to working unit.

This command is used for non-SONET line cards (e.g. DS1, DS3, DS3XM, and EC1). DS1 and DS3 cards have 1:1 and 1:N equipment protection. DS3XM and EC1 cards have only 1:1 equipment protection cards.

This command will switch the traffic from the protection card to the working card specified by the AID.

In a revertive protection group, the unit specified by the AID will clear the standing condition of WKSWPR if the command were executed without an error. In a non-revertive protection group, the unit specified by the AID will raise the transient condition of WKSWBK if the command were executed without an error.

Notes:

1. This command only supports one value of the <DIRN> parameter - BTH or null. A command with any other value is considered an incorrect use of the command. An IDNV (Input, Data Not Valid) error message should be responded
2. This command is not used for the common control (TCC2 or XC/XCVT/XC10G) cards. A command on a common control card will generate an IIAC (Input, Invalid Access Identifier) error message. To use the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
3. This command is not used for SONET (OCN) cards. A command on a SONET card will generate an IIAC (Input, Invalid Access Identifier) error message. To use a SONET card switching command, use the OPR-PROTNSW and RLS-PROTNSW commands.

4. If this command is used on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message will be responded.
5. If this command is sent to a missing working card, the SWFA (Status, Working Unit Failed) error message will be responded.
6. If this command is used on a protection card, the IIAC (Input, Invalid Access Identifier) error message will be responded.
7. If sending a mode parameter with a value other than NORM, FRCD, or null, the IDNV (Input, Data Not Valid) error message will be responded.
8. If sending the SW-TOWKG command to a working card when the working card has raised INH-SW-KG, the SWLD (Status, Working Unit Locked) error message will be responded.
9. If sending the SW-TOWKG command to a working card when the protection card has raised INH-SW-KG, the SPLD (Status, Protection Unit Locked) error message will be responded.
10. If sending the SW-TOWKG command to an active working card, the SNVS (Status, Not in Valid State) error message will be responded.

| Section            | SW-TOWKG-EQPT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |            |                  |                 |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|--------------------|---------------|------------------|---------|----------|---------------|---------|-----------------|----------|----------------|------------------|-----------|---------------|----------------|--------------------|------------|------------------|-----------------|
| Category           | Equipment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |            |                  |                 |
| Security           | Maintenance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |            |                  |                 |
| Related Messages   | <table border="0"> <tr> <td>ALW-SWDX-EQPT</td> <td>REPT ALM EQPT</td> </tr> <tr> <td>ALW-SWTOPROTN-EQPT</td> <td>REPT EVT EQPT</td> </tr> <tr> <td>ALW-SWTOWKG-EQPT</td> <td>REPT SW</td> </tr> <tr> <td>DLT-EQPT</td> <td>RTRV-ALM-EQPT</td> </tr> <tr> <td>ED-EQPT</td> <td>RTRV-ALMTH-EQPT</td> </tr> <tr> <td>ENT-EQPT</td> <td>RTRV-COND-EQPT</td> </tr> <tr> <td>EX-SW-&lt;OCN_BLSR&gt;</td> <td>RTRV-EQPT</td> </tr> <tr> <td>INH-SWDX-EQPT</td> <td>SET-ALMTH-EQPT</td> </tr> <tr> <td>INH-SWTOPROTN-EQPT</td> <td>SW-DX-EQPT</td> </tr> <tr> <td>INH-SWTOWKG-EQPT</td> <td>SW-TOPROTN-EQPT</td> </tr> </table>                                                                                                                                                                                                                                                           | ALW-SWDX-EQPT | REPT ALM EQPT | ALW-SWTOPROTN-EQPT | REPT EVT EQPT | ALW-SWTOWKG-EQPT | REPT SW | DLT-EQPT | RTRV-ALM-EQPT | ED-EQPT | RTRV-ALMTH-EQPT | ENT-EQPT | RTRV-COND-EQPT | EX-SW-<OCN_BLSR> | RTRV-EQPT | INH-SWDX-EQPT | SET-ALMTH-EQPT | INH-SWTOPROTN-EQPT | SW-DX-EQPT | INH-SWTOWKG-EQPT | SW-TOPROTN-EQPT |
| ALW-SWDX-EQPT      | REPT ALM EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |            |                  |                 |
| ALW-SWTOPROTN-EQPT | REPT EVT EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |            |                  |                 |
| ALW-SWTOWKG-EQPT   | REPT SW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |            |                  |                 |
| DLT-EQPT           | RTRV-ALM-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |            |                  |                 |
| ED-EQPT            | RTRV-ALMTH-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |            |                  |                 |
| ENT-EQPT           | RTRV-COND-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |            |                  |                 |
| EX-SW-<OCN_BLSR>   | RTRV-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |            |                  |                 |
| INH-SWDX-EQPT      | SET-ALMTH-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |            |                  |                 |
| INH-SWTOPROTN-EQPT | SW-DX-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |            |                  |                 |
| INH-SWTOWKG-EQPT   | SW-TOPROTN-EQPT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |            |                  |                 |
| Input Format       | <p>SW-TOWKG-EQPT:[&lt;TID&gt;]:&lt;AID&gt;:&lt;CTAG&gt;::[&lt;MODE&gt;],[&lt;DIRN&gt;];</p> <p>where:</p> <ul style="list-style-type: none"> <li>• &lt;AID&gt; identifies the working unit that is to be released from protection. &lt;AID&gt; is from the <a href="#">“PR SLOT” section on page 4-31</a></li> <li>• &lt;MODE&gt; will only support the NORM value. The null value will default to NORM. Sending the FRCD value will generate the same switching behavior as sending the NORM value. Valid values for &lt;MODE&gt; are shown in the <a href="#">“CMD_MODE” section on page 4-54</a></li> <li>• &lt;DIRN&gt; is the direction of transmission. The command only supports one value of the &lt;DIRN&gt; parameter - BTH. This parameter defaults to BTH; valid values for &lt;DIRN&gt; are shown in the <a href="#">“DIRECTION” section on page 4-56</a></li> </ul> |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |            |                  |                 |
| Input Example      | SW-TOWKG-EQPT:CISCO:SLOT-2:123::FRCD,BTH;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |            |                  |                 |
| Errors             | Errors are listed in <a href="#">Table 7-33 on page 7-27</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |               |                    |               |                  |         |          |               |         |                 |          |                |                  |           |               |                |                    |            |                  |                 |



## TL1 Command Components

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This chapter describes the components of TL1 commands and autonomous messages for the Cisco ONS 15454 and Cisco ONS 15327, Release 4.6, including:

- TL1 default values
- Modifier support by platform
- Starting positions for an STS-Mc SPE
- Access identifiers (AIDs)
- Parameter types

### 4.1 TL1 Default Values

#### 4.1.1 BLSR

*Table 4-1 BLSR Default Values*

| <b>BLSR</b> | <b>Default</b> |
|-------------|----------------|
| RVRTV       | Y              |
| RVTM        | 5.0 minutes    |
| SRVRTV      | Y              |
| SRVTM       | 5.0 minutes    |

#### 4.1.2 Cross Connections

*Table 4-2 Cross Connections Default Values*

| <b>Cross Connections</b> | <b>Default</b>                               |
|--------------------------|----------------------------------------------|
| CCT                      | 2WAY for both STSp and VT1 cross-connections |

## 4.1.3 Environment Alarms and Controls

**Table 4-3 Environment Alarms and Controls Default Values**

| Environment Alarms and Controls | Default                                                                                                                                                     |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OPR-EXT-CONT                    | CONTTYPE is set as one provisioned in the respective AID, there is not default for it. It is only used as a filter if entered. DUR is always taken as CONT. |
| RTRV-ATTR-CONT                  | There is no default for CONTTYPE. It is only used as a filter if entered.                                                                                   |
| RTRV-ATTR-ENV                   | There is no default for both NTFCNCDE and ALMTYPE, which are only used as filters if entered.                                                               |
| RTRV-EXT-CONT                   | CONTTYPE defaults to the contype associated with the AID.                                                                                                   |
| SET-ATTR-ENV                    | NTFCNCDE defaults to NR. ALMTYPE defaults to NULL. ALMMSG defaults to “Env Alarm Input 1”.                                                                  |

## 4.1.4 Equipment

**Table 4-4 Equipment Default Values**

| Equipment                                                                     | Default                                         |
|-------------------------------------------------------------------------------|-------------------------------------------------|
| ALW-SWTOPROTN-EQPT, INH-SWTOPROTN-EQPT and ALW-SWTOWKG-EQPT, ING-SWTOWKG-EQPT | DIRN defaults to BTH                            |
| ENT-EQPT                                                                      | PROTID, PRTYPE, RVRTV and RVTM defaults to NULL |
| SW-DX-EQPT                                                                    | MODE defaults to NORM                           |
| SW-TOPROTN-EQPT and SW-TOWKG-EQPT                                             | MODE defaults to NORM<br>DIRN defaults to BTH   |

## 4.1.5 Performance

**Table 4-5 Performance Default Values**

| Performance     | Default                                               |
|-----------------|-------------------------------------------------------|
| INIT-REG-<MOD2> | LOCN defaults to NEND (near end)                      |
| RTRV-PM-<MOD2>  | LOCN defaults to NEND<br>TMPER defaults to 15 minutes |



**Table 4-5 Performance Default Values (continued)**

| Performance           | Default                                                                                                                                                                                                                                          |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RTRV-TH-<MOD2>        | MONTYPE defaults to CVL for OCN, EC1, and DSN<br>MONTYPE defaults to ESP for STSp<br>MONTYPE defaults to UASV for VT1<br>MONTYPE defaults to AISSP for the DS1 layer of the DS3XM card<br>LOCN defaults to NEND<br>TMPPER defaults to 15 minutes |
| SET-PMMODE-<STS_PATH> | PMSTATE defaults to ON                                                                                                                                                                                                                           |
| SET-TH-<MOD2>         | LOCN defaults to NEND<br>TMPPER defaults to 15 minutes                                                                                                                                                                                           |

## 4.1.6 Ports

**Table 4-6 Ports Default Values**

| Ports                             | Default                                                                                                                                                                                                                 |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OCN Line                          | DCC defaults to N<br>TMGREF defaults to N<br>SYNCMSG defaults to Y<br>SENDDUS defaults to N<br>PJMON defaults to 0<br>SFBER defaults to 1E-4<br>SDBER defaults to 1E-7<br>MODE defaults to SONET<br>PST defaults to OOS |
| EC1 Line                          | PJMON defaults to 0 (zero)<br>LBO defaults to 0-225<br>RXEQUAL is Y<br>PST defaults to defaults to OOS                                                                                                                  |
| T1 Line (DS1/DS1N)                | LINECDE defaults to AMI<br>FMT defaults to D4<br>LBO defaults to 0-133<br>PST defaults to OOS                                                                                                                           |
| T3 Line (DS3, DS3E, DS3NE, DS3XM) | DS3/T3 LINECDE defaults to 0-225<br>DS3 PST defaults to OOS<br>DS3E/DS3NE FMT defaults to UNFRAMED<br>DS3E/DS3NE LINECDE defaults to B3ZS<br>DS3E/DS3NE LBO defaults to 0-225<br>DS3 of DS3XM PST defaults to OOS       |

## 4.1.7 SONET Line Protection

**Table 4-7 SONET Line Protection Default Values**

| SONET Line Protection | Default                                                                                                                                                                                                                                                  |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EX-SW-<OCN>           | ST (switch type) is optional and for BLSR protection switch only<br>ST defaults to BLSR RING switch type                                                                                                                                                 |
| OCN Line Protection   | PROTID defaults to the protecting port of the protection group (SLOT-#(OCN)PORT-#). It is a string that can have a maximum length of 32 characters<br>RVRTV defaults to N (non-revertive mode)<br>RVTM defaults to 5.0 minutes<br>PSDIRN defaults to UNI |
| OPR-PROTNSW-<OCN>     | ST (switch type) is optional and for BLSR protection switch only<br>ST defaults to BLSR RING switch type                                                                                                                                                 |

## 4.1.8 STS and VT Paths

**Table 4-8 STS and VT Paths Default Values**

| STS and VT Paths | Default                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| STS Path         | SFBER, SDBER, RVRTV, and RVTM apply to path protection STS paths only<br>SFBER defaults to 1E-4<br>SDBER defaults to 1E-6<br>RVRTV defaults to N<br>RVTM defaults to empty because RVRTV is N when path protection STSp is created<br><br>J1 is implemented on DS1, DS1N, DS3, DS3E, DS3NE, DS3XM, EC1, OC3, OC48AS AND OC192 cards<br>TRCMODE defaults to the OFF mode<br><br>EXPTRC defaults to a copy of the provisioned string or NULL when TRCMODE is OFF mode<br>EXPTRC defaults to the user entered string when the TRCMODE is MANUAL mode<br>EXPTRC defaults to a copy of the acquired received string or NULL if the string has not been acquired when the TRCMODE is AUTO mode<br><br>INCTRC defaults to the incoming string (NULL) when the TRCMODE is under OFF mode<br>INCTRC defaults to a copy of the received string or NULL if the string has not been received when the TRCMODE is under MANUAL or AUTO mode |
| VT Path          | RVRTV, RVTM apply to path protection VT paths only<br>RVRTV defaults to N<br>RVTM defaults to empty because RVRTV is N when path protection VT1 is created                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## 4.1.9 Synchronization

**Table 4-9 Synchronization Default Values**

| Synchronization | Default                                                                                                                                            |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| BITS            | LINECDE defaults to B8ZS<br>FMT defaults to ESF<br>SYNCMSG defaults to Y<br>PST defaults to OOS                                                    |
| NE-SYCN         | TMMDE defaults to EXTERNAL<br>SSMGEN defaults to GEN1<br>QRES defaults to SAME-AS-DUS<br>RVRTV defaults to Y<br>RVTM defaults to 5.0 minutes       |
| SYCN            | PRI/SEC QREF defaults to PRS<br>PRI STATUS defaults to ACT<br>SEC STATUS defaults to STBY<br>THIRD QREF defaults to ST3<br>STATUS defaults to STBY |

## 4.1.10 Testing

**Table 4-10 Testing Default Values**

| Testing  | Default                                             |
|----------|-----------------------------------------------------|
| OPR-LPBK | LPBKTYPE defaults to FACILITY                       |
| RLS-LPBK | LPBKTYPE defaults to current existing loopback type |

## 4.2 Modifier Support by Platform

Table 4-11 details the TL1 modifiers supported on the ONS 15454 and ONS 15327 for commands that have carets (< >) in part of their input format; for example, RTRV-<OCN\_TYPE>. A “Yes” in the ONS 15454 or ONS 15327 column indicates that a particular modifier is supported in that platform. A “No” in the ONS 15454 or ONS 15327 column indicates that a particular modifier is not supported in that platform. A “—” indicates that a particular modifier is not applicable to that platform.

**Table 4-11 Modifier Support**

| Modifier | ONS 15454 | ONS 15327 |
|----------|-----------|-----------|
| DS1      | Yes       | —         |
| EC1      | Yes       | —         |
| T1       | Yes       | Yes       |
| T3       | Yes       | Yes       |
| VT1      | Yes       | Yes       |

**Table 4-11** *Modifier Support (continued)*

| Modifier       | ONS 15454 | ONS 15327 |
|----------------|-----------|-----------|
| STS1           | Yes       | Yes       |
| STS3C          | Yes       | Yes       |
| STS6C          | Yes       | Yes       |
| STS9C          | Yes       | Yes       |
| STS12C         | Yes       | Yes       |
| STS24C         | Yes       | Yes       |
| STS48C         | Yes       | Yes       |
| STS192C        | Yes       | No        |
| OC3            | Yes       | Yes       |
| OC12           | Yes       | Yes       |
| OC48           | Yes       | Yes       |
| OC192          | Yes       | No        |
| G1000          | Yes       | Yes       |
| GIGE           | Yes       | No        |
| FSTE           | Yes       | No        |
| POS            | Yes       | No        |
| E100           | Yes       | Yes       |
| E1000          | Yes       | Yes       |
| CLNT           | Yes       | No        |
| OCH (TXP, MXP) | Yes       | No        |

## 4.3 Starting Positions for an STS-Mc SPE

Table 4-12, Table 4-13, and Table 4-14 list possible starting positions for Cisco ONS 15454 and Cisco ONS 15327 STS-Mc SPE. In each of the tables a “Y” indicates “Yes, this position is supported” and an “N” indicates, “No, this position is not supported”. More information about the generic NE support requirement can be found in *GR-253-CORE: Synchronous Optical Network (SONET) Transport Systems: Common Generic Criteria*.

**Table 4-12** *Starting Positions for an STS-Mc SPE in an OC-12 Signal*

| STS-1 Number | STS-3c SPE | STS-6c SPE | STS-9c SPE | STS-12c SPE |
|--------------|------------|------------|------------|-------------|
| 1            | Y          | Y          | Y          | Y           |
| 4            | Y          | Y          | Y          | N           |
| 7            | Y          | Y          | N          | N           |
| 10           | Y          | N          | Y          | N           |

**Table 4-13** Starting Positions for an STS-Mc SPE in an OC-48 Signal

| STS-1 Number | STS-3c SPE | STS-6c SPE | STS-9c SPE | STS-12c SPE | STS-24c SPE | STS-48c SPE |
|--------------|------------|------------|------------|-------------|-------------|-------------|
| 1            | Y          | Y          | Y          | Y           | Y           | Y           |
| 4            | Y          | Y          | Y          | N           | Y           | N           |
| 7            | Y          | Y          | N          | N           | Y           | N           |
| 10           | Y          | N          | Y          | N           | Y           | N           |
| 13           | Y          | Y          | Y          | Y           | Y           | N           |
| 16           | Y          | Y          | Y          | N           | Y           | N           |
| 19           | Y          | Y          | Y          | N           | Y           | N           |
| 22           | Y          | N          | N          | N           | Y           | N           |
| 25           | Y          | Y          | Y          | Y           | Y           | N           |
| 28           | Y          | Y          | Y          | N           | N           | N           |
| 31           | Y          | Y          | N          | N           | N           | N           |
| 34           | Y          | N          | N          | N           | N           | N           |
| 37           | Y          | Y          | Y          | Y           | N           | N           |
| 40           | Y          | Y          | Y          | N           | N           | N           |
| 43           | Y          | Y          | N          | N           | N           | N           |
| 46           | Y          | N          | Y          | N           | N           | N           |

**Table 4-14** Starting positions for an STS-Mc SPE in an OC-192 Signal

| STS-1 Number | STS-3c SPE | STS-6c SPE | STS-9c SPE | STS-12c SPE | STS-24c SPE | STS-48c SPE | STS-192c SPE |
|--------------|------------|------------|------------|-------------|-------------|-------------|--------------|
| 1            | Y          | Y          | Y          | Y           | Y           | Y           | Y            |
| 4            | Y          | Y          | Y          | N           | N           | N           | N            |
| 7            | Y          | Y          | N          | N           | N           | N           | N            |
| 10           | Y          | N          | Y          | N           | N           | N           | N            |
| 13           | Y          | Y          | Y          | Y           | N           | N           | N            |
| 16           | Y          | Y          | Y          | N           | N           | N           | N            |
| 19           | Y          | Y          | Y          | N           | N           | N           | N            |
| 22           | Y          | N          | N          | N           | N           | N           | N            |
| 25           | Y          | Y          | Y          | Y           | N           | N           | N            |
| 28           | Y          | Y          | Y          | N           | N           | N           | N            |
| 31           | Y          | Y          | N          | N           | N           | N           | N            |
| 34           | Y          | N          | N          | N           | N           | N           | N            |
| 37           | Y          | Y          | Y          | Y           | N           | N           | N            |
| 40           | Y          | Y          | Y          | N           | N           | N           | N            |
| 43           | Y          | Y          | N          | N           | N           | N           | N            |

Table 4-14 Starting positions for an STS-Mc SPE in an OC-192 Signal (continued)

| STS-1 Number | STS-3c SPE | STS-6c SPE | STS-9c SPE | STS-12c SPE | STS-24c SPE | STS-48c SPE | STS-192c SPE |
|--------------|------------|------------|------------|-------------|-------------|-------------|--------------|
| 46           | Y          | N          | Y          | N           | N           | N           | N            |
| 49           | Y          | Y          | Y          | Y           | Y           | Y           | N            |
| 52           | Y          | Y          | Y          | N           | N           | N           | N            |
| 55           | Y          | Y          | Y          | N           | N           | N           | N            |
| 58           | Y          | N          | N          | N           | N           | N           | N            |
| 61           | Y          | Y          | Y          | Y           | N           | N           | N            |
| 64           | Y          | Y          | Y          | N           | N           | N           | N            |
| 67           | Y          | Y          | N          | N           | N           | N           | N            |
| 70           | Y          | N          | N          | N           | N           | N           | N            |
| 73           | Y          | Y          | Y          | Y           | N           | N           | N            |
| 76           | Y          | Y          | Y          | N           | N           | N           | N            |
| 79           | Y          | Y          | N          | N           | N           | N           | N            |
| 82           | Y          | N          | Y          | N           | N           | N           | N            |
| 85           | Y          | Y          | Y          | Y           | N           | N           | N            |
| 88           | Y          | Y          | Y          | N           | N           | N           | N            |
| 91           | Y          | Y          | Y          | N           | N           | N           | N            |
| 94           | Y          | N          | N          | N           | N           | N           | N            |
| 97           | Y          | Y          | Y          | Y           | Y           | Y           | N            |
| 100          | Y          | Y          | Y          | N           | N           | N           | N            |
| 103          | Y          | Y          | N          | N           | N           | N           | N            |
| 106          | Y          | N          | N          | N           | N           | N           | N            |
| 109          | Y          | Y          | Y          | Y           | N           | N           | N            |
| 112          | Y          | Y          | Y          | N           | N           | N           | N            |
| 115          | Y          | Y          | N          | N           | N           | N           | N            |
| 118          | Y          | N          | Y          | N           | N           | N           | N            |
| 121          | Y          | Y          | Y          | Y           | N           | N           | N            |
| 124          | Y          | Y          | Y          | N           | N           | N           | N            |
| 127          | Y          | Y          | Y          | N           | N           | N           | N            |
| 130          | Y          | N          | N          | N           | N           | N           | N            |
| 133          | Y          | Y          | Y          | Y           | N           | N           | N            |
| 136          | Y          | Y          | Y          | N           | N           | N           | N            |
| 139          | Y          | Y          | N          | N           | N           | N           | N            |
| 142          | Y          | N          | N          | N           | N           | Y           | N            |
| 145          | Y          | Y          | Y          | Y           | Y           | N           | N            |
| 148          | Y          | Y          | Y          | N           | N           | N           | N            |

Table 4-14 Starting positions for an STS-Mc SPE in an OC-192 Signal (continued)

| STS-1 Number | STS-3c SPE | STS-6c SPE | STS-9c SPE | STS-12c SPE | STS-24c SPE | STS-48c SPE | STS-192c SPE |
|--------------|------------|------------|------------|-------------|-------------|-------------|--------------|
| 151          | Y          | Y          | N          | N           | N           | N           | N            |
| 154          | Y          | N          | Y          | N           | N           | N           | N            |
| 157          | Y          | Y          | Y          | Y           | N           | N           | N            |
| 160          | Y          | Y          | Y          | N           | N           | N           | N            |
| 163          | Y          | Y          | Y          | N           | N           | N           | N            |
| 166          | Y          | N          | N          | N           | N           | N           | N            |
| 169          | Y          | Y          | Y          | Y           | N           | N           | N            |
| 172          | Y          | Y          | Y          | N           | N           | N           | N            |
| 175          | Y          | Y          | N          | N           | N           | N           | N            |
| 178          | Y          | N          | N          | N           | N           | N           | N            |
| 181          | Y          | Y          | Y          | Y           | N           | N           | N            |
| 184          | Y          | Y          | Y          | N           | N           | N           | N            |
| 187          | Y          | Y          | N          | N           | N           | N           | N            |
| 190          | Y          | N          | Y          | N           | N           | N           | N            |

## 4.4 Access Identifiers

The AID code directs an input command to its intended physical or data entity inside the NE. Equipment modules and facilities are typical examples of entities addressed by the access code. The AIDs in this section apply to the ONS 15454 and the ONS 15327 except where noted.

### 4.4.1 ALL

Table 4-15 ALL

| AID         | Pattern                                                                                                                         |
|-------------|---------------------------------------------------------------------------------------------------------------------------------|
| AidUnionId  | FACILITY<br>STS<br>VT                                                                                                           |
| AidUnionId1 | BLSR                                                                                                                            |
| BAND        | ALL<br>BAND-{1-6,12-17}-{1-4}-ALL<br>BAND-{1-6,12-17}-{1-4}-{RX,TX}<br>BAND-{1-6,12-17}-{1}-ALL<br>BAND-{1-6,12-17}-{1}-{RX,TX} |

Table 4-15 ALL (continued)

| AID             | Pattern                                                                                                                                                                                                           |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BITS            | ALL<br>BITS-ALL<br>BITS-{1,2}<br>SYNC-BITS {1,2}                                                                                                                                                                  |
| BLSR            | ALL<br>BLSR-RINGID                                                                                                                                                                                                |
| CHANNEL         | ALL<br>CHAN-{1-6,12-17}-ALL<br>CHAN-{1-6,12-17}-{1-32}-ALL<br>CHAN-{1-6,12-17}-{1-32}-{RX,TX}<br>CHAN-{1-6,12-17}-{1-4}-ALL<br>CHAN-{1-6,12-17}-{1-4}-{RX,TX}<br>CHAN-{1-6,12-17}-{2,3}<br>CHAN-{1-6,12-17}-{2,5} |
| COM             | Common                                                                                                                                                                                                            |
| CrossConnectId  | FACILITY<br>STS                                                                                                                                                                                                   |
| CrossConnectId1 | FACILITY<br>STS<br>VT                                                                                                                                                                                             |
| DS1             | ALL<br>DS1-{1-6,12-17}-{1-6}-{1-28}                                                                                                                                                                               |
| ENV             | ALL<br>ENV-IN-ALL<br>ENV-IN-{1-20}<br>ENV-IN-{1-32}<br>ENV-IN-{1-4}<br>ENV-IN-{1-6}<br>ENV-OUT-ALL<br>ENV-OUT-{1-16}<br>ENV-OUT-{1-2}<br>ENV-OUT-{1-4}<br>ENV-{IN,OUT}-{1-16}                                     |
| EQPT            | AIP<br>ALL<br>BP<br>FAN<br>PWR-ALL<br>PWR-{A,B}<br>SLOT-ALL<br>SLOT-{1-14}<br>SLOT-{1-17}<br>SLOT-{1-6,12-17}<br>SLOT-{1-8}                                                                                       |



Table 4-15 ALL (continued)

| AID      | Pattern                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FACILITY | ALL<br>FAC-{1-4,11-14}-ALL<br>FAC-{1-4,11-14}-{1-16}<br>FAC-{1-4,11-14}-{1-4}<br>FAC-{1-4,14-17}-{1-8}<br>FAC-{1-4}-1<br>FAC-{1-4}-{1-4}<br>FAC-{1-6,12-17}-1<br>FAC-{1-6,12-17}-ALL<br>FAC-{1-6,12-17}-{0-11}<br>FAC-{1-6,12-17}-{0-1}<br>FAC-{1-6,12-17}-{1-12}<br>FAC-{1-6,12-17}-{1-4}<br>FAC-{1-6,12-17}-{1-6}<br>FAC-{1-6,12-17}-{1}<br>FAC-{1-6}-ALL<br>FAC-{5,6,12,13}-{1}<br>FAC-{5-6}-{1-28}<br>FAC-{5-6}-{1-3}<br>FAC-{8,10}-{1}<br>VFAC-{1-6,12-17}-{0-1} |
| IPCC     | ALL<br>CC-{1-16}                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| LINE     | LINE-{1-6,12-17}-{1-2}-ALL<br>LINE-{1-6,12-17}-{1-2}-{RX,TX}<br>LINE-{1-6,12-17}-{1-3}-ALL<br>LINE-{1-6,12-17}-{1-3}-{RX,TX}<br>LINE-{8,10}-{1}-ALL<br>LINE-{8,10}-{1}-{RX,TX}                                                                                                                                                                                                                                                                                        |
| NBR      | AAA.BBB.CC.DD<br>ALL<br>NBR-{1-16}                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| OSC      | ALL<br>OSC-RINGID                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| PR SLOT  | NULL<br>SLOT-1<br>SLOT-3<br>SLOT-5<br>SLOT-13<br>SLOT-15<br>SLOT-17                                                                                                                                                                                                                                                                                                                                                                                                   |
| RFILE    | RFILE-DB<br>RFILE-PKG                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

Table 4-15 ALL (continued)

| AID | Pattern                                           |
|-----|---------------------------------------------------|
| STS | ALL                                               |
|     | FAC-{1-6,12-17}-{1-4}                             |
|     | STS-{1-4,11-14}-{1-16}-1                          |
|     | STS-{1-4,11-14}-{1-16}-ALL                        |
|     | STS-{1-4,11-14}-{1-16}-{1,13,25,37}               |
|     | STS-{1-4,11-14}-{1-16}-{1,25}                     |
|     | STS-{1-4,11-14}-{1-16}-{1,4,7,10,-,46}            |
|     | STS-{1-4,11-14}-{1-4}-1                           |
|     | STS-{1-4,11-14}-{1-4}-ALL                         |
|     | STS-{1-4,11-14}-{1-4}-{1,13,25,37,-,181}          |
|     | STS-{1-4,11-14}-{1-4}-{1,25,49,73,-,169}          |
|     | STS-{1-4,11-14}-{1-4}-{1,4,7,10,-,190}            |
|     | STS-{1-4,11-14}-{1-4}-{1,49,97,145}               |
|     | STS-{1-4,11-14}-{1-4}-{1-192}                     |
|     | STS-{1-4,14-17}-{1-16}-{1-48}                     |
|     | STS-{1-4,14-17}-{1-4}-1                           |
|     | STS-{1-4,14-17}-{1-4}-ALL                         |
|     | STS-{1-4,14-17}-{1-4}-{1,4,7,10}                  |
|     | STS-{1-4,14-17}-{1-4}-{1,4,7}                     |
|     | STS-{1-4,14-17}-{1-4}-{1-3}                       |
|     | STS-{1-4,14-17}-{1-8}-1                           |
|     | STS-{1-4,14-17}-{1-8}-ALL                         |
|     | STS-{1-4,14-17}-{1-8}-{1-3}                       |
|     | STS-{1-4}-1-1                                     |
|     | STS-{1-4}-1-ALL                                   |
|     | STS-{1-4}-1-{1,13,25,37}                          |
|     | STS-{1-4}-1-{1,4,7,10,-,46}                       |
|     | STS-{1-4}-1-{1,4,7,10}                            |
|     | STS-{1-4}-1-{1,7,13,19,-,43}                      |
|     | STS-{1-4}-1-{1,7}                                 |
|     | STS-{1-4}-1-{1-12}                                |
|     | STS-{1-4}-1-{1-48}                                |
|     | STS-{1-6,12-17}-1                                 |
|     | STS-{1-6,12-17}-1-1                               |
|     | STS-{1-6,12-17}-1-ALL                             |
|     | STS-{1-6,12-17}-1-{1,13,25,37}                    |
|     | STS-{1-6,12-17}-1-{1,4,10,13,16,19,25,28,37,40}   |
|     | STS-{1-6,12-17}-1-{1,4,7,10,13,16,19,22,25}       |
|     | STS-{1-6,12-17}-1-{1,4,7,10-46}                   |
|     | STS-{1-6,12-17}-1-{1,4,7,10}                      |
|     | STS-{1-6,12-17}-1-{1,4,7,13,16,19,25,28,37,40,43} |
|     | STS-{1-6,12-17}-1-{1,4,7}                         |
|     | STS-{1-6,12-17}-1-{1,4}                           |
|     | STS-{1-6,12-17}-1-{1-12}                          |
|     | STS-{1-6,12-17}-1-{1-48}                          |
|     | STS-{1-6,12-17}-ALL                               |

Table 4-15 ALL (continued)

| AID             | Pattern                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| STS (continued) | STS-{1-6,12-17}-{1-12}<br>STS-{1-6,12-17}-{1-4}-1<br>STS-{1-6,12-17}-{1-4}-ALL<br>STS-{1-6,12-17}-{1-4}-{1,4,7,10-46}<br>STS-{1-6,12-17}-{1-4}-{1,4,7}<br>STS-{1-6,12-17}-{1-4}-{1,4}<br>STS-{1-6,12-17}-{1-4}-{1-12}<br>STS-{1-6,12-17}-{1-6}<br>STS-{5,6,12,13}-1-1<br>STS-{5,6,12,13}-1-{1,13,25,37-180}<br>STS-{5,6,12,13}-1-{1,13,25,37}<br>STS-{5,6,12,13}-1-{1,4,7,10,13,16,19,22,25}<br>STS-{5,6,12,13}-1-{1,4,7,10-190}<br>STS-{5,6,12,13}-1-{1,4,7,10-46}<br>STS-{5,6,12,13}-1-{1,4,7,13,16,19,25,28,37,40,43}<br>STS-{5,6,12,13}-1-{1,49,97,145}<br>STS-{5,6,12,13}-1-{1-192}<br>STS-{5,6,12,13}-1-{1-48}<br>STS-{5,6}-1<br>STS-{5,6}-{2-4}<br>STS-{5-6}-ALL<br>VFAC-{1-4}-{1-2}<br>VFAC-{1-6,12-17}-{0-1} |
| SYN             | SYNC-NE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| SYN_SRC         | BITS-1<br>BITS-2<br>FAC-{1-4,11-14}-{1-16}<br>FAC-{1-4,11-14}-{1-4}<br>FAC-{1-4}-1<br>FAC-{1-4}-{1-4}<br>FAC-{1-6,12-17}-{1-4}<br>FAC-{1-6,12-17}-{1}<br>FAC-{5,6,12,13}-{1}<br>INTERNAL<br>NONE<br>SYNC-NE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| SYNC_REF        | ALL<br>SYNC-ALL<br>SYNC-NE<br>SYNC-{BITS1,BITS2}                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| SYNCSW          | INT<br>PRI<br>SEC<br>THIRD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| UCP             | IPCCOID<br>NBRAID<br>STSAID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

Table 4-15 ALL (continued)

| AID    | Pattern                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| UDC    | ALL<br>UDC-{F,DCC}-{A,B}                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| VT     | ALL<br>VT1-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-4}<br>VT1-{1-4}-1-{1-12}-{1-7}-{1-4}<br>VT1-{1-4}-1-{1-48}-{1-7}-{1-4}<br>VT1-{1-4}-{1-4}-{1-3}-{1-7}-{1-4}<br>VT1-{1-6,12-17}-1-{1-12}-{1-7}-{1-4}<br>VT1-{1-6,12-17}-1-{1-48}-{1-7}-{1-4}<br>VT1-{1-6,12-17}-1-{1-7}-{1-2}<br>VT1-{1-6,12-17}-{1-12}-1-{1-7}-{1-4}<br>VT1-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-4}<br>VT1-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-4}<br>VT1-{1-6,12-17}-{1-6}-{1-7}-{1-4}<br>VT1-{5,6,12,13}-1-{1-192}-{1-7}-{1-4}<br>VT1-{5,6,12,13}-1-{1-48}-{1-7}-{1-4}<br>VT1-{5-6}-1-{1-7}-{1-2}<br>VT1-{5-6}-1-{1-7}-{1-4}<br>VT2-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-3}<br>VT2-{1-6,12-17}-1-{1-12}-{1-7}-{1-3}<br>VT2-{1-6,12-17}-1-{1-48}-{1-7}-{1-3}<br>VT2-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-3}<br>VT2-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-3}<br>VT2-{5,6,12,13}-1-{1-192}-{1-7}-{1-3}<br>VT2-{5,6,12,13}-1-{1-48}-{1-7}-{1-3} |
| WDMANS | AONS-{E,W}<br>WDMANS-{E,W}                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| WLEN   | WLEN-{E,W}-{ADD,DROP,EXP}-{1530.33,1531.12,1531.90,1532.68,1534.25,<br>1535.04,1535.82,1536.61,1538.19,1538.98,1539.77,1540.56,1542.14,1542.94,<br>1543.73,1544.53,1546.12,1546.92,,1547.72,1548.51,1550.12,1550.92,1551.72,<br>1552.52,1554.13,1554.94,1555.75,1556.55,1558.17,1558.98,1559.79,1560.61}                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## 4.4.2 AidUnionId

**Table 4-16** *AidUnionId*

| AID      | Patterns                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Facility | ALL<br>FAC-{1-4,11-14}-ALL<br>FAC-{1-4,11-14}-{1-16}<br>FAC-{1-4,11-14}-{1-4}<br>FAC-{1-4,14-17}-{1-8}<br>FAC-{1-4}-1<br>FAC-{1-4}-{1-4}<br>FAC-{1-6,12-17}-1<br>FAC-{1-6,12-17}-ALL<br>FAC-{1-6,12-17}-{0-11}<br>FAC-{1-6,12-17}-{0-1}<br>FAC-{1-6,12-17}-{1-12}<br>FAC-{1-6,12-17}-{1-4}<br>FAC-{1-6,12-17}-{1-6}<br>FAC-{1-6,12-17}-{1}<br>FAC-{1-6}-ALL<br>FAC-{5,6,12,13}-{1}<br>FAC-{5-6}-{1-28}<br>FAC-{5-6}-{1-3}<br>FAC-{8,10}-{1}<br>VFAC-{1-6,12-17}-{0-1} |

Table 4-16 AidUnionId (continued)

| AID | Patterns                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| STS | ALL<br>FAC-{1-6,12-17}-{1-4}<br>STS-{1-4,11-14}-{1-16}-1<br>STS-{1-4,11-14}-{1-16}-ALL<br>STS-{1-4,11-14}-{1-16}-{1,13,25,37}<br>STS-{1-4,11-14}-{1-16}-{1,25}<br>STS-{1-4,11-14}-{1-16}-{1,4,7,10,-,46}<br>STS-{1-4,11-14}-{1-4}-1<br>STS-{1-4,11-14}-{1-4}-ALL<br>STS-{1-4,11-14}-{1-4}-{1,13,25,37,-,181}<br>STS-{1-4,11-14}-{1-4}-{1,25,49,73,-,169}<br>STS-{1-4,11-14}-{1-4}-{1,4,7,10,-,190}<br>STS-{1-4,11-14}-{1-4}-{1,49,97,145}<br>STS-{1-4,11-14}-{1-4}-{1-192}<br>STS-{1-4,14-17}-{1-16}-{1-48}<br>STS-{1-4,14-17}-{1-4}-1<br>STS-{1-4,14-17}-{1-4}-ALL<br>STS-{1-4,14-17}-{1-4}-{1,4,7,10}<br>STS-{1-4,14-17}-{1-4}-{1,4,7}<br>STS-{1-4,14-17}-{1-4}-{1-3}<br>STS-{1-4,14-17}-{1-8}-1<br>STS-{1-4,14-17}-{1-8}-ALL<br>STS-{1-4,14-17}-{1-8}-{1-3}<br>STS-{1-4}-1-1<br>STS-{1-4}-1-ALL<br>STS-{1-4}-1-{1,13,25,37}<br>STS-{1-4}-1-{1,4,7,10,-,46}<br>STS-{1-4}-1-{1,4,7,10}<br>STS-{1-4}-1-{1,7,13,19,-,43}<br>STS-{1-4}-1-{1,7}<br>STS-{1-4}-1-{1-12}<br>STS-{1-4}-1-{1-48}<br>STS-{1-6,12-17}-1<br>STS-{1-6,12-17}-1-1<br>STS-{1-6,12-17}-1-ALL<br>STS-{1-6,12-17}-1-{1,13,25,37}<br>STS-{1-6,12-17}-1-{1,4,10,13,16,19,25,28,37,40}<br>STS-{1-6,12-17}-1-{1,4,7,10,13,16,19,22,25}<br>STS-{1-6,12-17}-1-{1,4,7,10-46}<br>STS-{1-6,12-17}-1-{1,4,7,10} |

Table 4-16 AidUnionId (continued)

| AID             | Patterns                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| STS (continued) | STS-{1-6,12-17}-1-{1,4,7,13,16,19,25,28,37,40,43}<br>STS-{1-6,12-17}-1-{1,4,7}<br>STS-{1-6,12-17}-1-{1,4}<br>STS-{1-6,12-17}-1-{1-12}<br>STS-{1-6,12-17}-1-{1-48} STS-{1-6,12-17}-ALL<br>STS-{1-6,12-17}-{1-12}<br>STS-{1-6,12-17}-{1-4}-1<br>STS-{1-6,12-17}-{1-4}-ALL STS-{1-6,12-17}-{1-4}-{1,4,7,10-46}<br>STS-{1-6,12-17}-{1-4}-{1,4,7}<br>STS-{1-6,12-17}-{1-4}-{1,4}<br>STS-{1-6,12-17}-{1-4}-{1-12}<br>STS-{1-6,12-17}-{1-6}<br>STS-{5,6,12,13}-1-1<br>STS-{5,6,12,13}-1-{1,13,25,37-180}<br>STS-{5,6,12,13}-1-{1,13,25,37}<br>STS-{5,6,12,13}-1-{1,4,7,10,13,16,19,22,25}<br>STS-{5,6,12,13}-1-{1,4,7,10-190}<br>STS-{5,6,12,13}-1-{1,4,7,10-46}<br>STS-{5,6,12,13}-1-{1,4,7,13,16,19,25,28,37,40,43}<br>STS-{5,6,12,13}-1-{1,49,97,145}<br>STS-{5,6,12,13}-1-{1-192}<br>STS-{5,6,12,13}-1-{1-48}<br>STS-{5,6}-1<br>STS-{5,6}-{2-4}<br>STS-{5-6}-ALL<br>VFAC-{1-4}-{1-2}<br>VFAC-{1-6,12-17}-{0-1} |

Table 4-16 AidUnionId (continued)

| AID | Patterns                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VT  | ALL<br>VT1-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-4}<br>VT1-{1-4}-1-{1-12}-{1-7}-{1-4}<br>VT1-{1-4}-1-{1-48}-{1-7}-{1-4}<br>VT1-{1-4}-{1-4}-{1-3}-{1-7}-{1-4}<br>VT1-{1-6,12-17}-1-{1-12}-{1-7}-{1-4}<br>VT1-{1-6,12-17}-1-{1-48}-{1-7}-{1-4}<br>VT1-{1-6,12-17}-1-{1-7}-{1-2}<br>VT1-{1-6,12-17}-{1-12}-1-{1-7}-{1-4}<br>VT1-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-4}<br>VT1-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-4}<br>VT1-{1-6,12-17}-{1-6}-{1-7}-{1-4}<br>VT1-{5,6,12,13}-1-{1-192}-{1-7}-{1-4}<br>VT1-{5,6,12,13}-1-{1-48}-{1-7}-{1-4}<br>VT1-{5-6}-1-{1-7}-{1-2}<br>VT1-{5-6}-1-{1-7}-{1-4}<br>VT2-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-3}<br>VT2-{1-6,12-17}-1-{1-12}-{1-7}-{1-3}<br>VT2-{1-6,12-17}-1-{1-48}-{1-7}-{1-3}<br>VT2-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-3}<br>VT2-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-3}<br>VT2-{5,6,12,13}-1-{1-192}-{1-7}-{1-3}<br>VT2-{5,6,12,13}-1-{1-48}-{1-7}-{1-3} |

### 4.4.3 AidUnionId1

Table 4-17 AidUnionId1

| AID  | Patterns           |
|------|--------------------|
| BLSR | ALL<br>BLSR-RINGID |

### 4.4.4 BAND

(Cisco ONS 15454 only)

The BAND AID is used to access Optical Multiplex Section (OMS) layer of Optical Network units.

