Table of Contents

Chapter 1: TL1 Overview

What is TL1?

Transaction Language 1 (TL1) is a set of ASCII (156American Standard Code for Information Interchange)-based instructions, or messages, that an operations support system (OSS) uses to manage a network element (NE) and its resources. TL1 provides a standard set of messages that can be used for communicating between operating systems and NEs, and personnel and NEs.

TL1 Message Types and Examples

There are two main types of standard-defined TL1 messages: command/responses and autonomous messages.

1. **Command/Responses**—These are initiated by a user and provide two parts: a request to the NE to set or get information, and a response from the NE containing completion or status codes and requested information. Request, or input messages are used to issue the request portions of command messages to the NE. Command messages are often referred to as command/response messages, where the request portion is an input message (OSS to NE) and the response portion is an output message (NE to OSS). Command/Responses can be further classified as follows:

a. **Set information**—The simplest type of messages are those that set information or instruct the NE to perform an action and return only a result with no data in the response:

   Example: ENT-CRS-<VC_PATH> to create an VC cross-connection

b. **Get information**—Some TL1 commands get information or request information be returned from the NE.

   Example: RTRV-ALM-ALL to show the current status of all active alarm conditions

c. **Response message**—The response portion of a command message correlates to a particular request message. If a command is successful, the NE sends a response message containing the COMPLD code.

   Example:
   SV192-DATA-461 2003-08-05 10:35:17

   M 123 COMPLD

   ;

   If a command fails, the NE sends an error response which includes the DENY code and may or may not contain an error message.

   Example:
   sv192-DATA-461 2003-08-05 10:35:17

   M 123 DENY;

   The following list shows standard responses:

   COMPLD—Completed

   DENY—TL1 command failed

   PRTL—Partially successful response. The requested action can be completed for some of the specified AIDs but not for all of them.

   RTRV—The response is successful but is lengthy and is being returned in multiple parts. Each part has a RTRV response code, but the final response has a COMPLD response code.

d. **Response acknowledgment—**Responses may also include intermediate acknowledgment messages. Brief messages that update the user as to the status of a given command are called acknowledgments. When a command has been sent to the NE and the NE takes longer than two seconds to respond, the NE sends an acknowledgment message to be followed later by the full response.

2. **Autonomous events**—These messages are used to report alarms, configuration changes or condition changes. Many of these messages, such as those relating to alarm conditions, are spontaneously triggered by the NE itself without intervention. Other messages, such as those relating to the reporting of periodic condition states or performance data

values are scheduled by the NE user through other commands. Autonomous messages are not issued to the NE and hence they do not include input formats or input examples.

Example: REPT-ALM

Connect to TL1

The first step in using TL1 is to connect to TL1. You only have to connect to TL1 one time per session. A session is a related set of communication transactions between two or more network devices. There are three ways to connect to TL1: via CTC, telnet, or craft interface. Perform one of the following procedures to connect to TL1.

Launch CTC and Open a TL1 Session

Step 1 From the PC connected to the Cisco NCS 2000 Series start Netscape Navigator or Internet Explorer.

Step 2 Enter the 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, there are two ways to open a TL1 session:

- Click **Tools > Open TL1 Connection,** or
- Click on the **Open TL1 Connection** button  on the toolbar.

Step 5 From the Select Node dialog box choose the node you want to communicate with.

Step 6 Click **OK**.

A TL1 interface window opens. There are three sub-windows in the TL1 interface window: Request History, Message Log/Summary 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 double-clicking on them.

Step 7 Verify that the Connect button is selected (grayed out).

Step 8 You are ready to log into TL1.

Telnet to Open a TL1 Session

To communicate with the NCS network element (NE) using TL1 commands through a Telnet session over a craft interface or a LAN connection, you can choose either of the following two ports:

- 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.

Note Port number 3082 is a raw TCP/IP port; it is not an interactive port and is not recommended for use as an alternate telnet port.

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 or 3083) where TL1 commands are understood. If the connection is successful, a screen opens with a prompt.

Step 3 You are ready to log into TL1.