Table 4-18 BAND

| Pattern                    | Description                                                                     |
|----------------------------|---------------------------------------------------------------------------------|
| ALL                        | All of the OMSs of the NE. The ALL AID is applicable for retrieve-only commands |
| BAND-{1-6,12-17}-{1-4}-ALL | All the Channels in a Band OADM (1Bn, 4Bn) units                                |



**Table 4-18 BAND (continued)**

| Pattern                        | Description                                                                       |
|--------------------------------|-----------------------------------------------------------------------------------|
| BAND-{1-6,12-17}-{1-4}-{RX,TX} | The Receive/Transmit Channels in a Band OADM (1Bn, 4Bn) units                     |
| BAND-{1-6,12-17}-{1}-ALL       | All the Channels in an Optical Multiplexer/Demultiplexer (4Ch) units              |
| BAND-{1-6,12-17}-{1}-{RX,TX}   | The Receive/Transmit Channels in an Optical Multiplexer/Demultiplexer (4Ch) units |

## 4.4.5 BITS

**Table 4-19 BITS**

| Pattern        | Description                                                                                                                                                                                                                           |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ALL            | The ALL AID is applicable to RTRV commands only (RTRV-BITS and RTRV-ALM/COND-BITS). The All AID is equivalent to BITS-ALL for these commands. For RTRV-ALM/COND-SYNCN, the ALL AID translates to BITS-ALL, SYNC-BITS1, and SYNC-BITS2 |
| BITS-ALL       | BITS AIDS of both BITS-1 and BITS-2 in the RTRV-BITS command                                                                                                                                                                          |
| BITS-{1,2}     | Individual BITS AID                                                                                                                                                                                                                   |
| SYNC-BITS{1,2} | BITS-OUT AIDS of BITS-1 and BITS-2. These AIDS are applicable only in ED/RTRV-BITS commands and are used for setting and retrieving the BITS-OUT parameters.                                                                          |

## 4.4.6 BLSR

BLSR AIDS are used to access the specific BLSR of the NE.

**Table 4-20 BLSR**

| Pattern     | Description                                                                                               |
|-------------|-----------------------------------------------------------------------------------------------------------|
| ALL         | All the BLSRs in the NE. The ALL AID is applicable for retrieve-only commands like RTRV-<MOD_RING> (BLSR) |
| BLSR-RINGID | RINGID is a string of up to six characters. Valid characters are [A-Z,0-9] (case insensitive)             |

## 4.4.7 CHANNEL

(Cisco ONS 15454 only)

Accesses the Optical Channels (OCH) layer of Optical Network/Client units.

**Table 4-21 CHANNEL**

| <b>CHANNEL Values</b>           | <b>Description</b>                                                                                                                                                                         |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ALL                             | ALL OCHs of the NE. The ALL AID is applicable for retrieve-only commands                                                                                                                   |
| CHAN-{1-6,12-17}-ALL            | All the Channels of an Optical Transponder/Muxponder                                                                                                                                       |
| CHAN-{1-6,12-17}-{1-32}-ALL     | All the Channels in an Optical Multiplexer/Demultiplexer (32Ch) units                                                                                                                      |
| CHAN-{1-6,12-17}-{1-32}-{RX,TX} | The Receive/Transmit Channels in an Optical Multiplexer/Demultiplexer (32Ch) units                                                                                                         |
| CHAN-{1-6,12-17}-{1-4}-ALL      | All the Channels in an OADM (1Ch, 2Ch, 4Ch) units and Optical and Optical Multiplexer/Demultiplexer (4Ch) units                                                                            |
| CHAN-{1-6,12-17}-{1-4}-{RX,TX}  | The Receive/Transmit Channels in an OADM (1Ch, 2Ch, 4Ch) units and Optical Multiplexer/Demultiplexer (4Ch) units                                                                           |
| CHAN-{1-6,12-17}-{2,3}          | A single channel of an Optical Transponder/Muxponder. The TXP_MR_10G and TXP_MR_2.5G use CHAN-slot-2 for the 1 DWDM Facility. TXPP_MR_2.5G uses CHAN-slot-{2,3} for the 2 DWDM facilities. |
| CHAN-{1-6,12-17}-{2,5}          | A single channel of an Optical Transponder/Muxponder. The TXP_MR_10G uses CHAN-slot-2 for the 1 DWDM facility. MXP_2.5G_10G uses the CHAN-slot-5 for the 1 DWDM facility                   |

## 4.4.8 COM

Common

**Table 4-22 COM**

| <b>Pattern</b> | <b>Description</b> |
|----------------|--------------------|
| COM            | Common             |

## 4.4.9 CrossConnectId

(Cisco ONS 15454 only)

**Table 4-23** *CrossConnectId*

| <b>AID</b> | <b>Pattern</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FACILITY   | ALL<br>FAC-{1-4,11-14}-ALL<br>FAC-{1-4,11-14}-{1-16}<br>FAC-{1-4,11-14}-{1-4}<br>FAC-{1-4,14-17}-{1-8}<br>FAC-{1-4}-1<br>FAC-{1-4}-{1-4}<br>FAC-{1-6,12-17}-1<br>FAC-{1-6,12-17}-ALL<br>FAC-{1-6,12-17}-{0-11}<br>FAC-{1-6,12-17}-{0-1}<br>FAC-{1-6,12-17}-{1-12}<br>FAC-{1-6,12-17}-{1-4}<br>FAC-{1-6,12-17}-{1-6}<br>FAC-{1-6,12-17}-{1}<br>FAC-{1-6}-ALL<br>FAC-{5,6,12,13}-{1}<br>FAC-{5-6}-{1-28}<br>FAC-{5-6}-{1-3}<br>FAC-{8,10}-{1}<br>VFAC-{1-6,12-17}-{0-1} |

Table 4-23 CrossConnectId (continued)

| AID | Pattern                                           |
|-----|---------------------------------------------------|
| STS | ALL                                               |
|     | FAC-{1-6,12-17}-{1-4}                             |
|     | STS-{1-4,11-14}-{1-16}-1                          |
|     | STS-{1-4,11-14}-{1-16}-ALL                        |
|     | STS-{1-4,11-14}-{1-16}-{1,13,25,37}               |
|     | STS-{1-4,11-14}-{1-16}-{1,25}                     |
|     | STS-{1-4,11-14}-{1-16}-{1,4,7,10,-,46}            |
|     | STS-{1-4,11-14}-{1-4}-1                           |
|     | STS-{1-4,11-14}-{1-4}-ALL                         |
|     | STS-{1-4,11-14}-{1-4}-{1,13,25,37,-,181}          |
|     | STS-{1-4,11-14}-{1-4}-{1,25,49,73,-,169}          |
|     | STS-{1-4,11-14}-{1-4}-{1,4,7,10,-,190}            |
|     | STS-{1-4,11-14}-{1-4}-{1,49,97,145}               |
|     | STS-{1-4,11-14}-{1-4}-{1-192}                     |
|     | STS-{1-4,14-17}-{1-16}-{1-48}                     |
|     | STS-{1-4,14-17}-{1-4}-1                           |
|     | STS-{1-4,14-17}-{1-4}-ALL                         |
|     | STS-{1-4,14-17}-{1-4}-{1,4,7,10}                  |
|     | STS-{1-4,14-17}-{1-4}-{1,4,7}                     |
|     | STS-{1-4,14-17}-{1-4}-{1-3}                       |
|     | STS-{1-4,14-17}-{1-8}-1                           |
|     | STS-{1-4,14-17}-{1-8}-ALL                         |
|     | STS-{1-4,14-17}-{1-8}-{1-3}                       |
|     | STS-{1-4}-1-1                                     |
|     | STS-{1-4}-1-ALL                                   |
|     | STS-{1-4}-1-{1,13,25,37}                          |
|     | STS-{1-4}-1-{1,4,7,10,-,46}                       |
|     | STS-{1-4}-1-{1,4,7,10}                            |
|     | STS-{1-4}-1-{1,7,13,19,-,43}                      |
|     | STS-{1-4}-1-{1,7}                                 |
|     | STS-{1-4}-1-{1-12}                                |
|     | STS-{1-4}-1-{1-48}                                |
|     | STS-{1-6,12-17}-1                                 |
|     | STS-{1-6,12-17}-1-1                               |
|     | STS-{1-6,12-17}-1-ALL                             |
|     | STS-{1-6,12-17}-1-{1,13,25,37}                    |
|     | STS-{1-6,12-17}-1-{1,4,10,13,16,19,25,28,37,40}   |
|     | STS-{1-6,12-17}-1-{1,4,7,10,13,16,19,22,25}       |
|     | STS-{1-6,12-17}-1-{1,4,7,10-46}                   |
|     | STS-{1-6,12-17}-1-{1,4,7,10}                      |
|     | STS-{1-6,12-17}-1-{1,4,7,13,16,19,25,28,37,40,43} |
|     | STS-{1-6,12-17}-1-{1,4,7}                         |
|     | STS-{1-6,12-17}-1-{1,4}                           |
|     | STS-{1-6,12-17}-1-{1-12}                          |
|     | STS-{1-6,12-17}-1-{1-48}                          |
|     | STS-{1-6,12-17}-ALL                               |

**Table 4-23** *CrossConnectId (continued)*

| AID             | Pattern                                           |
|-----------------|---------------------------------------------------|
| STS (continued) | STS-{1-6,12-17}-{1-12}                            |
|                 | STS-{1-6,12-17}-{1-4}-1                           |
|                 | STS-{1-6,12-17}-{1-4}-ALL                         |
|                 | STS-{1-6,12-17}-{1-4}-{1,4,7,10-46}               |
|                 | STS-{1-6,12-17}-{1-4}-{1,4,7}                     |
|                 | STS-{1-6,12-17}-{1-4}-{1,4}                       |
|                 | STS-{1-6,12-17}-{1-4}-{1-12}                      |
|                 | STS-{1-6,12-17}-{1-6}                             |
|                 | STS-{5,6,12,13}-1-1                               |
|                 | STS-{5,6,12,13}-1-{1,13,25,37-180}                |
|                 | STS-{5,6,12,13}-1-{1,13,25,37}                    |
|                 | STS-{5,6,12,13}-1-{1,4,7,10,13,16,19,22,25}       |
|                 | STS-{5,6,12,13}-1-{1,4,7,10-190}                  |
|                 | STS-{5,6,12,13}-1-{1,4,7,10-46}                   |
|                 | STS-{5,6,12,13}-1-{1,4,7,13,16,19,25,28,37,40,43} |
|                 | STS-{5,6,12,13}-1-{1,49,97,145}                   |
|                 | STS-{5,6,12,13}-1-{1-192}                         |
|                 | STS-{5,6,12,13}-1-{1-48}                          |
|                 | STS-{5,6}-1                                       |
|                 | STS-{5,6}-{2-4}                                   |
|                 | STS-{5,6}-ALL                                     |
|                 | VFAC-{1-4}-{1-2}                                  |
|                 | VFAC-{1-6,12-17}-{0-1}                            |

## 4.4.10 CrossConnectId1

(Cisco ONS 15454 only)

**Table 4-24** *CrossConnectId1*

| AID | Pattern                       |
|-----|-------------------------------|
| VCM | VCM-{1-6,12-17}-{0-1}-ALL     |
|     | VCM-{1-6,12-17}-{0-1}-{1-256} |
|     | VCM-{1-6,12-17}-{1-4}-ALL     |
|     | VCM-{1-6,12-17}-{1-4}-{1-256} |

Table 4-24 CrossConnectId1 (continued)

| AID      | Pattern                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FACILITY | ALL<br>FAC-{1-4,11-14}-ALL<br>FAC-{1-4,11-14}-{1-16}<br>FAC-{1-4,11-14}-{1-4}<br>FAC-{1-4,14-17}-{1-8}<br>FAC-{1-4}-1<br>FAC-{1-4}-{1-4}<br>FAC-{1-6,12-17}-1<br>FAC-{1-6,12-17}-ALL<br>FAC-{1-6,12-17}-{0-11}<br>FAC-{1-6,12-17}-{0-1}<br>FAC-{1-6,12-17}-{1-12}<br>FAC-{1-6,12-17}-{1-4}<br>FAC-{1-6,12-17}-{1-6}<br>FAC-{1-6,12-17}-{1}<br>FAC-{1-6}-ALL<br>FAC-{5,6,12,13}-{1}<br>FAC-{5-6}-{1-28}<br>FAC-{5-6}-{1-3}<br>FAC-{8,10}-{1}<br>VFAC-{1-6,12-17}-{0-1}                                                                                                                                                                                                                                                                                                           |
| STS      | ALL<br>FAC-{1-6,12-17}-{1-4}<br>STS-{1-4,11-14}-{1-16}-1<br>STS-{1-4,11-14}-{1-16}-ALL<br>STS-{1-4,11-14}-{1-16}-{1,13,25,37}<br>STS-{1-4,11-14}-{1-16}-{1,25}<br>STS-{1-4,11-14}-{1-16}-{1,4,7,10,-,46}<br>STS-{1-4,11-14}-{1-4}-1<br>STS-{1-4,11-14}-{1-4}-ALL<br>STS-{1-4,11-14}-{1-4}-{1,13,25,37,-,181}<br>STS-{1-4,11-14}-{1-4}-{1,25,49,73,-,169}<br>STS-{1-4,11-14}-{1-4}-{1,4,7,10,-,190}<br>STS-{1-4,11-14}-{1-4}-{1,49,97,145}<br>STS-{1-4,11-14}-{1-4}-{1-192}<br>STS-{1-4,14-17}-{1-16}-{1-48}<br>STS-{1-4,14-17}-{1-4}-1<br>STS-{1-4,14-17}-{1-4}-ALL<br>STS-{1-4,14-17}-{1-4}-{1,4,7,10}<br>STS-{1-4,14-17}-{1-4}-{1,4,7}<br>STS-{1-4,14-17}-{1-4}-{1-3}<br>STS-{1-4,14-17}-{1-8}-1<br>STS-{1-4,14-17}-{1-8}-ALL<br>STS-{1-4,14-17}-{1-8}-{1-3}<br>STS-{1-4}-1-1 |

Table 4-24 CrossConnectId1 (continued)

| AID             | Pattern                                           |
|-----------------|---------------------------------------------------|
| STS (continued) | STS-{1-4}-1-ALL                                   |
|                 | STS-{1-4}-1-{1,13,25,37}                          |
|                 | STS-{1-4}-1-{1,4,7,10,-,46}                       |
|                 | STS-{1-4}-1-{1,4,7,10}                            |
|                 | STS-{1-4}-1-{1,7,13,19,-,43}                      |
|                 | STS-{1-4}-1-{1,7}                                 |
|                 | STS-{1-4}-1-{1-12}                                |
|                 | STS-{1-4}-1-{1-48}                                |
|                 | STS-{1-6,12-17}-1                                 |
|                 | STS-{1-6,12-17}-1-1                               |
|                 | STS-{1-6,12-17}-1-ALL                             |
|                 | STS-{1-6,12-17}-1-{1,13,25,37}                    |
|                 | STS-{1-6,12-17}-1-{1,4,10,13,16,19,25,28,37,40}   |
|                 | STS-{1-6,12-17}-1-{1,4,7,10,13,16,19,22,25}       |
|                 | STS-{1-6,12-17}-1-{1,4,7,10-46}                   |
|                 | STS-{1-6,12-17}-1-{1,4,7,10}                      |
|                 | STS-{1-6,12-17}-1-{1,4,7,13,16,19,25,28,37,40,43} |
|                 | STS-{1-6,12-17}-1-{1,4,7}                         |
|                 | STS-{1-6,12-17}-1-{1,4}                           |
|                 | STS-{1-6,12-17}-1-{1-12}                          |
|                 | STS-{1-6,12-17}-1-{1-48}                          |
|                 | STS-{1-6,12-17}-ALL                               |
|                 | STS-{1-6,12-17}-{1-12}                            |
|                 | STS-{1-6,12-17}-{1-4}-1                           |
|                 | STS-{1-6,12-17}-{1-4}-ALL                         |
|                 | STS-{1-6,12-17}-{1-4}-{1,4,7,10-46}               |
|                 | STS-{1-6,12-17}-{1-4}-{1,4,7}                     |
|                 | STS-{1-6,12-17}-{1-4}-{1,4}                       |
|                 | STS-{1-6,12-17}-{1-4}-{1-12}                      |
|                 | STS-{1-6,12-17}-{1-6}                             |
|                 | STS-{5,6,12,13}-1-1                               |
|                 | STS-{5,6,12,13}-1-{1,13,25,37-180}                |
|                 | STS-{5,6,12,13}-1-{1,13,25,37}                    |
|                 | STS-{5,6,12,13}-1-{1,4,7,10,13,16,19,22,25}       |
|                 | STS-{5,6,12,13}-1-{1,4,7,10-190}                  |
|                 | STS-{5,6,12,13}-1-{1,4,7,10-46}                   |
|                 | STS-{5,6,12,13}-1-{1,4,7,13,16,19,25,28,37,40,43} |
|                 | STS-{5,6,12,13}-1-{1,49,97,145}                   |
|                 | STS-{5,6,12,13}-1-{1-192}                         |
|                 | STS-{5,6,12,13}-1-{1-48}                          |
|                 | STS-{5,6}-1                                       |
|                 | STS-{5,6}-{2-4}                                   |
|                 | STS-{5-6}-ALL                                     |
|                 | VFAC-{1-4}-{1-2}                                  |
|                 | VFAC-{1-6,12-17}-{0-1}                            |

Table 4-24 CrossConnectId1 (continued)

| AID | Pattern                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VT  | ALL<br>VT1-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-4}<br>VT1-{1-4}-1-{1-12}-{1-7}-{1-4}<br>VT1-{1-4}-1-{1-48}-{1-7}-{1-4}<br>VT1-{1-4}-{1-4}-{1-3}-{1-7}-{1-4}<br>VT1-{1-6,12-17}-1-{1-12}-{1-7}-{1-4}<br>VT1-{1-6,12-17}-1-{1-48}-{1-7}-{1-4}<br>VT1-{1-6,12-17}-1-{1-7}-{1-2}<br>VT1-{1-6,12-17}-{1-12}-1-{1-7}-{1-4}<br>VT1-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-4}<br>VT1-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-4}<br>VT1-{1-6,12-17}-{1-6}-{1-7}-{1-4}<br>VT1-{5,6,12,13}-1-{1-192}-{1-7}-{1-4}<br>VT1-{5,6,12,13}-1-{1-48}-{1-7}-{1-4}<br>VT1-{5-6}-1-{1-7}-{1-2}<br>VT1-{5-6}-1-{1-7}-{1-4}<br>VT2-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-3}<br>VT2-{1-6,12-17}-1-{1-12}-{1-7}-{1-3}<br>VT2-{1-6,12-17}-1-{1-48}-{1-7}-{1-3}<br>VT2-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-3}<br>VT2-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-3}<br>VT2-{5,6,12,13}-1-{1-192}-{1-7}-{1-3}<br>VT2-{5,6,12,13}-1-{1-48}-{1-7}-{1-3} |

## 4.4.11 DS1

(Cisco ONS 15454 only)

Used to access the DS-1 frame layer of the DS3XM.

Table 4-25 DS1

| Pattern                      | Description                                                                                                                                  |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| ALL                          | The ALL AID applies to RTRV-DS1 and RTRV-ALM/COND-DS1 commands only to retrieve all DS1 facilities and DS1-level alarms/conditions on the NE |
| DS1-{1-6,12-17}-{1-6}-{1-28} | DS1 AID for the DS3XM card                                                                                                                   |

## 4.4.12 ENV

The environmental AID for the AIC/AICI cards



**Table 4-26 ENV**

| Pattern             | Description                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------|
| ALL                 | The ALL AID applies to retrieve-only commands: RTRV-ALM/COND-ENV, RTRV-ATTR-CONT and RTRV-ATTR-ENV                                 |
| ENV-IN-ALL          | All Environmental Control Input contacts                                                                                           |
| ENV-IN-{1-20}       | Environmental AID for AICI Card on the 15454. "IN" is used for Environmental Alarms                                                |
| ENV-IN-{1-32}       | Environmental AID for AIC/AICI Cards on the 15454. "IN" is used for Environmental Alarms                                           |
| ENV-IN-{1-4}        | Environmental AID for AIC Card on the 15454. "IN" is used for Environmental Alarms                                                 |
| ENV-IN-{1-6}        | Environmental AID for the 15327. "IN" is used for Environmental Alarms                                                             |
| ENV-OUT-ALL         | All Environmental Control Output contacts                                                                                          |
| ENV-OUT-{1-16}      | Environmental AID for AICI Extensions on the 15454. "OUT" is used for Environmental Controls                                       |
| ENV-OUT-{1-2}       | Environmental AID for 15327. "OUT" is used for Environmental Controls                                                              |
| ENV-OUT-{1-4}       | Environmental AID for AIC/AICI Cards on the 15454. "OUT" is used for Environmental Controls                                        |
| ENV-{IN,OUT}-{1-16} | Environmental AID for AIC/AICI Cards on the 15454. "IN" is used for Environmental Alarms. "OUT" is used for Environmental Controls |

## 4.4.13 EQPT

Equipment AIDs are used to access specific cards. In the ONS 15454, the OC48/OC192 cards can only use the high speed slots (Slot 5, Slot 6, Slot 12, Slot 13). In the ONS 15327, Slots 1–4 are for I/O cards (Ethernet and Optical cards). Slots 5 and 6 are for the XTC cards, and Slots 7 and 8 are for the MIC cards.

**Table 4-27 EQPT**

| Pattern | Description                                                                                                                                                                                                                                                                                                                                                    |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AIP     | The AID for the AIP. It is used for RTRV-INV output only (ONS 15454)                                                                                                                                                                                                                                                                                           |
| ALL     | Only used for RTRV-INV, RTRV-EQPT, and RTRV-ALM/COND-EQPT commands. RTRV-INV returns all the inventory information for the NE. The ONS 15454 includes the I/O cards, controller cards, and the AIP, BP, and FAN. The ONS 15327 includes the I/O cards and controller cards. RTRV-EQPT with ALL AID returns EQPT and PWR-A and PWR-B type of alarms/conditions. |
| BP      | The AID for the backplane. It is used for RTRV-INV output only (ONS 15454 only)                                                                                                                                                                                                                                                                                |

**Table 4-27** EQPT (continued)

| Pattern          | Description                                                                                                     |
|------------------|-----------------------------------------------------------------------------------------------------------------|
| FAN              | The AID for the fan tray. It is used for RTRV-INV output only.                                                  |
| PWR-ALL          | AIDs for the Power Supply Sources. These AIDs are valid only for the RTRV-ALM-EQPT and RTRV-COND-EQPT commands. |
| PWR-{A,B}        | AIDs for the Power Supply Sources. These AIDs are valid only for the RTRV-ALM-EQPT and RTRV-COND-EQPT commands. |
| SLOT-ALL         | All of the NE equipment AIDs                                                                                    |
| SLOT-{1-17}      | Equipment AID for ONS 15454                                                                                     |
| SLOT-{1-6,12-17} | Individual equipment AID of the I/O card units or slots for ONS 15454                                           |
| SLOT-{1-8}       | EQPT AID for ONS 15327                                                                                          |

## 4.4.14 FACILITY

Facilities AIDs are used to access specific ports.

**Table 4-28** FACILITY

| Pattern                | Description                                                                                                                                                                                                                                                                                           |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ALL                    | The ALL AID is applicable for RTRV-only commands (RTRV-rr type of commands), for example: RTRV-OC48 with ALL AID returns all OC48 facilities on the node. RTRV-T1 with ALL AID returns all T1 facilities on the node.                                                                                 |
| FAC-{1-4,14-17}-{1-8}  | Facilities for an OC3-8 card (ONS 15454)                                                                                                                                                                                                                                                              |
| FAC-{1-4}-1            | Facility AIDs for OC12, OC48 (ONS 15327)                                                                                                                                                                                                                                                              |
| FAC-{1-4}-{1-4}        | Facility AIDs for 4-Port OC3 (ONS 15327)                                                                                                                                                                                                                                                              |
| FAC-{1-6,12-17}-1      | Facility AID for the 1 Client (CLNT) Port on a TXP_MR_10G card or a TXP_MR_2.5G (ONS 15454)                                                                                                                                                                                                           |
| FAC-{1-6,12-17}-ALL    | All the facilities of an I/O unit or slot (ONS 15454)                                                                                                                                                                                                                                                 |
| FAC-{1-6,12-17}-{0-11} | Facilities for the Ethernet Front-end ports on the ML100T-12 card. Ports are numbered starting with 0 (i.e. the first port is FAC-SLOT-0, second port is FAC-SLOT-1, ..., last port is FAC-SLOT-11 for ML100T-12 and first port is FAC-SLOT-0 and second port is FAC-SLOT-1 for ML1000-2) (ONS 15454) |
| FAC-{1-6,12-17}-{0-1}  | Facilities for the Ethernet Backend Ports on the ML1000-2 card. Ports are 0-based, (i.e the first port is FAC-SLOT-0 and the second port is FAC-SLOT-1) (ONS 15454)                                                                                                                                   |
| FAC-{1-6,12-17}-{1-12} | Facilities AID for the EC1 and DS3 cards (ONS 15454)                                                                                                                                                                                                                                                  |
| FAC-{1-6,12-17}-{1-4}  | Facility AID for the four Client (CLNT) facilities on the MXP_2.5G_10G card. Facility AID for 4-Port G1000/FC-MR-4 Card. Facility AID for creating/editing cross-connects (STS1, STS3C, STS6C, STS9C, STS12C, and STS24C) for the 4-Port G1000/FC-MR-4 Card (ONS 15454)                               |

**Table 4-28 FACILITY (continued)**

| Pattern                | Description                                                                                                                                                                                                                            |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FAC-{1-6,12-17}-{1-6}  | Facilities for the DS3XM card (ONS 15454)                                                                                                                                                                                              |
| FAC-{1-6,12-17}-{1}    | Facility AID for the 1-Port OC12, OC48AS and OC3 in OSC-CSM cards. Facility AID for the client ports on the MXP/TXP and TXP_MR_2.5G cards. (ONS 15454)                                                                                 |
| FAC-{1-6}-ALL          | Facility AIDs for I/O unit or slots (ONS 15327)                                                                                                                                                                                        |
| FAC-{5,6,12,13}-{1}    | Facility AID for the OC48/OC192 cards. The OC48/OC192 cards can only use the high speed slots (Slot 5, Slot 6, Slot 12, Slot 13) (ONS 15454)                                                                                           |
| FAC-{5-6}-{1-28}       | Facility AID for the T1 Ports on the XTC-28-3 (ONS 15327)                                                                                                                                                                              |
| FAC-{5-6}-{1-3}        | Facility AIDs on the TR Ports in the XTC-28-3 (ONS 15327)                                                                                                                                                                              |
| FAC-{8,10}-{1}         | Facility AID for the OSCM card. The OSCM cards can only use the XC slots (Slot-8, Slot-10) (ONS 15454)                                                                                                                                 |
| VFAC-{1-6,12-17}-{0-1} | Facilities for the backend POS ports on the ML-series card. Port numbering is 0-based (first POS port is VFAC-SLOT-0, second POS port is VFAC-SLOT-1). VC4, VC4-2C, VC4-3C, VC4-4C, VC4-8C for the ML1000 and ML100T Cards (ONS 15454) |

## 4.4.15 IPCC

(Cisco ONS 15454 only)

IP Control Channel AIDs are used to access the IPCC of the UCP.

**Table 4-29 IPCC**

| Pattern   | Description                                                                                                                                                                                                   |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ALL       | Indicates the whole IPCCs of the UCP. The "ALL" AID is used for UCP retrieving command input only. A NULL AID in the IPCCs retrieval command defaults to the ALL AID, which returns all the IPCCs of the node |
| CC-{1-16} | Indicates individual IPCC of the UCP                                                                                                                                                                          |

## 4.4.16 LINE

(Cisco ONS 15454 only)

The LINE AID is used to access the Optical Transport Section (OTS) layer of optical network units.

**Table 4-30** *LINE*

| Values                         | Description                                                                               |
|--------------------------------|-------------------------------------------------------------------------------------------|
| ALL                            | All of the OTSs of the NE. The ALL AID applies for retrieve-only commands                 |
| LINE-{1-6,12-17}-{1-2}-ALL     | All the Lines in a OPT-PRE, OCS-CSM, AD-1B, AD-4B, AD-1C, AD-2C, AD-4C units              |
| LINE-{1-6,12-17}-{1-2}-{RX,TX} | The receive/transmit Lines in a OPT-PRE, OCS-CSM, AD-1B, AD-4B, AD-1C, AD-2C, AD-4C units |
| LINE-{1-6,12-17}-{1-3}-ALL     | All the Lines in a OPT-BST units                                                          |
| LINE-{1-6,12-17}-{1-3}-{RX,TX} | The receive/transmit Lines in a OPT-BST units                                             |
| LINE-{8,10}-{1}-ALL            | All the Lines in a OSCM units                                                             |
| LINE-{8,10}-{1}-{RX,TX}        | The receive/transmit Lines in an OSCM units                                               |

## 4.4.17 NBR

(Cisco ONS 15454 only)

UCP neighbor AIDs are used to access the neighbors of the UCP.

**Table 4-31** *NBR*

| Pattern       | Description                                                                                                                         |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------|
| AAA.BBB.CC.DD | Indicates the UCP neighbor or IP address. It is a character string.                                                                 |
| ALL           | Indicates the whole neighbors of the UCP. It is used for UCP retrieving command input only.                                         |
| NBR-{1-16}    | Indicates an individual neighbor index (1-16) of the UCP. It is optional in the ENT-UCP-NBR command which returns a neighbor index. |

## 4.4.18 OSC

(Cisco ONS 15454 only)

OSC AIDs are used to access the OSC of the NE

**Table 4-32** *OSC*

| Values     | Description                                                                                   |
|------------|-----------------------------------------------------------------------------------------------|
| ALL        | All of the OSCs of the NE. The ALL AID applies to the retrieve-only commands                  |
| OSC-RINGID | RINGID is a string of up to six characters, valid characters are [A-Z,0-9] (case insensitive) |

## 4.4.19 PRSLOT

(Cisco ONS 15454 only)

Valid protection slots for the electrical cards

**Table 4-33 PRSLOT**

| Pattern | Description                                                                            |
|---------|----------------------------------------------------------------------------------------|
| NULL    | Indicates there is no protection group. Used when trying to delete a protection group. |
| SLOT-1  | The No.1 slot of an NE                                                                 |
| SLOT-3  | The No.3 slot of an NE                                                                 |
| SLOT-5  | The No.5 slot of an NE                                                                 |
| SLOT-13 | The No.13 slot of an NE                                                                |
| SLOT-15 | The No.15 slot of an NE                                                                |
| SLOT-17 | The No.17 slot of an NE                                                                |

## 4.4.20 RFILE

File transfer type

**Table 4-34 RFILE**

| Pattern   | Description                      |
|-----------|----------------------------------|
| RFILE-DB  | Transferring the system database |
| RFILE-PKG | Transferring a software package  |

## 4.4.21 STS

SONET frame-level AID set

**Table 4-35 STS**

| Pattern                             | Description                                                                                                                                                                                                                                    |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ALL                                 | The ALL AID applies to the RTRV-only commands: RTRV-STs with ALL AID retrieves all STS interfaces on the NE. RTRV-STs1 with ALL AID retrieves all STS1 interfaces on the NE. RTRV-STs3c with ALL AID retrieves all STS3c interfaces on the NE. |
| FAC-{1-6,12-17}-{1-4}               | Dynamically allocated STSs of all widths for the G1000-4 card (ONS 15454)                                                                                                                                                                      |
| STS-{1-4,11-14}-{1-16}-{1,13,25,37} | STS12C AID for 16-port OC48                                                                                                                                                                                                                    |
| STS-{1-4,11-14}-{1-16}-{1,25}       | STS24C AID for 16-Port OC48 (ONS 15454)                                                                                                                                                                                                        |

Table 4-35 STS (continued)

| Pattern                                           | Description                                                                    |
|---------------------------------------------------|--------------------------------------------------------------------------------|
| STS-{1-4,14-17}-{1-4}-1                           | STS12C AIDS for a 4-port OC12 card (ONS 15454)                                 |
| STS-{1-4,14-17}-{1-4}-ALL                         | All the STSs for a 4-port OC12 card (ONS 15454)                                |
| STS-{1-4,14-17}-{1-4}-{1,4,7,10}                  | STS3C for a 4-port OC12 card (ONS 15454)                                       |
| STS-{1-4,14-17}-{1-4}-{1,4,7}                     | STS6C AIDS for a 4-port OC12 (ONS 15454)                                       |
| STS-{1-4,14-17}-{1-4}-{1-3}                       | STS1 AID for a 4-port OC3 card (ONS 15454)                                     |
| STS-{1-4,14-17}-{1-8}-1                           | STS3C for an 8-port OC3 card (ONS 15454)                                       |
| STS-{1-4,14-17}-{1-8}-ALL                         | All the STSs for an 8-port OC3 card (ONS 15454)                                |
| STS-{1-4,14-17}-{1-8}-{1-3}                       | STS1 AID for an 8-port OC3 card (ONS 15454)                                    |
| STS-{1-4}-1-1                                     | STS48c AID for 1-Port OC48 (ONS 15327)                                         |
| STS-{1-4}-1-ALL                                   | STS ALL AID for 1-Port Cards (ONS 15327)                                       |
| STS-{1-4}-1-{1,13,25,37}                          | STS12c AID for 1-Port OC48 (ONS 15327)                                         |
| STS-{1-4}-1-{1,4,7,10,-,46}                       | STS3c AID for 1-Port OC48 (ONS 15327)                                          |
| STS-{1-4}-1-{1,4,7,10}                            | STS3c AID for 4-Port OC3 and 1-Port OC12 (ONS 15327)                           |
| STS-{1-4}-1-{1,7,13,19,-,43}                      | STS6c AID for 1-Port OC48 (ONS 15327)                                          |
| STS-{1-4}-1-{1,7}                                 | STS6c AID for 1-Port OC12 (ONS 15327)                                          |
| STS-{1-4}-1-{1-12}                                | STS1 AID for 4-Port OC3, 1-Port OC12 (ONS 15327)                               |
| STS-{1-4}-1-{1-48}                                | STS1 AID for 1-Port OC48 (ONS 15327)                                           |
| STS-{1-6,12-17}-1                                 | STS1 AID for a DS1 card (ONS 15454)                                            |
| STS-{1-6,12-17}-1-1                               | STS12C AID for a 1-port OC12 card<br>STS48C AID for an OC48AS card (ONS 15454) |
| STS-{1-6,12-17}-1-ALL                             | All the STSs of an STS bandwidth on a single port optical card (ONS 15454)     |
| STS-{1-6,12-17}-1-{1,13,25,37}                    | STS12C AIDS for an OC48AS card (ONS 15454)                                     |
| STS-{1-6,12-17}-1-{1,4,10,13,16,19,25,28,37,40}   | STS9C AID for an OC48AS card (ONS 15454)                                       |
| STS-{1-6,12-17}-1-{1,4,7,10,13,16,19,22,25}       | STS24C AID for an OC48AS card (ONS 15454)                                      |
| STS-{1-6,12-17}-1-{1,4,7,10-46}                   | STS3C AID for an OC48AS card (ONS 15454)                                       |
| STS-{1-6,12-17}-1-{1,4,7,10}                      | STS3C for a 1-port OC12 card (ONS 15454)                                       |
| STS-{1-6,12-17}-1-{1,4,7,13,16,19,25,28,37,40,43} | STS6C AID for an OC48AS card (ONS 15454)                                       |
| STS-{1-6,12-17}-1-{1,4,7}                         | STS6C AID for an OC12 card (ONS 15454)                                         |
| STS-{1-6,12-17}-1-{1,4}                           | STS9C AID for a 1-port OC12 card (ONS 15454)                                   |
| STS-{1-6,12-17}-1-{1-12}                          | STS1 AID for a 1-port OC12 card (ONS 15454)                                    |
| STS-{1-6,12-17}-1-{1-48}                          | STS1 AID for an OC48AS card (ONS 15454)                                        |
| STS-{1-6,12-17}-ALL                               | STS ALL AID for the card in the given slot (ONS 15454)                         |

**Table 4-35 STS (continued)**

| Pattern                                           | Description                                                                                                                                      |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| STS-{1-6,12-17}-{1-12}                            | STS1 AID for EC1 and DS3 cards (ONS 15454)                                                                                                       |
| STS-{1-6,12-17}-{1-4}-1                           | STS3C AID for a 4-port OC3 card (ONS 15454)                                                                                                      |
| STS-{1-6,12-17}-{1-4}-ALL                         | All the STSs for a 4-port OC3 card (ONS 15454)                                                                                                   |
| STS-{1-6,12-17}-{1-4}-{1,4,7}                     | STS6c AID for 4-PortOC12 (ONS 15454)                                                                                                             |
| STS-{1-6,12-17}-{1-4}-{1,4}                       | STS9C AID for a 4-port OC12 card (ONS 15454)                                                                                                     |
| STS-{1-6,12-17}-{1-4}-{1-12}                      | STS1 AID for a 4-port OC12 card (ONS 15454)                                                                                                      |
| STS-{1-6,12-17}-{1-6}                             | STS1 AID for a DS3XM card (ONS 15454)                                                                                                            |
| STS-{5,6,12,13}-1-1                               | STS48C AID for an OC48 card<br>STS192 AID for an OC192 card (ONS 15454)                                                                          |
| STS-{5,6,12,13}-1-{1,13,25,37-180}                | STS12C AID for an OC192 card (ONS 15454)                                                                                                         |
| STS-{5,6,12,13}-1-{1,13,25,37}                    | STS12C AIDs for an OC48 card (ONS 15454)                                                                                                         |
| STS-{5,6,12,13}-1-{1,4,7,10,13,16,19,22,25}       | STS24C AID for an OC48 card (ONS 15454)                                                                                                          |
| STS-{5,6,12,13}-1-{1,4,7,10-190}                  | STS3C for an OC192 card (ONS 15454)                                                                                                              |
| STS-{5,6,12,13}-1-{1,4,7,10-46}                   | STS3C AID for an OC48 card (ONS 15454)                                                                                                           |
| STS-{5,6,12,13}-1-{1,4,7,13,16,19,25,28,37,40,43} | STS6C AID for an OC48 card (ONS 15454)                                                                                                           |
| STS-{5,6,12,13}-1-{1,49,97,145}                   | STS48C AID for an OC192 card (ONS 15454)                                                                                                         |
| STS-{5,6,12,13}-1-{1-192}                         | STS1 AID for an OC192 card (ONS 15454)                                                                                                           |
| STS-{5,6,12,13}-1-{1-48}                          | STS1 AID for an OC48 card (ONS 15454)                                                                                                            |
| STS-{5,6}-1                                       | STS1 AID for XTC-14, XTC-28-3 for the T1 Port (ONS 15327)                                                                                        |
| STS-{5,6}-{2-4}                                   | STS1 AID for XTC-14, XTC-28-3 T3 Ports (ONS 15327)                                                                                               |
| STS-{5-6}-ALL                                     | TS ALL AID for the T1 and T3 Ports within the XTC-14 and XTC-28-3 (ONS 15327)                                                                    |
| VFAC-{1-6,12-17}-{0-1}                            | Virtual facility AIDs for the ML-series cards back end POS ports. Both the ML1000-2 and ML100T-12 have two POS ports and are 0-based (ONS 15454) |

## 4.4.22 SYN

Synchronization AIDs

**Table 4-36 SYN**

| Pattern | Description |
|---------|-------------|
| SYNC-NE | NE sync AID |

## 4.4.23 SYN\_SRC

Synchronization source

**Table 4-37** SYN\_SRC

| Pattern               | Description                                                                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| BITS-1                | Sync source is BITS-1                                                                                                                                     |
| BITS-2                | Sync source is BITS-2                                                                                                                                     |
| FAC-{1-4,11-14}-{1-4} | Sync source is 4-Port OC192 (ONS 15454)                                                                                                                   |
| FAC-{1-4}-1           | Sync Source is the Optical Card (1-Port OC12, OC48) facility in ONS 15327                                                                                 |
| FAC-{1-4}-{1-4}       | Sync Source is the Optical Card (4-Port OC3) facility in ONS 15327                                                                                        |
| FAC-{1-6,12-17}-{1-4} | Sync source is the optical card (four-port OC3 and four-port OC12) facility in ONS 15454                                                                  |
| FAC-{1-6,12-17}-{1}   | Sync source is the optical card (one-port OC12 and OC48AS) facility in ONS 15454                                                                          |
| FAC-{5,6,12,13}-{1}   | Sync source is the optical card (OC48,OC192) facility in ONS 15454                                                                                        |
| INTERNAL              | Set the SYN_SRC to be the system default value. The “Internal” value of the SYN_SRC is only applied for the SYNC-NE AID on the ED-SYNCN command.          |
| NONE                  | Set the SYNC_SRC value to the default value for BITS-OUT. The “NONE” value of SYNC_SRC only applies to the BITS-1 and BITS-2 AID of the ED-SYNCN command. |
| SYNC-NE               | SYNC-NE source. It is only used in the alarm report or alarm retrieve commands.                                                                           |

## 4.4.24 SYNC\_REF

Synchronization AIDs

**Table 4-38** SYNC\_REF

| Pattern            | Description                                                                                                                            |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| ALL                | Equivalent to a combination of SYNC-ALL, BITS-1 and BITS-2. This AID is valid only for the commands RTRV-ALM-SYNCN and RTRV-COND-SYNCN |
| SYNC-ALL           | All synchronization references                                                                                                         |
| SYNC-NE            | NE sync AID                                                                                                                            |
| SYNC-{BITS1,BITS2} | BITS1 and BITS2 sync AIDs                                                                                                              |

## 4.4.25 SYNC\_SW

New synchronization reference that will be used



**Table 4-39** *SYNCSW*

| Pattern | Description                                                                                                  |
|---------|--------------------------------------------------------------------------------------------------------------|
| INT     | Internal clock. The “INT” value of the syncsw is only applied for the SYNC-NE AID on the OPR-SYNCSW command. |
| PRI     | Primary timing reference                                                                                     |
| SEC     | Secondary timing reference                                                                                   |
| THIRD   | Third timing reference                                                                                       |

## 4.4.26 UCP

(Cisco ONS 15454 only)

UCP alarm AID

**Table 4-40** *UCP*

| Pattern | Description                                                     |
|---------|-----------------------------------------------------------------|
| IPCCAID | Indicates UCP Control Channel AIDs, in the type of “CC-CCID”    |
| NBRAID  | Indicates UCP Neighbor AIDs, in the type of “CC-NEIGHBORID”     |
| STSAID  | Indicates UCP STS Circuit AIDs, in the type of “STS-SLOT#-STS#” |

## 4.4.27 UDC

(Cisco ONS 15454 only)

UDC AIDs for F-UDC and DCC-UDC channels on the AICI card

**Table 4-41** *UDC*

| Pattern                      | Description                                                                                                                                                   |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ALL                          | ALL AID is applicable to RTRV-only commands, for example: RTRV-ALM/COND-UDCF and RTRV-ALM/COND-UDCDCC. It corresponds to a superset of F-UDC and DCC-UDC AIDs |
| UDC- $\{F,DCC\}$ - $\{A,B\}$ | F-UDC and DCC-UDC AIDs for A and B channels                                                                                                                   |

## 4.4.28 VT

Virtual tributary

**Table 4-42 VT**

| Pattern                                  | Description                                                                                                                      |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| ALL                                      | The ALL AID applies to RTRV-only commands; for example, RTRV-VT and RTRV-VT1 with ALL AID returns all VT1 interfaces on the node |
| VT1-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-4}  | 8-port OC3 card (ONS 15454)                                                                                                      |
| VT1-{1-4}-1-{1-12}-{1-7}-{1-4}           | VT AIDs for 1-Port OC12 (ONS 15327)                                                                                              |
| VT1-{1-4}-1-{1-48}-{1-7}-{1-4}           | VT AIDs for 1-Port OC48 (ONS 15327)                                                                                              |
| VT1-{1-4}-{1-4}-{1-3}-{1-7}-{1-4}        | VT AIDs for 4-Port OC3 (ONS 15327)                                                                                               |
| VT1-{1-6,12-17}-1-{1-12}-{1-7}-{1-4}     | 1-port OC12 card (ONS 15454)                                                                                                     |
| VT1-{1-6,12-17}-1-{1-48}-{1-7}-{1-4}     | OC48AS card (ONS 15454)                                                                                                          |
| VT1-{1-6,12-17}-1-{1-7}-{1-2}            | DS1 card (ONS 15454)                                                                                                             |
| VT1-{1-6,12-17}-{1-12}-1-{1-7}-{1-4}     | EC1 card (ONS 15454)                                                                                                             |
| VT1-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-4} | 4-port OC12 card (ONS 15454)                                                                                                     |
| VT1-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-4}  | 4-port OC3 card (ONS 15454)                                                                                                      |
| VT1-{1-6,12-17}-{1-6}-{1-7}-{1-4}        | DS3XM card (ONS 15454)                                                                                                           |
| VT1-{5,6,12,13}-1-{1-192}-{1-7}-{1-4}    | OC192 Card (ONS 15454)                                                                                                           |
| VT1-{5,6,12,13}-1-{1-48}-{1-7}-{1-4}     | VT AIDs for 1-port OC48 (ONS 15327)                                                                                              |
| VT1-{5-6}-1-{1-7}-{1-2}                  | VT AIDs for T1 Port within XTC-14 (ONS 15327)                                                                                    |
| VT1-{5-6}-1-{1-7}-{1-4}                  | VT AID for T1 Port with XTC-28-3 (ONS 15327)                                                                                     |
| VT2-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-3}  | 8-port OC3 card (ONS 15454)                                                                                                      |
| VT2-{1-6,12-17}-1-{1-12}-{1-7}-{1-3}     | 1-port OC12 card (ONS 15454)                                                                                                     |
| VT2-{1-6,12-17}-1-{1-48}-{1-7}-{1-3}     | OC48AS card (ONS 15454)                                                                                                          |
| VT2-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-3} | 4-port OC12 card (ONS 15454)                                                                                                     |
| VT2-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-3}  | 4-port OC3 card (ONS 15454)                                                                                                      |
| VT2-{5,6,12,13}-1-{1-192}-{1-7}-{1-3}    | OC192 Card (ONS 15454)                                                                                                           |
| VT2-{5,6,12,13}-1-{1-48}-{1-7}-{1-3}     | OC48 card (ONS 15454)                                                                                                            |

## 4.4.29 WDMANS

(Cisco ONS 15454 only)

This AID is used to access the AONS application of the NE.

**Table 4-43 WDMANS**

| Pattern      | Description                                                           |
|--------------|-----------------------------------------------------------------------|
| AONS-{E,W}   | Automatic Optical Node Setup identifier (is per ring direction based) |
| WDMANS-{E,W} | Automatic Optical Node Setup identifier (is per ring direction based) |

## 4.4.30 WLEN

(Cisco ONS 15454 only)

This AID represents the single wavelength inside an external facility. If the facility is of type OTS (line) the wavelengths contained are all the available in the node: currently 32. If the facility is of type OCH (CHAN) the wavelength is just one and it is the same of the correspondent wavelength customized for that channel.

**Table 4-44 WLEN**

| Pattern                                                                                                                                                                                                                                                                                      | Description           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| WLEN-{E,W}-{ADD,DROP,EXP}-{1530.33,1531.12,1531.90,1532.68,1534.25,1535.04,1535.82,1536.61,1538.19,1538.98,1539.77,1540.56,1542.14,1542.94,1543.73,1544.53,1546.12,1546.92,,1547.72,1548.51,1550.12,1550.92,1551.72,1552.52,1554.13,1554.94,1555.75,1556.55,1558.17,1558.98,1559.79,1560.61} | Wavelength identifier |

## 4.5 Parameter Types

This section provides a description of all message parameter types defined for the TL1 messages used in the ONS 15454 and ONS 15327. The TL1 message descriptions frequently refer to this section.

### 4.5.1 ATAG Description

The autonomous message tag (ATAG) is used for message sequencing. There are four streams of autonomous messages and each stream corresponds to a sequence. The sequence numbers increment by one for each autonomous message within that stream. The format and range of ATAG differs for each stream. The four streams are:

**1. Alarmed events:**

These include REPT ALM and REPT EVT (except REPT EVT SESSION) messages as well as the REPT SW autonomous message.

ATAG Format: x.y

where

x – sequence number of this alarmed event. This is an integer in the range of 0–9999.

y – sequence number of the previous alarmed event which is related to this alarmed event. This is an integer in the range of 0-9999.

If there is no such previous related event, then y will be the same as x. For example, the first time an alarm is raised you will receive the autonomous message:

```
TID-000 1998-06-20 14:30:00
* 1346.1346 REPT ALM T1
" FAC-1-1:MN,LOS,NSA,,,: "Loss Of Signal",DS1-14"
;
```

When this alarmed event/condition is cleared, you will receive the autonomous message:

```
TID-000 1998-06-20 14:31:00
A 1349.1346 REPT ALM T1
“FAC-1-1:CL,LOS,NSA,,,,:\“Loss Of Signal”,DS1-14”
;
```

## 2. Database change messages:

The REPT DBCHG message falls into this category.

ATAG Format: x

where:

x – sequence number of the database change update message. This is an integer in the range of 0–9999. For example:

```
TID-000 1998-06-20 14:30:00
A 96 REPT DBCHG
“TIME=18-01-05,DATE=1970-01-01,SOURCE=2,USERID=CISCO15,
DBCHGSEQ=96:ENT-EQPT:SLOT-3”
;
```




---

**Note** The ATAG is the same as the DBCHGSEQ field in the REPT DBCHG output.

---

## 3. PM Reports:

The REPT PM messages fall into this category.

ATAG format: x

where:

x – sequence number of the PM report. This is an integer in the range of 0–9999. For example:

```
TID-000 1998-06-20 14:30:00
A5 REPT PM DS1
“FAC-3-1:CVL,10,PRTL,NEND,BTH,15-MIN,05-25,14-46”
;
```

This sequence number is global across all existing PM schedules.

## 4. Autonomous messages specific to a TL1 session. These messages are usually related to the security aspect of the TL1 session. Only the autonomous messages REPT EVT SESSION and CAN fall under this category. This is an integer in the range 0–9999.

For example:

```
TID-000 1998-06-20 14:30:00
A 1 CANC
“User”
;
```

## 4.5.2 CTAG Description

The correlation tag (CTAG) is included in each command by the user and is repeated by the NE in the response to allow the user to associate the command and response messages. The valid values for a CTAG are strings of up to 6 characters comprised of identifiers (alphanumeric, beginning with a letter) or non-zero decimal numbers (a string of decimal digits with an optional non-trailing “.”).

A zero in the response field is valid when indicating an error; for example, issuing a semi-colon by itself results in:

```
TID-000 1998-06-20 14:30:00
M 0 DENY IISP
/* Input, Garbage */
;
```

### 4.5.3 TID Description

The TID is the name of the NE where the command is addressed. TID is the Telcordia name for the system.

### 4.5.4 Parameter Notes

1. If a parameter is set to a value that is inconsistent with something already in the database, and that value is not changed to a consistent value then the command will be denied.
2. If a parameter is set to a value that is consistent with what is already in the database, but another parameter in the same command is incompatible, then the command will be denied.
3. The correct way to issue a command where parameters may be in conflict is to:
  - a. First issue that command and change all relevant parameters to compatible values,
  - b. Then issue the command again to change the target values.

For example, OC-N is syncmsg=y, to change SDH to y, ED-OCN needs to be called to set syncmsg=N, then called again to set SDH=y.

4. The attribute defaults have also been presented under RTRV commands, and they can be retrieved only if the RTRV commands follow the card/entity original provision.
5. The default for an optional field of an ED command is either the provisioned default value or the last provisioned value in the previous ED command.

### 4.5.5 ALL\_MONTYPE

Monitoring type list

**Table 4-45** ALL\_MONTYPE Values

| Values  | Description                                                                                 |
|---------|---------------------------------------------------------------------------------------------|
| AISSP   | Alarm Indication Signal Seconds—Path                                                        |
| BBE-PM  | OTN—Background Block Errors—Path Monitor Point                                              |
| BBE-SM  | OTN—Background Block Errors—Section Monitor Point                                           |
| BBER-PM | OTN—Background Block Error Ratio—Path Monitor Point expressed as 1/10th of a percentage.    |
| BBER-SM | OTN—Background Block Error Ratio—Section Monitor Point expressed as 1/10th of a percentage. |
| BIEC    | FEC—Bit Errors Corrected                                                                    |
| CGV     | 8B10B—Code Group Violations                                                                 |
| CVCPP   | Coding Violations—CP-Bit Path                                                               |

Table 4-45 ALL\_MONTYPE Values (continued)

| Values        | Description                                                                                                         |
|---------------|---------------------------------------------------------------------------------------------------------------------|
| CVLBCL-HIGH   | Coding Violations—Line                                                                                              |
| CVP           | Coding Violations—Path                                                                                              |
| CVS           | Coding Violations—Section                                                                                           |
| CVV           | Coding Violations—Section                                                                                           |
| DCG           | 8B10B—Data Code Groups                                                                                              |
| ES-PM         | OTN—Errored Seconds—Path Monitor Point                                                                              |
| ES-NPIC-PDET  | OTN—PPJC-PDET: Negative Pointer Justification                                                                       |
| ES-NPIC-PGEN  | OTN—PPJC-PGEN: Negative Pointer Justification                                                                       |
| ESIOBED       | Error in EC-Section Bit Errors Detected                                                                             |
| ESIOPR-AVG    | Error in EC-Section: Average Receive Power in 1/10 uW                                                               |
| ESIOPR-HIGH   | Error in EC-Section: Power Ratio 10 uW Measured value [-40.0 dBm,+30.0 dBm]                                         |
| ESIOPR-LOW    | Error in EC-Section: Power Ratio 10 uW Measured value [-40.0 dBm,+30.0 dBm] Percentage                              |
| ESIOPR-MAX    | Error in EC-Section: Relative Section Minimum Point expressed as 1/10th of a percentage                             |
| ESIOPR-MIN    | Minimum Receive Power in 1/10 uW                                                                                    |
| ESOPT-AVG     | Errored Seconds—Section<br>Average Transmit Power in 1/10 uW                                                        |
| ESOPT-HIGH    | Errored Seconds—VT Path<br>Transmit power in 1/10 uW. Measured value [-40.0 dBm,+30.0 dBm]                          |
| FC-PM-LOW     | OTN—Failure Count—Path Monitor Point<br>Transmit power in 1/10 uW. Measured value [-40.0 dBm,+30.0 dBm]             |
| FC-PM-MAX     | OTN—Failure Count—Section Monitor Point<br>Maximum Transmit Power in 1/10 uW                                        |
| FCOPT-MIN     | Failure Count—Line<br>Minimum Transmit Power in 1/10uW                                                              |
| IOSOPWR-AVG   | 8B10B: Idle Ordered Sets<br>Optical Power—Average Interval Value in 1/10th of dBm                                   |
| IPCOPWR-MAX   | Invalid Packet Count<br>Optical Power—Maximum Interval Value in 1/10th of dBm                                       |
| LATOPWR-MIN   | Average Laser Temperature current in 1/256 degrees Celsius<br>Optical Power—Minimum Interval Value in 1/10th of dBm |
| LATOPWR-HIGH  | Laser Temperature in 1/256 degrees Celsius Measured range                                                           |
| LATPPJC-PDET  | PPJC-PDET: Positive Pointer Justification<br>[-40.000 C, 125.000 C]                                                 |
| LATPPJC-PGEN  | PPJC-PGEN: Positive Pointer Justification                                                                           |
| LATLOW        | Laser Temperature in 1/256 degrees Celsius Measured range                                                           |
| LATPSC        | Protection Switching Count<br>[-40.000 C, 125.000 C]                                                                |
| LATPSC-R      | Maximum Laser Temperature in 1/256 degrees Celsius Measured range                                                   |
| LATPSC-S      | Protection Switching Count—Span<br>[-40.000 C, 125.000 C]                                                           |
| LATPSC-W      | Minimum Laser Temperature in 1/256 degrees Celsius Measured range                                                   |
| LATPSD        | Protection Switching Duration<br>[-40.000 C, 125.000 C]                                                             |
| LBCL-AVG      | Average Laser Bias current in uA                                                                                    |
| LBCL-PSD-R    | Protection Switching Duration—Ring                                                                                  |
| LBCL-PSD-S    | High Laser Bias current in uA<br>Protection Switching Duration—Span                                                 |
| LBCL-LOW      | Low Laser Bias current in uA                                                                                        |
| LBCL-PSD-W    | Protection Switching Duration—Working                                                                               |
| LBCL-MAX      | Max Laser Bias current in uA                                                                                        |
| LBCL-RXT-AVG  | Average Receiver Temperature                                                                                        |
| LBCL-RXT-MIN  | Minimum Laser Bias current in uA                                                                                    |
| LBCL-RXT-HIGH | High Alarm Threshold level for Receiver Temperature                                                                 |
| LOSSL-RXT-LOW | Loss of Signal Seconds—Line<br>Low Alarm Threshold level for Receiver Temperature Measured range                    |
| NIOS          | 8B10B: Idle Ordered Sets                                                                                            |

**Table 4-45 ALL\_MONTYPE Values (continued)**

| <b>Values</b> | <b>Description</b>                                                                      |
|---------------|-----------------------------------------------------------------------------------------|
| NPJC-PDET     | PPJC-PDET:Negative Pointer Justification                                                |
| NPJC-PGEN     | PPJC-PGEN:Negative Pointer Justification                                                |
| OBED          | FEC—One Bit Errors Detected                                                             |
| OPR-AVG       | Average Receive Power in 1/10 uW                                                        |
| OPR-HIGH      | Receive power in 1/10 uW Measured value [-40.0 dBm,+30.0 dBm]                           |
| OPR-LOW       | Receive power in 1/10 uW Measured value [-40.0 dBm,+30.0 dBm]                           |
| OPR-MAX       | Maximum Receive Power in 1/10 uW                                                        |
| OPR-MIN       | Minimum Receive Power in 1/10 uW                                                        |
| OPT-AVG       | Average Transmit Power in 1/10 uW                                                       |
| OPT-HIGH      | Transmit power in 1/10 uW. Measured value [-40.0 dBm,+30.0 dBm]                         |
| OPT-LOW       | Transmit power in 1/10 uW. Measured value[-40.0 dBm,+30.0 dBm]                          |
| OPT-MAX       | Maximum Transmit Power in 1/10 uW                                                       |
| OPT-MIN       | Minimum Transmit Power in 1/10uW                                                        |
| OPWR-AVG      | Optical Power—Average Interval Value in 1/10th of dBm                                   |
| OPWR-MAX      | Optical Power—Maximum Interval Value in 1/10th of dBm                                   |
| OPWR-MIN      | Optical Power—Minimum Interval Value in 1/10th of dBm                                   |
| PPJC-PDET     | PPJC-PDET:Positive Pointer Justification                                                |
| PPJC-PGEN     | PPJC-PGEN:Positive Pointer Justification                                                |
| PSC           | Protection Switching Count                                                              |
| PSC-R         | Protection Switching Count—Ring                                                         |
| PSC-S         | Protection Switching Count—Span                                                         |
| PSC-W         | Protection Switching Count—Working                                                      |
| PSD           | Protection Switching Duration                                                           |
| PSD-R         | Protection Switching Duration—Ring                                                      |
| PSD-S         | Protection Switching Duration—Span                                                      |
| PSD-W         | Protection Switching Duration—Working                                                   |
| RXT-AVG       | Average Receiver Temperature                                                            |
| RXT-HIGH      | High Alarm Threshold level for Receiver Temperature                                     |
| RXT-LOW       | Low Alarm Threshold level for Receiver Temperature Measured range [-40.000 C,125.000 C] |

|         |                                                                                             |
|---------|---------------------------------------------------------------------------------------------|
| BBER-PM | OTN—Background Block Error Ratio—Path Monitor Point expressed as 1/10th of a percentage.    |
| BBER-SM | OTN—Background Block Error Ratio—Section Monitor Point expressed as 1/10th of a percentage. |
| BIEC    | FEC—Bit Errors Corrected                                                                    |
| CGV     | 8B10B—Code Group Violations                                                                 |
| CVCPP   | Coding Violations—CP-Bit Path                                                               |



Table 4-45 ALL\_MONTYPE Values (continued)

| Values               | Description                                                                             |
|----------------------|-----------------------------------------------------------------------------------------|
| <del>NBJC-PDET</del> | PPJC-PDET:Negative Pointer Justification                                                |
| NBJC-PGEN            | PPJC-PGEN:Negative Pointer Justification                                                |
| OBED                 | FEC—One Bit Errors Detected                                                             |
| OPR-AVG              | Average Receive Power in 1/10 uW                                                        |
| OPR-HIGH             | Receive power in 1/10 uW Measured value [-40.0 dBm,+30.0 dBm]                           |
| OPR-LOW              | Receive power in 1/10 uW Measured value [-40.0 dBm,+30.0 dBm]                           |
| OPR-MAX              | Maximum Receive Power in 1/10 uW                                                        |
| OPR-MIN              | Minimum Receive Power in 1/10 uW                                                        |
| OPT-AVG              | Average Transmit Power in 1/10 uW                                                       |
| OPT-HIGH             | Transmit power in 1/10 uW. Measured value [-40.0 dBm,+30.0 dBm]                         |
| OPT-LOW              | Transmit power in 1/10 uW. Measured value[-40.0 dBm,+30.0 dBm]                          |
| OPT-MAX              | Maximum Transmit Power in 1/10 uW                                                       |
| OPT-MIN              | Minimum Transmit Power in 1/10uW                                                        |
| OPWR-AVG             | Optical Power—Average Interval Value in 1/10th of dBm                                   |
| OPWR-MAX             | Optical Power—Maximum Interval Value in 1/10th of dBm                                   |
| OPWR-MIN             | Optical Power—Minimum Interval Value in 1/10th of dBm                                   |
| PPJC-PDET            | PPJC-PDET:Positive Pointer Justification                                                |
| PPJC-PGEN            | PPJC-PGEN:Positive Pointer Justification                                                |
| PSC                  | Protection Switching Count                                                              |
| PSC-R                | Protection Switching Count—Ring                                                         |
| PSC-S                | Protection Switching Count—Span                                                         |
| PSC-W                | Protection Switching Count—Working                                                      |
| PSD                  | Protection Switching Duration                                                           |
| PSD-R                | Protection Switching Duration—Ring                                                      |
| PSD-S                | Protection Switching Duration—Span                                                      |
| PSD-W                | Protection Switching Duration—Working                                                   |
| RXT-AVG              | Average Receiver Temperature                                                            |
| RXT-HIGH             | High Alarm Threshold level for Receiver Temperature                                     |
| RXT-LOW              | Low Alarm Threshold level for Receiver Temperature Measured range [-40.000 C,125.000 C] |
|                      | High Laser Bias current in uA                                                           |
| LBCL-LOW             | Low Laser Bias current in uA                                                            |
| LBCL-MAX             | Max Laser Bias current in uA                                                            |
| LBCL-MIN             | Minimum Laser Bias current in uA                                                        |
| LOSSL                | Loss of Signal Seconds—Line                                                             |
| NIOS                 | 8B10B—Non Idle Ordered Sets                                                             |

**Table 4-45** ALL\_MONTYPE Values (continued)

| Values    | Description                                                                                 |
|-----------|---------------------------------------------------------------------------------------------|
| RXT-MAX   |                                                                                             |
| SES-SM    | OTN—Severely Errored Second—Section Monitor Point                                           |
| SESCPP    | Severely Errored Second—CP-Bit Path                                                         |
| SESL      | Severely Errored Second—Line                                                                |
| SESP      | Severely Errored Second—Path                                                                |
| SESR-PM   | OTN—Severely Errored Second Ratio—Path Monitor Point expressed as 1/10th of a percentage    |
| SESR-SM   | OTN—Severely Errored Second Ratio—Section Monitor Point expressed as 1/10th of a percentage |
| SESS      | Severely Errored Second—Section                                                             |
| SESV      | Severely Errored Second—VT Path                                                             |
| UAS-PM    | OTN—Unavailable Second—Path Monitor Point                                                   |
| UAS-SM    | OTN—Unavailable Second—Section Monitor Point                                                |
| UASCPP    | Unavailable Second—CP-Bit Path                                                              |
| UASL      | Unavailable Second—Line                                                                     |
| UASP      | Unavailable Second—Path                                                                     |
| UASV      | Unavailable Second—VT Path                                                                  |
| UNC-WORDS | FEC—Uncorrectable Words                                                                     |
| VPC       | Valid Packet Count                                                                          |

## 4.5.6 ALL\_THR

Threshold list

**Table 4-46** ALL\_THR Value

| Values   | Description                                            |
|----------|--------------------------------------------------------|
| T-AISSP  | Alarm Indication Signal Seconds—Path                   |
| T-BBE-PM | OTN TCA. Background Block Errors—Path Monitor Point    |
| T-BBE-SM | OTN TCA. Background Block Errors—Section Monitor Point |
| T-BBEHP  | Background Block Errors—High Order Path                |
| T-BBEL   | Background Block Errors—Line                           |
| T-BBELP  | Background Block Errors—Low Order Path (VC3/VC12)      |

**Table 4-46** *ALL\_THR Value (continued)*

| <b>Values</b> | <b>Description</b>                             |
|---------------|------------------------------------------------|
| T-BBEM        | Background Block Errors- Multiplex Section     |
| T-BBEP        | Background Block Errors—High Order Path        |
| T-BBEPR       | Background Block Errors                        |
| T-BBER        | Background Block Errors—Regenerator Section    |
| T-BBER-PM     | Background Block Errors—Path Level OTN         |
| T-BBER-SM     | Background Block Errors—Section Level OTN      |
| T-BBER-TCM1   | Background Block Errors—Tandem1 Level OTN      |
| T-BBER-TCM2   | Background Block Errors—Tandem2 Level OTN      |
| T-BBERS       | Background Block Errors—Regenerator Section    |
| T-BBESR       | Background Block Errors                        |
| T-BBEV        | Background Block Errors                        |
| T-BIEC        | FEC TCA. Bit Errors Corrected                  |
| T-CGV         | 8B10B—Code Group Violations TCA                |
| T-CSS         | Controlled Slipped Seconds                     |
| T-CSS-P-FE    | 8B10B                                          |
| T-CVCP        | Coding Violations—CP-Bit Path                  |
| T-CVL         | Coding Violations—Line                         |
| T-CVP         | Coding Violations—Path                         |
| T-CVS         | Coding Violations—Section                      |
| T-CVV         | Coding Violations—VT Path                      |
| T-DCG         | 8B10B TCA. Data Code Groups                    |
| T-EBHP        | EB—High Order Path                             |
| T-EBLP        | EB Low Order Path VC3/VC12                     |
| T-EBMS        | EB Multiplex Section                           |
| T-EBP         | EB Line Path                                   |
| T-EBRS        | EB Regenerator Section                         |
| T-ES-PM       | OTN TCA. Errored Seconds—Path Monitor Point    |
| T-ES-SM       | OTN TCA. Errored Seconds—Section Monitor Point |
| T-ESCPP       | Errored Seconds—CP-Bit Path                    |
| T-ESHP        | ED High Order Path VC4/VC4-nc                  |
| T-ESL         | Errored Seconds—Line                           |
| T-ESLP        | ES Low Order Path VC3/VC12                     |
| T-ESMS        | ES Multiplex Section                           |
| T-ESP         | Errored Seconds—Path                           |
| T-ESR         | ES—Regenerator Section                         |
| T-ESR-PM      | ES—Regenerator Section—Path Level OTN          |

**Table 4-46** ALL\_THR Value (continued)

| Values     | Description                                                                                                                                                                         |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| T-ESR-SM   | ES—Regenerator Section—Section Level OTN                                                                                                                                            |
| T-ESR-TCM1 | ES—Regenerator Section—Tandem1 Level OTN                                                                                                                                            |
| T-ESR-TCM2 | ES—Regenerator Section—Tandem2 Level OTN                                                                                                                                            |
| T-ESRS     | ES Regenerator Section                                                                                                                                                              |
| T-ESS      | Errored Seconds—Section                                                                                                                                                             |
| T-ESV      | Errored Seconds—VT Path                                                                                                                                                             |
| T-FC-PM    | OTN TCA. Failure Count—Path Monitor Point                                                                                                                                           |
| T-FC-SM    | OTN TCA. Failure Count—Section Monitor Point                                                                                                                                        |
| T-FCHP     | FC High Order Path                                                                                                                                                                  |
| T-FCLP     | FC Low Order Path                                                                                                                                                                   |
| T-FCMS     | FC Multiplex Section                                                                                                                                                                |
| T-FCP      | Failure Count—Line                                                                                                                                                                  |
| T-HOPWR    | Optical Power—High Threshold crossed in 1/10th of dBm                                                                                                                               |
| T-GAIN-MAX | TCA—Maximum Gain TCA. Applicable to optical service channel cards, optical amplifier cards, dispersion compensation units, multiplex or and demultiplexor cards and OADM cards only |
| T-GAIN-MIN | TCA—Minimum Gain TCA. Applicable to optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards       |
| T-GPC      | 8B10B TCA. Good Packet Count                                                                                                                                                        |
| T-IOS      | 8B10B TCA. Idle Ordered Sets                                                                                                                                                        |
| T-IPC      | Invalid Packet Count                                                                                                                                                                |
| T-LBCL-HWT | Laser Level TCA. Laser Bias current in uA. Low/High Warning Threshold                                                                                                               |
| T-LOPWR    | Optical Power—Low Threshold crossed in 1/10th of dBm                                                                                                                                |
| T-LOSSL    | Loss of Signal Seconds—Line                                                                                                                                                         |
| T-NIOS     | 8B10B TCA. Non Idle Ordered Sets                                                                                                                                                    |
| T-OBED     | FEC TCA. One Bit Errors Detected                                                                                                                                                    |
| T-OPR-HWT  | Laser Level TCA. Receive power in 1/10 uW. Low/High Warning Threshold                                                                                                               |
| T-OPR-LWT  | Laser Level TCA. Receive power in 1/10 uW. Low/High Warning Threshold                                                                                                               |
| T-OPT-HWT  | Laser Level TCA. Transmit power in 1/10 uW. Low/High Warning Threshold                                                                                                              |
| T-OPT-LWT  | Laser Level TCA. Transmit power in 1/10 uW. Low/High Warning Threshold                                                                                                              |
| T-OPWR-MAX | Optical Power—High Threshold crossed                                                                                                                                                |
| T-OPWR-MIN | Optical Power—Low Threshold crossed                                                                                                                                                 |
| T-PJ-DET   | Pointer Justification Detected                                                                                                                                                      |
| T-PJ-DIFF  | Pointer Justification Diff                                                                                                                                                          |
| T-PJ-GEN   | Pointer Justification Generated                                                                                                                                                     |
| T-PJNEG    | PPJC-PDET:Negative Pointer Justification                                                                                                                                            |

**Table 4-46** ALL\_THR Value (continued)

| Values        | Description                                                |
|---------------|------------------------------------------------------------|
| T-PJNEG-GEN   | PPJC-PGEN:Negative Pointer Justification                   |
| T-PJPOS       | PPJC-PDET:Positive Pointer Justification                   |
| T-PJPOS-GEN   | PPJC-PGEN:Positive Pointer Justification                   |
| T-PSC         | Protection Switching Count                                 |
| T-PSC-R       | Protection Switching Count                                 |
| T-PSC-S       | Protection Switching Count                                 |
| T-PSC-W       | Protection Switching Count                                 |
| T-PSD         | Protection Switching Duration                              |
| T-PSD-R       | Protection Switching Duration                              |
| T-PSD-S       | Protection Switching Duration                              |
| T-PSD-W       | Protection Switching Duration                              |
| T-RX-TEMP-MAX | Receiver Temperature Max TCA (applicable to MXP/TXP cards) |
| T-SASCPP      | Severely Errored Framing/AIS Second—CP-Bit Path            |
| T-SASP        | Severely Errored Framing/AIS Seconds                       |
| T-SEFS        | Severely Errored Framing Seconds                           |
| T-SEFSRS      | SEFRS                                                      |
| T-SES-PM      | OTN TCA. Severely Errored Second—Path Monitor Point        |
| T-SES-SM      | OTN TCA. Severely Errored Second—Section Monitor Point     |
| T-SESCPP      | Severely Errored Second—CP-Bit Path                        |
| T-SESHP       | SES High Order Path                                        |
| T-SESL        | Severely Errored Second—Line                               |
| T-SESLP       | SES Low Order Path                                         |
| T-SESMS       | SES Multiplex Section                                      |
| T-SESP        | Severely Errored Second—Path                               |
| T-SESR-PM     | SESR—Path Level OTN                                        |
| T-SESR-SM     | SESR—Section Level OTN                                     |
| T-SESR-TCM1   | SESR—Tandem1 Level OTN                                     |
| T-SESR-TCM2   | SESR—Tandem2 Level OTN                                     |
| T-SESRs       | SES Regeneration Section                                   |
| T-SESS        | Severely Errored Second—Section                            |
| T-SESV        | Severely Errored Second—VT Path                            |
| T-UAS-PM      | OTN TCA. Unavailable Second—Path Monitor Point             |
| T-UAS-SM      | OTN TCA. Unavailable Second—Path Monitor Point             |
| T-UASCPP      | Unavailable Second—CP-Bit Path                             |
| T-UASHP       | UA High Order Path                                         |
| T-UASL        | Unavailable Second—Line                                    |

**Table 4-46** ALL\_THR Value (continued)

| Values      | Description                                                                                                                                                                                          |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| T-UASLP     | UA Low Order Path                                                                                                                                                                                    |
| T-UASMS     | UA Multiplex Section                                                                                                                                                                                 |
| T-UASP      | Unavailable Second—Path                                                                                                                                                                              |
| T-UASV      | Unavailable Second—VT Path                                                                                                                                                                           |
| T-UNC-WORDS | FEC TCA. UnCorrectable Words                                                                                                                                                                         |
| T-VOA-MAX   | Variable Optical Attenuation Maxed TCA. Applicable to optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards only |
| T-VOA-MIN   | Variable Optical Attenuation Min TCA. Applicable to optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards only   |
| T-VPC       | Valid Packet Count                                                                                                                                                                                   |

## 4.5.7 ALM\_THR

Alarm Threshold list for MXP\_2.5G\_10G, TXP\_MR\_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B cards.

**Table 4-47** ALM\_THR Values

| Values     | Description                                                                                                   |
|------------|---------------------------------------------------------------------------------------------------------------|
| BATV-EHIGH | Battery Voltage - Extremely High                                                                              |
| BATV-ELow  | Battery Voltage - Extremely Low                                                                               |
| BATV-HIGH  | Battery Voltage - High                                                                                        |
| BATV-LOW   | Battery Voltage - Low                                                                                         |
| GAIN-HDEG  | Gain not reached—High Degrade Threshold                                                                       |
| GAIN-HFAIL | Gain not reached—High Failure Threshold                                                                       |
| GAIN-LDEG  | Gain not reached—Low Degrade Threshold                                                                        |
| GAIN-LFAIL | Gain not reached—Low Failure Threshold                                                                        |
| LBCL-HIGH  | Laser Bias current in uA as 1/10% High Warning Threshold, Low Warning Threshold Measured value [0.0%, 100.0%] |
| OPR-HIGH   | Receive power in 1/10 uW Measured value [-40.0 dBm,+30.0 dBm]                                                 |
| OPR-LOW    | Receive power in 1/10 uW Measured value [-40.0 dBm,+30.0 dBm]                                                 |
| OPT-HIGH   | Transmit power in 1/10 uW. Measured value [-40.0 dBm,+30.0 dBm]                                               |
| OPT-LOW    | Transmit power in 1/10 uW. Measured value [-40.0 dBm,+30.0 dBm]                                               |
| OPWR-HDEG  | Optical Power—High Degrade Threshold                                                                          |
| OPWR-HFAIL | Optical Power—High Failure Threshold                                                                          |
| OPWR-LDEG  | Optical Power—Low Degrade Threshold                                                                           |
| OPWR-LFAIL | Optical Power—Low Failure Threshold                                                                           |

**Table 4-47** ALM\_THR Values (continued)

| Values    | Description                                                       |
|-----------|-------------------------------------------------------------------|
| VOA-HDEG  | VOA Attenuation—High Degrade Threshold                            |
| VOA-HFAIL | VOA Attenuation—High Failure Threshold                            |
| VOA-LDEG  | VOA Attenuation—Low Degrade Threshold                             |
| VOA-LFAIL | VOA Attenuation—Low Failure Threshold                             |
| XCVR-HIGH | Transceiver voltage in 1/10 mV Measure value [0.0 mV, 10000.0 mV] |

## 4.5.8 ALS\_CFG

Specifies the type of check for ALS detection mode

**Table 4-48** ALS\_CFG Values

| Values | Description                                                         |
|--------|---------------------------------------------------------------------|
| ALL    | The ALS is applied checking all the received signals (Line and OSC) |
| OSC    | The ALS is applied checking only the received OSC signal            |
| RX     | The ALS is applied checking only the received Line signal           |

## 4.5.9 ALS\_MODE

This type specifies the working mode for the Automatic Laser Shutdown (ALS) functionality.

**Table 4-49** ALS\_MODE Values

| Values      | Description             |
|-------------|-------------------------|
| AUTO        | Automatic               |
| DISABLED    | Disabled                |
| MAN         | Manual                  |
| MAN-RESTART | Manual Restart for Test |

## 4.5.10 ALS\_RESTART

Automatic Laser Shutdown for the G1000 card.



### Note

ALS\_RESTART is separate from [“4.5.9 ALS\\_MODE”](#) section on page 4-49.

**Table 4-50** *ALS\_RESTART Values*

| Values           | Description                                |
|------------------|--------------------------------------------|
| AUTO_RESTART     | Automatic Laser Shutdown Automatic Restart |
| MAN_RESTART      | Automatic Laser Shutdown Manual Restart    |
| MAN_TEST_RESTART | Automatic Laser Shutdown Restart Test      |

## 4.5.11 AMPL\_MODE

Defines the Amplifier control mode

**Table 4-51** *AMPL\_MODE Values*

| Values | Description                                               |
|--------|-----------------------------------------------------------|
| GAIN   | The Amplifier always maintains a fixed Gain               |
| POWER  | The Amplifier maintains the Output Power to a fixed value |

## 4.5.12 AWG\_STATUS

AWG status list

**Table 4-52** *AWG\_STATUS Values*

| Values  | Description           |
|---------|-----------------------|
| ON      | The AWG is on         |
| WARM-UP | The AWG is warming up |

## 4.5.13 BITS\_LineBuildOut

BITS Line buildout

**Table 4-53** *BITS\_LineBuildOut Values*

| Values  | Description                         |
|---------|-------------------------------------|
| 0–133   | BITS line buildout range is 0–133   |
| 134–266 | BITS line buildout range is 134–266 |
| 267–399 | BITS line buildout range is 267–399 |
| 400–533 | BITS line buildout range is 400–533 |
| 534–655 | BITS line buildout range is 534–655 |

## 4.5.14 BLSR\_MODE

BLSR mode



**Table 4-54** *BLSR\_MODE Values*

| Values | Description     |
|--------|-----------------|
| 2F     | Two fiber BLSR  |
| 4F     | Four fiber BLSR |

## 4.5.15 BLSR\_PTH\_STATE

Indicates the BLSR path state only if the port is on the BLSR

**Table 4-55** *BLSR\_PTH\_STATE Values*

| Values     | Description                                                                     |
|------------|---------------------------------------------------------------------------------|
| PCAPTHACT  | Indicates the BLSR ring un-switched and its PCA path is in the active state     |
| PCAPTHSTB  | Indicates the BLSR ring switched and its PCA path is in the standby state       |
| PROTPTHACT | Indicates the BLSR ring switched and its protection path is in the active state |
| WKGPTHACT  | Indicates the BLSR ring un-switched and its working path is in the active state |
| WKGPTHSTB  | Indicates the BLSR ring switched and its working path is in the standby state   |

## 4.5.16 BLSR\_PTH\_TYPE

Indicates the BLSR path TYPE only if the port is on the BLSR

**Table 4-56** *BLSR\_PTH\_TYPE Values*

| Values  | Description                                                                 |
|---------|-----------------------------------------------------------------------------|
| NON-PCA | Indicates the AID is on the working path, or the XC created protection path |
| PCA     | Indicates the AID is on the BLSR PCA path                                   |

## 4.5.17 BLSR\_TYPE

BLSR type of an OCN port

**Table 4-57** *BLSR\_TYPE Values*

| Values   | Description                                             |
|----------|---------------------------------------------------------|
| EASTPROT | Identifies that the OCN port is an east protecting port |
| EASTWORK | Identifies that the OCN port is an east working port    |
| WESTPROT | Identifies that the OCN port is a west protecting port  |
| WESTWORK | Identifies that the OCN port is a west working port     |

## 4.5.18 C2\_BYTE

Indicates C2 byte Hex Code

**Table 4-58 C2\_BYTE Values**

| Values | Description                                        |
|--------|----------------------------------------------------|
| 0X00   | Unequipped                                         |
| 0X01   | Equipped-Non Specific payload                      |
| 0X02   | VT-Structured STS-1 SPE                            |
| 0X03   | Locked VT Mode                                     |
| 0X04   | Asynchronous Mapping for DS3                       |
| 0X12   | Asynchronous Mapping for DS4NA                     |
| 0X13   | Mapping for ATM                                    |
| 0X14   | Mapping for DQDB                                   |
| 0X15   | Asynchronous Mapping for FDDI                      |
| 0X16   | HDLC-Over-SONET Mapping                            |
| 0XE1   | VT-structured STS-1 SPE with 1VTx payload defect   |
| 0XE2   | VT-structured STS-1 SPE with 2VTx payload defects  |
| 0XE3   | VT-structured STS-1 SPE with 3VTx payload defects  |
| 0XE4   | VT-structured STS-1 SPE with 4VTx payload defects  |
| 0XE5   | VT-structured STS-1 SPE with 5VTx payload defects  |
| 0XE6   | VT-structured STS-1 SPE with 6VTx payload defects  |
| 0XE7   | VT-structured STS-1 SPE with 7VTx payload defects  |
| 0XE8   | VT-structured STS-1 SPE with 8VTx payload defects  |
| 0XE9   | VT-structured STS-1 SPE with 9VTx payload defects  |
| 0XEA   | VT-structured STS-1 SPE with 10VTx payload defects |
| 0XEB   | VT-structured STS-1 SPE with 11VTx payload defects |
| 0XEC   | VT-structured STS-1 SPE with 12VTx payload defects |
| 0XED   | VT-structured STS-1 SPE with 13VTx payload defects |
| 0XEE   | VT-structured STS-1 SPE with 14VTx payload defects |
| 0XEF   | VT-structured STS-1 SPE with 15VTx payload defects |
| 0XF0   | VT-structured STS-1 SPE with 16VTx payload defects |
| 0XF1   | VT-structured STS-1 SPE with 17VTx payload defects |
| 0XF2   | VT-structured STS-1 SPE with 18VTx payload defects |
| 0XF3   | VT-structured STS-1 SPE with 19VTx payload defects |
| 0XF4   | VT-structured STS-1 SPE with 20VTx payload defects |
| 0XF5   | VT-structured STS-1 SPE with 21VTx payload defects |
| 0XF6   | VT-structured STS-1 SPE with 22VTx payload defects |
| 0XF7   | VT-structured STS-1 SPE with 23VTx payload defects |

**Table 4-58** C2\_BTIE Values (continued)

| Values | Description                                                                                              |
|--------|----------------------------------------------------------------------------------------------------------|
| 0XF8   | VT-structured STS-1 SPE with 24VTx payload defects                                                       |
| 0XF9   | VT-structured STS-1 SPE with 25VTx payload defects                                                       |
| 0XFA   | VT-structured STS-1 SPE with 26VTx payload defects                                                       |
| 0XFB   | VT-structured STS-1 SPE with 27VTx payload defects                                                       |
| 0XFC   | VT-structured STS-1 SPE with 28VTx payload defects                                                       |
| 0XFE   | O.181 Test Signal (TSS1 to TSS3) Mapping                                                                 |
| 0XFF   | Reserved, however, C2 is 0XFF if AIS-L is being generated by an optical card or cross-connect downstream |

## 4.5.19 CCT

Defines the type of cross-connect to be created

**Table 4-59** CCT Values

| Values  | Description                                                                                                                                                                                                                                                                      |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1WAY    | A unidirectional connection from a source tributary to a destination tributary                                                                                                                                                                                                   |
| 1WAYDC  | path protection mcast drop with (1-way) continue                                                                                                                                                                                                                                 |
| 1WAYEN  | path protection mcast end node (1-way continue)                                                                                                                                                                                                                                  |
| 1WAYMON | A bidirectional connection between the two tributaries<br><b>Note</b> Starting with ONS 15454 R3.0 and ONS 15327 R3.3, 1WAYMON is not supported with TL1. However, it is still supported from CTC. Using CTC you can create 1WAYMON cross-connects and can be retrieved via TL1. |
| 1WAYPCA | A unidirectional connection from a source tributary to a destination tributary on the protection path/fiber                                                                                                                                                                      |
| 2WAY    | A bidirectional connection between the two tributaries                                                                                                                                                                                                                           |
| 2WAYDC  | A Bidirectional Drop and Continue connection applicable only to path protection Traditional and Integrated Dual Ring InterConnections                                                                                                                                            |
| 2WAYPCA | A bidirectional connection between the two tributaries on the extra protection path/fiber                                                                                                                                                                                        |

## 4.5.20 CIRCUIT\_SIZE

The DWDM circuit size used on a wavelength.