Use a Craft Interface to Open a TL1 Session (Cisco NCS 2000 Series)

The TCC2/TCC2P card has two built-in interface ports for accessing the Cisco NCS 2000 Series. 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 EIA/TIA-232 port. The EIA/TIA-232 port supports VT100 emulation which allows TL1 commands to be entered directly without a browser.

Step 1 Connect the serial cable to the EIA/TIA-232 port on the active TCC2/TCC2P card.

Step 2 Configure the terminal emulation software (Hyperterminal):

a. Terminal emulation = vt100

a. Bits per second = 9600

a. Parity = None

a. Stop BITS = 1

a. Flow control = None

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

Step 4 You are ready to log into TL1.

Log Into TL1

Once you have connected to TL1, you must log into TL1 in order to issue commands. Logging into TL1 only has to be done once per session.

Step 1 Issue the ACT-USER command:

Input Format:

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

- TID is the name of the node you want to access. If you only want to query the node you connected to, leave the TID blank.
- UID is your user ID. UID can be up to 10 characters.
- CTAG is any non-blank character series that does not have to be unique.
- PID is your password. PID can be up to 10 characters. PIDs are encrypted and are displayed as asterisks (*).

Input Example:

ACT-USER:PETALUMA:DXT:100::MYPASSWD;

Step 2 Confirm you receive a COMPLD response to indicate the command was completed successfully.

Response Example:

TID-000 1998-06-20 14:30:00

M 001 COMPLD

DXT:2003-01-02 14-04-49,0;

Command Actions and Categories

When you have connected and logged into a TL1 session, you are ready to begin issuing TL1 commands and autonomous messages. TL1 commands and autonomous messages can be used to accomplish a variety of actions. Determining the correct

command or autonomous message you need begins with identifying what action you want to perform. The first part of every command and autonomous message helps identify the action that command or autonomous message performs.

Table 1-2 TL1 Command and Autonomous Message Actions

Commands or Autonomous Messages That Begin With	Generally Do This	Command Example
ACT-	Activate	ACT-USER
ALW-	Allow	ALW-MSG-ALL
APPLY	Apply	APPLY
CANC (autonomous message)	Report	CANC (reports a cancelled session)
CANC-	Cancel	CANC-USER
CHG-	Change	CHG-ACCMD-<MOD_TACC>
CLR-	Clear	CLR-COND-SECU
CONN-	Connect	CONN-TACC-<MOD_TACC>
COPY-	Copy	COPY-IOSCFG
DISC-	Disconnect	DISC-TACC
DLT-	Delete	DLT-MSSPR
ED-	Edit/Change	ED-BITS
ENT-	Enter/Create	ENT-MSSPR
EX-	Exercise	EX-SW-<OCN_MSSPR>
INH-	Inhibit	INH-MSG-ALL
INIT-	Initialize	INIT-SYS
REPT (autonomous message)	Report	REPT ALM ENV
RLS-	Release	RLS-EXT-CONT
RMV-	Remove	RMV-<MOD2>
RST-	Restore	RST-<MOD2>
RTRV-	Retrieve	RTRV-COND-RING
SCHED-	Schedule	SCHED-PMREPT-<MOD2>
SET-	Set	SET-ATTR-ENV
SW-	Switch	SW-DX-EQPT
TST-	Test	TST-INSERRBITS-<MOD2>

The following table shows some examples of actions, categories, and commands that apply to the *Cisco NCS 2000 Series*.

Table 1-3 Some TL1 Category Examples (continued)

If You Want to	Look in this Category	Applicable Command or Autonomous Message
Create a 2-fiber or 4-fiber MS-SPRing	MS-SPRing	ENT-<MOD_RING>
Delete a cross-connection on a VC path	Cross Connections	DLT-CRS-<PATH>

Set the attributes of the air conditioner	Environment Alarms and Controls	SET-ATTR-CONT
Delete a card from the NE	Equipment	DLT-EQPT
Lockout a user from the NE	Security	INH-USER-SECU
See the alarms on a BITS	Synchronization	REPT ALM BITS[1]
Change the date on the NE	System	ED-DAT
Disconnect a test access path/point	Troubleshooting and Test Access	DISC-TACC
Perform an SNCP protection switch on an VC path	Protection	OPR-PROTNSW-<PATH>
Release an SNCP protection switch on an VC path	Protection	RLS-PROTNSW-<PATH>

Basic Commands

This section lists the basic commands to help you get started. You must be connected and logged into aTL1 session. After you issue a command, confirm you receive a COMPLD response to indicate the command was completed successfully.