**Table 4-60** CIRCUIT\_SIZE Values

| Values     | Description                                 |
|------------|---------------------------------------------|
| 10G_FEC    | The circuit size is 10 Gbit/sec with FEC    |
| 10G_NO_FEC | The circuit size is 10 Gbit/sec without FEC |

**Table 4-60** *CIRCUIT\_SIZE Values (continued)*

| Values     | Description                                  |
|------------|----------------------------------------------|
| 2G5_FEC    | The circuit size is 2.5 Gbit/sec with FEC    |
| 2G5_NO_FEC | The circuit size is 2.5 Gbit/sec without FEC |
| MULTI_RATE | The circuit size support multi rate          |
| NOT_SPEC   | The circuit size is Equipment not specific   |

## 4.5.21 CMD\_MODE

Command mode is used to force the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but the user may specify FRCD to force the system to override a state in which the command would normally be denied.

**Table 4-61** *CMD\_MODE Values*

| Values | Description                                                                                  |
|--------|----------------------------------------------------------------------------------------------|
| FRCD   | Force the system to override a state in which the command would normally be denied           |
| NORM   | Execute the command normally. Do not override any conditions that may make the command fail. |

## 4.5.22 COMM\_TYPE

The out of band communications channel termination type

**Table 4-62** *COMM\_TYPE Values*

| Values | Description                              |
|--------|------------------------------------------|
| DCC    | Section DCC type                         |
| GCC    | Generic Communication Channel (OTN) Type |
| NONE   | Disable DCC or GCC if enabled            |

## 4.5.23 COND\_EFF

The affected unit's condition

**Table 4-63** *COND\_EFF Values*

| Values | Description                |
|--------|----------------------------|
| CL     | Standing condition cleared |
| SC     | Standing condition raised  |
| TC     | Transient condition        |

## 4.5.24 CONT\_MODE

Current state of environmental control

**Table 4-64** *CONT\_MODE Values*

| Values | Description                                           |
|--------|-------------------------------------------------------|
| NA     | Indicates Not applicable (i.e., duration is MENTRY)   |
| OPR    | Indicates that the environment control state is CLOSE |
| RLS    | Indicates that the environment control state is OPEN  |

## 4.5.25 CONTTYPE

The Environmental control types as defined by Telcordia GR-833-CORE, Issue 2, November 1996, Appendix G.

**Table 4-65** *CONTTYE Values*

| Values  | Description      |
|---------|------------------|
| AIRCOND | Air conditioning |
| ENGINE  | Engine           |
| FAN     | Fan              |
| GEN     | Generator        |
| HEAT    | Heat             |
| LIGHT   | Light            |
| MISC    | Miscellaneous    |
| SPKLR   | Sprinkler        |

## 4.5.26 CREATION\_TYPE

The Optical Link creation type.

**Table 4-66** *CREATION\_TYPE Values*

| Values | Description                 |
|--------|-----------------------------|
| AUTO   | Automatically created by NE |
| PROV   | Provisioned by user         |

## 4.5.27 CRS\_TYPE

Indicates the cross-connection type

**Table 4-67** CRS\_TYPE Values

| Values  | Description                             |
|---------|-----------------------------------------|
| STS     | Indicates all the STS cross-connections |
| STS1    | STS1 Cross Connect                      |
| STS3C   | STS3C Cross Connect                     |
| STS6C   | STS6C Cross Connect                     |
| STS9C   | STS9C Cross Connect                     |
| STS12C  | STS12C Cross Connect                    |
| STS24C  | STS24C Cross Connect                    |
| STS48C  | STS48C Cross Connect                    |
| STS192C | STS192C Cross Connect                   |
| VT      | Indicates all the VT1 cross-connections |
| VT1     | VT1 Cross Connect                       |
| VT2     | VT2 Cross Connect                       |

## 4.5.28 DATARATE

Data Rate

**Table 4-68** DATARATE Values

| Values    | Description      |
|-----------|------------------|
| FC        | Fiber Channel    |
| GIG_E     | Gigabit Ethernet |
| PASS_THRU | Pass thru        |

## 4.5.29 DIRECTION

Transmit and receive directions

**Table 4-69** DIRECTION Values

| DIRECTION Values | Description                          |
|------------------|--------------------------------------|
| BTH              | Both transmit and receive directions |
| RCV              | Receive direction only               |
| TRMT             | Transmit direction only              |

## 4.5.30 DIRN

Specifies the discriminating level for the requested monitored parameter

**Table 4-70** DIRN Values

| Values | Description                                                                                |
|--------|--------------------------------------------------------------------------------------------|
| DN     | Monitored parameter with values equal to or greater than the level of LEV will be reported |
| UP     | Monitored parameter with values equal to or less than the value of LEV will be reported    |

## 4.5.31 DL\_TYPE

Indicates software download type

**Table 4-71** DL\_TYPE Values

| Values | Description                                                                 |
|--------|-----------------------------------------------------------------------------|
| ACT    | Indicates to activate to a newer software load during the software download |
| RVRT   | Indicates to revert to an older software load during software download      |

## 4.5.32 DS\_LINE\_CODE

DS123 Line Code

**Table 4-72** DS\_LINE\_CODE Values

| Values | Description                          |
|--------|--------------------------------------|
| B3ZS   | Bipolar with Three-Zero Substitution |

## 4.5.33 DS\_LINE\_TYPE

DS123 Line type

**Table 4-73** DS\_LINE\_TYPE Values

| Values    | Description                                                                             |
|-----------|-----------------------------------------------------------------------------------------|
| AUTO-PROV | Auto Provisioned                                                                        |
| C-BIT     | C-BIT line type applies to DS3XM and DS3E card                                          |
| M13       | M23 line type applies to DS3XM and DS3E card                                            |
| UNFRAMED  | Line Type is unframed. The old DS3 (L3M) and DS3CR cards can only run in unframed mode. |

## 4.5.34 DURATION

Duration

**Table 4-74** *DURATION Values*

| DURATION Values | Description         |
|-----------------|---------------------|
| CONTS           | Continuous duration |

## 4.5.35 DWDM\_RING\_TYPE

Network Type where the NE is installed

**Table 4-75** *DWDM\_RING\_TYPE Values*

| Values       | Description                                                            |
|--------------|------------------------------------------------------------------------|
| METRO-ACCESS | The network where the DWDM node is installed is a metro access network |
| METRO-CORE   | The network where the DWDM node is installed is a metro core network   |
| NONE         | A node that does not have a standard DWDM configuration                |

## 4.5.36 E\_LBO

Electrical signal line buildout

**Table 4-76** *E\_LBO Values*

| Values  | Description                                 |
|---------|---------------------------------------------|
| 0-225   | Electrical signal buildout range is 1-225   |
| 226-450 | Electrical signal buildout range is 226-450 |

## 4.5.37 ENV\_ALM

Environmental alarm types as defined by Telcordia GR-833-CORE, Issue 2, November 1996, Appendix F.

**Table 4-77** *ENV\_ALM Values*

| Values    | Description                     |
|-----------|---------------------------------|
| AIRCOMPR  | Air compressor failure          |
| AIRCOND   | Air conditioning failure        |
| AIRDRYR   | Air dryer failure               |
| BATDSCHRG | Battery discharging             |
| BATTERY   | Battery failure                 |
| CLFAN     | Cooling fan failure             |
| CPMAJOR   | Centralized power major failure |



**Table 4-77 ENV\_ALM Values (continued)**

| <b>Values</b> | <b>Description</b>              |
|---------------|---------------------------------|
| CPMINOR       | Centralized power minor failure |
| ENGINE        | Engine failure                  |
| ENGOPRG       | Engine operating                |
| EXPLGS        | Explosive gas                   |
| FIRDETR       | Fire detector failure           |
| FIRE          | Fire                            |
| FLOOD         | Flood                           |
| FUSE          | Fuse failure                    |
| GEN           | Generator failure               |
| HIAIR         | High airflow                    |
| HIHUM         | High humidity                   |
| HITEMP        | High temperature                |
| HIWTR         | High water                      |
| INTRUDER      | Intrusion                       |
| LWBATVG       | Low battery voltage             |
| LWFUEL        | Low fuel                        |
| LWHUM         | Low humidity                    |
| LWPRES        | Low cable pressure              |
| LWTEMP        | Low temperature                 |
| LWWTR         | Low water                       |
| MISC          | Miscellaneous                   |
| OPENDR        | Open door                       |
| POWER         | Commercial power failure        |
| PUMP          | Pump failure                    |
| PWR-48        | 48 Volt power supply failure    |
| RECT          | Rectifier failure               |
| RECTHI        | Rectifier high voltage          |
| RECTLO        | Rectifier low voltage           |
| SMOKE         | Smoke                           |
| TOXICGAS      | Toxic gas                       |
| VENTN         | Ventilation system failure      |

### 4.5.38 EQPT\_TYPE

Identifies the type of equipment being provisioned into a slot

**Table 4-78 EQPT\_TYPE Values**

| Values    | Description                                                                                                                                                         |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AD-1B     | Optical Add/Drop Multiplexed (OADM) 1 Band Filter                                                                                                                   |
| AD-1C     | Optical Add/Drop Multiplexed (OADM) 1 Channel Filter                                                                                                                |
| AD-2C     | Optical Add/Drop Multiplexed (OADM) 2 Channels Filter                                                                                                               |
| AD-4B     | Optical Add/Drop Multiplexed (OADM) 4 Bands Filter                                                                                                                  |
| AD-4C     | Optical Add/Drop Multiplexed (OADM) 4 Channels Filter                                                                                                               |
| AIC       | The Alarm Interface Controller Card is an optional card which expands system management capabilities for the customer defined alarm I/O and orderwire functionality |
| AICI      | The AICI card                                                                                                                                                       |
| AIP       | The Alarm Indicator Panel                                                                                                                                           |
| ALM-PWR   | Alarm Power                                                                                                                                                         |
| BP        | The Backplane of the NE                                                                                                                                             |
| CRFT-TMG  | Craft Timing                                                                                                                                                        |
| DCC       | The Data Communications Channel                                                                                                                                     |
| DMX-32    | Optical De/Multiplexed (DMX) 32 Channels                                                                                                                            |
| DS1-14    | A 14 port interface card supporting DS1 facilities                                                                                                                  |
| DS1N-14   | A 14 port interface card supporting DS1 facilities                                                                                                                  |
| DS3-12    | A 12 port interface card supporting DS3 facilities                                                                                                                  |
| DS3-3     | A 3 port interface card supporting DS3 facilities                                                                                                                   |
| DS3ATM-12 | A 12 port interface card supporting DS3 ATM facilities                                                                                                              |
| DS3CR-12  | Cost reduced DS3                                                                                                                                                    |
| DS3E-12   | A 12 port interface card supporting DS3E facilities                                                                                                                 |
| DS3I      | DS3I Card (I= International)                                                                                                                                        |
| DS3IN     | DS3IN Card                                                                                                                                                          |
| DS3NE-12  | A 12 port interface card supporting DS3E facilities                                                                                                                 |
| DS3N-12   | A 12 port interface card supporting DS3 facilities                                                                                                                  |
| DS3XM-6   | An interface card that converts six framed DS-3 network connections to 28x6 or 168 VT1.5s                                                                           |
| E1000T-2  | A 2 port interface card supporting 1000 Base T Ethernet facilities                                                                                                  |
| E100T-12  | A 12 port interface card supporting 100 Base T Ethernet facilities                                                                                                  |
| E100T-4   | A four port interface card supporting 100 Base T Ethernet facilities.                                                                                               |
| EC1-12    | A 12 port interface card supporting EC1 facilities                                                                                                                  |
| EC1N-12   | A 12 port interface card supporting EC1 facilities                                                                                                                  |
| FTA       | The Fan Tray of the NE                                                                                                                                              |
| FTA1      | The Fan Tray 1 of the NE                                                                                                                                            |
| FTA2      | The Fan Tray 2 of the NE                                                                                                                                            |

**Table 4-78** *EQPT\_TYPE Values (continued)*

| <b>Values</b>       | <b>Description</b>                                                                                                       |
|---------------------|--------------------------------------------------------------------------------------------------------------------------|
| G1000-4             | A four port G1000 card                                                                                                   |
| MD-4                | Optical Multiplexer/Demultiplexer with 4 Channels                                                                        |
| MIC-28-3-A          | ONS 15327 MIC card A                                                                                                     |
| MIC-28-3-B          | ONS 15327 MIC card B                                                                                                     |
| MIC-EXT             | ONS 15327 MIC card                                                                                                       |
| MIC-GEN             | ONS 15327 MIC card                                                                                                       |
| MUX-32              | Optical Multiplexed (MUX) 32 Channels                                                                                    |
| MXP-2.5G-10G        | 10G (4 * 2.5G) Muxponder Card                                                                                            |
| OC12                | An interface card that supports one or more OC-12 (622Mbps) optical facilities                                           |
| OC12-327            | ONS 15327 OC12 card                                                                                                      |
| OC12-4              | A four port OC12 card                                                                                                    |
| OC12-IR-1           | An interface card that supports one intermediate range OC-12 (622Mbps) optical facilities                                |
| OC12-LR-1           | An interface card that supports one long range OC-12 (622Mbps) optical facilities                                        |
| OC12-SR-1           | An interface card that supports one short range OC-12 (622Mbps) optical facilities                                       |
| OC192-LR-1          | An interface card that supports one or more OC-192 optical facilities                                                    |
| OC3                 | An interface card that supports multiple OC-3 (155Mbps) optical facilities                                               |
| OC3-327             | ONS 15327 OC3 card                                                                                                       |
| OC3-IR-4            | An interface card that supports four intermediate range OC-3 (155Mbps) optical facilities                                |
| OC3-SR-4            | An interface card that supports four short range OC-3 (155Mbps) optical facilities                                       |
| OC3ATM-IR-6         | An interface card that supports six intermediate range OC-3 (155Mbps) ATM optical fibers                                 |
| OC3IR-STM1SH-1310-8 | An OC3 card which has 8 ports over the lower speed slot of the ONS 15454 with XC10G/192                                  |
| OC3POS-SR-4         | An interface card that supports four short range OC-3 (155Mbps) POS optical facilities                                   |
| OC48                | An interface card that supports one or more OC-48 (10Gbs) optical facilities                                             |
| OC48-327            | ONS 15327 OC48 card                                                                                                      |
| OC48-AS-1           | An interface card that supports one short range OC-48 (10Gbs) optical facilities that can be provisioned in any I/O slot |
| OC48-ELR-1          | An interface card that supports one short range OC-48 (2.5Gbs) optical facility                                          |
| OC48-IR-1           | An interface card that supports one intermediate range OC-48 (10Gbs) optical facility                                    |

**Table 4-78** *EQPT\_TYPE Values (continued)*

| Values       | Description                                                                      |
|--------------|----------------------------------------------------------------------------------|
| OC48-LR-1    | An interface card that supports one long range OC-48 (10Gbs) optical facility    |
| OC48-SR-1    | An interface card that supports one short range OC-48 (10Gbs) optical facilities |
| OPT-BST      | Optical Booster Amplifier                                                        |
| OPT-PRE      | Optical Pre-Amplifier                                                            |
| OSC-CSM      | Optical Service Channel (OSC) with Combiner/Separator Module (SCM)               |
| OSCM         | Optical Service Channel (OSC) Module                                             |
| TCC          | The Timing Communication and Control card                                        |
| TXP-MR-10G   | 10G Multirate Transponder Card                                                   |
| TXP-MR-2.5G  | Multi-Rate 2.5G Unprotected                                                      |
| TXPP-MR-2.5G | Multi-Rate 2.5G Protected                                                        |
| XC           | A Cross-connect card                                                             |
| XC-VT        | A Cross-Connect card                                                             |
| XC10G        | A Cross-Connect card                                                             |
| XTC          | ONS 15327 XTC card                                                               |
| XTC-DS1-14   | ONS 15327 XTC DS1-14 card                                                        |
| XTC-DS1-28   | ONS 15327 XTC DS1-28 card                                                        |
| XTC-DS1-56   | ONS 15327 XTC DS1-56 card                                                        |
| XTC-DS3-3    | ONS 15327 XTC DS3-3 card                                                         |

## 4.5.39 EQUIP

Indicates the presence of a plug-in unit

**Table 4-79** *EQUIP Values*

| Values  | Description                   |
|---------|-------------------------------|
| EQUIP   | The unit is Equipped—present  |
| UNEQUIP | The unit is Unequipped—absent |

## 4.5.40 EQUIPMENT\_TYPE

Equipment type

**Table 4-80** *EQUIPMENT\_TYPE* Values

| Values       | Description                                           |
|--------------|-------------------------------------------------------|
| AD-1B        | Optical Add/Drop Multiplexed (OADM) 1 Band Filter     |
| AD-1C        | Optical Add/Drop Multiplexed (OADM) 1 Channel Filter  |
| AD-2C        | Optical Add/Drop Multiplexed (OADM) 2 Channels Filter |
| AD-4B        | Optical Add/Drop Multiplexed (OADM) 4 Bands Filter    |
| AD-4C        | Optical Add/Drop Multiplexed (OADM) 4 Channels Filter |
| AIC          | AIC card                                              |
| AICI         | AICI card                                             |
| DMX-32       | Optical De/Multiplexed (DMX) 32 Channels              |
| DS1          | DS1 card                                              |
| DS1N         | DS1N card                                             |
| DS3          | DS3 card                                              |
| DS3E         | DS3E card                                             |
| DS3I         | DS3I Card                                             |
| DS3IN        | DS3IN Card                                            |
| DS3N         | DS3N card                                             |
| DS3NE        | DS3NE card                                            |
| DS3XM        | DS3XM card                                            |
| E1000T       | E1000T card                                           |
| E100T        | E100T card                                            |
| EC1          | EC1 card                                              |
| FC-MR-4      | FC-MR-4 card                                          |
| G1000-2      | A two port G1000 card (ONS 15327)                     |
| G1000-4      | A four port G1000 card (ONS 15454)                    |
| MD-4         | Optical Multiplexer/Demultiplexer with 4 Channels     |
| MIC          | ONS 15327 MIC card                                    |
| MIC-EXT      | ONS 15327 XC-EXT card                                 |
| ML1000-1     | 1-Port GigE card                                      |
| ML1000-2     | 2-Port GigE card                                      |
| ML100T-12    | 12-Port FSTE card                                     |
| ML100T-8     | 8-Port FSTE card                                      |
| MUX-32       | Optical Multiplexed (MUX) 32 Channels                 |
| MXP-2.5G-10G | 10G (4 * 2.5G) Muxponder Card                         |
| OC3          | OC3 card                                              |
| OC3-8        | 8 Port OC3 card                                       |
| OC12         | OC12 card                                             |
| OC12-4       | A four port OC12 card                                 |

**Table 4-80** *EQUIPMENT\_TYPE Values (continued)*

| Values       | Description                                                        |
|--------------|--------------------------------------------------------------------|
| OC48         | OC48 card                                                          |
| OC192        | OC192 card                                                         |
| OPT-BST      | Optical Booster Amplifier                                          |
| OPT-PRE      | Optical Pre-Amplifier                                              |
| OSC-CSM      | Optical Service Channel (OSC) with Combiner/Separator Module (SCM) |
| OSCM         | Optical Service Channel (OSC) Module                               |
| TCC          | TCC card                                                           |
| TXP-MR-10G   | 10G Multirate Transponder Card                                     |
| TXP-MR-2.5G  | Multi-Rate 2.5G Unprotected                                        |
| TXPP-MR-2.5G | Multi-Rate 2.5G Protected                                          |
| XC           | XC card                                                            |
| XC10G        | XC10G card                                                         |
| XCVT         | XCVT card                                                          |
| XTC          | ONS 15327 XTC card                                                 |

## 4.5.41 ETHER\_DUPLEX

Duplex mode

**Table 4-81** *ETHER\_DUPLEX Values*

| Values | Description |
|--------|-------------|
| AUTO   | Auto mode   |
| FULL   | Full mode   |
| HALF   | Half mode   |

## 4.5.42 ETHER\_SPEED

Ethernet speed

**Table 4-82** *ETHER\_SPEED Values*

| Values   | Description |
|----------|-------------|
| 100_MBPS | 100 Mbps    |
| 10_GBPS  | 10 Gbps     |
| 10_MBPS  | 10 Mbps     |
| 1_GBPS   | 1 Gbps      |
| AUTO     | Auto        |

## 4.5.43 EXT\_RING

Indicates if the ring supports the extended K1/K2/K3 protocol

**Table 4-83** *EXT\_RING Values*

| Values | Description                                                        |
|--------|--------------------------------------------------------------------|
| N      | Indicates the Ring does not support the extended K1/K2/K3 protocol |
| Y      | Indicates the Ring does support the extended K1/K2/K3 protocol     |

## 4.5.44 FC\_LINKRATE

The link rate on a fiber channel port

**Table 4-84** *FC\_LINKRATE Values*

| Values    | Description                                                                             |
|-----------|-----------------------------------------------------------------------------------------|
| 1GFC      | The rate is 1 Gig                                                                       |
| 2GFC      | The rate is 2 Gig                                                                       |
| UNKNOWN   | The rate is unknown                                                                     |
| UNPLUGGED | The SFP is not plugged into the Fiber channel port so the link rate can not be detected |

## 4.5.45 FLOW

Indicates the type of flow control that has been negotiated for an Ethernet port

**Table 4-85** *FLOW Values*

| Values           | Description                   |
|------------------|-------------------------------|
| ASYMMETRIC       | Asymmetric flow control       |
| ASYMMETRIC_LOCAL | Asymmetric local flow control |
| NONE             | No flow control               |
| SYMMETRIC        | Symmetric flow control        |

## 4.5.46 FRAME\_FORMAT

The frame format for a T1 port

**Table 4-86** *FRAME\_FORMAT Values*

| Values | Description        |
|--------|--------------------|
| D4     | Frame format is D4 |

**Table 4-86** *FRAME\_FORMAT Values (continued)*

| Values   | Description              |
|----------|--------------------------|
| ESF      | Frame format is ESF      |
| UNFRAMED | Frame format is unframed |

## 4.5.47 GCCRATE

The data rate of the GCC traffic

**Table 4-87** *GCCRATE Values*

| Values | Description |
|--------|-------------|
| 192K   | 192 Kbps    |
| 576K   | 576 Kbps    |

## 4.5.48 HEATER\_STATUS

Heater status list.

**Table 4-88** *HEATER\_STATUS Values*

| Values | Description       |
|--------|-------------------|
| OFF    | The heater is off |
| ON     | The heater is on  |

## 4.5.49 IMPEDANCE

The Termination Impedance of the BITS-IN port

**Table 4-89** *IMPEDANCE Values*

| Values  | Description          |
|---------|----------------------|
| 120-OHM | Impedance of 120 Ohm |
| 75-OHM  | Impedance of 75 Ohm  |

## 4.5.50 INH\_MODE

Indicates whether the function is inhibited



**Table 4-90** *INH\_MODE Values*

| Values | Description           |
|--------|-----------------------|
| ALW    | Function is allowed   |
| INH    | Function is inhibited |

## 4.5.51 LASER\_STATUS

Defines the laser status

**Table 4-91** *LASER\_STATUS Values*

| Values | Description                                                       |
|--------|-------------------------------------------------------------------|
| APR    | The Laser is switched on but is working Automatic Power Reduction |
| OFF    | The Laser is switched off                                         |
| ON     | The Laser is switched on                                          |

## 4.5.52 LCAS

LCAS (link capacity adjustment scheme) mode for the VCG (virtual concatenated group) created.

**Table 4-92** *LCAS Values*

| Values  | Description                                                                                                          |
|---------|----------------------------------------------------------------------------------------------------------------------|
| LCAS    | LCAS is enabled                                                                                                      |
| NONE    | No LCAS                                                                                                              |
| SW-LCAS | SW-LCAS supports temporary removal of a VCG member during the member failure. Only supported by the ML-series cards. |

## 4.5.53 LINE\_BUILDOUT

Line buildout

**Table 4-93** *LINE\_BUILDOUT Values*

| Values  | Description                    |
|---------|--------------------------------|
| 0-131   | Line buildout range is 0-131   |
| 132-262 | Line buildout range is 132-262 |
| 263-393 | Line buildout range is 263-393 |
| 394-524 | Line buildout range is 394-524 |
| 525-655 | Line buildout range is 525-655 |

## 4.5.54 LINE\_CODE

Line code

**Table 4-94** *LINE\_CODE Values*

| Values | Description                                                    |
|--------|----------------------------------------------------------------|
| AMI    | Line code value is AMI                                         |
| B8ZS   | Line code value is B8ZS (Bipolar with Three-Zero Substitution) |

## 4.5.55 LOCATION

Identifies the location where the action is to take place

**Table 4-95** *LOCATION Values*

| Values | Description                                   |
|--------|-----------------------------------------------|
| FEND   | Action occurs on the Far End of the facility  |
| NEND   | Action occurs on the Near End of the facility |

## 4.5.56 LPBK\_TYPE

Indicates the type of loopback that is to be operated or released

**Table 4-96** *LPBK\_TYPE Values*

| Values   | Description                                                                                                                                                                                          |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CRS      | A path level loopback which is established at the cross-connect matrix level (the XC card). An STS level cross-connect loopback causes an AIS-P to be sent on the outgoing direction of transmission |
| FACILITY | A type of loopback that connects the incoming received signal immediately following the optical-to-electrical conversion (after descrambling) to the associated transmitter in the return direction  |
| LINE     | Line level loopback                                                                                                                                                                                  |
| TERMINAL | A loopback that connects the signal that is about to be transmitted (after scrambling but before the electrical-to-optical conversion) is connected to the associated, incoming receiver             |

## 4.5.57 MFS\_TYPE

Indicates the maximum frame size used by an Ethernet card

**Table 4-97** MFS\_TYPE Values

| Values | Description       |
|--------|-------------------|
| 1548   | Normal frame size |
| JUMBO  | Jumbo frame size  |

## 4.5.58 MOD2

Line/Path Modifier

**Table 4-98** MOD2 Values

| Values  | Description                       |
|---------|-----------------------------------|
| CLNT    | Client facility for MXP/TXP cards |
| DS1     | DS1 line of a DS3XM card          |
| DS3I    | DS3I Line                         |
| EC1     | EC1 facility                      |
| FC      | Fiber Channel facility            |
| G1000   | G1000 Facility                    |
| OC3     | OC3 facility                      |
| OC12    | OC12 facility                     |
| OC48    | OC48 facility                     |
| OC192   | OC192 facility                    |
| OCH     | Optical channel                   |
| OMS     | Optical Multiplex Section         |
| OTS     | Optical Transport Section         |
| STS1    | STS1 path                         |
| STS3C   | STS3C path                        |
| STS6C   | STS6C path                        |
| STS9C   | STS9C path                        |
| STS12C  | STS12C path                       |
| STS48C  | STS48C path                       |
| STS192C | STS192C path                      |
| T1      | T1/DS1 facility/line              |
| T3      | T3/DS3 facility/line              |
| VT1     | VT1 path                          |
| VT2     | VT2 path                          |



**Note** RTRV-PM-<MOD2> command is not supported on the G1000 card.

## 4.5.59 MOD2\_IO

Facility/Line Modifier

**Table 4-99** MOD2\_IO Values

| Values | Description                                |
|--------|--------------------------------------------|
| CLNT   | Client facility for MXP/TXP cards          |
| DS1    | DS1 line of a DS3XM card                   |
| DS3I   | DS3I                                       |
| EC1    | EC1 facility                               |
| FC     | Fiber Channel facility                     |
| G1000  | G1000 facility                             |
| OC3    | OC3 facility                               |
| OC12   | OC12 facility                              |
| OC48   | OC48 facility                              |
| OC192  | OC192 facility                             |
| OCH    | Optical channel facility for MXP/TXP cards |
| OMS    | Optical multiplexing section               |
| OTS    | Optical Transport Section                  |
| T1     | T1/DS1 facility                            |
| T3     | T3/DS3 facility                            |

## 4.5.60 MOD2ALM

Alarm type for certain generic TL1 commands

**Table 4-100** MOD2ALM Values

| Values | Description                       |
|--------|-----------------------------------|
| CLNT   | Client facility for MXP/TXP cards |
| DS1    | DS1 alarm                         |
| DS3I   | DS3I alarm                        |
| E100   | E100 alarm                        |
| E1000  | E1000 alarm                       |
| EC1    | EC1 alarm                         |
| FC     | Fiber Channel facility alarm      |
| FSTE   | Fast Ethernet Port alarm          |
| G1000  | G1000 alarm                       |
| GIGE   | GIG Ethernet Port alarm           |
| OC3    | OC3 alarm                         |

**Table 4-100** *MOD2ALM Values (continued)*

| <b>Values</b> | <b>Description</b>           |
|---------------|------------------------------|
| OC12          | OC12 alarm                   |
| OC48          | OC48 alarm                   |
| OC192         | OC192 alarm                  |
| OCH           | Optical channel              |
| OMS           | Optical Multiplex Section    |
| OTS           | Optical Transport Section    |
| POS           | POS port alarm               |
| STS1          | STS alarm                    |
| STS3C         | STS alarm                    |
| STS6C         | STS alarm                    |
| STS9C         | STS alarm                    |
| STS12C        | STS alarm                    |
| STS48C        | STS alarm                    |
| STS192C       | STS alarm                    |
| T1            | T1 alarm                     |
| T3            | T3 alarm                     |
| UDCDCC        | UDCDCC alarm                 |
| UDCF          | UCDF alarm                   |
| VT1           | VT1 alarm                    |
| VT2           | VT2 alarm                    |
| WLEN          | Wavelength Path Provisioning |

## 4.5.61 MOD2B

Alarm type for certain generic TL1 commands

**Table 4-101** *MOD2B Values*

| <b>Values</b> | <b>Description</b>                |
|---------------|-----------------------------------|
| BITS          | BITS alarm                        |
| CLNT          | Client facility for MXP/TXP cards |
| COM           | Common alarm                      |
| DS1           | DS1 alarm                         |
| DS3I          | DS3I alarm                        |
| E100          | E100 alarm                        |
| E1000         | E1000 alarm                       |
| EC1           | EC1 alarm                         |

**Table 4-101 MOD2B Values (continued)**

| Values  | Description               |
|---------|---------------------------|
| ENV     | ENV alarm                 |
| EQPT    | EQPT alarm                |
| FC      | Fiber Channel alarm       |
| FSTE    | FSTE alarm                |
| G1000   | G1000 alarm               |
| GIGE    | GIGE alarm                |
| MIC     | MIC alarm (ONS 15327)     |
| MIC-EXT | MIC-EXT Alarm (ONS 15327) |
| OC3     | OC3 alarm                 |
| OC12    | OC12 alarm                |
| OC48    | OC48 alarm                |
| OC192   | OC192 alarm               |
| OCH     | Optical channel           |
| OMS     | Optical Multiplex Section |
| OTS     | Optical Transport Section |
| POS     | POS alarm                 |
| STS1    | STS alarm                 |
| STS3C   | STS alarm                 |
| STS6C   | STS alarm                 |
| STS9C   | STS alarm                 |
| STS12C  | STS alarm                 |
| STS24C  | STS alarm                 |
| STS48C  | STS alarm                 |
| STS192C | STS Alarm                 |
| SYNCN   | SYNCN alarm               |
| T1      | T1 alarm                  |
| T3      | T3 alarm                  |
| TCC     | TCC alarm                 |
| UCP     | UCP Alarm                 |
| VT1     | VT1 alarm                 |
| VT2     | VT2 alarm                 |
| XTC     | ONS 15327 XTC Alarm       |

## 4.5.62 MOD20

Facility types for MXP\_2.5G\_10G, TXP\_MR\_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B cards

**Table 4-102 MOD20 Values**

| Values | Description                 |
|--------|-----------------------------|
| OCH    | Optical Channel             |
| OMS    | Optical Multiplexer Section |
| OTS    | Optical Trace Section       |

## 4.5.63 MOD\_PATH

STS/VT Path Modifier

**Table 4-103 MOD\_PATH Values**

| Values | Description  |
|--------|--------------|
| STS1   | STS1 path    |
| STS3C  | STS3C path   |
| STS6C  | STS6C path   |
| STS9C  | STS9C path   |
| STS12C | STS12C path  |
| STS24C | STS 24C path |
| STS48C | STS48C path  |
| STS192 | STS192C path |
| VT1    | VT1 path     |
| VT2    | VT2 path     |

## 4.5.64 MOD\_RING

Ring protection type

**Table 4-104 MOD\_RING Values**

| Values | Description          |
|--------|----------------------|
| BLSR   | Ring protection type |

## 4.5.65 MOD\_TACC

Test Access Modifier

**Table 4-105 MOD\_TACC Values**

| Values | Description              |
|--------|--------------------------|
| DS1    | DS1 line of a DS3XM card |
| DS3I   | DS3I card                |

**Table 4-105** *MOD\_TACC Values (continued)*

| Values  | Description          |
|---------|----------------------|
| STS1    | STS1 path            |
| STS3C   | STS3C path           |
| STS6C   | STS6C path           |
| STS9C   | STS9C path           |
| STS12C  | STS12C path          |
| STS24C  | STS24C path          |
| STS48C  | STS48C path          |
| STS192C | STS192C path         |
| T1      | T1/DS1 facility/line |
| T3      | T3/DS3 facility/line |
| VT1     | VT1 path             |
| VT2     | VT2 path             |

## 4.5.66 MODULE\_OP

Module operation mode

**Table 4-106** *MOD\_OP Values*

| Values    | Description                                |
|-----------|--------------------------------------------|
| CLR       | Clear switch operation mode                |
| LOCKDX    | Lock duplex switch operation mode          |
| LOCKPRT   | Lock switch to protection operation mode   |
| LOCKWKG   | Lock switch to working operation mode      |
| RST       | Reset operation mode                       |
| SWITCHDX  | Switch duplex operation mode               |
| SWITCHPRT | Switch to protection operation mode        |
| SWITCHWKG | Switch to working operation mode           |
| UNLOCKDX  | Unlock duplex switch operation mode        |
| UNLOCKPRT | Unlock switch to protection operation mode |
| UNLOCKWKG | Unlock switch to working operation mode    |
| UPGRADE   | Upgrade operation mode                     |

## 4.5.67 MSGTYPE

Type of trace message



**Table 4-107 MSGTYPE Values**

| MSGTYPE Values | Description                          |
|----------------|--------------------------------------|
| EXPTRC         | Expected incoming Path trace message |
| INCTRC         | Incoming Path trace message          |
| TRC            | Outgoing Path trace message          |

## 4.5.68 MUX\_TYPE

BLSR Extension Byte

**Table 4-108 MUX\_TYPE Values**

| Values | Description         |
|--------|---------------------|
| E2     | E2 Byte (orderwire) |
| F1     | F1 Byte (user)      |
| K3     | K3 Byte             |
| Z2     | Z2 Byte             |

## 4.5.69 NOTIF\_CODE

The 2-character Notification Code associated with an autonomous message

**Table 4-109 NOTIF\_CODE Values**

| Values | Description                                 |
|--------|---------------------------------------------|
| CL     | The condition causing the alarm has Cleared |
| CR     | A Critical alarm                            |
| MJ     | A Major alarm                               |
| MN     | A Minor alarm                               |
| NA     | The condition is Not Alarmed                |
| NR     | The alarm is Not Reported                   |

## 4.5.70 OCN\_BLSR

Modifier used to differentiate the various levels of OC-N in BLSR

**Table 4-110 OCN\_BLSR Values**

| Values | Description                       |
|--------|-----------------------------------|
| OC12   | Optical Carrier level-12 (662Mbs) |
| OC48   | Optical Carrier level-48 (2.4Gbs) |
| OC192  | Optical Carrier level-192 (10Gbs) |

## 4.5.71 OCN\_MONTYPE

OCN monitor type

**Table 4-111** OCN\_MONTYPE Values

| Values | Description                              |
|--------|------------------------------------------|
| CVL    | Coding Violation—Line                    |
| ESL    | Errored Second—Line                      |
| PJNEG  | PPJC-PDET:Negative Pointer Justification |
| PJPOS  | PPJC-PFEN:Negative Pointer Justification |
| PSC    | Protection Switching Count               |
| PSD    | Protection Switching Duration            |
| SEFS   | Severely Errored Framing Seconds         |
| UASL   | Unavailable Second -Line                 |

## 4.5.72 OCN\_TYPE

Modifier used to differentiate the various levels of OC-N in the ENT/ED/DLT/RTRV commands

**Table 4-112** OCN\_TYPE Values

| Values | Description                       |
|--------|-----------------------------------|
| OC3    | Optical Carrier level-3 (155Mbs)  |
| OC12   | Optical Carrier level-12 (622Mbs) |
| OC48   | Optical Carrier level-48 (2.4Gbs) |
| OC192  | Optical Carrier level-192 (10Gbs) |

## 4.5.73 ON\_OFF

Disable or Enable an attribute

**Table 4-113** ON\_OFF Values

| Values | Description           |
|--------|-----------------------|
| N      | Disable the attribute |
| Y      | Enable the attribute  |

## 4.5.74 OPTICAL\_BAND

Defines the Optical Band

**Table 4-114** *OPTICAL\_BAND Values*

| Values          | Description                                        |
|-----------------|----------------------------------------------------|
| 1530.33-1532.68 | Band 1                                             |
| 1534.25-1536.61 | Band 2                                             |
| 1538.19-1540.56 | Band 3                                             |
| 1542.14-1544.53 | Band 4                                             |
| 1546.12-1548.51 | Band 5                                             |
| 1550.12-1552.52 | Band 6                                             |
| 1554.13-1556.55 | Band 7                                             |
| 1558.17-1560.61 | Band 8                                             |
| USE-DEFAULT     | The band is not yet configured/retrieved from unit |

## 4.5.75 OPTICAL\_LINK\_TYPE

The type of the Optical Link between two optical facilities

**Table 4-115** *OPTICAL\_LINK\_TYPE Values*

| Values   | Description                                                                                                                            |
|----------|----------------------------------------------------------------------------------------------------------------------------------------|
| ADD-DROP | Link between two points that result in an add/drop connection from a Drop point to an Add point                                        |
| HITLESS  | Link between two OMS points that result in a hitless connection from a Drop point to an Add point of a consecutive Band/Channel Filter |
| OTS      | Link between two OTS points                                                                                                            |

## 4.5.76 OPTICAL\_MODE

The facility optical mode

**Table 4-116** *OPTICAL\_MODE Values*

| Values | Description                                |
|--------|--------------------------------------------|
| SDH    | The SDH optical mode the European format   |
| SONET  | The SONET optical mode the American format |

## 4.5.77 OPTICAL\_PORT\_TYPE

Qualifies the optical port of a card

**Table 4-117** OPTICAL\_PORT\_TYPE Values

| Values   | Description                                                                 |
|----------|-----------------------------------------------------------------------------|
| ADD      | The signal is added to the port                                             |
| DROP     | The signal is dropped from the port                                         |
| IN-COM   | COM channels (without OSC) that continues the signal from the previous card |
| IN-DC    | Input DCU port                                                              |
| IN-EXP   | Express channel that continues the signal from the previous card            |
| IN-LINE  | All the channels that continues the signal from the previous card           |
| IN-OSC   | OSC channel that continues the signal from the previous card                |
| OUT-COM  | COM channels (without OSC) that continues the signal to the next card       |
| OUT-DC   | Output DCU Port                                                             |
| OUT-EXP  | Express channel that continues the signal to the next card                  |
| OUT-LINE | All the channels that continues the signal to the next card                 |
| OUT-OSC  | OSC channel that continues the signal to the next card                      |

## 4.5.78 OPTICAL\_WLEN

The Optical Wavelength

**Table 4-118** OPTICAL\_WLEN Values

| Values  | Description   |
|---------|---------------|
| 1530.33 | Wavelength 1  |
| 1531.12 | Wavelength 2  |
| 1531.90 | Wavelength 3  |
| 1532.68 | Wavelength 4  |
| 1534.25 | Wavelength 5  |
| 1535.04 | Wavelength 6  |
| 1535.82 | Wavelength 7  |
| 1536.61 | Wavelength 8  |
| 1538.19 | Wavelength 9  |
| 1538.98 | Wavelength 10 |
| 1539.77 | Wavelength 11 |
| 1540.56 | Wavelength 12 |
| 1542.14 | Wavelength 13 |
| 1542.94 | Wavelength 14 |
| 1543.73 | Wavelength 15 |
| 1544.53 | Wavelength 16 |

**Table 4-118** *OPTICAL\_WLEN Values (continued)*

| Values   | Description              |
|----------|--------------------------|
| 1546.12  | Wavelength 17            |
| 1546.92  | Wavelength 18            |
| 1547.72  | Wavelength 19            |
| 1548.51  | Wavelength 20            |
| 1550.12  | Wavelength 21            |
| 1550.92  | Wavelength 22            |
| 1551.72  | Wavelength 23            |
| 1552.52  | Wavelength 24            |
| 1554.13  | Wavelength 25            |
| 1554.94  | Wavelength 26            |
| 1555.75  | Wavelength 27            |
| 1556.55  | Wavelength 28            |
| 1558.17  | Wavelength 29            |
| 1558.98  | Wavelength 30            |
| 1559.79  | Wavelength 31            |
| 1560.61  | Wavelength 32            |
| USE-TWL1 | Use Tunable Wavelength 1 |

## 4.5.79 OPTICS

The type of Gigabyte Ethernet optics being used

**Table 4-119** *OPTICS Values*

| Values       | Description  |
|--------------|--------------|
| 1000_BASE_CX | 1000 Base CX |
| 1000_BASE_LX | 1000 Base LX |
| 1000_BASE_SX | 1000 Base SX |
| 1000_BASE_ZX | 1000 Base ZX |
| CWDM_1470    | CWDM 1470    |
| CWDM_1490    | CWDM 1490    |
| CWDM_1510    | CWDM 1510    |
| CWDM_1530    | CWDM 1530    |
| CWDM_1550    | CWDM 1550    |
| CWDM_1570    | CWDM 1570    |
| CWDM_1590    | CWDM 1590    |
| CWDM_1610    | CWDM 1610    |

**Table 4-119** OPTICS Values (continued)

| Values           | Description          |
|------------------|----------------------|
| ITU_100G_1530_33 | ITU-100G 1530.33     |
| ITU_100G_1531_12 | ITU-100G 1531.12     |
| ITU_100G_1531_90 | ITU-100G 1531.90     |
| ITU_100G_1532_68 | ITU-100G 1532.68     |
| ITU_100G_1534_25 | ITU-100G 1534.25     |
| ITU_100G_1535_04 | ITU-100G 1535.04     |
| ITU_100G_1535_82 | ITU-100G 1535.82     |
| ITU_100G_1536_61 | ITU-100G 1536.61     |
| ITU_100G_1538_19 | ITU-100G 1538.19     |
| ITU_100G_1538_98 | ITU-100G 1538.98     |
| ITU_100G_1539_77 | ITU-100G 1539.77     |
| ITU_100G_1540_56 | ITU-100G 1540.56     |
| ITU_100G_1542_14 | ITU-100G 1542.14     |
| ITU_100G_1542_94 | ITU-100G 1542.94     |
| ITU_100G_1543_73 | ITU-100G 1543.73     |
| ITU_100G_1544_53 | ITU-100G 1544.53     |
| ITU_100G_1546_12 | ITU-100G 1546.12     |
| ITU_100G_1546_92 | ITU-100G 1546.92     |
| ITU_100G_1547_72 | ITU-100G 1547.72     |
| ITU_100G_1548_51 | ITU-100G 1548.51     |
| ITU_100G_1550_12 | ITU-100G 1550.12     |
| ITU_100G_1550_92 | ITU-100G 1550.92     |
| ITU_100G_1551_72 | ITU-100G 1551.72     |
| ITU_100G_1552_52 | ITU-100G 1552.52     |
| ITU_100G_1554_13 | ITU-100G 1554.13     |
| ITU_100G_1554_94 | ITU-100G 1554.94     |
| ITU_100G_1555_75 | ITU-100G 1555.75     |
| ITU_100G_1556_55 | ITU-100G 156.55      |
| ITU_100G_1558_17 | ITU-100G 1558.17     |
| ITU_100G_1558_98 | ITU-100G 1558.98     |
| ITU_100G_1559_79 | ITU-100G 1559.79     |
| ITU_100G_1560_61 | ITU-100G 1560.61     |
| UNKNOWN          | Unknown Optical Type |
| UNPLUGGED        | Unplugged            |

## 4.5.80 PATH

Modifier for Path commands

**Table 4-120** *PATH Values*

| Values  | Description                                                   |
|---------|---------------------------------------------------------------|
| STS1    | Synchronous Transport Signal level-1 (51 Mbs)                 |
| STS3C   | Synchronous Transport Signal level-3 Concatenated (155 Mbs)   |
| STS6C   | Synchronous Transport Signal level-6 Concatenated (310 Mbs)   |
| STS9C   | Synchronous Transport Signal level-9 Concatenated (465 Mbs)   |
| STS12C  | Synchronous Transport Signal level-12 Concatenated (622 Mbs)  |
| STS24C  | Synchronous Transport Signal level-24 Concatenated (1240 Mbs) |
| STS48C  | Synchronous Transport Signal level-48 Concatenated (2488 Mbs) |
| STS192C | Synchronous Transport Signal level-192 (9952 Mbs)             |
| VT1     | Virtual Tributary 1                                           |
| VT2     | Virtual Tributary 2                                           |

## 4.5.81 PAYLOAD

Identifies payload type

**Table 4-121** *PAYLOAD Values*

| Values       | Description                  |
|--------------|------------------------------|
| 10GE         | 10 GigE Payload Mode         |
| 1GE          | 1 Gigabit ethernet mode      |
| 1GFC         | 2 Gigabit Ethernet mode      |
| 2GFC         | 2 Gigabit Fiber Channel mode |
| DV6000       | Video mode                   |
| ESCON        | ESCON mode                   |
| HDTV         | HDTV mode                    |
| OC12         | SONET OC12 mode              |
| OC3          | SONET OC3 mode               |
| OC48         | SONET OC48 mode              |
| PASS-THROUGH | Pass through mode            |
| SDI-D1-VIDEO | SDI-D1-Video mode            |
| SONET        | SONET Payload Mode           |

## 4.5.82 PM\_MODE

Identifies the type of PM parameters. Only P type is supported.

**Table 4-122** *PM\_MODE Values*

| Values | Description                                           |
|--------|-------------------------------------------------------|
| I      | Transport Intermediate Node PM parameters             |
| L      | Transport Line PM parameters                          |
| NONE   | No PM parameters are being stored for the entity      |
| P      | Transport Path PM parameters                          |
| S      | Transport Section PM parameters                       |
| SEG    | Transport Path Segment PM parameters (e.g., ISDN BRA) |

## 4.5.83 PM\_STATE

Directs the named PM mode type—path (P) state

**Table 4-123** *PM\_STATE Values*

| Values | Description      |
|--------|------------------|
| OFF    | Disable the mode |
| ON     | Enable the mode  |

## 4.5.84 PRIVILEGE

Security level

**Table 4-124** *PRIVILEGE Values*

| Values | Description                 |
|--------|-----------------------------|
| MAINT  | Maintenance security level  |
| PROV   | Provisioning security level |
| RTRV   | Retrieve security level     |
| SUPER  | Superuser security level    |

## 4.5.85 PRODUCT\_TYPE

Product (NE) type



**Table 4-125** *PRODUCT\_TYPE Values*

| Values  | Description          |
|---------|----------------------|
| 15327   | Cisco ONS 15327 NE   |
| 15454   | Cisco ONS 15454 NE   |
| UNKNOWN | Unknown product type |

## 4.5.86 PROTECTION\_GROUP

Protection group type

**Table 4-126** *PROTECTION\_GROUP Values*

| Values | Description             |
|--------|-------------------------|
| 1-1    | 1 to 1 protection group |
| 1-N    | 1 to N protection group |

## 4.5.87 PROTOTYPE

Protection type for DWDM Client facilities

**Table 4-127** *PROTOTYPE Values*

| Values  | Description                                              |
|---------|----------------------------------------------------------|
| Y-CABLE | Y Cable Protection for the Client Ports on MXP/TXP cards |

## 4.5.88 PST

Primary State. This parameter indicates the current overall service condition of an entity.

**Table 4-128** *PST Values*

| Values | Description    |
|--------|----------------|
| IS     | In-service     |
| OOS    | Out-of-Service |

## 4.5.89 RDIRN\_MODE

This type specifies the Optical Ring directionality

**Table 4-129** *RDIRN\_MODE Values*

| Values | Description                                                            |
|--------|------------------------------------------------------------------------|
| E-W    | The direction of the signal is from east to west (or clockwise)        |
| W-E    | The direction of the signal is from west to east (or counterclockwise) |

## 4.5.90 REVERTIVE\_TIME

Revertive time

**Table 4-130** *REVERTIVE\_TIME Values*

| Values     | Description                           |
|------------|---------------------------------------|
| 0.5 – 12.0 | Revertive time is 0.5 to 12.0 minutes |

## 4.5.91 RMODE

Roll mode

**Table 4-131** *RMODE Values*

| Values | Description |
|--------|-------------|
| AUTO   | Automatic   |
| MAN    | Manual      |

## 4.5.92 RPATH

Indicates STS or VT path

**Table 4-132** *RPATH Values*

| Values | Description |
|--------|-------------|
| STS    | STS paths   |
| VT     | VT paths    |

## 4.5.93 SABITS

Indicates the SA BITS

**Table 4-133** *SABITS Values*

| Values | Description     |
|--------|-----------------|
| BYTE-4 | SABIT is BYTE-4 |
| BYTE-5 | SABIT is BYTE-5 |
| BYTE-6 | SABIT is BYTE-6 |
| BYTE-7 | SABIT is BYTE-7 |
| BYTE-8 | SABIT is BYTE-8 |

## 4.5.94 SD\_BER

The threshold for declaring Signal Degrade on a facility or path

**Table 4-134** *SD\_BER Values*

| Values    | Description            |
|-----------|------------------------|
| 1E-5–1E-9 | SDBER is the 1E-5–1E-9 |

## 4.5.95 SDCC\_MODE

Enables or disables the Section Data Communications Channel (SDCC) for the specified facility

**Table 4-135** *SDCC\_MODE Values*

| Values | Description                                                       |
|--------|-------------------------------------------------------------------|
| N      | Section Data Communications Channel is disabled for this facility |
| Y      | Section Data Communications Channel is enabled for this facility  |

## 4.5.96 SECUALMTYPE

The security alarm type

**Table 4-136** *SECUALMTYPE Values*

| Values         | Description          |
|----------------|----------------------|
| INTRUSION-PSWD | Intrusion (password) |

## 4.5.97 SERV\_EFF

Indicates the effect of the alarm on service

**Table 4-137** *SERV\_EFF Values*

| Values | Description                            |
|--------|----------------------------------------|
| NSA    | The condition is Non-Service Affecting |
| SA     | The condition is Service Affecting     |

## 4.5.98 SF\_BER

The threshold for declaring Signal Failure on a facility or path

**Table 4-138** *SF\_BER Values*

| Values    | Description            |
|-----------|------------------------|
| 1E-3–1E-5 | SFBER is the 1E-3–1E-5 |

## 4.5.99 SIDE

The role the unit is playing in the protection group

**Table 4-139** *SIDE Values*

| Values | Description                                               |
|--------|-----------------------------------------------------------|
| PROT   | The entity is the protection unit in the protection group |
| WORK   | The entity is a working unit in the protection group      |

## 4.5.100 SST

Secondary State. This parameter provides additional information pertaining to PST and PSTQ. Values for this state included here are a subset of the list in the GR document.

**Table 4-140** *SST Values*

| Values | Description                      |
|--------|----------------------------------|
| AINS   | Out of service, auto in service  |
| MT     | Out of service, maintenance mode |

## 4.5.101 STATUS

The status of the unit in the protection pair, either Active or Standby.

**Table 4-141** STATUS Values

| Values | Description                                 |
|--------|---------------------------------------------|
| ACT    | The entity is the active unit on the shelf  |
| NA     | Status is unavailable                       |
| STBY   | The entity is the standby unit on the shelf |

## 4.5.102 STM\_TYPE

The Synchronous Transport Mode of the NE

**Table 4-142** STM\_TYPE Values

| Values | Description                                               |
|--------|-----------------------------------------------------------|
| SDH    | The NE is operating in Synchronous Digital Hierarchy mode |
| SONET  | The NE is operating in Synchronous Optical Network mode   |

## 4.5.103 STS\_MONTYPE

STS Monitor Type

**Table 4-143** STS\_MONTYPE Values

| Values | Description                  |
|--------|------------------------------|
| CVP    | Coding Violation—P           |
| ESP    | Errored Second—Path          |
| SESP   | Severely Errored Second—Path |
| UASP   | Unavailable Second—Path      |

## 4.5.104 STS\_PATH

Modifier for some of the STS commands. This table does not include STS for the RTRV-CRS command because STS is not a standard designator.

**Table 4-144** STS\_PATH Values

| Values | Description                                                   |
|--------|---------------------------------------------------------------|
| STS1   | Synchronous Transport Signal level-1 (51Mbs)                  |
| STS3C  | Synchronous Transport Signal level-3 Concatenated (155Mbs)    |
| STS6C  | Synchronous Transport Signal level-3 Concatenated (310Mbs)    |
| STS9C  | Synchronous Transport Signal level-9 Concatenated (465Mbs)    |
| STS12C | Synchronous Transport Signal level-12 Concatenated (622Mbs)   |
| STS24C | Synchronous Transport Signal level-24 Concatenated (1240 Mbs) |

**Table 4-144 STS\_PATH Values (continued)**

| Values  | Description                                                   |
|---------|---------------------------------------------------------------|
| STS48C  | Synchronous Transport Signal level-48 Concatenated (2488 Mbs) |
| STS192C | Synchronous Transport Signal level-192 (9952Mbs)              |

## 4.5.105 SW

The type of switch to be initiated

**Table 4-145 SW Values**

| Values    | Description                                                                                                 |
|-----------|-------------------------------------------------------------------------------------------------------------|
| APS-CLEAR | APS-CLEAR switch state. It is a read only switch state, and is not allowed in the OPR-PROTNSW-xxx commands. |
| CLEAR     | CLEAR switch state. This switch state is not allowed in the OPR-PROTNSW-xxx commands.                       |
| EXERCISE  | EXERCISE switch state. This switch state is not allowed in the OPR-PROTNSW-XXX commands.                    |
| FRCD      | Force a switch unless another FRCD or LOCKOUT is in effect.                                                 |
| LOCKOUT   | Locks the facility out of switching. The system cannot switch to the protect facility to carry service.     |
| MAN       | Requests a manual switch of the facility                                                                    |

## 4.5.106 SWITCH\_TYPE

BLSR Switch Type. MANWKSWBK, MANWKSWPR, FRCDWKSWBK, FRCDWKSWPR, LOCKOUTOFPR, and LOCKOUTOFWK are retrieve-only values for RTRV-PROTNSW-OCn commands. They are not applicable for the OPR-PROTNSW-OCn commands.



**Note**

RING and SPAN are the only valid values for BLSR protection switching.

**Table 4-146 SWITCH\_TYPE Values**

| Values      | Description                                               |
|-------------|-----------------------------------------------------------|
| FRCDWKSWBK  | Working unit forced to switch back to working             |
| FRCDWKSWPR  | Working unit forced to switch to the protection unit      |
| LOCKOUTOFPR | Lockout of protection                                     |
| LOCKOUTOFWK | Lockout of working                                        |
| MANWKSWBK   | Manual switch of working unit back to working             |
| MANWKSWPR   | Manual switch of working unit back to the protection unit |
| RING        | BLSR ring switch type                                     |
| SPAN        | BLSR span switch type                                     |

## 4.5.107 SYNC\_CLOCK\_REF\_QUALITY\_LEVEL

Clock Source Quality Level

**Table 4-147** SYNC\_CLOCK\_REF\_QUALITY\_LEVEL Values

| Values | Description                                   |
|--------|-----------------------------------------------|
| DUS    | Don't Use for Synchronization                 |
| PRS    | Primary Reference Source, Stratum 1 Traceable |
| RES    | Reserved for network synchronization use      |
| SMC    | SONET Minimum Clock Traceable                 |
| ST2    | Stratum 2 Traceable                           |
| ST3    | Stratum 3 Traceable                           |
| ST3E   | Stratum 3E Traceable (2nd generation only)    |
| ST4    | Stratum 4 Traceable                           |
| STU    | Synchronized, Traceability Unknown            |
| TNC    | Transit Node Clock (2nd generation only)      |

## 4.5.108 SYNC\_GENERATION

Synchronization status message set generation

**Table 4-148** SYNC\_GENERATION Values

| Values | Description               |
|--------|---------------------------|
| GEN1   | First generation SSM set  |
| GEN2   | Second generation SSM set |

## 4.5.109 SYNC\_QUALITY\_LEVEL

Network synchronization quality level

**Table 4-149** SYNC\_QUALITY\_LEVEL Values

| Values    | Description for Generation-1                                                                  |
|-----------|-----------------------------------------------------------------------------------------------|
| ABOVE-PRS | Better than Primary Reference Source. Valid setting for Generation-1 and Generation-2 SSM set |
| ABOVE-SMC | Between SMC and ST3. Valid setting for Generation-1 and Generation-2 SSM set                  |
| ABOVE-ST2 | Between ST2 and STU. Valid setting for Generation-1 and Generation-2 SSM set                  |
| ABOVE-ST3 | For Generation-1 SSM set, between ST3 and ST2. For Generation-2 SSM set, between ST3 and ST3E |

**Table 4-149** SYNC\_QUALITY\_LEVEL Values (continued)

| Values      | Description for Generation-1                                                                            |
|-------------|---------------------------------------------------------------------------------------------------------|
| ABOVE-ST3E  | Between ST3E and TNC. Valid setting only for Generation-2 SSM set                                       |
| ABOVE-ST4   | Between ST4 and ST3. Valid setting for Generation-1 and Generation-2 SSM set                            |
| ABOVE-STU   | Between STU and PRS. Valid setting for Generation-1 and Generation-2 SSM set                            |
| ABOVE-TNC   | Between TNC and ST2. Valid setting only for Generation-2 SSM set                                        |
| BELOW-ST4   | Below ST4 but still usable. Valid setting only for Generation-1 and Generation-2 SSM set                |
| SAME-AS-DUS | Disable the RES message by equating it to DUS. Valid setting for Generation-1 and Generation-2 SSM set. |
| BELOW-ST4   | Below ST4 but still usable. Valid setting for Generation-1 and Generation-2 SSM set                     |
| SAME-AS-DUS | Disable the RES message by equating it to DUS. Valid setting for Generation-1 and Generation-2 SSM set  |

## 4.5.110 SYS\_TYPE

The type of the system representing the fiber and the span length that connects two nodes.

**Table 4-150** SYS\_TYPE Values

| Values            | Description                                                          |
|-------------------|----------------------------------------------------------------------|
| SMF-28-16CH-POWER | SMF-28 system type, Constant Power Amplification With 16 Channels    |
| SMF-28-8CH-POWER  | SMF-28 system type, Constant Power Amplification With 8 Channels     |
| SMF-28-GAIN       | SMF-28 system type, Constant Gain Amplification                      |
| SMF-28-POWER      | SMF-28 system type, Constant Power Amplification With 32/64 Channels |

## 4.5.111 T1\_MONTYPE

T1 monitor type

**Table 4-151** T1\_MONTYPE Values

| Values | Description                          |
|--------|--------------------------------------|
| CVL    | Coding Violation—Line                |
| CVP    | Coding Violation—Path                |
| ESL    | Errored Second—Line                  |
| SASP   | Severely Errored Framing/AIS Seconds |



**Table 4-151** T1\_MONTYPE Values (continued)

| Values | Description                  |
|--------|------------------------------|
| SESL   | Severely Errored Second—Line |
| SESP   | Severely Errored Second—Path |
| UASP   | Unavailable Second—Path      |

## 4.5.112 T3\_MONTYPE

T3 monitor type

**Table 4-152** T3\_MONTYPE Values

| Values | Description                  |
|--------|------------------------------|
| CVL    | Coding Violation—Line        |
| ESL    | Errored Second—Line          |
| SESL   | Severely Errored Second—Line |

## 4.5.113 TACC\_MODE

Test access mode

**Table 4-153** TACC\_MODE Values

| Values | Description                                                                                                                                                                                                                                                                                                                                                           |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LOOPE  | Indicates to split both the A and B paths, connect the line incoming from E direction to the line outgoing in the E direction, and connect this looped configuration to the FAD. The line outgoing in the F direction shall have a QRS connected, and the line incoming from the F direction shall be terminated by the nominal characteristic impedance of the line. |
| LOOPF  | Indicates to split both the A and B paths, connect the line incoming from F direction to the line outgoing in the F direction, and connect this looped configuration to the FAD. The line outgoing in the E direction shall have a QRS connected, and the line incoming from the E direction shall be terminated by the nominal characteristic impedance of the line. |
| MONE   | Indicates that a monitor connection is to be provided from the FAD to the A transmission path of the accessed circuit.                                                                                                                                                                                                                                                |
| MONEF  | Indicates that a monitor connection is to be provided from the FAD1 to a DFAD, or the odd pair of a FAP, to the A transmission path and from FAD2 of the same DFAD, or the even pair of a FAP, to the B transmission path of the accessed circuit.                                                                                                                    |
| MONF   | Indicates that a monitor connection is to be provided from the FAD to the B transmission path of the accessed circuit.                                                                                                                                                                                                                                                |
| SPLTA  | Indicates that a connection is to be provided from both the E and F sides of the A transmission path of the circuit under test to the FAD and split the A transmission path.                                                                                                                                                                                          |

**Table 4-153 TACC\_MODE Values (continued)**

| Values | Description                                                                                                                                                                                                                                                                                                                                                      |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SPLTB  | Indicates that a connection is to be provided from both the E and F sides of the B transmission path of the circuit under test to the FAD and split the B transmission path.                                                                                                                                                                                     |
| SPLTE  | Indicates to split both the A and B paths and connect the E side of the accessed circuit to the FAD. The line outgoing in the F direction shall have a QRS connected, and the line incoming from the F direction shall have a QRS connected, and the line incoming from the E direction shall be terminated by the nominal characteristic impedance of the line. |
| SPLTEF | Indicates to split both the A and B paths, and connect the E side of the accessed circuit to FAD1 and the F side to FAD2.                                                                                                                                                                                                                                        |
| SPLTF  | Indicates to split both the A and B paths, and connect the F side of the accessed circuit to the FAD. The line outgoing in the E direction shall have a QRS connected, and the line incoming in the E direction shall have a QRS connected, and the line incoming from the E direction shall be terminated by the nominal characteristic impedance of the line.  |

## 4.5.114 TAPTYPE

Test Access Point Type

**Table 4-154 TAPTYPE Values**

| Values | Description |
|--------|-------------|
| DUAL   | Dual FAD    |
| SINGLE | Single FAD  |

## 4.5.115 TERM\_MODE

Terminating mode of the card

**Table 4-155 TERM\_MODE Values**

| Values | Description              |
|--------|--------------------------|
| LINE   | Line Terminating Mode    |
| SEC    | Section Terminating Mode |
| TRANS  | Transparent Mode         |

## 4.5.116 TIMING\_MODE

Timing mode for the current node

**Table 4-156** *TIMING\_MODE Values*

| Values   | Description                                           |
|----------|-------------------------------------------------------|
| EXTERNAL | The node derives its clock from the BITS input        |
| LINE     | The node derives its clock from the SONET lines       |
| MIXED    | The node derives its clock from the mixed timing mode |

## 4.5.117 TMPER

Performance parameter

**Table 4-157** *TMPER Values*

| Values | Description                                                         |
|--------|---------------------------------------------------------------------|
| 15-MIN | Performance Parameter Accumulation Interval Length—Every 15 Minutes |
| 1-DAY  | Performance Parameter Accumulation Interval Length—Every 24 Hours   |

## 4.5.118 TRANS\_MODE

G1000 Transponder Mode

**Table 4-158** *TRANS\_MODE Values*

| Values | Description             |
|--------|-------------------------|
| BI     | Bidirectional           |
| NONE   | Not in Transponder Mode |
| UNI    | Unidirectional          |

## 4.5.119 TRCFORMAT

Indicates the trace format

**Table 4-159** *TRCFORMAT Values*

| Values  | Description           |
|---------|-----------------------|
| 1-BYTE  | 1-Byte Trace Message  |
| 16-BYTE | 16-Byte Trace Message |
| 64-BYTE | 64-Byte Trace Message |

## 4.5.120 TRCLEVEL

Indicates the trace mode options

**Table 4-160 TRCLEVEL Values**

| Values | Description                                 |
|--------|---------------------------------------------|
| J0     | Identifies the SONET J0 Section trace level |
| TTI-PM | Identifies the TTI Path monitoring point    |
| TTI-SM | Identifies the TTI Section Monitoring point |

## 4.5.121 TRCMODE

Path Trace Mode

**Table 4-161 TRCMODE Values**

| Values      | Description                                                                                                          |
|-------------|----------------------------------------------------------------------------------------------------------------------|
| AUTO        | Use the previously received path trace string as the expected string (not applicable to MXP/TXP cards)               |
| AUTO-NO-AIS | Use the previously received path trace string as the expected string and do not turn on AIS and RDI if TIMP detected |
| MAN         | Use the provisioned expected string as the expected string                                                           |
| MAN-NO-AIS  | Use the provisioned expected string as the expected string and do not turn on AIS and RDI if TIMP detected           |
| OFF         | Turn off path trace capability. Nothing will be reported                                                             |

## 4.5.122 TX\_RSLT

Indicates the file transferred result

**Table 4-162 TX\_RSLT Values**

| Values  | Description                   |
|---------|-------------------------------|
| FAILURE | Indicates a failed result     |
| SUCCESS | Indicates a successful result |

## 4.5.123 TX\_STATUS

Indicates the file transferred status

**Table 4-163 TX\_STATUS Values**

| Values | Description                                   |
|--------|-----------------------------------------------|
| COMPLD | Indicates the file transmission is completed  |
| IP     | Indicates the file transmission is in process |
| START  | Indicates the file transmission is started    |

## 4.5.124 TX\_TYPE

Specifies the type and direction of the file transferred

**Table 4-164** TX\_TYPE Values

| Values | Description                   |
|--------|-------------------------------|
| RFBU   | Indicates Remote File Backup  |
| RFR    | Indicates Remote File Restore |
| SWDL   | Indicates Software Download   |

## 4.5.125 UCP\_ADM\_STATE

UCP Administrative States

**Table 4-165** UCP\_ADM\_STATE Values

| Values | Description                                    |
|--------|------------------------------------------------|
| DOWN   | Indicates the UCP administrative state is down |
| UP     | Indicates the UCP administrative state is up   |

## 4.5.126 UCP\_CC\_TUN\_MD

UCP IP Tunneling mode. Default is DISABLED.

**Table 4-166** UCP\_CC\_TUN\_MD Values

| Values   | Description                 |
|----------|-----------------------------|
| DISABLED | DISABLED UCP tunneling mode |
| GRE      | GRE UCP tunneling mode      |
| IP-IN-IP | IP-IN-IP UCP tunneling mode |

## 4.5.127 UCP\_CKT\_STATE

UCP Operation States of Circuits

**Table 4-167** UCP\_CKT\_STATE Values

| Values    | Description                                                                          |
|-----------|--------------------------------------------------------------------------------------|
| CLEARING  | UCP circuit is in the clearing state                                                 |
| CLOSED    | UCP circuit is in the closed state                                                   |
| FAILED    | UCP circuit is in the failed state                                                   |
| LISTENING | UCP circuit is in the listening state. This state is applicable only at termination. |

**Table 4-167** UCP\_CKT\_STATE Values (continued)

| Values  | Description                                                              |
|---------|--------------------------------------------------------------------------|
| OPEN    | UCP circuit is opened                                                    |
| OPENING | UCP circuit is opening                                                   |
| PENDING | UCP circuit is in the open-pending state                                 |
| RETRY   | UCP circuit is in retry state. This state is applicable only at source   |
| WAIT    | UCP circuit is in wait-cc state. This state is applicable only at source |

## 4.5.128 UCP\_CRC\_MODE

UCP CRC mode for this control channel, it is applicable to IPCCs of the SDCC type only.

**Table 4-168** UCP\_CRC\_MODE Values

| Values | Description                 |
|--------|-----------------------------|
| 16-BIT | Indicates a 16-bit CRC mode |
| 32-BIT | Indicates a 32-bit CRC mode |

## 4.5.129 UCP\_IPCC\_TYPE

UCP Types

**Table 4-169** UCP\_IPCC\_TYPE Values

| Values | Description                                          |
|--------|------------------------------------------------------|
| ROUTED | Indicates the Optical User Network Interface–Client  |
| SDCC   | Indicates the Optical User Network Interface–Network |

## 4.5.130 UCP\_TNA\_TYPE

Types of TNA (transport network administered address)

**Table 4-170** UCP\_TNA\_TYPE Values

| Values | Description             |
|--------|-------------------------|
| IPV4   | Indicates IPV4 TNA type |
| IPV6   | Indicates IPV6 TNA type |
| NSAP   | Indicates NSAP TNA type |

## 4.5.131 UNI\_BI

Unidirectional and Bidirectional switch operations

**Table 4-171 UNI\_BI Values**

| Values | Description                         |
|--------|-------------------------------------|
| BI     | Bidirectional protection switching  |
| UNI    | Unidirectional protection switching |

## 4.5.132 UP\_DOWN

Up/Down

**Table 4-172 UP\_DOWN Values**

| Values | Description |
|--------|-------------|
| DOWN   | Down        |
| UP     | Up          |

## 4.5.133 USER\_LOGINS

Indicate the number of times a user can log into the same NE with the same userid.

**Table 4-173 USER\_LOGINS Values**

| Values   | Description                                                               |
|----------|---------------------------------------------------------------------------|
| MULTIPLE | A user can log into the same NE many times                                |
| SINGLE   | A user can log into the NE once only (includes both CTC and TL1 sessions) |

## 4.5.134 VALIDITY

Response validity

**Table 4-174 VALIDITY Values**

| Values | Description       |
|--------|-------------------|
| COMPL  | Complete Response |
| PRTL   | Partial Response  |

## 4.5.135 VOA\_CNTR\_MODE

Defines the VOA control mode

**Table 4-175** *VOA\_CNTR\_MODE Values*

| Values | Description                                                 |
|--------|-------------------------------------------------------------|
| ATTN   | VOA has a fixed attenuation                                 |
| POWER  | VOA controls the attenuation to obtain a fixed output power |

## 4.5.136 VT1\_5\_MONTYPE

VT1\_5 Monitor Type

**Table 4-176** *VT1\_5\_MONTYPE Values*

| Values | Description                      |
|--------|----------------------------------|
| CVV    | Coding Violation—VT Path         |
| ESV    | Errored Seconds—VT Path          |
| SESV   | Severely Errored Seconds—VT Path |
| UASV   | Unavailable Second—VT Path       |

## 4.5.137 VT\_PATH

Modifier for some of the VT commands. This table does not include VT for the RTRV-CRS command because VT is not a standard designator.

**Table 4-177** *VT\_PATH Values*

| Values | Description         |
|--------|---------------------|
| VT1    | Virtual tributary 1 |
| VT2    | Virtual tributary 2 |

## 4.5.138 WDM

Facility Types for MXP/TXP cards

**Table 4-178** *WDM Values*

| Values | Description                     |
|--------|---------------------------------|
| CLNT   | Client Facility                 |
| OCH    | Optical Channel (DWDM) Facility |

## 4.5.139 WLEN\_MODE

The Wavelength configuration mode of a single node/direction



**Table 4-179 WLEN\_MODE Values**

| Values | Description                              |
|--------|------------------------------------------|
| ADD    | The wavelength is added at this node     |
| DROP   | The wavelength is dropped from this node |
| EXP    | The wavelength is expressed in this node |

## 4.5.140 YES\_NO

Indicates whether or not:

1. The user's password is about to expire
2. The user is logged into the NE
3. The user is locked out of the NE

**Table 4-180 YES\_NO Values**

| YES_NO Values | Description |
|---------------|-------------|
| NO            | No          |
| YES           | Yes         |





## Ring Provisioning

---

This chapter provides information and sample procedures for setting up STS or VT circuits over existing path protection and bidirectional line switch ring (BLSR) configurations using TL1, including 1-way drop and continue.



**Note**

The terms "Unidirectional Path Switched Ring" and "UPSR" may appear in Cisco literature. These terms do not refer to using Cisco ONS 15xxx products in a unidirectional path switched ring configuration. Rather, these terms, as well as "Path Protected Mesh Network" and "PPMN," refer generally to Cisco's path protection feature, which may be used in any topological network configuration. Cisco does not recommend using its path protection feature in any particular topological network configuration.

---



**Note**

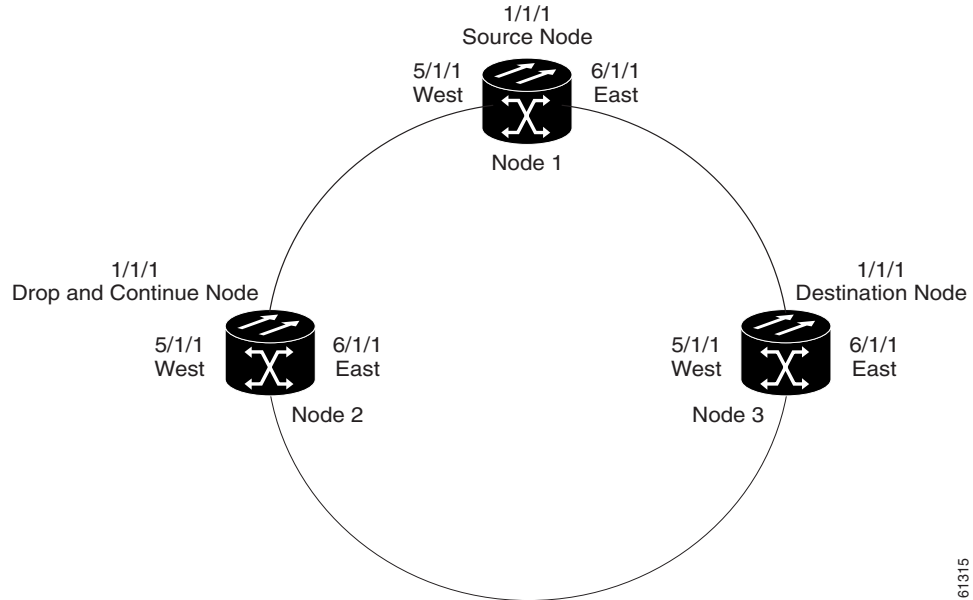
Because the ONS 15454/ONS 15327 implements logical path protection, there are no defined east and west ports. Instead, the east STS path for one circuit can exit a different port than the east STS path of another circuit, even though the west STS paths for both circuits may share the same port.

---

### 5.1 1-Way Drop and Continue

The following examples show how to create a 1-way drop and continue cross-connect. The examples use three nodes (Node 1, Node 2, and Node 3) in a ring configuration ([Figure 5-1](#)). Node 1 is the source node, Node 2 has the drop and continue, and Node 3 is the destination.

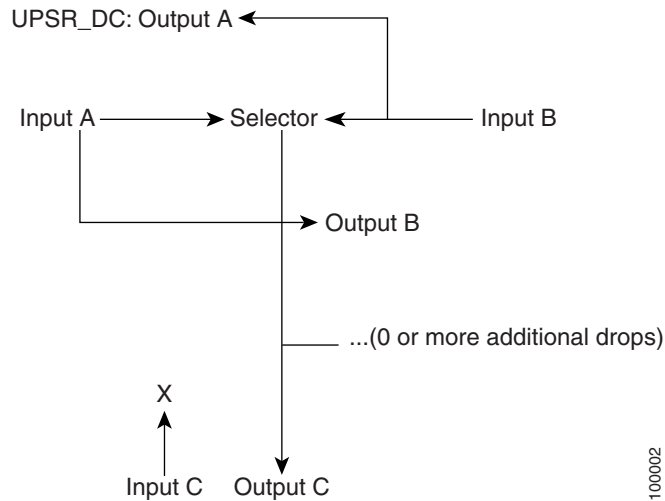
Figure 5-1 1-way drop and continue



61315

Figure 5-2 shows a circuit diagram example of the orientation of AIDs associated with the ENT-CRS command used to establish drop and continue connections.

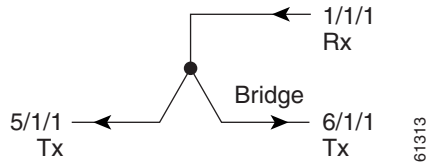
Figure 5-2 Orientation of AIDs used to establish drop and continue connections



100002

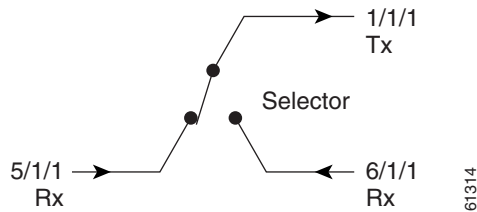
## 5.1.1 Sample Node 1 Configuration (Source Node)

Issue the ENT-CRS-STSn::STS-1-1,STS-5-1&STS-6-1:CTAG::1WAY; command on Node 1.

**Figure 5-3** Bridge from 1/1/1 to 5/1/1 and 6/1/1

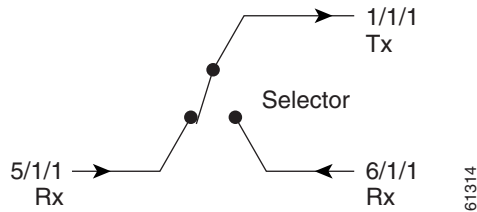
## 5.1.2 Sample Node 2 Configuration (Drop and Continue Node)

Issue the ENT-CRS-STSn::STS-5-1&STS-6-1,STS-1-1:CTAG::1WAYDC; on Node 2.

**Figure 5-4** Selector between 5/1/1 and 6/1/1 to 1/1/1

## 5.1.3 Sample Node 3 Configuration (Destination Node)

Issue the ENT-CRS-STSn::STS-5-1&STS-6-1,STS-1-1:CTAG::1WAY; on Node 3.

**Figure 5-5** Selector between 5/1/1 and 6/1/1 to 1/1/1





## TL1 Performance Monitoring

Performance information is continuously monitored and stored in individual performance monitoring (PM) registers and can be retrieved upon request or when a preset threshold is exceeded. For more detailed information on performance monitoring, refer to the *Cisco ONS 15454 Reference Guide* and the *Cisco ONS 15327 Reference Guide*.