Note If you receive a DENY response, first check the syntax you entered for accuracy.

- To perform an in-service card upgrade or downgrade on a system, see CHG-EQPT.
- To delete a card from the NE, see DLT-EQPT.
- To change configuration information on an E1 port, see ED-E1.
- To enter the card type and attributes for a given slot on an NE, see ENT-EQPT.
- To initialize the specified card and its associated subsystem(s), see INIT-SYS.
- To remove an equipment from the In Serv.ice state and place it into Maintenance, see RMV-EQPT.
- To provision an equipment into the In Service state from the Maintenance state, see RST-EQPT.
- To retrieve configuration information about an E1 port, see RTRV-<STM_TYPE>.
- To retrieve all alarms on a specific E1 port, see RTRV-ALM-<MOD2ALM.
- To retrieve all conditions on a specific E1 port, see RTRV-COND-<MOD2ALM>.
- To retrieve all alarms on a system, see RTRV-ALM-ALL.
- To retrieve all conditions on a system, see RTRV-COND-ALL.
- To retrieve all data, state, and shelf parameters on an associated equipment unit, see RTRV-EQPT.
- To retrieve all general attributes on a system, see RTRV-NE-GEN.
- To retrieve actual PM values on an E1 port, see RTRV-PM-<MOD2>.

[1]REPT ALM BITS is an autonomous message. Autonomous messages are either spontaneously triggered by the NE or scheduled by the NE user via other commands.

- To retrieve the thresholds in place for an E1 port, see RTRV-TH-<MOD2>.
- To create a loopback, see OPR-LPBK-<MOD2>.
- To release a loopback, see RLS-LPBK-<MOD2NCSPAYLOAD>.

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, 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 characters 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 common language location identifier (CLLI) code. To establish the TID for a node, use the Provisioning > General tab in Cisco Transport Controller (CTC).

The AID is an access code used to identify and address specific objects within the NE. 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 NE 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 composed of identifiers (alphanumeric, beginning with a letter) or decimal numerals (a string of decimal digits with an optional nontrailing period).

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

- Angle brackets (< >) enclose a symbol specifier, for example <CTAG>.
- Square brackets ([ ]) enclose an optional symbol, for example [<TID>].
- Quotation marks (“ ”) enclose a literal character, as shown in the following output example:

  SLOT-7:PLUGIN,TC,,,,,,,:\“EQUIPMENT PLUG-IN\”,TCC

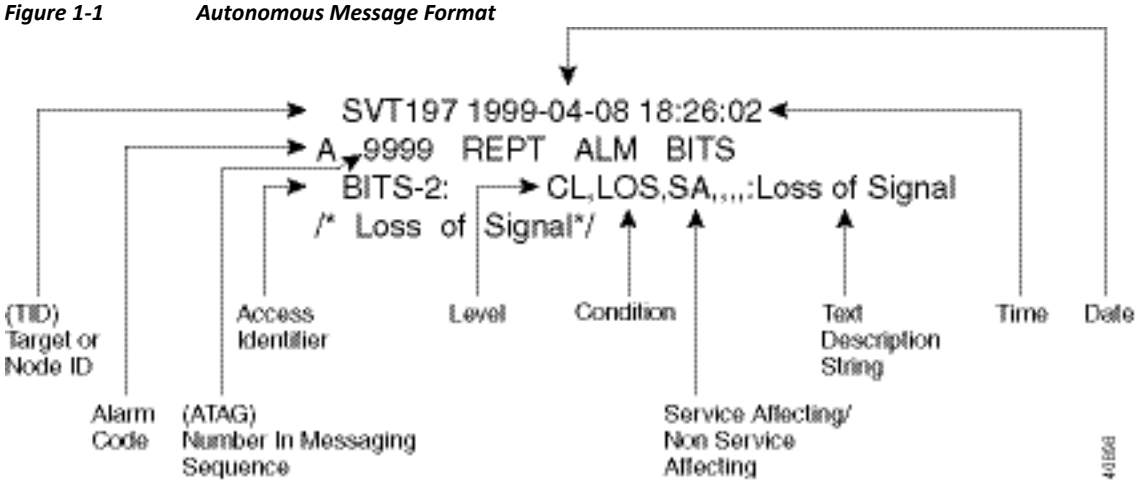
Autonomous Message Syntax

Autonomous messages are used to report alarms, configuration changes, and condition changes. Many of these messages, such as those relating to alarm conditions, are spontaneously triggered by the NE itself without intervention. Other messages, such as those relating to the reporting of periodic condition states or performance data values, are scheduled by the NE user through other commands. Because you do not issue autonomous messages to the NE, they do not include input formats or input examples.

The following figure 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 NE. Cisco NEs 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 the following figure.