This chapter provides TL1 performance monitoring information for the Cisco ONS 15454 and the Cisco ONS 15327, including:

- Performance monitoring by card
- PM parameters by line type
- Scheduled PM report provisioning

### 6.1 Performance Monitoring by Card

**Table 6-1** MXP\_2.5G\_10G, TXP\_MR\_10G, TXP\_MR\_2.5G, and TXPP\_MR\_2.5G Card PMs

| SONET Layer Far-End (FE) <sup>1</sup> | SONET Layer Near-End (NE) <sup>1</sup> | OTN Layer (NE and FE) <sup>2</sup> | Optics (NE) <sup>1, 3</sup> | 8B10B (NE) <sup>4</sup> | FEC (NE) <sup>2</sup> |
|---------------------------------------|----------------------------------------|------------------------------------|-----------------------------|-------------------------|-----------------------|
| CVL                                   | CVS                                    | ES-PM                              | OPT-AVG                     | CGV                     | BIEC                  |
| ESL                                   | CVL                                    | ES-SM                              | OPT-MAX                     | DCG                     | UNC-WORDS             |
| SESL                                  | ESS                                    | ESR-PM                             | OPT-MIN                     | IOS                     |                       |
| UASL                                  | ESL                                    | ESR-SM                             | OPR-AVG                     | IPC                     |                       |
| FCL                                   | SESS                                   | SES-PM                             | OPR-MAX                     | NIOS                    |                       |
|                                       | SESL                                   | SES-SM                             | OPR-MIN                     | VPC                     |                       |
|                                       | SEFS                                   | SESR-PM                            | LBCL-AVG                    |                         |                       |
|                                       | UASL                                   | SESR-SM                            | LBCL-MAX                    |                         |                       |
|                                       | FCL                                    | UAS-PM                             |                             |                         |                       |
|                                       |                                        | UAS-SM                             |                             |                         |                       |
|                                       |                                        | BBE-PM                             |                             |                         |                       |
|                                       |                                        | BBE-SM                             |                             |                         |                       |
|                                       |                                        | BBER-PM                            |                             |                         |                       |
|                                       |                                        | BBER-SM                            |                             |                         |                       |
|                                       |                                        | FC-PM                              |                             |                         |                       |
|                                       |                                        | FC-SM                              |                             |                         |                       |

1. Applicable to OCH and CLNT facilities

2. Applicable to OCH facility

3. TXP-MR-2.5G/TXPP-MR-2.5G ESCON payload does not support Optics PMs on the client port due to SFP imposed restriction.

4. Applicable to TXP\_MR\_2.5G and TXPP\_MR\_2.5G cards only

**Table 6-2 OSCM/OSC-CSM (OC3) Card PMs**

| Section (NE) <sup>1</sup>  | Line (NE/FE) <sup>1</sup>         | Optics (NE) <sup>2</sup>         |
|----------------------------|-----------------------------------|----------------------------------|
| CVS<br>ESS<br>SESS<br>SEFS | CVL<br>ESL<br>SESL<br>UASL<br>FCL | OPWR-AVG<br>OPWR-MAX<br>OPWR-MIN |

1. Applicable to OC3
2. Applicable to OTS facilities

**Table 6-3 Optical Amplifiers, OADM, MUX/DEMUX Card PMs**

| Optics (NE) <sup>1</sup>         |
|----------------------------------|
| OPWR-AVG<br>OPWR-MAX<br>OPWR-MIN |

1. Applicable to OCH, OMS, OTS Facilities

**Table 6-4 EC1 Card PMs**

| Section (NE)               | Line (NE)                         | STS Path (NE)                                                                                                              | Line (FE)                         | STS Path (FE)                     |
|----------------------------|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------|
| CVS<br>ESS<br>SESS<br>SEFS | CVL<br>ESL<br>SESL<br>UASL<br>FCL | CVP<br>ESP<br>SESP<br>UASP<br>FCP<br>PPJC-PDET<br>NPJC-PDET<br>PPJC-PGEN<br>NPJC-PGEN<br>PNPJC-SEC<br>NPJC-SEC<br>PJC-DIFF | CVL<br>ESL<br>SESL<br>UASL<br>FCL | CVP<br>ESP<br>SESP<br>UASP<br>FCP |

**Table 6-5 DS1(N) Card PMs**

| Line (NE)                   | Line (FE)  | Rx Path (NE)                                | Tx Path (NE)                                | VT Path (NE)               | STS Path (NE)                     | Rx Path (FE)                                                | V (FE)                     | STS Path (FE)                     |
|-----------------------------|------------|---------------------------------------------|---------------------------------------------|----------------------------|-----------------------------------|-------------------------------------------------------------|----------------------------|-----------------------------------|
| CVL<br>ESL<br>SESL<br>LOSSL | CVL<br>ESL | AISSP<br>CVP<br>ESP<br>SASP<br>SESP<br>UASP | AISSP<br>CVP<br>ESP<br>SASP<br>SESP<br>UASP | CVV<br>ESV<br>SESV<br>UASV | CVP<br>ESP<br>SESP<br>UASP<br>FCP | ESP<br>ESAP<br>ESBP<br>CVP<br>CSSP<br>SEFSP<br>SESP<br>UASP | CVV<br>ESV<br>SESV<br>UASV | CVP<br>ESP<br>SESP<br>UASP<br>FCP |



**Table 6-6 DS3(N) Card PMs**

| Line (NE) | STS Path (NE) | STS Path (FE) |
|-----------|---------------|---------------|
| CVL       | CVP           | CVP           |
| ESL       | ESP           | ESP           |
| SESL      | SESP          | SESP          |
| LOSSL     | UASP<br>FCP   | UASP<br>FCP   |

**Table 6-7 DS3(N)-3E Card PMs**

| Line (NE) | Path (NE)                                                  | STS Path (NE) | Path (FE) <sup>1</sup> | STS Path (FE) |
|-----------|------------------------------------------------------------|---------------|------------------------|---------------|
| CVL       | AISSP                                                      | CVP           | CVCPP                  | CVP           |
| ESL       | CVP                                                        | ESP           | ESCPP                  | ESP           |
| SESL      | ESP                                                        | SESP          | SASCPP                 | SESP          |
| LOSSL     | SASP<br>SESP<br>UASP<br>CVCPP<br>ESCPP<br>SESCPP<br>UASCPP | UASP<br>FCP   | SESCPP<br>UASCPP       | UASP<br>FCP   |

1. The C-Bit PMs (PMs that end in "CPP") are applicable only if line format is C-Bit.

**Table 6-8 DS3XM-6 Card PMs**

| DS3 Line (NE) | DS3 Path (NE) <sup>1</sup>                                 | DS1 Path (NE) | VT Path (NE) | STS Path (NE) | DS3 Path (FE) <sup>1</sup> | VT Path (FE) | STS Path (FE) |
|---------------|------------------------------------------------------------|---------------|--------------|---------------|----------------------------|--------------|---------------|
| CVL           | AISSP                                                      | AISSP         | CVV          | CVP           | CVCPP                      | CVV          | CVP           |
| ESL           | CVP                                                        | ESP           | ES-V         | ESP           | ESCPP                      | ESV          | ESP           |
| SESL          | ESP                                                        | SASP          | SES-V        | SESP          | SASCPP                     | SESV         | SESP          |
| LOSSL         | SASP<br>SESP<br>UASP<br>ESCPP<br>SESCPP<br>UASCPP<br>CVCPP | SESP<br>UASP  | UAS-V        | UASP<br>FCP   | SESCPP<br>UASCPP           | UASV         | UASP<br>FCP   |

1. The C-Bit PMs (PMs that end in "CPP") are applicable only if line format is C-Bit.

Table 6-9 OC3 Card PMs

| Section (NE) | Line (NE) | STS Path (NE) | Line (FE) | STS Path (FE) <sup>1</sup> |
|--------------|-----------|---------------|-----------|----------------------------|
| CVS          | CVL       | CVP           | CVL       | CVP                        |
| ESS          | ESL       | ESP           | ESL       | ESP                        |
| SESS         | SESL      | SESP          | SESL      | SESP                       |
| SEFS         | UASL      | UASP          | UASL      | UASP                       |
|              | FCL       | FCP           | FCL       | FCP                        |
|              | PSC (1+1) | PPJC-PDET     |           |                            |
|              | PSD (1+1) | NPJC-PDET     |           |                            |
|              |           | PPJC-PGEN     |           |                            |
|              |           | NPJC-PGEN     |           |                            |
|              |           | PPJC-SEC      |           |                            |
|              |           | NPJC-SEC      |           |                            |
|              |           | PJC-DIFF      |           |                            |

1. The STS Path (FE) PMs are valid only for the OC3-4 card on ONS 15454.

Table 6-10 OC3-8 Card PMs

| Section (NE) | Line (NE) | Physical Layer (NE) | STS Path (NE) | Line (FE) | STS Path (FE) |
|--------------|-----------|---------------------|---------------|-----------|---------------|
| CVS          | CVL       | LBCL                | CVP           | CVL       | CVP           |
| ESS          | ESL       | OPT                 | ESP           | ESL       | ESP           |
| SESS         | SESL      | OPR                 | SESP          | SESL      | SESP          |
| SEFS         | UASL      |                     | UASP          | UASL      | UASP          |
|              | FCL       |                     | FCP           | FCL       | FCP           |
|              | PSC (1+1) |                     | PPJC-PDET     |           |               |
|              | PSD (1+1) |                     | NPJC-PDET     |           |               |
|              |           |                     | PPJC-PGEN     |           |               |
|              |           |                     | NPJC-PGEN     |           |               |
|              |           |                     | PPJC-SEC      |           |               |
|              |           |                     | NPJC-SEC      |           |               |
|              |           |                     | PJC-DIFF      |           |               |

Table 6-11 OC12, OC48, OC192 Card PMs

| Section (NE) | Line (NE)          | STS Path (NE) | Line (FE) |
|--------------|--------------------|---------------|-----------|
| CVS          | CVL                | CVP           | CVL       |
| ESS          | ESL                | ESP           | ESL       |
| SESS         | SESL               | SESP          | SESL      |
| SEFS         | UASL               | UASP          | UASL      |
|              | FCL                | FCP           | FCL       |
|              | PSC (1+1, 2F BLSR) | PPJC-PDET     |           |
|              | PSD (1+1, 2F BLSR) | NPJC-PDET     |           |
|              | PSC-W (4F BLSR)    | PPJC-PGEN     |           |
|              | PSD-W (4F BLSR)    | NPJC-PGEN     |           |
|              | PSC-S (4F BLSR)    | PPJC-SEC      |           |
|              | PSD-S (4F BLSR)    | NPJC-SEC      |           |
|              | PSC-R (4F BLSR)    | PJC-DIFF      |           |
|              | PSD-R (4F BLSR)    |               |           |

## 6.2 PM Parameters by Line Type

**Table 6-12** PM Parameters by Line Type

| Parameter | OC-N | T1 | T3 | STS | VT1.5 |
|-----------|------|----|----|-----|-------|
| CVL       | Y    | Y  | Y  |     |       |
| CVP       |      | Y  | Y  | Y   |       |
| CVS       | Y    |    |    |     |       |
| CVV       |      |    |    |     | Y     |
| ESL       | Y    | Y  | Y  |     |       |
| ESP       |      | Y  | Y  | Y   |       |
| ESS       | Y    |    |    |     |       |
| ESV       |      |    |    |     | Y     |
| FCP       |      |    |    | Y   |       |
| FCL       | Y    |    |    |     |       |
| PJNEG     | Y    |    |    |     |       |
| PJPOS     | Y    |    |    |     |       |
| PSC       | Y    |    |    |     |       |
| PSD       | Y    |    |    |     |       |
| SASP      |      | Y  | Y  |     |       |
| SEFS      | Y    |    |    |     |       |
| SESL      | Y    | Y  | Y  |     |       |
| SESP      |      | Y  | Y  | Y   |       |
| SESS      | Y    |    |    |     |       |
| SESV      |      |    |    |     | Y     |
| UASL      | Y    |    |    |     |       |
| UASP      |      | Y  | Y  | Y   |       |
| UASV      |      |    |    |     | Y     |
| AISSP     |      | Y  | Y  |     |       |
| CVCPP     |      |    | Y  |     |       |
| ESCPP     |      |    | Y  |     |       |
| LOSSL     |      |    | Y  |     |       |
| SASCPP    |      |    | Y  |     |       |
| SESCPP    |      |    | Y  |     |       |
| UASCPP    |      |    | Y  |     |       |

## 6.3 Scheduled PM Report

Scheduled performance monitoring (PM) report is a feature that extends the capability of PM reporting for the Cisco ONS 15454 and the Cisco ONS 15327. With scheduled PM report the system automatically and periodically generates the PM report of any specified facility or cross-connection.


**Note**

The current maximum number of schedules allowed to be created for an NE is 1000. If this number of schedules has been created for the NE, an error message “Reach Limits Of MAX Schedules Allowed. Can Not Add More” will be returned if trying to create more schedules on the NE.


**Note**

Identical schedules for an NE is not allowed. Two schedules are considered identical if they have the same AID, MOD2 type, performance monitor type, performance monitor level, location, direction and time period.


**Note**

An error message “Duplicate Schedule” is returned if you create a schedule which is a duplicate of an existing schedule. However, if the existing schedule expires (with the parameter <NUMINVL> equal to zero when retrieved by the RTRV-PMSCHED command which means no more performance monitoring report to be sent), then the new schedule with the identical parameter will replace the existing schedule.


**Note**

When you create a PM schedule, the minimum report interval should not be less than five minutes.

See each command description for command formats and syntax:

- SCHED-PMREPT-<MOD2> [on page 3-321](#)
- ALW-PMREPT-ALL [on page 3-25](#)
- RTRV-PMSCHED-<MOD2> [on page 3-277](#)
- RTRV-PMSCHED-ALL [on page 3-278](#)
- INH-PMREPT-ALL [on page 3-126](#)
- REPT PM <MOD2> [on page 3-167](#)

### 6.3.1 Create a PM Schedule and Receive an Autonomous PM Report

1. Issue the SCHED-PMREPT-<MOD2> command to create a PM schedule.
2. Issue the ALW-PMREPT-ALL command to allow the current TL1 session to be able to receive the autonomous PM report.

### 6.3.2 Manage PM Schedules

1. Create a PM schedule by issuing the SCHED-PMREPT-<MOD2> command.
2. Delete a PM schedule by issuing the SCHED-PMREPT-<MOD2> command with the <NUMREPT> parameter equal to zero.



---

**Note** The PM schedules created on a facility or a cross-connect will be automatically deleted if the card or the cross-connect are unprovisioned.

---

3. Retrieve all the PM schedules created on the node by issuing the RTRV-PMSCHED-ALL command. Retrieve a particular MOD2 type of PM schedule by issuing the RTRV-PMSCHED-<MOD2> command.



---

**Note** The system will not automatically delete the schedules that are expired (for example, a schedule is created to report PM 10 times. After 10 PM reports are sent, the schedule is expired). The expired schedule can be identified by its <NUMINVL> field (equal to zero) in the response of RTRV-PMSCHED.

---

### 6.3.3 Enable or Disable a TL1 Session to Receive Autonomous PM Reports

1. Enable a TL1 session to receive a scheduled PM report by issuing the ALW-PMREPT-ALL command.



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**Note** By default, a TL1 session is disabled to receive PM reports. The ALW-PMREPT-ALL command enables a TL1 user to receive all the scheduled PM reports from the system, regardless of whether or not the schedule is created by this TL1 user or by any other TL1 user.

---

2. Disable a TL1 session to receive any scheduled PM report by issuing the INH-PMREPT-ALL command.





## TL1 Alarms and Errors

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This chapter provides TL1 alarm and error information supported by the Cisco ONS 15454 and Cisco ONS 15327, including:

- [Alarms, page 7-1](#)
- [Conditions, page 7-18](#)
- [Errors, page 7-27](#)
- [Echo, page 7-60](#)

Each alarm includes a description and severity. Errors are listed by error type and include error message. Conditions are not alarmed (NA) or not reported (NR) and are listed in the [“Conditions” section on page 7-18](#)



### Note

The terms "Unidirectional Path Switched Ring" and "UPSR" may appear in Cisco literature. These terms do not refer to using Cisco ONS 15xxx products in a unidirectional path switched ring configuration. Rather, these terms, as well as "Path Protected Mesh Network" and "PPMN," refer generally to Cisco's path protection feature, which may be used in any topological network configuration. Cisco does not recommend using its path protection feature in any particular topological network configuration.

## 7.1 Alarms

Refer to “Alarm Troubleshooting” in the *Cisco ONS 15454 Troubleshooting Guide* or the *Cisco ONS 15327 Troubleshooting Guide* for complete alarm definitions, trouble notifications, and fault recovery procedures. The alarms are listed alphabetically by alarmable object:

- AEP, page 7-2
- AIP, page 7-3
- BITS, page 7-3
- BP, page 7-3
- CC, page 7-3
- CKT, page 7-4
- DS1, page 7-4
- DS3, page 7-5
- DWDM Client, page 7-5
- DWDM Trunk, page 7-6
- ECN, page 7-8
- ENV, page 7-8
- EQPT, page 7-9
- ETHER, page 7-10
- EXTSYNCH, page 7-10
- FAN, page 7-11
- FCMR, page 7-11
- FUDC, page 7-12
- HDGE (G1000), page 7-12
- L2SC (ML-Series), page 7-12
- NBR, page 7-12
- NE, page 7-13
- NESYNCH, page 7-14
- OCN, page 7-14
- OSCRING, page 7-15
- PWR, page 7-15
- STSMON, page 7-16
- STSTERM, page 7-16
- VCATGROUP, page 7-17
- VT-MON, page 7-17
- VT-TERM, page 7-18

For a sample of each TL1 alarm that can be generated by the Cisco ONS 15454, refer to the file 15454\_r46\_tl1\_alarms.txt on the Cisco ONS 15454 Software CD in the subdirectory \T11. For a sample of each TL1 alarm that can be generated by the Cisco ONS 15327, refer to the file 15327\_r46\_tl1\_alarms.txt on the Cisco ONS 15327 Software CD in the subdirectory \T11. These files can be used to test an operations support system's ability to receive alarms which the ONS 15454/ONS 15327 can raise.

## 7.1.1 AEP

Alarm expansion panel

**Table 7-1** AEP

| Alarm  | Severity | Description                                                                                                                                              |
|--------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| EQPT   | CR/SA    | An Equipment Failure alarm indicates that a hardware failure has occurred on the reporting card.                                                         |
| MFGMEM | CR/SA    | The manufacturing data memory failure alarm means that the ONS 15454/15327 cannot access the data on the erasable programmable read-only memory (EPROM). |

## 7.1.2 AIP

Auxiliary interface protection module



**Table 7-2 AIP**

| Alarm     | Severity | Description                                                                                                                                                                                                                                                                   |
|-----------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| INVMACADR | MJ/NSA   | The Equipment Failure Invalid MAC Address alarm occurs when the ONS 15454/15327 Media Access Control layer address (MAC Address) is invalid.                                                                                                                                  |
| MEA       | CR/SA    | If the Mismatch of Equipment Attributes alarm is reported against the AIP, the fuse in the AIP board blew or is missing. The MEA alarm also occurs when an old AIP board with a 2-Amp fuse is installed in a newer 10 Gbps-compatible or ANSI shelf assembly (15454-SA-ANSI). |
| MFGMEM    | CR/SA    | The manufacturing data memory failure alarm means that the ONS 15454/15327 cannot access the data on the erasable programmable read-only memory (EPROM).                                                                                                                      |

## 7.1.3 BITS

Building integration timing supply (BITS) incoming references (BITS-1, BITS-2)

**Table 7-3 BITS**

| Alarm    | Severity | Description                                                                                                   |
|----------|----------|---------------------------------------------------------------------------------------------------------------|
| LOF      | MJ/SA    | A port on the TCC2/MIC BITS input detects a loss of frame (LOF) on the incoming BITS timing reference signal. |
| LOS      | MJ/SA    | The TCC2/MIC card has a loss of signal (LOS) condition from the BITS timing source.                           |
| SSM-FAIL | MN/NSA   | Synchronization status messaging failed.                                                                      |

## 7.1.4 BP

The backplane

**Table 7-4 BP**

| Alarm  | Severity | Description                                                                                                                                                       |
|--------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MEA    | CR/SA    | The MEA alarm for the backplane occurs when the revision of the backplane is incompatible with cross-connect equipment.                                           |
| MFGMEM | CR/SA    | The Manufacturing Data Memory Failure (MFGMEM) alarm means that the ONS 15454/15327 cannot access the data on the erasable programmable read-only memory (EPROM). |

## 7.1.5 CC

Control channel

**Table 7-5** CC

| Alarm         | Severity | Description                                                                                                                                                                             |
|---------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LMP-HELLODOWN | MN/NSA   | The Link Management Protocol (LMP) Hello Down alarm means that Hello protocol, which monitors unified control plane (UCP) control channel status, is not available for link management. |
| LMP-NDFAIL    | MN/NSA   | The LMP Neighbor Detection Fail alarm means that neighbor detection within the UCP has failed.                                                                                          |

## 7.1.6 CKT

UCP circuit

**Table 7-6** CKT

| Alarm   | Severity | Description                                                                                                                                                                                     |
|---------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CKTDOWN | CR/SA    | The Unified Control Plane (UCP) Circuit Down alarm applies to logical circuits created within the UCP between devices and It occurs when the there is signaling failure across a UCP interface. |

## 7.1.7 DS1

A DS1 line on a DS1 or DS3XM card

**Table 7-7** DS1

| Alarm     | Severity | Description                                                                                                                                                                    |
|-----------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LOF       | MJ/SA    | The DS-1 LOF alarm indicates that the receiving ONS 15454 has lost frame delineation in an incoming DS-1 data stream.                                                          |
| LOS       | MJ/SA    | A LOS alarm for a DS-3 port or a DS-1 port occurs when the port on the card is in service but no signal is being received.                                                     |
| RCVR-MISS | MJ/SA    | A Facility Termination Equipment Receiver Missing alarm occurs when the facility termination equipment detects an incorrect amount of impedance on its backplane connector.    |
| TRMT      | MJ/SA    | A Missing Transmitter alarm occurs when there is a transmit failure on the DS-1 card because of an internal hardware failure. The card must be replaced.                       |
| TRMT-MISS | MJ/SA    | A Facility Termination Equipment Transmitter Missing alarm occurs when the facility termination equipment detects an incorrect amount of impedance on its backplane connector. |

## 7.1.8 DS3

A DS3 line on a DS3 or DS3XM card

**Table 7-8 DS3**

| Alarm | Severity | Description                                                                                                                       |
|-------|----------|-----------------------------------------------------------------------------------------------------------------------------------|
| LOF   | CR/SA    | The DS-3 LOF alarm indicates that the receiving ONS 15454/15327 has lost frame delineation in the incoming DS-3 data stream.      |
| LOS   | CR/SA    | A LOS alarm for either a DS-3 port or a DS-1 port occurs when the port on the card is in service but no signal is being received. |

## 7.1.9 DWDM Client

The low-speed port; such as a TXP or MXP, where the optical signal is dropped.

**Table 7-9 DWDM Client**

| Alarm        | Severity | Description                                                                                                                                                                                                            |
|--------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CARLOSS      | MJ/SA    | A Carrier Loss alarm on the transponder (TXP) or muxponder (MXP) card occurs when G.709 monitoring is turned off at the client port.                                                                                   |
| EOC          | MJ/NSA   | The SONET Data Communications Channel (DCC) Termination Failure alarm occurs when the ONS 15454 loses its data communications channel.                                                                                 |
| GE-OOSYNC    | CR/SA    | The Gigabit Ethernet Out of Sync alarm object applies to TXP cards when the Gigabit Ethernet signal is out of synchronization and is very similar to the SONET LOS alarm.                                              |
| HI-LASERBIAS | MN/NSA   | The Equipment High Transmit Laser Bias Current alarm is raised against the TXP and MXP card laser performance. The alarm indicates that the card laser has reached the maximum laser bias tolerance.                   |
| HI-RXPOWER   | MN/NSA   | The Equipment High Receive Power alarm is an indicator for TXP card and MXP card received optical signal power. This alarm occurs when the measured optical power of the received signal exceeds the threshold.        |
| HI-TXPOWER   | MN/NSA   | The Equipment High Transmit Power alarm is an indicator for TXP card and MXP card transmitted optical signal power. This alarm occurs when the measured optical power of the transmitted signal exceeds the threshold. |
| LOF          | CR/SA    | The LOF alarm occurs when a port on the reporting OC-N card has an LOF condition. LOF indicates that the receiving ONS 15454 has lost frame delineation in the incoming data.                                          |
| LO-RXPOWER   | MN/NSA   | The Equipment Low Receive Power alarm is an indicator for TXP card and MXP card received optical signal power. This alarm occurs when the measured optical power of the received signal falls under the threshold.     |
| LOS          | CR/SA    | The Loss of Signal for a DWDM client applies to TXP and MXP cards. It is raised when the card port is not receiving input.                                                                                             |

**Table 7-9 DWDM Client (continued)**

| Alarm          | Severity | Description                                                                                                                                                                                                                    |
|----------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LO-TXPOWER     | MN/NSA   | The Equipment Low Transmit Power alarm is an indicator for TXP card and MXP card transmitted optical signal power. This alarm occurs when the measured optical power of the transmitted signal falls under the threshold.      |
| PORT-CODE-MISM | CR/SA    | The Pluggable Port Security Code Mismatch alarm refers to ML-series Ethernet (traffic) cards (MXP and TXP) and occurs when the SFP connector that is plugged into the card is not supported by Cisco.                          |
| PORT-COMM-FAIL | CR/SA    | The Port Communication Failure alarm applies to TXP and MXP card SFPs and occurs when the card cannot communicate with the SFP.                                                                                                |
| PORT-MISMATCH  | CR/SA    | The Pluggable Port Mismatch alarm applies to ML-series Ethernet (traffic) card small form pluggable (SFP) connectors. The alarm indicates that the provisioned payload for the connector does not match the SFP configuration. |
| PORT-MISSING   | CR/SA    | The Pluggable Port Missing alarm applies to ML-series Ethernet (traffic) card small form pluggable (SFP) connectors. The alarm indicates that the connector is not plugged into the card port.                                 |
| SSM-FAIL       | MN/NSA   | The SSM Failed alarm occurs when the synchronization status messaging received by the ONS 15454 fails.                                                                                                                         |
| TIM            | CR/SA    | The Section Trace Identifier Mismatch (TIM) occurs when the expected J0 path trace string does not match the received string.                                                                                                  |
| TIM-MON        | MN/NSA   | The TIM Section Monitor Trace Identifier Mismatch alarm is similar to the TIM-P alarm, but it applies to TXP and MXP cards when they are configured in transparent mode.                                                       |

## 7.1.10 DWDM Trunk

The optical or DWDM card carrying the high-speed signal.

**Table 7-10 DWDM Trunk**

| Alarm         | Severity | Description                                                                                                                                                                                   |
|---------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CARLOSS       | MJ/SA    | A Carrier Loss alarm on the ML-series Ethernet (traffic) card occurs when the Ethernet port has lost its link and is not receiving a valid signal.                                            |
| DSP-COMM-FAIL | MJ/SA    | The DSP Communication Failure alarm indicates that there is a communications failure between an MXP or TXP card microprocessor and the on-board DSP chip that controls the trunk (DWDM) port. |

Table 7-10 DWDM Trunk (continued)

| Alarm        | Severity | Description                                                                                                                                                                                                                            |
|--------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DSP-FAIL     | MJ/SA    | The DSP Failure alarm indicates that a DSP-COMM-FAIL has persisted for an extended period on an MXP or TXP card and that the card is faulty.                                                                                           |
| EOC          | MJ/NSA   | The SONET Data Communications Channel (DCC) Termination Failure alarm occurs when the ONS 15454 loses its data communications channel.                                                                                                 |
| GCC-EOC      | MJ/NSA   | The GCC Embedded Operation Channel Failure alarm applies to the OTN communication channel for TXP and MXP cards. It is raised when the channel cannot operate.                                                                         |
| GE-OOSYNC    | CR/SA    | The Gigabit Ethernet Out of Sync alarm object applies to TXP cards when the Gigabit Ethernet signal is out of synchronization and is very similar to the SONET LOS alarm.                                                              |
| HI-LASERBIAS | MN/NSA   | The Equipment High Transmit Laser Bias Current alarm is raised against the TXP and MXP card laser performance. The alarm indicates that the card laser has reached the maximum laser bias tolerance.                                   |
| HI-RXPOWER   | MN/NSA   | The Equipment High Receive Power alarm is an indicator of the optical signal power that is transmitted to the TXP or MXP card.                                                                                                         |
| HI-TXPOWER   | MN/NSA   | The Equipment High Transmit Power alarm is an indicator for TXP card and MXP card transmitted optical signal power. This alarm occurs when the measured optical power of the transmitted signal exceeds the threshold.                 |
| LOC          | CR/SA    | Loss of Fiber Continuity - Mux 32 occurs when G709 is turned on for trunk ports.                                                                                                                                                       |
| LOF          | CR/SA    | The Loss of Frame for the DWDM trunk applies to the trunk optical or electrical signal that is carried to TXP and MXP cards.                                                                                                           |
| LOM          | CR/SA    | The optical transport unit (OTU) Loss of Multiframe alarm applies to MXP and TXP cards when the Multi Frame Alignment Signal (MFAS) overhead field is errored for more than five frames and persists for more than three milliseconds. |
| LO-RXPOWER   | MN/NSA   | The Equipment Low Receive Power alarm is an indicator for TXP card and MXP card received optical signal power. This alarm occurs when the measured optical power of the received signal falls under the threshold.                     |
| LOS          | CR/SA    | The Loss of Signal for the DWDM trunk applies to the trunk optical or electrical signal that is carried to TXP and MXP cards.                                                                                                          |
| LO-TXPOWER   | MN/NSA   | The Equipment Low Transmit Power alarm is an indicator for TXP card and MXP card transmitted optical signal power. This alarm occurs when the measured optical power of the transmitted signal falls under the threshold.              |

**Table 7-10 DWDM Trunk (continued)**

| Alarm        | Severity | Description                                                                                                                                                                                                                                                                                                                                                                   |
|--------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OTUK-LOF     | CR/SA    | The OTUK LOF alarm applies to TXP cards and MXP cards when G.709 monitoring is enabled for the cards. The alarm indicates that the card has lost frame delineation on the input data. Loss of frame occurs when the optical transport unit overhead frame alignment (FAS) area is errored for more than five frames and that the error persists more than three milliseconds. |
| PTIM         | MN/NSA   | The Payload Type Identifier Mismatch alarm occurs when there is a mismatch between the way the G.709 option is configured on MXP cards and TXP card at each end of the optical span.                                                                                                                                                                                          |
| SSM-FAIL     | MN/NSA   | The SSM Failed alarm occurs when the synchronization status messaging received by the ONS 15454 fails.                                                                                                                                                                                                                                                                        |
| TIM          | CR/SA    | The Section Trace Identifier Mismatch (TIM) occurs when the expected J0 section trace string does not match the received section trace string.                                                                                                                                                                                                                                |
| TIM-MON      | MN/NSA   | The TIM Section Monitor Trace Identifier Mismatch alarm is similar to the TIM-P alarm, but it applies to TXP and MXP cards when they are configured in transparent mode.                                                                                                                                                                                                      |
| WVL-MISMATCH | MJ/SA    | The Equipment Wavelength Mismatch alarm applies to the TXP and MXP cards. It occurs when you provision the card in CTC with a wavelength that the card does not support.                                                                                                                                                                                                      |

## 7.1.11 ECN

An EC-N line on an EC-N card

**Table 7-11 ECN**

| Alarm | Severity | Description                                                                                                 |
|-------|----------|-------------------------------------------------------------------------------------------------------------|
| LOF   | CR/SA    | The EC-N LOF alarm occurs when a port on the reporting OC-N card has an LOF condition.                      |
| LOS   | CR/SA    | LOS on an EC-N port occurs when a SONET receiver detects an all-zero pattern for 10 microseconds or longer. |

## 7.1.12 ENV

An environmental alarm port

**Table 7-12 ENV**

| Alarm | Severity | Description                                                                                                                                         |
|-------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| EXT   | MN/NSA   | A Failure Detected External to the NE alarm occurs because an environmental alarm is present, for example, a door is open or flooding has occurred. |

## 7.1.13 EQPT

A card in any of the card slots. This object is used for alarms that refer to the card itself and all other objects on the card including ports, lines, STS and VT.

**Table 7-13** EQPT

| Alarm          | Severity | Description                                                                                                                                                                                                                       |
|----------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AUTORESET      | MN/NSA   | The Automatic System Reset alarm occurs when you change an IP address or perform any other operation that causes an automatic card-level reboot.                                                                                  |
| BKUPMEMP       | CR/NSA   | A problem with the TCC2/XTC card's flash memory.                                                                                                                                                                                  |
| CARLOSS        | MJ/SA    | A Carrier Loss on the LAN Equipment alarm occurs when the ONS 15454/15327 and the workstation hosting CTC do not have a TCP/IP connection.                                                                                        |
| COMIOXC        | CR/SA    | The I/O Slot To Cross-Connect Communication Failure alarm is caused by the cross-connect card. It occurs when there is a communication failure for a particular I/O slot.                                                         |
| CONTBUS-A      | MJ/NSA   | The TCC2/XTC card in Slot 7/Slot 5 has lost communication with a traffic card.                                                                                                                                                    |
| CONTBUS-A-18   | MJ/NSA   | The main processor on the TCC2/XTC card in Slot 7/Slot 5 has lost communication with the coprocessor on the second TCC2/XTC card in Slot 11/Slot 6.                                                                               |
| CONTBUS-B      | MJ/NSA   | The TCC2/XTC card in Slot 11/Slot 6 has lost communication with a traffic card.                                                                                                                                                   |
| CONTBUS-B-18   | MJ/NSA   | The main processor on the TCC2/XTC card in Slot 11/Slot 6 has lost communication with the coprocessor on the TCC2/XTC card in Slot 7/Slot 5.                                                                                      |
| CTNEQPT-PBPROT | CR/SA    | A failure of the main payload between the protect cross-connect (XC/XCVT/XC10G) card in Slot 10, or the protect XTC card, and the reporting traffic card.                                                                         |
| CTNEQPT-PBWORK | CR/SA    | A failure of the main payload bus between the active cross-connect (XC/XCVT/XC10G) card in Slot 8, or the active XTC card, and the reporting traffic card.                                                                        |
| EQPT           | CR/SA    | A hardware failure occurred on the reporting card.                                                                                                                                                                                |
| ERROR-CONFIG   | MN/NSA   | The Error in Startup Configuration alarm applies to the ML-series Ethernet cards. These cards process startup configuration files line by line. If one or more lines cannot be executed, the error causes the ERROR-CONFIG alarm. |
| EXCCOL         | MN/NSA   | There are too many collisions occurring between data packets on the network management LAN, and communications between the ONS 15454/15327 and CTC may be affected.                                                               |
| HITEMP         | MN/NSA   | The High Temperature alarm occurs when the temperature of the ONS 15454 is above 122° F (50° C).                                                                                                                                  |
| IMPROPRMVL     | CR/SA    | A card was physically removed from its slot before the card was deleted from CTC.                                                                                                                                                 |

**Table 7-13** EQPT (continued)

| Alarm               | Severity | Description                                                                                                                                                                                                                                                                          |
|---------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MEA                 | CR/SA    | The MEA alarm for equipment is reported against a card slot when the physical card inserted into a slot does not match the card type that is provisioned for that slot in CTC.                                                                                                       |
| MEM-GONE            | MJ/NSA   | Data generated by software operations exceeds the memory capacity of the TCC2/XTC card.                                                                                                                                                                                              |
| MEM-LOW             | MN/NSA   | Data generated by software operations is close to exceeding the memory capacity of the TCC2/XTC card.                                                                                                                                                                                |
| PEER-<br>NORESPONSE | MJ/NSA   | The switch agent raises a Peer Card Not Responding alarm if either traffic card in a protection group does not receive a response to the peer status request message                                                                                                                 |
| PROTNA              | MN/NSA   | The Protection Unit Not Available is raised by an out-of-service protection when a TCC2/XTC or cross-connect card or port that is provisioned as part of a protection group is not available.                                                                                        |
| PWR-REDUN           | MN/NSA   | The Redundant Power Capability Lost alarm applies to cards (such as the TCC2 and newer optical cards) that have two built-in fuses. The alarm indicates that one of the fuses has blown, and must be serviced.                                                                       |
| SFTWDOWN            | MN/NSA   | A Software Download in progress alarm occurs when the TCC2/XTC is downloading or transferring software.                                                                                                                                                                              |
| SWMTXMOD            | CR/SA    | The Switching Matrix Module Failure alarm occurs on the cross-connect card or a traffic card. If the alarm reports against a traffic card, it means that the logic component on the cross-connect card is out of frame (OOF) with the logic component on the reporting traffic card. |

## 7.1.14 ETHER

Ethernet, such as for straight-through (CAT 5) LAN cables.

**Table 7-14** ETHER

| Alarm   | Severity | Description                                                                                                                                                                        |
|---------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CARLOSS | MJ/SA    | A Carrier Loss on the LAN E-Series Ethernet (traffic) Card alarm is the data equivalent of an LOS (OC-N). The Ethernet card has lost its link and is not receiving a valid signal. |

## 7.1.15 EXTSYNCH

BITS outgoing references (SYNC-BITS1, SYNC-BITS2)

**Table 7-15** EXTSYNCH

| Alarm   | Severity | Description                                        |
|---------|----------|----------------------------------------------------|
| SYNCPRI | MN/NSA   | A loss of the primary timing source (reference 1). |



**Table 7-15** *EXTSYNCH (continued)*

|           |        |                                                      |
|-----------|--------|------------------------------------------------------|
| SYNCSEC   | MN/NSA | A loss of the secondary timing source (reference 2). |
| SYNCTHIRD | MN/NSA | A loss of the third timing source (reference 3).     |

## 7.1.16 FAN

Fan-tray assembly

**Table 7-16** *FAN*

| Alarm      | Severity | Description                                                                                                                                                                                                                                                                                                                          |
|------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EQPT-MISS  | CR/SA    | Indicates the replaceable fan-tray assembly unit is missing or not fully inserted.                                                                                                                                                                                                                                                   |
| FAN        | CR/SA    | A problem with the fan-tray assembly.                                                                                                                                                                                                                                                                                                |
| FANDEGRADE | MJ/NSA   | The Partial Fan Failure alarm is raised if fan speed for one of the fans in the fan-tray assembly falls below 500 RPM when read by a tachometry counter.                                                                                                                                                                             |
| MEA        | CR/SA    | The MEA alarm is reported against the fan tray when a newer fan-tray assembly (15454-FTA3) with a 5 Amp fuse is used with an older shelf assembly or when an older fan tray with a 2 Amp fuse is used with a newer 10 Gbps compatible or ANSI shelf assembly (15454-SA-ANSI) that contains cards introduced in Release 3.1 or later. |
| MFGMEM     | CR/SA    | The manufacturing data memory failure alarm occurs if the ONS 15454 cannot access the data in the erasable programmable read-only memory (EEPROM).                                                                                                                                                                                   |

## 7.1.17 FCMR

Fiber channel

**Table 7-17** *FCMR*

| Alarm         | Severity | Description                                                                                                                                                                                               |
|---------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| INC-SIGLOSS   | MJ/NSA   | The Incoming Signal Loss on the Fibre Channel Interface alarm is raised when there is a signal loss at the local Fibre Channel port.                                                                      |
| INC-SYNCCLOSS | MJ/NSA   | The Incoming Synchronization Loss on the Fibre Channel Interface alarm is raised when there is a synchronization error at the local Fibre Channel port.                                                   |
| TPTFAIL       | MJ/SA    | The Transport Fail alarm is raised against a local Fiber Channel port when the port receives another SONET error such as AIS-P, LOP-P, UNEQ-P, PLM-P, TIM-P, LOM (for VCat only), or SQM (for VCat only). |

## 7.1.18 FUDC

SONET byte user data channel

**Table 7-18** FUDC

| Alarm | Severity | Description                                                                                                                        |
|-------|----------|------------------------------------------------------------------------------------------------------------------------------------|
| LOS   | MN/NSA   | The LOS (FUDC) alarm is raised if there is a UDC circuit created on the AIC-I DCC port but the port is not receiving signal input. |

## 7.1.19 HDGE (G1000)

High Density Gigabit Ethernet. Applies to G1000-4 cards.

**Table 7-19** HDGE (G1000)

| Alarm     | Severity | Description                                                                                                                                                                                                                                                          |
|-----------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CARLOSS   | MJ/SA    | A carrier loss on the LAN G-series card is the data equivalent of an LOS (OC-N) alarm. The Ethernet card has lost its link and is not receiving a valid signal.                                                                                                      |
| TPTFAIL   | MJ/SA    | The Transport (TPT) Layer Failure alarm for the G-series Ethernet (traffic) cards indicates a break in the end-to-end Ethernet link integrity feature of the G1000-4 cards. TPTFAIL indicates a far-end condition and not a problem with the port reporting TPTFAIL. |
| TUNDERRUN | MJ/SA    | The Ethernet Transmit Underrun alarm is raised by a G1000-4 card when there is a major hardware fault on a port                                                                                                                                                      |

## 7.1.20 L2SC (ML-Series)

Layer 2 (and Layer 3 for ML-series) Switching Device

**Table 7-20** L2SC

| Alarm   | Severity | Description                                                                                                                                                                                                                                  |
|---------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CARLOSS | MJ/SA    | A Carrier Loss alarm on the ML-series Ethernet (traffic) card is the data equivalent of the LOS (OCN) alarm. The Ethernet port has lost its link and is not receiving a valid signal.                                                        |
| TPTFAIL | MJ/SA    | The TPT Layer Failure alarm for the ML-series Ethernet (traffic) cards indicates a break in the end-to-end POS link integrity feature of the ML-series POS cards. TPTFAIL indicates a far-end condition or misconfiguration of the POS port. |

## 7.1.21 NBR

Neighbor

**Table 7-21 NBR**

| Alarm          | Severity | Description                                                                                                                                                                    |
|----------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RSVP-HELLODOWN | MN/NSA   | The Resource Reservation Protocol (RSVP) Hello Down alarm occurs when the Hello protocol, which monitors UCP control channel status, is not available for reserving resources. |

## 7.1.22 NE

The entire network element

**Table 7-22 NE**

| Alarm        | Severity | Description                                                                                                                                                                                                                  |
|--------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| APC-DISABLED | MJ/NSA   | The Automatic Power Control (APC) Disabled occurs when the information related to the number of channels is not reliable.                                                                                                    |
| APC-FAIL     | MJ/NSA   | The APC Failure alarm occurs when APC has not been able to create a setpoint on a node because it has consumed all allocated power margins.                                                                                  |
| DATAFLT      | MN/NSA   | The TCC2/XTC exceeds its flash memory.                                                                                                                                                                                       |
| DBOSYNC      | MJ/NSA   | The standby TCC2/XTC “To be Active” database does not synchronize with the “Active” database on the active TCC2/XTC.                                                                                                         |
| DUP-IDADDR   | MJ/NSA   | The Duplicate IP Address alarm indicates that the alarmed node’s IP address is already in use within the same DCC area.                                                                                                      |
| DUP-NODENAME | MJ/NSA   | The Duplicate Node Name alarm indicates that the alarmed node’s alphanumeric name is already being used within the same DCC area.                                                                                            |
| HITEMP       | CR/SA    | The High Temperature alarm occurs when the temperature of the ONS 15454/15327 is above 122° F (50° C).                                                                                                                       |
| OPTNTWMIS    | MJ/NSA   | The Optical Network Type Mismatch alarm is raised when DWDM nodes are not configured for the same type of network, either MetroCore and MetroAccess.                                                                         |
| SNTP-HOST    | MN/NSA   | The SNTP (Simple Network Timing Protocol) Host Failure alarm indicates that an ONS node serving as an IP proxy for the other ONS nodes in the ring is not forwarding SNTP information to the other ONS nodes in the network. |
| SYSBOOT      | MJ/SA    | New software is booting on the TCC2/XTC card.                                                                                                                                                                                |

## 7.1.23 NESYNCH

Represents the timing status of the NE

**Table 7-23 NESYNCH**

| Alarm      | Severity | Description                                                                                     |
|------------|----------|-------------------------------------------------------------------------------------------------|
| FSTSYNC    | MN/NSA   | A Fast Start Synchronization alarm occurs when the ONS node is choosing a new timing reference. |
| HLDOVRSYNC | MJ/SA    | A loss of primary or secondary timing reference.                                                |
| SYNCPRI    | MN/NSA   | A loss of the primary timing source (reference 1).                                              |
| SYNCSEC    | MN/NSA   | A loss of the secondary timing source (reference 2).                                            |
| SYNCTHIRD  | MN/NSA   | A loss of the third timing source (reference 3).                                                |

## 7.1.24 OCN

An OC-N line on an OC-N card

**Table 7-24 OCN**

| Alarm        | Severity | Description                                                                                                                                                                                                |
|--------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| APSB         | MN/NSA   | The line terminating equipment detects protection switching byte failure in the incoming automatic protection switching (APS) signal.                                                                      |
| APSCDFLTK    | MN/NSA   | A BLSR is not properly configured.                                                                                                                                                                         |
| APSC-IMP     | MN/NSA   | Invalid K bytes.                                                                                                                                                                                           |
| APSCINCON    | MN/SA    | The SONET overhead contains K1/K2 APS bytes that notify receiving equipment, such as the ONS 15454/ONS 15327, to switch the SONET signal from a working to a protect path.                                 |
| APSCM        | MJ/SA    | The ONS 15454/ONS 15327 expects a working channel but receives a protection channel.                                                                                                                       |
| APSCNMIS     | MJ/SA    | The source node ID contained in the K2 byte of the APS channel being received is not present in the ring map.                                                                                              |
| APSM         | MN/NSA   | There is a mismatch of the protection switching schemes at the two ends of the span.                                                                                                                       |
| AUTOLSROFF   | CR/SA    | The OC-192 card temperature exceeds 194° F (90 ° C). (ONS 15454)                                                                                                                                           |
| BLSROSYNC    | MJ/SA    | The BLSR Out Of Synchronization alarm is caused when you attempt to add or delete a circuit and a node on a working ring loses its DCC connection because all transmit and receive fiber has been removed. |
| EOC          | MJ/NSA   | The SONET Data Communications Channel (DCC) Termination Failure alarm occurs when the ONS 15454/15327 loses its data communications channel.                                                               |
| EOC-L        | MJ/NSA   | The SONET Data Communications Channel (DCC) Termination Failure alarm occurs when the ONS 15454/15327 loses its data communications channel.                                                               |
| E-W-MISMATCH | MJ/SA    | Nodes in a ring have an east slot/port misconnected to another east slot/port or a west slot/port misconnected to another west slot/port.                                                                  |

**Table 7-24 OCN (continued)**

| Alarm                     | Severity | Description                                                                                                                                                                                                   |
|---------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EXTRA-TRAF-PREEMPT        | MJ/SA    | An Extra Traffic Preempted alarm occurs on OC-N cards in two-fiber and four-fiber BLSRs because low-priority traffic directed to the protect system has been preempted by a working system protection switch. |
| FEPRLF                    | MN/NSA   | an APS switching channel SF occurs on the protect card coming into the node.                                                                                                                                  |
| KBYTE-APS-CHANNEL-FAILURE | MN/NSA   | The APS Channel Failure alarm is raised when there a span provisioned for different APS channels on each side.                                                                                                |
| LASEREOL                  | MN/NSA   | The Laser Approaching End of Life alarm applies to TXP and MXP cards and occurs when the laser in the card will need to be replaced.                                                                          |
| LOF                       | CR/SA    | A port on the reporting OC-N card or TXP card has an LOF condition.                                                                                                                                           |
| LOS                       | CR/SA    | A SONET receiver detects an all-zero pattern for 10 microseconds or longer.                                                                                                                                   |
| SSM-FAIL                  | MN/NSA   | Synchronization status messaging received by the ONS 15454/ONS 15327 fails.                                                                                                                                   |

## 7.1.25 OSCRING

Optical service channel ring

**Table 7-25 OSCRING**

| Alarm       | Severity | Description                                                                                                                                                 |
|-------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RING-ID-MIS | MJ/NSA   | (Applicable to DWDM nodes only) The Ring ID Mismatch refers to the ring OSC in APC and occurs when a ring ID does not match other detectable node ring IDs. |

## 7.1.26 PWR

Power

**Table 7-26 PWR**

| Alarm    | Severity | Description                                                                                                                                          |
|----------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| BAT-FAIL | MJ/SA    | The Battery Fail alarm occurs when one of the two power supplies (A or B) is not detected.                                                           |
| EHIBATVG | MJ/SA    | The Extreme High Voltage Battery alarm occurs in a -48 Vdc environment when a battery lead's input voltage exceeds the extreme high power threshold. |

**Table 7-26 PWR (continued)**

|          |       |                                                                                                                                                                                                                |
|----------|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ELWBATVG | MJ/SA | The Extreme Low Voltage Battery alarm occurs in a –48 Vdc environment when the voltage on the battery feeds is extremely low or has been lost, and power redundancy is no longer guaranteed.                   |
| HIBATVG  | MJ/SA | The High Voltage Battery alarm occurs in a –48 Vdc environment when a battery lead's input voltage exceeds the high power threshold.                                                                           |
| LWBATVG  | MJ/SA | The Low Voltage Battery alarm occurs in a –48 Vdc environment when a battery lead's input voltage falls below the low power threshold. This threshold, with a default value of –44 Vdc, is user-provisionable. |

## 7.1.27 STSMON

STS alarm detection at the monitor point (upstream from the cross-connect)

**Table 7-27 STSMON**

| Alarm  | Severity | Description                                                                                                  |
|--------|----------|--------------------------------------------------------------------------------------------------------------|
| LOP-P  | CR/SA    | A loss of pointer (LOP) condition at the path level.                                                         |
| PLM-P  | CR/SA    | A signal label mismatch failure (SLMF).                                                                      |
| TIM-P  | MN/NSA   | The TIM Path alarm occurs when the expected path trace string does not match the received path trace string. |
| UNEQ-P | CR/SA    | An SLMF UNEQ Path alarm occurs when the path does not have a valid sender.                                   |

## 7.1.28 STSTERM

STS alarm detection at termination (downstream from the cross-connect)

**Table 7-28 STSTERM**

| Alarm | Severity | Description                                                                                                                                                                                                                                                   |
|-------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LOM   | CR/SA    | The optical transport unit (OTU) Loss of Multiframe is a VCAT member alarm which applies to MXP and TXP cards when the Multi Frame Alignment Signal (MFAS) overhead field is errored for more than five frames and persists for more than three milliseconds. |
| LOP-P | CR/SA    | A loss of pointer (LOP) condition at the path level.                                                                                                                                                                                                          |
| PLM-P | CR/SA    | A signal label mismatch failure (SLMF).                                                                                                                                                                                                                       |
| SQM   | CR/SA    | The Sequence Mismatch alarm is a VCAT member alarm that occurs when the expected sequence numbers of VCAT members do not match the received sequence numbers.                                                                                                 |

**Table 7-28 STSTERM (continued)**

|        |       |                                                                                                              |
|--------|-------|--------------------------------------------------------------------------------------------------------------|
| TIM-P  | CR/SA | The TIM Path alarm occurs when the expected path trace string does not match the received path trace string. |
| UNEQ-P | CR/SA | An SLMF UNEQ Path alarm occurs when the path does not have a valid sender.                                   |

## 7.1.29 VCATGROUP

VT concatenation

**Table 7-29 VCATGROUP**

| Alarm | Severity | Description                                                                                                                                                                                                                                                                                                         |
|-------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LOA   | CR/SA    | The Loss of Alignment on a VCG is a VCAT member alarm that occurs when members of a VCG travel over different paths in the network (due to initial operator provisioning or to protection or restoration events) and the differential delays between the paths cannot be recovered by terminating hardware buffers. |

## 7.1.30 VT-MON

VT1 alarm detection at the monitor point (upstream from the cross-connect)

**Table 7-30 VT-MON**

| Alarm       | Severity | Description                                                                                                                                    |
|-------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------|
| AUTOSW-LOP  | MN/SA    | The AUTOSW-LOP alarm indicates that automatic path protection switching occurred because of an LOP-V alarm.                                    |
| AUTOSW-UNEQ | MN/SA    | AUTOSW-UNEQ (VTMON) indicates that an UNEQ-V caused automatic path protection switching to occur.                                              |
| LOP-V       | MJ/SA    | The LOP VT alarm indicates a loss of pointer at the VT level.                                                                                  |
| UNEQ-V      | MJ/SA    | An SLMF UNEQ VT alarm indicates that the node is receiving SONET path overhead with bits 5, 6, and 7 of the V5 overhead byte all set to zeros. |

## 7.1.31 VT-TERM

VT1 alarm detection at termination (downstream from cross-connect)

**Table 7-31 VT-TERM**

| Alarm  | Severity | Description                                                                                                                                                                                                                                                   |
|--------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LOM    | CR/SA    | The optical transport unit (OTU) Loss of Multiframe is a VCAT member alarm which applies to MXP and TXP cards when the Multi Frame Alignment Signal (MFAS) overhead field is errored for more than five frames and persists for more than three milliseconds. |
| LOP-V  | MJ/SA    | The LOP VT alarm indicates a loss of pointer at the VT level.                                                                                                                                                                                                 |
| PLM-V  | MJ/SA    | A Payload Label Mismatch VT Layer alarm indicates that the content of the V5 byte in the SONET overhead is inconsistent or invalid.                                                                                                                           |
| SQM    | MJ/SA    | The Sequence Mismatch alarm is a VCAT member alarm that occurs when the expected sequence numbers of VCAT members do not match the received sequence numbers.                                                                                                 |
| UNEQ-V | MJ/SA    | An SLMF UNEQ VT alarm indicates that the node is receiving SONET path overhead with bits 5, 6, and 7 of the V5 overhead byte all set to zeroes.                                                                                                               |

## 7.2 Conditions

The term “Condition” refers to any problem detected on an ONS 15454 or ONS 15327 shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, Not-Alerted conditions (NA), and Not-Reported (NR) conditions. A snapshot of all current raised conditions on a node, whether they are reported or not, can be retrieved using the CTC Conditions window or using the RTRV-COND commands. You can see the actual reporting messages for alarms and NA conditions in the CTC History tab. [Table 7-32](#) lists the conditions.

### 7.2.1 Conditions

**Table 7-32 Conditions**

| Condition    | Description                      |
|--------------|----------------------------------|
| AIS          | Alarm Indication Signal          |
| AIS-L        | Alarm Indication Signal - Line   |
| AIS-P        | Alarm Indication Signal - Path   |
| AIS-V        | Alarm Indication Signal - VT     |
| ALS          | Automatic Laser Shutdown         |
| APC-DISABLED | Automatic Power Control Disabled |
| APC-FAIL     | Automatic Power Control Failure  |
| APSB         | Byte Failure                     |
| APSC-IMP     | Improper APS Code                |



**Table 7-32 Conditions (continued)**

| <b>Condition</b> | <b>Description</b>                                       |
|------------------|----------------------------------------------------------|
| APSCDFLTK        | Default K Byte                                           |
| APSCINCON        | Inconsistent APS Code                                    |
| APSCM            | Protection Switching Channel Match Failure               |
| APSCNMIS         | Node Id Mismatch                                         |
| APSIMP           | APS Invalid Mode                                         |
| APSM             | Automatic Protection Switch Mode Mismatch                |
| AS-CMD           | Alarms Suppressed By User Command                        |
| AS-MT            | Alarms Suppressed For Maintenance                        |
| AU-LOF           | LOF - Administration Unit - Loss of Multi Frame          |
| AUD-LOG-LOSS     | Audit Log 100 Percent Full - Oldest records will be lost |
| AUD-LOG-LOW      | Audit Log 80 Percent Full                                |
| AUTOLSROFF       | Automatic Laser Shutoff Due To High Temperature          |
| AUTORESET        | Automatic System Reset                                   |
| AUTOSW-AIS       | Automatic path protection Switch Caused By AIS           |
| AUTOSW-LOP       | Automatic path protection Switch Caused By LOP           |
| AUTOSW-PDI       | Automatic path protection Switch Caused By PDI           |
| AUTOSW-SDBER     | Automatic path protection Switch Caused By SDBER         |
| AUTOSW-SFBER     | Automatic path protection Switch Caused By SFBER         |
| AUTOSW-UNEQ      | Automatic path protection Switch Caused By UNEQ          |
| BAT-FAIL         | Battery Failure                                          |
| BKUPMEMP         | Primary Non-Volatile Backup Memory Failure               |
| BLSROSYNC        | BLSR Out Of Sync                                         |
| CARLOSS          | Carrier Loss On The LAN                                  |
| CKTDOWN          | Signaling Unable to setup circuit                        |
| CLDRESTART       | Cold Restart                                             |
| COMIOXC          | IO Slot To XCON Communication Failure                    |
| COMM-FAIL        | Plug-in Module Communication Failure                     |
| CONTBUS-A-18     | TCC A To DCC A Processor Communication Failure           |
| CONTBUS-B-18     | TCC B To DCC B Processor Communication Failure           |
| CONTBUS_A        | Controller A To Shelf Slot Communication Failure         |
| CONTBUS_B        | Controller B To Shelf Slot Communication Failure         |

Table 7-32 Conditions (continued)

| Condition          | Description                                                |
|--------------------|------------------------------------------------------------|
| CTNEQPT-MISMATCH   | Connection Equipment Mismatch                              |
| CTNEQPT-PBPROT     | Interconnection Equipment Failure - Protect XC Payload Bus |
| CTNEQPT-PBWORK     | Interconnection Equipment Failure - Working XC Payload Bus |
| DATAFLT            | Software Fault - Data Integrity Fault                      |
| DBOSYNC            | Standby Database Out of Sync                               |
| DS3-MISM           | DS3 Frame Format Mismatch                                  |
| DSP-COMM-FAIL      | DSP Communication Failure                                  |
| DSP-FAIL           | DSP Failure                                                |
| DUP-IPADDR         | IP address already in use within the same DCC Area         |
| DUP-NODENAME       | Node name already in use within the same DCC Area          |
| E-W-MISMATCH       | Both Ends Of Fiber Provisioned As East Or Both As West     |
| EHIBATVG           | Extreme High Volt                                          |
| ELWBATVG           | Extreme Low Volt                                           |
| EOC                | SDCC Termination Failure                                   |
| EOC-L              | Line DCC Termination Failure                               |
| EQPT               | Equipment Failure                                          |
| EQPT-MISS          | Replaceable Equipment/Unit is Missing                      |
| ERFI-P-CONN        | Enhanced Remote Failure Indication - Path - Connectivity   |
| ERFI-P-PAYLD       | Enhanced Remote Failure Indication - Path - Payload        |
| ERFI-P-SRVR        | Enhanced Remote Failure Indication - Path - Server         |
| ERROR-CONFIG       | Error in Startup Config                                    |
| ETH-LINKLOSS       | Rear Panel Ethernet Link Removed                           |
| EXCCOL             | Excess Collisions On The LAN                               |
| EXERCISE-RING-FAIL | Exercise Request on Ring Failed                            |
| EXERCISE-RING-REQ  | Exercise Request on Ring                                   |
| EXERCISE-SPAN-FAIL | Exercise Request on Span Failed                            |
| EXERCISE-SPAN-REQ  | Exercise Request on Span                                   |
| EXT                | Failure Detected External To The NE                        |
| EXTRA-TRAF-PREEMPT | Extra Traffic Preempted                                    |
| FAILTOSW           | Failure To Switch To Protection                            |

Table 7-32 Conditions (continued)

| Condition           | Description                                                    |
|---------------------|----------------------------------------------------------------|
| FAILTOSW-PATH       | Failure To Switch To Protection - Path                         |
| FAILTOSWR           | Failure To Switch To Protection - Ring                         |
| FAILTOSWS           | Failure To Switch To Protection - Span                         |
| FAN                 | Fan Failure                                                    |
| FANDEGRADE          | Partial Fan Failure                                            |
| FE-AIS              | Far End AIS                                                    |
| FE-DS1-MULTLOS      | Far End Multiple DS1 LOS Detected On DS3                       |
| FE-DS1-NSA          | Far End DS1 Equipment Failure - Non Service Affecting          |
| FE-DS1-SA           | Far End DS1 Equipment Failure - Service Affecting              |
| FE-DS1-SNGLLOS      | Far End Single DS1 LOS                                         |
| FE-DS3-NSA          | Far End DS3 Equipment Failure - Non Service Affecting          |
| FE-DS3-SA           | Far End DS3 Equipment Failure - Service Affecting              |
| FE-EQPT-NSA         | Far End Common Equipment Failure - Non Service Affecting       |
| FE-EXERCISING-RING  | Far End Exercising Ring                                        |
| FE-EXERCISING-SPAN  | Far End Exercising Span                                        |
| FE-FRCDWKSWPR-RING  | Far End Working Facility Forced To Switch To Protection - Ring |
| FE-FRCDWKSWPR-SPAN  | Far End Working Facility Forced To Switch To Protection - Span |
| FE-IDLE             | Far End IDLE                                                   |
| FE-LOCKOUTOFPR-SPAN | Far End Lockout Of Protection - Span                           |
| FE-LOF              | Far End LOF                                                    |
| FE-LOS              | Far End LOS                                                    |
| FE-MANWKSWPR-RING   | Far End Manual Switch Of Working Facility To Protection - Ring |
| FE-MANWKSWPR-SPAN   | Far End Manual Switch Of Working Facility To Protection - Span |
| FEC-MISM            | FEC Mismatch                                                   |
| FEPRLF              | Far End Protection Line Failure                                |
| FORCED-REQ          | Forced Switch Request                                          |
| FORCED-REQ-RING     | Forced Switch Request On Ring                                  |
| FORCED-REQ-SPAN     | Forced Switch Request On Span                                  |

Table 7-32 Conditions (continued)

| Condition                 | Description                                                 |
|---------------------------|-------------------------------------------------------------|
| FRCDSWTOINT               | Forced Switch To Internal Clock                             |
| FRCDSWTOPRI               | Forced Switch To Primary Reference                          |
| FRCDSWTOSEC               | Forced Switch To Second Reference                           |
| FRCDSWTOTHIRD             | Forced Switch To Third Reference                            |
| FRNGSYNC                  | Free Running Synchronization Mode                           |
| FSTSYNC                   | Fast Start Synchronization Mode                             |
| FULLPASSTHR-BI            | Bidirectional Full Pass Through Is Active                   |
| GCC-EOC                   | GCC Termination Failure                                     |
| GE-OOSYNC                 | GigaBit Ethernet Out of Sync                                |
| HI-LASERBIAS              | Equipment High Laser Bias                                   |
| HI-RXPOWER                | Equipment High Rx power                                     |
| HI-TXPOWER                | Equipment High Tx power                                     |
| HIBATVG                   | High Volt                                                   |
| HITEMP                    | High Temperature                                            |
| HLDOVRSYNC                | Holdover Synchronization Mode                               |
| I-HITEMP                  | Industrial High Temperature                                 |
| IMPROPRMVL                | Improper Removal                                            |
| INC-GFP-OUTOFFRAME        | Out Of Frame Detected by GFP Receiver                       |
| INC-GFP-SIGLOSS           | Client Signal Loss Frames Detected by GFP Receiver          |
| INC-ISD                   | DS3 Idle Condition                                          |
| INC-SIGLOSS               | Incoming Signal Loss on Fibre Channel Interface             |
| INC-SYNCLLOSS             | Incoming Synchronization Loss on Fibre Channel Interface    |
| INC_GFP_SYNCLOSS          | Client Synchronization Loss Frames Detected by GFP Receiver |
| INHSWPR                   | Inhibit Switch To Protect Request On Equipment              |
| INHSWWKG                  | Inhibit Switch To Working Request On Equipment              |
| INTRUSION-PSWD            | Security Intrusion Attempt Detected - See Audit Log         |
| INVMACADR                 | Invalid MAC Address                                         |
| IOSCFGCOPY                | Ios Config Copy In Progress                                 |
| KB-PASSTHR                | K Bytes Pass Through Is Active                              |
| KBYTE-APS-CHANNEL-FAILURE | Kbyte Channel Failure                                       |

**Table 7-32 Conditions (continued)**

| <b>Condition</b> | <b>Description</b>                              |
|------------------|-------------------------------------------------|
| LAN-POL-REV      | Lan Connection Polarity Reversed                |
| LASEREOL         | Laser Approaching End of Life                   |
| LKOUTPR-S        | Lockout Of Protection - Span                    |
| LMP-HELLODOWN    | LMP Hello FSM to Control Channel down           |
| LMP-NDFAIL       | LMP Neighbor Discovery has failed               |
| LO-RXPOWER       | Equipment Low Rx power                          |
| LO-TXPOWER       | Equipment Low Tx power                          |
| LOA              | Loss of Alignment                               |
| LOC              | Loss of Channel                                 |
| LOCKOUT-REQ      | Lockout Switch Request On Facility or Equipment |
| LOCKOUT-REQ-RING | Lockout Switch Request On Ring                  |
| LOF              | Loss Of Frame                                   |
| LOM              | Loss of Multi-Frame                             |
| LOP-P            | Loss Of Pointer - Path                          |
| LOP-V            | Loss Of Pointer - VT                            |
| LOS              | Loss Of Signal                                  |
| LPBKCRS          | Cross-connect Loopback                          |
| LPBKDS1FEAC      | DS1 Loopback Due To FEAC Command                |
| LPBKDS1FEAC-CMD  | DS1 Loopback Command Sent To Far End            |
| LPBKDS3FEAC      | DS3 Loopback Due To FEAC Command                |
| LPBKDS3FEAC-CMD  | DS3 Loopback Command Sent To Far End            |
| LPBKFACILITY     | Facility Loopback                               |
| LPBKTERMINAL     | Terminal Loopback                               |
| LWBATVG          | Low Volt                                        |
| MAN-REQ          | Manual Switch Request                           |
| MANRESET         | Manual System Reset                             |
| MANSWTOINT       | Manual Switch To Internal Clock                 |
| MANSWTOPRI       | Manual Switch To Primary Reference              |
| MANSWTOSEC       | Manual Switch To Second Reference               |
| MANSWTOTHIRD     | Manual Switch To Third Reference                |
| MANUAL-REQ-RING  | Manual Switch Request On Ring                   |

Table 7-32 Conditions (continued)

| Condition          | Description                                                 |
|--------------------|-------------------------------------------------------------|
| MANUAL-REQ-SPAN    | Manual Switch Request On Span                               |
| MEA                | Mismatch Of Equipment And Attributes                        |
| MEM-GONE           | Free Memory On Card Near Zero                               |
| MEM-LOW            | Free Memory On Card Very Low                                |
| MFGMEM             | Manufacturing Data Memory (EEPROM Failure)                  |
| NO-CONFIG          | No Startup Config                                           |
| NTWTPINC           | Network Topology Incomplete                                 |
| OCHNC-ACTIV-FAIL   | Optical Channel Activation Failure                          |
| OCHNC-DEACTIV-FAIL | Optical Channel De-Activation Failure                       |
| OCHNC-FAIL         | Optical Channel Connection Failure                          |
| OCHNC-INC          | Optical Channel Incomplete                                  |
| ODUK-AIS-PM        | ODUk: Alarm Indication Signal                               |
| ODUK-BDI-PM        | ODUk: PM Backward Defect Indication                         |
| ODUK-LCK-PM        | ODUk: Locked Defect - PM                                    |
| ODUK-OCI-PM        | ODUk: Open Connection Indication                            |
| ODUK-SD-PM         | ODUk: Signal Degrade                                        |
| ODUK-SF-PM         | ODUk: Signal Failure                                        |
| ODUK-TIM-PM        | ODUk: Trail Trace Identifier Mismatch                       |
| OOU-TPT            | Out of Use - Transport Failure                              |
| OPTNTWMIS          | Optical Network Type Mismatch                               |
| OTUK-AIS           | OTUk: Alarm Indication Signal                               |
| OTUK-BDI           | OTUk: Backward Defect Indication                            |
| OTUK-LOF           | OTUk: Loss Of Frame                                         |
| OTUK-SD            | OTUk: Signal Degrade                                        |
| OTUK-SF            | OTUk: Signal Failure                                        |
| OTUK-TIM           | OTUk: Trail Trace Identifier Mismatch                       |
| OUT-OF-SYNC        | 8B10B Out of Sync                                           |
| PDI-P              | Payload Defect Indication - Path                            |
| PEER-NORESPONSE    | Peer Card Not Responding                                    |
| PLM-P              | Payload Label Mismatch - Path                               |
| PLM-V              | Signal Label Mismatch Failure - Payload Label Mismatch - VT |

Table 7-32 Conditions (continued)

| Condition       | Description                                            |
|-----------------|--------------------------------------------------------|
| PORT-CODE-MISM  | Pluggable Port security code mismatch                  |
| PORT-COMM-FAIL  | Module Communication Failure                           |
| PORT-MISMATCH   | Pluggable Port rate mismatch                           |
| PORT-MISSING    | Pluggable Port missing                                 |
| PRC-DUPID       | Duplicate Node ID                                      |
| PROTNA          | Protection Unit Not Available                          |
| PTIM            | Payload Type Identifier Mismatch                       |
| PWR-REDUN       | Redundant Power Capability Lost                        |
| RAI             | Remote Alarm Indication                                |
| RCVR-MISS       | Facility Termination Equipment - Receiver Missing      |
| RFI             | Remote Failure Indication                              |
| RFI-L           | Remote Failure Indication - Line                       |
| RFI-P           | One-Bit Remote Failure Indication - Path               |
| RFI-V           | Remote Failure Indication - VT                         |
| RING-ID-MIS     | Ring Id Mismatch                                       |
| RING-MISMATCH   | Far End Of Fiber Is Provisioned With Different Ring ID |
| RING-SW-EAST    | Ring Switch Is Active On The East Side                 |
| RING-SW-WEST    | Ring Switch Is Active On The West Side                 |
| RSVP-HELLODOWN  | RSVP Hello FSM to Neighbor down                        |
| RUNCFG-SAVENEED | Need to Save Running Config                            |
| SD              | Signal Degrade                                         |
| SD-L            | BER Threshold Exceeded For Signal Degrade - Line       |
| SD-P            | BER Threshold Exceeded For Signal Degrade - Path       |
| SF              | Signal Failure                                         |
| SF-L            | BER Threshold Exceeded For Signal Failure - Line       |
| SF-P            | BER Threshold Exceeded For Signal Failure - Path       |
| SFTWDOWN        | Software Download In Progress                          |
| SNTP-HOST       | SNTP Host Failure                                      |
| SPAN-SW-EAST    | Span Switch Is Active On The East Side                 |
| SPAN-SW-WEST    | Span Switch Is Active On The West Side                 |
| SQM             | Sequence Mismatch                                      |

Table 7-32 Conditions (continued)

| Condition  | Description                                                    |
|------------|----------------------------------------------------------------|
| SQUELCH    | Ring Is Squelching Traffic                                     |
| SQUELCHED  | Equipment Squelched                                            |
| SSM-DUS    | Do Not Use For Synchronization                                 |
| SSM-FAIL   | Failed To Receive Synchronization Status Message               |
| SSM-LNC    | G812 - Local Node Clock traceable                              |
| SSM-OFF    | Synchronization Status Messages Are Disabled On This Interface |
| SSM-PRC    | G811 - Primary Reference Clock traceable                       |
| SSM-PRS    | Stratum 1 Primary Reference Source Traceable                   |
| SSM-RES    | Reserved For Network Synchronization Use                       |
| SSM-SDH-TN | G812 - Transit Node Clock traceable                            |
| SSM-SETS   | G813 - Synchronous Equipment Timing Source traceable           |
| SSM-SMC    | SONET Minimum Clock Traceable                                  |
| SSM-ST2    | Stratum 2 Traceable                                            |
| SSM-ST3    | Stratum 3 Traceable                                            |
| SSM-ST3E   | Stratum 3E Traceable                                           |
| SSM-ST4    | Stratum 4 Traceable                                            |
| SSM-STU    | Synchronized - Traceability Unknown                            |
| SSM-TNC    | Transit Node Clock Traceable                                   |
| SWMTXMOD   | Switching Matrix Module Failure                                |
| SWTOPRI    | Switch To Primary Reference                                    |
| SWTOSEC    | Switch To Second Reference                                     |
| SWTOTHIRD  | Switch To Third Reference                                      |
| SYNC-FREQ  | Synchronization Reference Frequency Out Of Bounds              |
| SYNCPRI    | Primary Synchronization Reference Failure                      |
| SYNCSEC    | Secondary Synchronization Reference Failure                    |
| SYNCTHIRD  | Third Synchronization Reference Failure                        |
| SYSBOOT    | System Reboot                                                  |
| TIM        | TIM Section - Trace Identifier Mismatch Failure                |
| TIM-MON    | TIM Section Monitor - Trace Identifier Mismatch Failure        |
| TIM-P      | STS Path Trace Identifier Mismatch                             |
| TPTFAIL    | Transport layer failure                                        |



**Table 7-32** Conditions (continued)

| Condition    | Description                                          |
|--------------|------------------------------------------------------|
| TRMT         | Transmit Failure                                     |
| TRMT-MISS    | Facility Termination Equipment - Transmitter Missing |
| TUNDERRUN    | Ether tx underrun                                    |
| TX-AIS       | Alarm Indication Signal in TX                        |
| TX-RAI       | Remote Alarm Indication in TX                        |
| UNC-WORD     | FEC Uncorrected Word                                 |
| UNEQ-P       | Unequipped - Path                                    |
| UNEQ-V       | Signal Label Mismatch Failure - Unequipped VT        |
| VCG-DEG      | VCAT Group Degraded                                  |
| VCG-DOWN     | VCAT Group Down                                      |
| WKSWPR       | Switched To Protection                               |
| WTR          | Wait To Restore                                      |
| WVL-MISMATCH | Equipment Wavelength Mismatch                        |

## 7.3 Errors

Errors may be generated by any command or command response message. You can find errors listed by error code in [Table 7-33 on page 7-27](#). The format of an error message is as follows:

```
SID DATE TIME
M CTAG DENY
<ERRCDE>
/* <ERRMSG> */
;
```

### 7.3.1 Errors Listed by Error Code

Error Code SONET Error Messages

**Table 7-33** Errors

| Error Code | Error Message                             |
|------------|-------------------------------------------|
| ENEQ       | At Least One Equipment Is Not Plugged     |
|            | Communication Failed                      |
|            | Control Not Provisioned                   |
|            | EnvControl IF Is Not Found                |
|            | Environmental Control Interface Not Found |

Table 7-33 Errors (continued)

| Error Code       | Error Message                             |
|------------------|-------------------------------------------|
|                  | Equipment Must Be Present                 |
|                  | Equipment Not Found                       |
|                  | Equipment Not Present                     |
|                  | Equipment Not Provisioned                 |
|                  | Internal Communication Error              |
|                  | No standby present                        |
|                  | No standby provisioned                    |
|                  | Not Equipped                              |
|                  | Sensor IF Is Not Found                    |
|                  | Sensor Interface Not Found                |
|                  | Standby not in valid state, please wait   |
| IBEX             | Extra Datablock                           |
|                  | Extra parameters                          |
|                  | Invalid AID Block. Extra Datablock.       |
|                  | Invalid Payload Block. Extra Datablock.   |
| ICNV             | Cannot Set DCC When G709 Is Enabled       |
| ICNV (continued) | Equipment Does Not Match Request          |
|                  | Equipment In Use                          |
|                  | Invalid Command                           |
|                  | Operation Not Supported By This Card      |
|                  | PM Threshold Type Not Supported           |
|                  | PM Type Not Supported                     |
|                  | Performance Monitoring Type Not Supported |
|                  | Threshold Type Not Supported              |
|                  | Trace Not Supported On Protect Trunk Port |
| IDMS             | Data Missing                              |
|                  | Loopback Type Missing                     |
|                  | Missing Internal Data                     |
| IDNC             | Invalid Data                              |
|                  | Invalid PST Value                         |
|                  | Invalid SST Value                         |

Table 7-33 Errors (continued)

| Error Code       | Error Message                                                           |
|------------------|-------------------------------------------------------------------------|
|                  | PRI source cannot be INTERNAL when SEC source is not INTERNAL           |
|                  | PRI source cannot be INTERNAL when THIRD is not INTERNAL                |
|                  | Primary Source Cannot Be INTERNAL When Secondary Source Is Not INTERNAL |
|                  | Primary Source Cannot Be INTERNAL When Third Source Is Not INTERNAL     |
|                  | SEC source cannot be INTERNAL when THIRD is not INTERNAL                |
|                  | Secondary Source Cannot Be INTERNAL When Third Source Is Not INTERNAL   |
|                  | Third source must be INTERNAL                                           |
| IDNV             | 2F-BLSR Architecture Does Not Permit Manual/Forced Span Switching       |
|                  | AUTO ALS Mode Not Allowed With Digital Wrapper Disabled                 |
|                  | AUTO Trace Mode Not Allowed                                             |
|                  | Alarm Message Must Be Enclosed Within a Pair of Quotes                  |
|                  | Alarm Message Required for MISC                                         |
|                  | At least an XC10G XC card is needed for this equipment type             |
|                  | Cannot Access DCC                                                       |
|                  | Cannot Change Protection Type                                           |
| IDNV (continued) | Cannot Edit NAME When Regeneration Group Not Present                    |
|                  | CMDMDE Only Applicable when Creating/Deleting Protection Group          |
|                  | Command Not Valid On Protect Card                                       |
|                  | Configuration Does Not Support AUTO ALS Mode                            |
|                  | DCC Not Supported In Transparent Term Mode                              |
|                  | DCC is in used                                                          |
|                  | Description Cannot Have More Than 64 Characters                         |
|                  | Description cannot be more than 32 characters                           |
|                  | Edit FMT on an Invalid Card                                             |
|                  | Edit FMT with an Invalid Data                                           |
|                  | Edit Line Code Failed                                                   |
|                  | Edit Line Code on an Invalid Card                                       |
|                  | Equipment Does Not Support CALOPWR                                      |
|                  | Equipment Does Not Support EXPWLEN                                      |
|                  | Equipment Does Not Support Payload Type                                 |

**Table 7-33** *Errors (continued)*

| <b>Error Code</b> | <b>Error Message</b>                      |
|-------------------|-------------------------------------------|
| ICNV (continued)  | Equipment Does Not Match Request          |
|                   | Equipment In Use                          |
|                   | Invalid Command                           |
|                   | Operation Not Supported By This Card      |
|                   | PM Threshold Type Not Supported           |
|                   | PM Type Not Supported                     |
|                   | Performance Monitoring Type Not Supported |
|                   | Threshold Type Not Supported              |
|                   | Trace Not Supported On Protect Trunk Port |
| IDMS              | Data Missing                              |
|                   | Loopback Type Missing                     |
|                   | Missing Internal Data                     |
| IDNC              | Invalid Data                              |
|                   | Invalid PST Value                         |
|                   | Invalid SST Value                         |

|                  |                                                                |
|------------------|----------------------------------------------------------------|
| IDNV (continued) | Cannot Edit NAME When Regeneration Group Not Present           |
|                  | CMDMDE Only Applicable when Creating/Deleting Protection Group |
|                  | Command Not Valid On Protect Card                              |
|                  | Configuration Does Not Support AUTO ALS Mode                   |
|                  | DCC Not Supported In Transparent Term Mode                     |
|                  | DCC is in used                                                 |
|                  | Description Cannot Have More Than 64 Characters                |
|                  | Description cannot be more than 32 characters                  |
|                  | Edit FMT on an Invalid Card                                    |
|                  | Edit FMT with an Invalid Data                                  |
|                  | Edit Line Code Failed                                          |
|                  | Edit Line Code on an Invalid Card                              |
|                  | Equipment Does Not Support CALOPWR                             |

Table 7-33 Errors (continued)

| Error Code | Error Message                           |
|------------|-----------------------------------------|
|            | Equipment Does Not Support EXPWLEN      |
|            | Equipment Does Not Support Payload Type |
|            |                                         |
|            |                                         |
|            |                                         |
|            |                                         |
|            |                                         |
|            |                                         |
|            |                                         |
|            |                                         |
|            |                                         |
|            |                                         |
|            |                                         |
|            |                                         |
|            |                                         |
|            |                                         |

**Table 7-33** *Errors (continued)*

| <b>Error Code</b>         | <b>Error Message</b>                                    |
|---------------------------|---------------------------------------------------------|
| IDNV (continued)          | Invalid Equipment Type                                  |
|                           | Invalid Ethernet Frame Size                             |
|                           | Invalid Expected Path Trace Message                     |
|                           | Invalid Holdoff Timer Value                             |
|                           | Invalid Log Name                                        |
|                           | Invalid MONLEV Value                                    |
|                           | Invalid MONTYPE Value                                   |
|                           | Invalid Mac Address                                     |
|                           | Invalid Notification Code                               |
|                           | Invalid PM Interval                                     |
|                           | Invalid Peer Id                                         |
|                           | Invalid Protect Group Identifier                        |
|                           | Invalid Protid                                          |
|                           | Invalid Recovery Pulse Width                            |
|                           | Invalid Reference                                       |
|                           | Invalid Regeneration Group Configuration                |
|                           | Invalid Report Interval                                 |
|                           | Invalid Start Time                                      |
|                           | Invalid Switch Type For BLSR                            |
|                           | Invalid TAP Number                                      |
|                           | Invalid TXCOUNT Or RXCOUNT                              |
|                           | Invalid Threshold Value Ordering                        |
|                           | Invalid Time Offset                                     |
|                           | Invalid Trace Level                                     |
|                           | Invalid User Name                                       |
|                           | Invalid area id, format is nnn.nnn.nnn.nnn              |
|                           | J0 Section Trace Not Supported In Transparent Term Mode |
|                           | Keyword All Not Allowed                                 |
|                           | Line Code Not Supported                                 |
|                           | Low Threshold Should Be Greater Than Extreme Low        |
| Multiple AIDs Not Allowed |                                                         |

Table 7-33 Errors (continued)

| Error Code       | Error Message                                                |
|------------------|--------------------------------------------------------------|
| IDNV (continued) | Multiple PROTID Not valid                                    |
|                  | Multiple Protection Group Card Slot Identifiers Not Allowed  |
|                  | Multiple References Not Allowed                              |
|                  | Must Provide PROTID for Adding Working Modules               |
|                  | Null Userid Or Range In Userid List Not Allowed              |
|                  | Number Of Reports Is Negative                                |
|                  | Only CRS_STS is not supported                                |
|                  | PRIVLVL Not Allowed When PAGE = 0                            |
|                  | PRIVLVL Not Allowed Without PAGE, PCND, or TMOUT             |
|                  | PRIVLVL Required With PAGE, PCND, Or TMOUT                   |
|                  | Parameter Not Supported By Payload Type                      |
|                  | Parameter Not Supported By This Optical Node Type            |
|                  | Parameter Not Supported On Protect Trunk Port                |
|                  | Payload Type Does Not Support AUTO ALS Mode                  |
|                  | Payload Type Does Not Support DCC                            |
|                  | Payload Type Does Not Support OOS-AINS State                 |
|                  | Payload Type Does Not Support OTN/FEC                        |
|                  | Payload Type Not Supported                                   |
|                  | Protect Card Does Not Support Protection Type                |
|                  | Protect Slot Not Provisioned                                 |
|                  | Protection Group Card Slot Identifier Field Required         |
|                  | Protection Group Does Not Exist                              |
|                  | Protection Group Name Exceeds Maximum Length                 |
|                  | Regeneration Group Name Exceeds Maximum Length               |
|                  | Ring Lockout BLSR Switching Is Not Supported                 |
|                  | SDCC is in used                                              |
|                  | Span Lockout of Working on BLSR Switching Is Not Supported   |
|                  | Switch Type Is Not Allowed On 1+1                            |
|                  | Tap Out Of Range                                             |
|                  | Term Mode Does Not Support Synchronization/Timing Parameters |
|                  | Threshold Increment Invalid                                  |

Table 7-33 Errors (continued)

| Error Code         | Error Message                                                  |
|--------------------|----------------------------------------------------------------|
| IDNV (continued)   | Threshold Value Out Of Range                                   |
|                    | Trace Level Not Supported By Client Port                       |
|                    | Trace Level Required                                           |
|                    | Trace Not Supported In Transparent Term Mode                   |
|                    | Transmitted Path Trace Message not supported                   |
|                    | Transponder Does Not Support Synchronization/Timing Parameters |
|                    | Unsupported Or Incompatible Termination Mode                   |
|                    | VOA Out Of Range                                               |
|                    | Value Or Threshold Read Only                                   |
| IDRG               | Difference Value Range Error                                   |
|                    | Invalid DURAL Value                                            |
|                    | Invalid MXINV Value                                            |
|                    | Invalid MXINV or DURAL Value                                   |
|                    | Invalid PAGE Value                                             |
|                    | Invalid PAGE or PCND Value                                     |
|                    | Invalid PCND Value                                             |
|                    | Invalid PINT Value                                             |
|                    | Invalid PJMON Value                                            |
|                    | Invalid POLD Value                                             |
|                    | Invalid TMOUT Value                                            |
|                    | Invalid Threshold Value                                        |
|                    | Invalid UOUT Value                                             |
|                    | Invalid Watermark Value                                        |
| PJMON Out Of Range |                                                                |
| IIAC               | AID Does Not Match with Requested BLSR Path Type               |
|                    | AID PARSE ERROR                                                |
|                    | ALL, Ranging and Grouping Are Not Supported for Hard Reset     |
|                    | ALL, Ranging and Grouping Are Not Supported                    |
|                    | Aid validation failed                                          |
|                    | BLSR Time Slot Mismatch                                        |
|                    | Bad Ring Id                                                    |



**Table 7-33** *Errors (continued)*

| <b>Error Code</b> | <b>Error Message</b>                                            |
|-------------------|-----------------------------------------------------------------|
| IIAC (continued)  | CCT=1WAY Not Allowed For The Card                               |
|                   | Can Not Create Schedule On Protect Card                         |
|                   | Cannot Access One Plus One Protect Line                         |
|                   | Cannot Make Changes To Protect Card                             |
|                   | Cannot make changes to protect card                             |
|                   | Cross-Connection Cannot Overlap PCA Boundary                    |
|                   | Cross-Connection Cannot Use GIGE Ports When In Transponder Mode |
|                   | Cross-connection PathWidth Not Supported by Card                |
|                   | DS1 Out of Range                                                |
|                   | EQPT Prot AID parse failed                                      |
|                   | Equipment Can Not Be Provisioned On Low Speed Slot              |
|                   | Equipment Does Not Match Request                                |
|                   | Equipment Does Not Match Request                                |
|                   | Expected Trace Not Supported On This Card Type                  |
|                   | Expected Trace String Exceeds Max Length (62)                   |
|                   | Expected Trace String Exceeds Maximum Length                    |
|                   | FAC parse failed                                                |
|                   | Incoming Trace Not Supported On This Card Type                  |
|                   | Incorrect Card Type                                             |
|                   | Input, Invalid Access                                           |
|                   | Invalid AID                                                     |
|                   | Invalid DS1 AID                                                 |
|                   | Invalid FROM= AID                                               |
|                   | Invalid G1000 Facility Port                                     |
|                   | Invalid Month Or Day                                            |
|                   | Invalid Node Side                                               |
|                   | Invalid NodeId                                                  |
|                   | Invalid Operation On Drop AID                                   |
|                   | Invalid PJMON Value                                             |
|                   | Invalid PM Direction parameter                                  |
|                   | Invalid Protect AID Or Working AID                              |

**Table 7-33** *Errors (continued)*

| <b>Error Code</b> | <b>Error Message</b>                                           |
|-------------------|----------------------------------------------------------------|
| IIAC (continued)  | Invalid Protect AID or Working AID                             |
|                   | Invalid Protect AID                                            |
|                   | Invalid RTO AID                                                |
|                   | Invalid Reference                                              |
|                   | Invalid RingId                                                 |
|                   | Invalid Source AID                                             |
|                   | Invalid Source/Destination AID Count For Cross-Connection Type |
|                   | Invalid TAP                                                    |
|                   | Invalid TO= AID                                                |
|                   | Invalid TPORT AID                                              |
|                   | Invalid Time                                                   |
|                   | Invalid VCG Member Number                                      |
|                   | Invalid Year                                                   |
|                   | Invalid fac-n-m input                                          |
|                   | J1 Trace Not Supported On This Card                            |
|                   | List AID Not Allowed For ALL AID                               |
|                   | List Or All AID Not Supported                                  |
|                   | Loopback type mismatch                                         |
|                   | LpbkType Does Not Match                                        |
|                   | Multiple AIDs Not Supported                                    |
|                   | Multiple Destination AID Exceeds Limit                         |
|                   | Multiple Destinations Not Supported By Cross-Connection        |
|                   | Multiple Source AID Exceeds Limit                              |
|                   | Multiple TAP AIDs Not Supported                                |
|                   | Multiple AIDs Not Allowed                                      |
|                   | No TPORT With ONE-PORT-BI TRANS Mode                           |
|                   | No TPORT With Removing TRANS Mode                              |
|                   | Not Allowed On 1+1 Protect Line                                |
|                   | Not Allowed On BLSR Protect Line                               |
|                   | Optional AIDs Are Not Supported                                |
|                   | Ranging and Grouping Are Not Supported for Soft Reset          |

Table 7-33 Errors (continued)

| Error Code                            | Error Message                                                      |
|---------------------------------------|--------------------------------------------------------------------|
| IIAC (continued)                      | RingId Does Not Match with AID Number                              |
|                                       | TPORT Must Use The Same Slot As The Aid                            |
|                                       | TPORT Supports Only A Single AID                                   |
|                                       | Trace Mode Not Supported On This Card Type                         |
|                                       | Trace Not Supported For Current Configuration                      |
|                                       | Trace Not Supported On This Card Type                              |
|                                       | Trace String Exceeds Maximum Length                                |
|                                       | UPSR Cross-Connections Not Allowed For The Facility Of Data Card   |
|                                       | Use Of TPORT Argument Requires Use Of TRANS                        |
|                                       | IICM                                                               |
| Command not supported in this release |                                                                    |
| Input, Invalid Command                |                                                                    |
| Input, Invalid MOD1                   |                                                                    |
| Input, Invalid MOD2                   |                                                                    |
| Input, Invalid MOD2                   |                                                                    |
| Input, Invalid VERB                   |                                                                    |
| IICT                                  | Invalid Correlation Tag                                            |
| IIDT                                  | '%xx'Encoding Error In FTP URL Parsing                             |
|                                       | 0 sec revertive time not supported                                 |
|                                       | 2F-BLSR Does Not Support SRVRTV/SRVTM/EASTPROT/WESTPROT Parameters |
|                                       | AUTO trace mode not supported                                      |
|                                       | Can Not Delete A Schedule Which Does Not Exist                     |
|                                       | Cannot Activate To Older Software                                  |
|                                       | Cannot Add And Remove Drops Together                               |
|                                       | Cannot Revert From R2 To R1                                        |
|                                       | Cannot Revert To Newer Software                                    |
|                                       | Command Already In Progress                                        |
|                                       | DEST Incompatible With RFR Type                                    |
|                                       | DEST Incompatible With SWDL Type                                   |
|                                       | DEST Required For RFBU Type                                        |
|                                       | Duplicate BLSR Working/Protect Facilities                          |

Table 7-33 Errors (continued)

| Error Code | Error Message                                                    |
|------------|------------------------------------------------------------------|
| IIDT       | Duplicate DCC                                                    |
|            | Duplicate Performance Monitoring Schedule                        |
|            | Duplicate Schedule                                               |
|            | Error Adding New Schedule                                        |
|            | FRCD mode not supported                                          |
|            | FTTD Is Not Supported. Only Direct File Transfers Are Supported  |
|            | Facility Already in OSC Group                                    |
|            | File Name Missing In FTP URL                                     |
|            | Flash Manager Not Active                                         |
|            | Hostname Missing In FTP URL                                      |
|            | IOS Config File Too Big                                          |
|            | Invalid 2 Fiber Blsr Parameter                                   |
|            | Invalid BLSR Mode                                                |
|            | Invalid BLSR Protect Facility                                    |
|            | Invalid BLSR Working Facility                                    |
|            | Invalid Data Parameter                                           |
|            | Invalid East work Port                                           |
|            | Invalid OSC Group Facility                                       |
|            | Invalid Phase Number                                             |
|            | Invalid Port In FTP URL                                          |
|            | Invalid Revertive Time                                           |
|            | Invalid Software Switch Type                                     |
|            | Invalid State Value                                              |
|            | Invalid Type Value In FTP URL. Only 'a', 'i', or 'd' Is Allowed. |
|            | Invalid West work Port                                           |
|            | Invalid type= Syntax In FTP URL.                                 |
|            | Loopback type not supported                                      |
|            | Mandatory FTP URL Not Provided                                   |
|            | Maximum Performance Monitoring Schedule Limit Reached            |
|            | Memory Out Of Range                                              |
|            | Missing/Invalid Destination                                      |

Table 7-33 Errors (continued)

| Error Code                | Error Message                                           |
|---------------------------|---------------------------------------------------------|
| IIDT (continued)          | Missing/Invalid Source                                  |
|                           | Non-IP Hostname In FTP URL                              |
|                           | Null Outputs In FTP URL Parsing                         |
|                           | Number Of Reports Is Negative                           |
|                           | Only MAINT STATE Supported                              |
|                           | Only NORM CMD_MODE Is Supported                         |
|                           | Only OOS PST Is Supported                               |
|                           | Only OVWRT of YES is Allowed For Uploads                |
|                           | Only Port 21 Is Supported                               |
|                           | Only SWDL Is Supported For The xfertype Argument        |
|                           | Only Type 'a' Is Supported In The COPY-IOSCFG FTP URL   |
|                           | Only Type 'i' Is Supported In The COPY-RFILE FTP URL    |
|                           | Password Missing In FTP URL                             |
|                           | Performance Monitoring Schedule Does Not Exist          |
|                           | Port Missing In FTP URL                                 |
|                           | Reach Limits Of MAX Schedules Allowed. Can Not Add More |
|                           | SRC Incompatible With RFBU Type                         |
|                           | SRC Required For RFR Type                               |
|                           | SRC Required For SWDL Type                              |
|                           | SWDL Incompatible With RFILE-PKG Aid                    |
|                           | Software Activate/Revert Failed                         |
|                           | Software Not Available For Switch                       |
|                           | The URL Contains Unsafe Characters. Please Encode.      |
|                           | Unknown Error Processing FTP URL.                       |
|                           | Unsupported Locn Value                                  |
|                           | Username Missing In FTP URL                             |
| ftp:// Missing In FTP URL |                                                         |
| IIFM                      | Invalid AID Block. Invalid Data Format.                 |
|                           | Invalid Data Format                                     |
|                           | Invalid Password                                        |
|                           | Invalid Payload Block. Invalid Data Format.             |

**Table 7-33** *Errors (continued)*

| <b>Error Code</b> | <b>Error Message</b>                                         |
|-------------------|--------------------------------------------------------------|
| IIFM              | Invalid User ID                                              |
| IIPG              | Configuration Requires Transparent Termination Mode          |
|                   | Equipment Payload Type Incompatible For Regeneration Group   |
|                   | Payload Type Requires Transparent Termination Mode           |
|                   | Transparent Termination Mode Required For Regeneration Group |
| IISP              | Input, Garbage                                               |
| IITA              | GNE: Input, Invalid Target Identifier                        |
|                   | Input, Invalid Target Identifier                             |
| INUP              | EXTRNG Configuration Is Not Supported                        |
|                   | General Block Unsupported                                    |
|                   | Missing mandatory field                                      |
|                   | NODEID Configuration Is Not Supported                        |
|                   | RNGID Configuration Is Not Supported                         |
|                   | RNGMAPAUTO Configuration Is Not Supported                    |
|                   | RNGWTR Configuration Is Not Supported                        |
| IPEX              | Duplicate N/V field                                          |
|                   | Invalid Payload Block. Extra Parameters.                     |
|                   | Invalid Payload Block. Extra Parameters.                     |
| IPMS              | Invalid AID Block. Missing Mandatory Field.                  |
|                   | Invalid Payload Block. Missing Mandatory Field.              |
|                   | Invalid syntax                                               |
|                   | Missing mandatory field                                      |
| IPNC              | Cannot Change Existing Protection Type                       |
|                   | Cross-connect Doesn't Have UPSR Path Selector                |
|                   | Description Cannot Have More Than 64 Characters              |
|                   | Invalid Flow Control Value                                   |
|                   | Invalid Maximum Frame Size                                   |
|                   | Invalid Parameter                                            |
|                   | Invalid Trans Value                                          |
|                   | Parameter Not Valid                                          |
|                   | Parameters Are Not Consistent                                |

**Table 7-33** *Errors (continued)*

| <b>Error Code</b>       | <b>Error Message</b>                                          |
|-------------------------|---------------------------------------------------------------|
| IPNV                    | Parameters Not Compatible                                     |
|                         | AID or Condition Must Be Specified                            |
|                         | Bad IP Configuration Parameter                                |
|                         | Bad Parameter                                                 |
|                         | Bad Reference                                                 |
|                         | Cannot Set Expected Path Trace For Source Path                |
|                         | Cannot Set Expected Path Trace In Auto Mode                   |
|                         | Cannot Set Outgoing Path Trace For Drop Path                  |
|                         | Cross-Connection Does Not Have UPSR Path Selector             |
|                         | Empty parameter                                               |
|                         | Exercise Is Not Allowed On Protected Facility                 |
|                         | Expected Trace String Exceeds Max Length (62)                 |
|                         | Facility Does Not Support Montype                             |
|                         | Far End Loopback Type Not Supported In Current Framing Format |
|                         | Far End Performance Monitoring Values Not Supported           |
|                         | Holdoff Timer Not Supported For Non-DRI Cross-Connections     |
|                         | INT Not Valid For BITS-OUT                                    |
|                         | Internal-Ip Lookup Failed                                     |
|                         | Internal-Network Nodes Lookup Failed                          |
|                         | Invalid Clock Source                                          |
|                         | Invalid Condition Type                                        |
|                         | Invalid Default Router Address                                |
|                         | Invalid IIOP Port number                                      |
|                         | Invalid IP Address                                            |
|                         | Invalid IP Configuration Parameter                            |
|                         | Invalid IP Mask                                               |
|                         | Invalid MONLEV Value                                          |
|                         | Invalid PM register                                           |
|                         | Invalid Parameter                                             |
|                         | Invalid Payload Block. Empty Parameter.                       |
| Invalid Report Interval |                                                               |

**Table 7-33** *Errors (continued)*

| <b>Error Code</b>                                             | <b>Error Message</b>                                |
|---------------------------------------------------------------|-----------------------------------------------------|
| IPNV (continued)                                              | Invalid SNTP Host Address                           |
|                                                               | Invalid Start Time                                  |
|                                                               | Invalid Switch Command For Synchronization          |
|                                                               | Invalid Switch Type                                 |
|                                                               | Invalid Threshold Value                             |
|                                                               | Invalid why parameter                               |
|                                                               | New Source Must Be Specified                        |
|                                                               | Node Name Exceeds Maximum Length                    |
|                                                               | Number Of Reports Is Negative                       |
|                                                               | PM Not Supported                                    |
|                                                               | Parameter Not Valid                                 |
|                                                               | Payload Does Not Support Optics Montypes            |
|                                                               | Primary Reference Incompatible With Timing Mode     |
|                                                               | Protection Type Does Not Support Reversion Mode     |
|                                                               | Reference Type Not Supported                        |
|                                                               | SPNWTR Parameter Not Supported                      |
|                                                               | Secondary Reference Incompatible With Timing Mode   |
|                                                               | Synchronization Source Already Defined For The Slot |
|                                                               | TMGREF Parameter Not Supported                      |
|                                                               | Third Reference Incompatible With Timing Mode       |
|                                                               | Time Period Not Applicable                          |
|                                                               | Timing Mode Not Compatible                          |
|                                                               | PICC                                                |
| AID does not match this session UID                           |                                                     |
| Bad Password Toggling - New Password Same As A Prior Password |                                                     |
| Can't change own security level                               |                                                     |
| Can't login                                                   |                                                     |
| Can't logout if user not logged in                            |                                                     |
| Command Not Available To This User Level                      |                                                     |
| Command Not Available to this User Level                      |                                                     |
| Invalid User Access Privilege Value                           |                                                     |



**Table 7-33** *Errors (continued)*

| <b>Error Code</b>  | <b>Error Message</b>                                |
|--------------------|-----------------------------------------------------|
| PICC (continued)   | Invalid User Identifier - Must Conform To TL1 Rules |
|                    | Invalid User Password - Must Conform To TL1 Rules   |
|                    | Logout failed                                       |
|                    | Password Must Be Changed Before Continuing          |
|                    | Password Recently Changed.                          |
|                    | Unexpected Default Case                             |
|                    | Unknown CORBA Exception (Internal Error)            |
|                    | Unknown User                                        |
|                    | User Access Privilege Required                      |
|                    | User Already Exists                                 |
|                    | User Identifier Exceeds Maximum Length Allowed      |
|                    | User Not Authorized                                 |
|                    | User Password Required                              |
| PIMA               | Memory Out Of Range                                 |
| PIUC               | Cannot Delete The Logged In User                    |
|                    | Cannot Remove The Last Superuser                    |
|                    | Unauthorized change of PID                          |
|                    | Unauthorized                                        |
|                    | User Currently Logged Into Another Session          |
|                    | User Is Not Superuser                               |
|                    | User Not Allowed To Change User Access Privilege    |
|                    | User Not Allowed To Change User Password            |
|                    | User Not Allowed To Disable/Enable Self             |
|                    | User Not Allowed To Terminate Self                  |
| User Not Logged In |                                                     |
| RALB               | GNE: All ENE Connections in Use                     |
|                    | Requested DCC In Use                                |
| RANB               | GNE: No Response from ENE - IENE                    |
| RNBY               | Software upgrade in progress                        |
| RRNG               | I/O Slot Out Of Range                               |
|                    | Invalid Slot Number                                 |

**Table 7-33** *Errors (continued)*

| <b>Error Code</b> | <b>Error Message</b>                 |
|-------------------|--------------------------------------|
| RTBY              | Connection In Service                |
|                   | TAP Already In Use                   |
|                   | TAP Number In Use                    |
| RTEN              | Cannot Access VT                     |
|                   | Cannot Change Access Mode            |
|                   | Cannot Set Access Mode               |
|                   | Invalid Access Mode                  |
|                   | Invalid STS TAP Number               |
|                   | Invalid TAP AID                      |
|                   | Invalid TAP Mode                     |
|                   | Invalid TAP Number                   |
|                   | Invalid VT TAP Number                |
|                   | Requested TAP Does Not Exist         |
|                   | Requested Tap Busy                   |
| TAP Not Found     |                                      |
| SAAL              | Already Allowed                      |
| SAAS              | Equipment Already Provisioned        |
| SADC              | GNE: ENE is down                     |
|                   | TAP Not Connected                    |
| SADS              | Loopback Applied On Cross-connection |
| SAIN              | Already Inhibited                    |
| SAIS              | Port Already In Service              |
| SAMS              | Already In Clear Maintenance State   |
|                   | Already In Force Maintenance State   |
|                   | Already In Lockout Maintenance State |
|                   | Already In Manual Maintenance State  |
| SAOP              | Control Already Operated             |
|                   | Control Already Released             |
|                   | Control Operated In Mntry            |
| SAOS              | Port Already In OOS-AINS             |
|                   | Port Already In OOS-MT               |

**Table 7-33** *Errors (continued)*

| <b>Error Code</b>              | <b>Error Message</b>                                                   |
|--------------------------------|------------------------------------------------------------------------|
| SAOS (continued)               | Port Already Out Of Service                                            |
| SAPR                           | Cannot Provision Regeneration Group When A Protection Group Is Present |
| SARB                           | GNE: All Gateways in Use                                               |
|                                | System Memory Exhausted. Retry A Few Seconds Later                     |
| SCAT                           | Connection already in loopback                                         |
|                                | Connection already in roll                                             |
|                                | Connection already in test access                                      |
|                                | Connection is tapped                                                   |
|                                | End Point Is Already Connected                                         |
|                                | STS Is Already Connected                                               |
|                                | Test Access Busy                                                       |
|                                | VT Is Already Connected                                                |
|                                | Would exceed max number of drops                                       |
| SDBE                           | AID Parser Failed                                                      |
|                                | Asymmetric VCG Not Supported                                           |
|                                | Bad Parameter                                                          |
|                                | Cannot Access Alarms                                                   |
|                                | Cannot Access Conditions                                               |
|                                | Cannot Access Controls                                                 |
|                                | Cannot Access Date/Time                                                |
|                                | Cannot Access Defaults Description                                     |
|                                | Cannot Access Environmental Settings                                   |
|                                | Cannot Access Equipment                                                |
|                                | Cannot Access Facility                                                 |
|                                | Cannot Access IP Configuration                                         |
|                                | Cannot Access Interface                                                |
|                                | Cannot Access Node ID                                                  |
|                                | Cannot Access Node Name                                                |
|                                | Cannot Access Object                                                   |
| Cannot Access Orderwire        |                                                                        |
| Cannot Access Protection Group |                                                                        |

**Table 7-33** *Errors (continued)*

| <b>Error Code</b> | <b>Error Message</b>                                          |
|-------------------|---------------------------------------------------------------|
| SDBE (continued)  | Cannot Access Protection State                                |
|                   | Cannot Access SNMP Ip Addr                                    |
|                   | Cannot Access SNTP Host                                       |
|                   | Cannot Access STS                                             |
|                   | Cannot Access Software Version                                |
|                   | Cannot Access Synchronization Configuration                   |
|                   | Cannot Access Timezone                                        |
|                   | Cannot Access Trace Information                               |
|                   | Cannot Access VT Performance Monitoring Parameters            |
|                   | Cannot Access VT                                              |
|                   | Cannot Configure SYNC                                         |
|                   | Cannot Create 1+1 Protection Group                            |
|                   | Cannot Edit STS                                               |
|                   | Cannot Get Line Information                                   |
|                   | Cannot Get Synchronization Configuration                      |
|                   | Cannot Set Date When Using SNTP                               |
|                   | Cannot Set Date                                               |
|                   | Cannot Set IP Configuration                                   |
|                   | Cannot Set Node Name                                          |
|                   | Cannot Set Pointer Justification Monitoring Parameter (PJMON) |
|                   | Cannot Set SNTP Host Configuration                            |
|                   | Cannot Set Timezone                                           |
|                   | Cannot Soft Reset System                                      |
|                   | Cannot Switch To E2 Byte With Express Orderwire IS            |
|                   | Card Type Not Supported                                       |
|                   | DLT prg Failed                                                |
|                   | Delete Protection Group Failed                                |
|                   | Equipment Not Found                                           |
|                   | Facility Does Not Exist                                       |
|                   | Facility Does Not Match Request                               |
|                   | Facility Does Not Support Mac Address                         |

**Table 7-33** *Errors (continued)*

| <b>Error Code</b> | <b>Error Message</b>                     |
|-------------------|------------------------------------------|
| SDBE (continued)  | Facility Is Not Provisioned              |
|                   | Facility Not Provisioned                 |
|                   | File Transfer In Progress                |
|                   | Get Sonet Line Info Failed               |
|                   | Getting sonet sync configurations        |
|                   | IOS Config Update In Progress            |
|                   | IP Configuration Failed                  |
|                   | Incompatible Parameter Values            |
|                   | Incorrect Facility Type                  |
|                   | Interface Does Not Exist                 |
|                   | Interface Does Not Support Loopback Type |
|                   | Internal Access Failed                   |
|                   | Internal Data Base Error                 |
|                   | Internal Database Error                  |
|                   | Invalid Command                          |
|                   | Invalid Cross Connect Type For VCG       |
|                   | Invalid DCC                              |
|                   | Invalid Mondat Format                    |
|                   | Invalid Montm Format                     |
|                   | Invalid Performance Monitoring Mode      |
|                   | Invalid Protection Group                 |
|                   | Invalid Time Period                      |
|                   | Invalid Trace Mode for Card Type         |
|                   | LCAS Not Supported By This Card          |
|                   | Location Value Invalid                   |
|                   | Loopback Is Invalid                      |
|                   | Loopback Port In Service                 |
|                   | Loopback type not supported              |
|                   | Mac Address Not Supported By Payload     |
|                   | No such interface                        |
|                   | Node Name Configuration Failed           |

Table 7-33 Errors (continued)

| Error Code           | Error Message                                                            |
|----------------------|--------------------------------------------------------------------------|
| SDBE (continued)     | Not a Sonet interface                                                    |
|                      | Object Not Provisioned                                                   |
|                      | Object Not Supported                                                     |
|                      | Operation Not Supported On EC1 Interface                                 |
|                      | Operation not supported by this card                                     |
|                      | Path Width Not Supported                                                 |
|                      | Path loopback already exists                                             |
|                      | SNTP Configuration Failed                                                |
|                      | STS Not Provisioned                                                      |
|                      | Synchronization Configuration Not Available                              |
|                      | Synchronization Status Messaging(SSM) Not Supported On EC1 Interface     |
|                      | Synchronization::Sync not available                                      |
|                      | Used Frame Format Does Not Support Synchronization Status Messaging(SSM) |
|                      | VT Not Provisioned                                                       |
|                      | Wrong Facility Type                                                      |
|                      | Wrong Interface Type                                                     |
|                      | bind failed for sonet gen                                                |
|                      | getActiveRefSource failed                                                |
| getRefSources failed |                                                                          |
| SDLD                 | Duplex Unit Locked                                                       |
| SDNA                 | Active TCC Not Ready                                                     |
|                      | Standby TCC Not Ready                                                    |
| SNCC                 | Cross connection does not exist                                          |
|                      | Path roll does not exist                                                 |
|                      | Replace This Message When A SNCC message is needed                       |
| SNCN                 | Bad Quality                                                              |
|                      | Cannot Switch To Inferior Reference Source                               |
|                      | Clock Source Failed                                                      |
|                      | Command Not Implemented                                                  |
|                      | Cross-Connection Type Not Supported In TL1                               |
|                      | Invalid Clock Source                                                     |

Table 7-33 Errors (continued)

| Error Code                                                                      | Error Message                                                                     |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| SNCN (continued)                                                                | Requested Direction Not Supported                                                 |
|                                                                                 | STS Rate Changing Not Supported                                                   |
| SNNS                                                                            | Reference Not From Optical Card                                                   |
| SNOS                                                                            | Cannot Change Card Wavelength With Port(s) Not In OOS State                       |
|                                                                                 | Cannot Change Payload With Port(s) Not In OOS State                               |
|                                                                                 | Cannot Change Termination Mode With Port(s) Not In OOS State                      |
| SNPR                                                                            | Cannot Get Role Of Port                                                           |
|                                                                                 | Get Port Role Failed                                                              |
| SNVS                                                                            | Already Switched To Internal Reference Source                                     |
|                                                                                 | BLSR East Operation Already Set                                                   |
|                                                                                 | BLSR West Operation Already Set                                                   |
|                                                                                 | CCAT Cross Connect Exists                                                         |
|                                                                                 | Cannot Change Configuration When Port(s) Are Not In OOS State                     |
|                                                                                 | Cannot Change Payload For Protection Group                                        |
|                                                                                 | Cannot Change Payload When Port(s) Are DCC Enabled                                |
|                                                                                 | Cannot Change Payload When Port(s) Are Used As A Clock Source                     |
|                                                                                 | Cannot Change Termination Mode When Port(s) Are DCC Enabled                       |
|                                                                                 | Cannot Change Termination Mode When Port(s) Are Used As a Clock Source            |
|                                                                                 | Cannot Change Termination Mode With Trace Enabled                                 |
|                                                                                 | Cannot END an AUTO roll                                                           |
|                                                                                 | Cannot Edit Facility When Not In OOS State                                        |
|                                                                                 | Cannot Operate Loopback In Current Cross-connection State                         |
|                                                                                 | Cannot Operate Loopback In Current State                                          |
|                                                                                 | Cannot Provision Regeneration Group When A Protection Switch Operation Is Present |
|                                                                                 | Cannot Provision Regeneration Group When Equipment Has Different FEC Settings     |
| Cannot Provision Regeneration Group When Equipment Has Different G.709 Settings |                                                                                   |
| Cross Connect Exists                                                            |                                                                                   |
| Facility Not Part Of BLSR                                                       |                                                                                   |
| Invalid AINS Soak Time                                                          |                                                                                   |

**Table 7-33** *Errors (continued)*

| <b>Error Code</b>            | <b>Error Message</b>                      |
|------------------------------|-------------------------------------------|
| SNVS (continued)             | Invalid Admin State                       |
|                              | Invalid BLSR Element                      |
|                              | Invalid Clock Source                      |
|                              | Invalid Equipment State                   |
|                              | Invalid Transponder Provisioning          |
|                              | Loopback Already In Progress              |
|                              | Loopback Not In Progress                  |
|                              | No Switch In Progress                     |
|                              | No valid roll signal                      |
|                              | Protection Group Does Not Exist           |
|                              | Protection Unit Active                    |
|                              | Roll condition does not exist             |
|                              | Roll is not controlled by TL1             |
|                              | Status, Not in Valid State                |
|                              | Unable to complete roll                   |
|                              | VCG Already Created                       |
|                              | Working Unit Already Active               |
| Working Unit Already Standby |                                           |
| SOSE                         | Unrecognized Message Type                 |
| SPFA                         | Cannot Get Current Card Status            |
|                              | Protection Unit Failed Or Missing         |
|                              | Status, Protection Unit Failed or Missing |
| SPLD                         | Cannot Create 1+1 Protection Group        |
|                              | Cannot Delete Equipment                   |
|                              | Cannot Delete Filler Equipment            |
|                              | Cannot Enter Filler Equipment             |
|                              | Equipment In Use                          |
|                              | FTP Task Is Busy                          |
|                              | Facility Is Busy                          |
|                              | Protection Unit Locked                    |



Table 7-33 Errors (continued)

| Error Code                     | Error Message                              |
|--------------------------------|--------------------------------------------|
| SRAC                           | Invalid Connection Type                    |
|                                | Path roll does not exist                   |
|                                | Requested Access Configuration is Invalid  |
| SRCN                           | Already In Requested Mode                  |
|                                | Area already exists on lan interface       |
|                                | Cannot use backbone area, lan active       |
|                                | Requested Condition Already Exists         |
| SROF                           | 1+1 Protection Group Not Found             |
|                                | 1WAYMON not supported                      |
|                                | 2F BLSR Pool Not Available                 |
|                                | 4F BLSR EastProtect Pool Is Not Available  |
|                                | 4F BLSR Pool Not Available                 |
|                                | 4F BLSR WestProtect Pool Is Not Available  |
|                                | AID Listing Not Allowed                    |
|                                | ALS Mode Does Not Allow Laser Restart      |
|                                | APC System Is Busy                         |
|                                | Active Flash Not Ready                     |
|                                | All DCCs In Use                            |
|                                | BLSR In Use                                |
|                                | BLSR Pool Not Available                    |
|                                | BLSR Protect STS Path List Is Empty        |
|                                | Can Not Get IOS Config Source Origin       |
|                                | Cannot Access 1+1 Line                     |
|                                | Cannot Access 1+1 Protected Line           |
|                                | Cannot Access 2 Fiber BLSR                 |
|                                | Cannot Access 4 Fiber BLSR East Protection |
|                                | Cannot Access 4 Fiber BLSR West Protection |
| Cannot Access 4F BLSR          |                                            |
| Cannot Access Alarm Log        |                                            |
| Cannot Access BLSR 2 Wire Line |                                            |
| Cannot Access BLSR 2-Wire Line |                                            |

**Table 7-33** *Errors (continued)*

| <b>Error Code</b> | <b>Error Message</b>                                                          |
|-------------------|-------------------------------------------------------------------------------|
| SROF (continued)  | Cannot Access BLSR                                                            |
|                   | Cannot Access Cross-Connection                                                |
|                   | Cannot Access DCC                                                             |
|                   | Cannot Access Facility                                                        |
|                   | Cannot Access PM Mode                                                         |
|                   | Cannot Access Performance Monitoring Statistics                               |
|                   | Cannot Access Protected Equipment                                             |
|                   | Cannot Access Protection Group Information                                    |
|                   | Cannot Access Protection Group Name                                           |
|                   | Cannot Access Protection Group Reversion Information                          |
|                   | Cannot Access Reversion Information                                           |
|                   | Cannot Access STS                                                             |
|                   | Cannot Access TAP                                                             |
|                   | Cannot Access Unprotected Line                                                |
|                   | Cannot Access Unprotected Line                                                |
|                   | Cannot Access VT                                                              |
|                   | Cannot Add Equipment                                                          |
|                   | Cannot Add Equipment                                                          |
|                   | Cannot Change BITS Configuration When Manual Switch Exists                    |
|                   | Cannot Change Ethernet IP With DHCP Provisioned                               |
|                   | Cannot Change Ethernet IP With OSPF Provisioned                               |
|                   | Cannot Change Parameter When Manual Switch Exists                             |
|                   | Cannot Change Port State When Manual Switch Exists                            |
|                   | Cannot Change Synchronization Configuration When Manual Switch Exists         |
|                   | Cannot Change Timing Reference When Manual Switch Exists                      |
|                   | Cannot Change XTC Protection Group                                            |
|                   | Cannot Configure SYNC                                                         |
|                   | Cannot Create Cross-Connection Between Incompatible Interfaces                |
|                   | Cannot Create Protection Group                                                |
|                   | Cannot Create Protection Group with Pre-provisioned Cards when CMDMDE is FRCD |
|                   | Cannot Create TAP On Last VT                                                  |

Table 7-33 Errors (continued)

| Error Code       | Error Message                                                                             |
|------------------|-------------------------------------------------------------------------------------------|
| SROF (continued) | Cannot Create TAP                                                                         |
|                  | Cannot Create Y cable Protection                                                          |
|                  | Cannot Delete Cross-Connection                                                            |
|                  | Cannot Delete Last Drop                                                                   |
|                  | Cannot Delete Protected Equipment                                                         |
|                  | Cannot Delete Protection Group                                                            |
|                  | Cannot Delete Protection Group with Cross-Connections on Working Card when CMDMDE is FRCD |
|                  | Cannot Disable DWRAP With FEC Enabled                                                     |
|                  | Cannot Disable DWRAP With GCC Enabled                                                     |
|                  | Cannot Disable DWRAP. Orderwire Circuit Exists                                            |
|                  | Cannot Disable DWRAP. Y-Cable Protection Exists                                           |
|                  | Cannot Edit Ethernet IP                                                                   |
|                  | Cannot Edit STS                                                                           |
|                  | Cannot Enable FEC When G.709 Is Disabled                                                  |
|                  | Cannot Enable FEC With DWRAP Disabled                                                     |
|                  | Cannot Modify Protect Card                                                                |
|                  | Cannot Perform ACO                                                                        |
|                  | Cannot Provision Equipment                                                                |
|                  | Cannot Provision Protection Equipment                                                     |
|                  | Cannot Set ALS Mode                                                                       |
|                  | Cannot Set Bidirectional Protection Group                                                 |
|                  | Cannot Set DCC When Digital Wrapper Is Enabled                                            |
|                  | Cannot Set GCC When DWRAP Is Disabled                                                     |
|                  | Cannot Set NodeId                                                                         |
|                  | Cannot Set Payload Type                                                                   |
|                  | Cannot Set Protection Group Name                                                          |
|                  | Cannot Set Protection Group Revertive Behavior                                            |
|                  | Cannot Set RingId                                                                         |
|                  | Cannot Set Span Revertive Mode Unless 4-Fiber Ring                                        |
|                  | Cannot Set Span Revertive Time In Non-revertive Mode                                      |
|                  | Cannot Set Span Revertive Time Unless 4-Fiber Ring                                        |

**Table 7-33** *Errors (continued)*

| <b>Error Code</b> | <b>Error Message</b>                                    |
|-------------------|---------------------------------------------------------|
| SROF (continued)  | Cannot Set Termination Mode                             |
|                   | Cannot Set Wave Length                                  |
|                   | Cannot Switch For Specified Connection Type             |
|                   | Cannot Switch For Specified Path                        |
|                   | Cannot Update Synchronization Reference List            |
|                   | Cannot modify cross connect right now                   |
|                   | Cannot roll a non-TL1 circuit                           |
|                   | Cannot set loopback                                     |
|                   | Command Not Supported                                   |
|                   | Connection is already in roll                           |
|                   | Connection type error                                   |
|                   | Connection type error                                   |
|                   | Could Not Delete Protection                             |
|                   | Could not provision area                                |
|                   | Cross-Connection Creation Failed                        |
|                   | Cross-Connection Does Not Exist                         |
|                   | Cross-connection Was Not Found                          |
|                   | Cross-connection deletion failed                        |
|                   | DCC Does Not Exist                                      |
|                   | DCC In Use                                              |
|                   | DCC Not In Use                                          |
|                   | DCC Termination Is Required to Set OSPF                 |
|                   | DWRAP Not Enabled                                       |
|                   | Database Is Busy                                        |
|                   | Element Not Found                                       |
|                   | Element not available                                   |
|                   | Equipment Does Not Match Request                        |
|                   | Equipment Does Not Support 8B10B Montypes               |
|                   | Equipment Does Not Support Cross-connection Loopback    |
|                   | Equipment Provisioning Failed                           |
|                   | Ethernet IP And Default Router IP Subnets Are Different |

**Table 7-33** *Errors (continued)*

| <b>Error Code</b> | <b>Error Message</b>                              |
|-------------------|---------------------------------------------------|
| SROF (continued)  | Expected Trace Size Exceeds Trace Format Limit    |
|                   | Facility Does Not Support Laser Restart           |
|                   | Facility Not Protected                            |
|                   | Facility Not Provisioned                          |
|                   | Fail to add RTO                                   |
|                   | Flash Is Busy                                     |
|                   | Generation1 Does Not Support Given Quality Of RES |
|                   | Generic ios config upload failure message         |
|                   | Get IOR Failed                                    |
|                   | Host Not In IP Address Format                     |
|                   | Insufficient Path Width For Cross-Connection      |
|                   | Insufficient Path Width For Test Access           |
|                   | Internal Database Error                           |
|                   | Internal Exercise Failure                         |
|                   | Internal Facility Type Failure                    |
|                   | Invalid AID                                       |
|                   | Invalid ALS Recovery Interval                     |
|                   | Invalid ALS Recovery Pulse Width                  |
|                   | Invalid Control Type (CONTTYPE) For AID           |
|                   | Invalid Cross Connect Type For VCG                |
|                   | Invalid Cross-Connection Path                     |
|                   | Invalid Cross-Connection Type For Drops           |
|                   | Invalid Drop Path                                 |
|                   | Invalid FTP Username/Password                     |
|                   | Invalid Loopback Provision                        |
|                   | Invalid Operation For Connection Type             |
|                   | Invalid Operation For Specified Path              |
|                   | Invalid Path                                      |
|                   | Invalid Protection Group                          |
|                   | Invalid Protection Switch Operation               |
| Invalid RMODE     |                                                   |

Table 7-33 Errors (continued)

| Error Code       | Error Message                                                    |
|------------------|------------------------------------------------------------------|
| SROF (continued) | Invalid SYNC entity                                              |
|                  | Invalid State When Loopback Present                              |
|                  | Invalid Subnet Mask                                              |
|                  | Invalid Synchronization Source                                   |
|                  | Invalid UPSR Path                                                |
|                  | Invalid type for this Cross connection                           |
|                  | Is Not 1+1 Element Type                                          |
|                  | J0 Section Trace Level Not Supported By 10GE Payload Type        |
|                  | Laser Was Not Shutdown.Cannot Restart Laser                      |
|                  | Location Incompatible With Loopback Type                         |
|                  | Loopback Not Allowed On Drop Path                                |
|                  | Loopback Type Does Not Match                                     |
|                  | MIC Cards Cannot Be Reset                                        |
|                  | Maximum Drop Limit Reached                                       |
|                  | Maximum User Limit Reached                                       |
|                  | Maximum VT Cross Connection Limit Reached                        |
|                  | No Path To Regulate                                              |
|                  | No Start-Up IOS Config                                           |
|                  | No clock and data copy information from Line cards and CXC cards |
|                  | Node::General not available                                      |
|                  | Node::NetworkConfig not available                                |
|                  | Non Revertive Mode Does Not Allow to Set RVTM                    |
|                  | Not Enough Path Width For TACC                                   |
|                  | Number of Drops Exceed Allowable                                 |
|                  | One Plus One Line pool not available                             |
|                  | Operate Alarm Cutoff Failed                                      |
|                  | Operation Not Supported                                          |
|                  | Operation not Valid for Connection Type                          |
|                  | Operation not Valid for Path Specified                           |
|                  | OspfTopology::OSPFTopo not available                             |
|                  | Parameter Not Supported When DWRAP Is Enabled                    |

**Table 7-33** *Errors (continued)*

| <b>Error Code</b>             | <b>Error Message</b>                            |
|-------------------------------|-------------------------------------------------|
| SROF (continued)              | Path Already In Use                             |
|                               | Path Specified Is Not Valid                     |
|                               | Path Used For Test Access                       |
|                               | Payload Type Does Not Support Trace             |
|                               | Peer Equipment Attributes Do Not Match          |
|                               | Peer Equipment Type Does Not Match              |
|                               | Peer Facility Has Loopback                      |
|                               | Peer Facility In Use                            |
|                               | Peer Payload Type Does Not Match                |
|                               | Peer Termination Mode Does Not Match            |
|                               | Pool Does Not Exist                             |
|                               | Pool not available                              |
|                               | Protect Port Active                             |
|                               | Protection Group Does Not Exist                 |
|                               | Protection Switching Failed                     |
|                               | Protection Type Mismatch                        |
|                               | Protection Type Not Compatible With Facility    |
|                               | Provisioning Rules Failed                       |
|                               | ROLL TO path is already in the cross-connection |
|                               | Regeneration Group Already Exist                |
|                               | Regeneration Group Does Not Exist               |
|                               | Requested Operation Failed                      |
|                               | Requested Tap Busy                              |
|                               | Ring Reversion Failed                           |
|                               | SDBER Out Of Range                              |
|                               | SDCC creation failed                            |
|                               | SFBER Out Of Range                              |
|                               | SSet PRG Reversion Failed                       |
|                               | STS Does Not Exist                              |
|                               | STS Does Not Have TAP                           |
| STS Path Width Does Not Match |                                                 |

**Table 7-33** *Errors (continued)*

| <b>Error Code</b> | <b>Error Message</b>                                               |
|-------------------|--------------------------------------------------------------------|
| SROF (continued)  | STS Path Width Does Not Match                                      |
|                   | STS Rates Do Not Match                                             |
|                   | Section Termination Mode Not Supported                             |
|                   | Security::General not available                                    |
|                   | Set PRG Bidirectional Failed                                       |
|                   | Set PRG Name Failed                                                |
|                   | Software Activation Failed                                         |
|                   | Software Download Failed                                           |
|                   | Software Error                                                     |
|                   | Software Reversion Failed                                          |
|                   | Span Reversion Failed                                              |
|                   | Specified Operation Is Not Valid                                   |
|                   | Standby Flash Not Ready                                            |
|                   | Sync Reference List Update Failed                                  |
|                   | Synchronization/Timing Parameters Not Supported With DWRAP Enabled |
|                   | TAP connected                                                      |
|                   | TTI Trace Not Allowed With G709 Disabled                           |
|                   | Tap Not Provisioned                                                |
|                   | Test Access Active                                                 |
|                   | Test Access Not Supported On Card                                  |
|                   | Trace Format Not Supported By J0 Section Trace                     |
|                   | Trace Format Not Supported By TTI Section Trace                    |
|                   | Trace Message Size Exceeds Trace Format Limit                      |
|                   | Trace Mode Incompatible With Termination Mode                      |
|                   | Trace Mode Not Supported                                           |
|                   | UPSR Needed To Change Revertive Behavior                           |
|                   | Unable to cancel roll                                              |
|                   | Unknown Internal Error                                             |
|                   | Unprotected Line pool not available                                |
|                   | Unprovisioning Rules Failed                                        |
|                   | Unsupported BLSR STS Path Operation                                |



Table 7-33 Errors (continued)

| Error Code                                          | Error Message                                |
|-----------------------------------------------------|----------------------------------------------|
| SROF (continued)                                    | Unsupported Command Type                     |
|                                                     | Unsupported Element Type                     |
|                                                     | VCG Does Not Exist                           |
|                                                     | VT Cross-Connection Does Not Exist           |
|                                                     | VT Does Not Exist                            |
|                                                     | VT Does Not Have TAP                         |
|                                                     | VT Path Width Does Not Match                 |
|                                                     | Wavelength Value Not Supported               |
|                                                     | Working/Peer Card In Use                     |
|                                                     | Wrong Interface Type                         |
|                                                     | XC Card Does Not Support VT Cross-Connection |
|                                                     | XC Card Not Present                          |
|                                                     | XCVXL Card Not Present                       |
|                                                     | Y-Cable Protection Does Not Exist            |
|                                                     | SRQN                                         |
| BLSR Deletion Failed                                |                                              |
| BLSR Does Not Exist                                 |                                              |
| BLSR Editing Failed                                 |                                              |
| Cannot Create Automatic Links                       |                                              |
| Cannot Edit SENDDUS On Protect Port                 |                                              |
| Cannot Edit SYNCMSG On Protect Port                 |                                              |
| DCC Not Allowed On Protect Port                     |                                              |
| DCC not enabled                                     |                                              |
| Data Access Request Failed                          |                                              |
| Invalid Mode For Current Configuration              |                                              |
| Invalid Request                                     |                                              |
| OSC Group Already Exists                            |                                              |
| OSC Group Does Not Exist                            |                                              |
| Path loopback already exists                        |                                              |
| Protect Card Does Not Support Electrical Protection |                                              |
| Protect Card Does Not Support Protection Type       |                                              |

**Table 7-33** *Errors (continued)*

| <b>Error Code</b> | <b>Error Message</b>                        |
|-------------------|---------------------------------------------|
| SRQN (continued)  | STS Cross-Connection Does Not Exist         |
|                   | VT Cross-Connection Does Not Exist          |
| SRTN              | TAP Not Found                               |
| SSRD              | Manual Switch Cannot Override Forced Switch |
|                   | Switch Request Denied                       |
| SSRE              | GNE: ENE Connection Closed                  |
|                   | GNE: System Resources Exceeded - FD         |
|                   | GNE: System Resources Exceeded - Lock       |
|                   | GNE: System Resources Exceeded - Thread     |
|                   | Memory Resources Exceeded                   |
|                   | Memory resource denial                      |
| SWFA              | Status, Working Unit Failed or Missing      |
|                   | Working Unit Failed Or Missing              |
| SWLD              | Working Unit Locked                         |

## 7.4 Echo

In order to improve telnet functionality for automated systems, the echo function has been turned off since ONS 15454 Release 3.0. This change is transparent to users running standard UNIX-compliant telnet clients; however, PC users may need to change their client setup to enable “local echo.” This is normally accomplished by a pull-down menu or a preference attribute.

To test the local echo on your PC client, use the RTRV-HDR command. If you receive a response but no data, set local echo ON. Cisco recommends that you close any windows containing sensitive information after exiting a TL1 session.



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