Figure 1-1 Autonomous Message Format



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^—Nonalarmed message

Critical, Major, and Minor correspond to the reporting of alarmed events. The Nonalarmed message designation is used when the NE is reporting nonalarmed events, periodic measurements, or results of previously scheduled diagnostics or audits. If multiple alarms are reported in the same message, the alarm code represents the highest severity of those be ing 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”
```

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.

General Rules

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

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.

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 Section Explicit List of AIDs—No Wildcards. The caveat is that the implicit list only includes AIDs that apply to the command. For example, assume SLOT-3 contains an STM-4 card and only VC-4-4 and VC-4-7 are of path-width VC4 while the rest are VC3. An ED-VC3 command with VC-4-ALL AID applies only on the VC3 implicit AID set VC4-{1,2,3,10,11,12} (with the ED-VC3 command).

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.

If all valid AIDs fail to match, DENY is returned.

Explicit List Grouped With Implicit List

If the set of AIDs is composed 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 in the "Explicit List of AIDs—No Wildcards" and "Implicit List of AIDs—Single AID With Wildcard" sections respectively. Apply the logic in the following table to the results from the two subsets:

Table 1-4 Explicit List, Implicit List, and Combined List Logic

Explicit List Returns	Implicit List Returns	Combined List Returns
COMPLD	COMPLD	COMPLD plus matching list
COMPLD	DENY	PRTL with errors plus matching list
PRTL	COMPLD	PRTL with errors plus matching list
PRTL	DENY	PRTL with errors plus matching list
COMPLD	PRTL	PRTL with errors plus matching list
DENY	PRTL	PRTL with errors plus matching list
DENY	COMPLD	PRTL with errors plus matching list
PRTL	PRTL	PRTL with errors plus matching list
DENY	DENY	DENY with errors

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: COMPLD, PRTL, and DENY. You can specify an explicit, implicit, or explicit with implicit list as explained in the following sections.

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 (for example, the user specifies VC-N-13 when SLOT-N only contains an STM-4) or for each AID where no matching cross-connection is found.

If the result is either PRTL or COMPLD, then a list of matching cross-connections will accompany the response.

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

Apply the following rules to the set:

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

For example, consider the command **RTRV-CRS-VC3:[<TID>]:VC-9-ALL:<CTAG>;** where VC-9-ALL maps to VC-9-{1,2,3,10,11,12} because there is a single-port STM-4 card in Slot 3 with VC-4 defined for VC-9-4 and VC-9-7. In this example, the set is traversed and returns only the VC-3 cross-connections that exist using endpoints in that set. If no cross-connections are retrieved, COMPLD is returned.

Explicit List Grouped With Implicit List

When you have determined the implicit list, apply the rules in the Implicit List of AIDs—Single AID With Wildcard to the implicit list and the rules from the Explicit List of AIDs—No Wildcards to the explicit list. Apply the logic in Explicit List, Implicit List, and Combined List Logic to the results from the two subsets.

User Security Levels

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 timeouts. Starting with Release 4.0, timeouts 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 through TL1 with the SET-ATTR-SECUDFLT command.

Security Default Timeouts shows security levels and their default timeouts.

Table 1-5 Security Default Timeouts

Security Level	Default Timeout
Retrieve	Unlimited
Maintenance	60 minutes
Provisioning	30 minutes

Superuser	15 minutes

Keyboard Shortcuts

TL1 has the ability to store previously issued commands so that they can be recalled for future use. A maximum of 20 commands are stored. All types of commands are stored, including invalid commands. If the session is a GNE session, it will store commands sent to both the gateway network element (GNE) and the end network element (ENE).

- Pressing **Ctrl-R** recalls the last command issued. Each time Ctrl-R is pressed, a previously issued command is displayed.
- Pressing **Ctrl-F** recalls commands in the forward direction.
- Pressing **Ctrl-P** provides the list of options available, to be used with a particular parameter in the command.

When a command has been recalled, you can use the Backspace key to edit the command as necessary. Cursor keys (for example, left and right arrows) are not permitted for editing.

Note Command recall keys are only available when using a serial port session or an interactive Telnet session (for example, **telnet <hostname> 3083**).

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. For further assistance, contact the Cisco Technical Assistance Center (TAC) at www.cisco.com or call (800) 553-2447 for unresolved problems.

Default Values

This section lists the default values applied by the system when they are not explicitly specified during provisioning.

MS-SPRing

MS-SPRing Default Values lists the default MS-SPRing values that are applied by the system when they are not explicitly specified during MS-SPRing provisioning (ENT-MSSPR).

Table 1-6 MS-SPRing Default Values

MS-SPRing Parameter	Default
RVRTV	Y
RVTM	5.0 minutes
SRVRTV	Y
SRVTM	5.0 minutes

Cross-Connections

Cross-Connections Default Values lists the default cross-connection values that are applied by the system when they are not explicitly specified during circuit creation (ENT-CRS).

Table 1-7 Cross-Connections Default Values

Cross-Connection Parameter	Default
CCT	2WAY for both VCp and VC11 cross-connections

Environment

Environment Default Values lists the default environment alarms and controls values applied by the system when they are not explicitly specified during environment alarms and controls provisioning.

Table 1-8 Environment Default Values

Commands	Parameter Default
OPR-EXT-CONT	CONTTYPE is provisioned in the respective AID. There is no default for it. It is only used as a filter if entered. DUR always defaults to 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 either NTFCNCDE or ALMTYPE, which are only used as filters if entered.
RTRV-EXT-CONT	CONTTYPE defaults to the control type associated with the AID.
SET-ATTR-ENV	NTFCNCDE defaults to NR. ALMTYPE defaults to NULL. ALMMSG defaults to \“Env Alarm Input 1\”.

Equipment

Equipment Default Values lists the default equipment values that are applied by the system when they are not explicitly specified during equipment provisioning.

Table 1-9 Equipment Default Values

Commands	Parameter Default
ALW-SWTOPROTN-EQPT, INH-SWTOPROTN-EQPT, ALW-SWTOWKG-EQPT, and ING-SWTOWKG-EQPT	DIRN defaults to BTH.
ENT-EQPT	PROTID, PRTYPE, RVRTV, and RVTM default to NULL.
SW-DX-EQPT	MODE defaults to NORM.
SW-TOPROTN-EQPT and SW-TOWKG-EQPT	MODE defaults to NORM. DIRN defaults to BTH.

Performance

Performance Default Values lists the default performance values that are applied by the system when they are not explicitly specified during performance provisioning.

Table 1-10 Performance Default Values

Commands	Parameter Default
INIT-REG-<MOD2>	LOCN defaults to NEND (near end).
RTRV-PM-<MOD2>	LOCN defaults to NEND. TMPER defaults to 15 minutes.
RTRV-TH-<MOD2>	MONTYPE defaults to CVL for STM/OCN. MONTYPE defaults to ESP for VCp. MONTYPE defaults to UASV for VC11. LOCN defaults to NEND. TMPER defaults to 15 minutes.
SET-PMMODE-<VC_PATH>	PMSTATE defaults to ON.
SET-TH-<MOD2>	LOCN defaults to NEND. TMPER defaults to 15 minutes.

Ports

Ports Default Values lists the default port values that are applied by the system when they are not explicitly specified during port provisioning.

Table 1-11 Ports Default Values

Ports	Parameter Default
STM Line	DCC defaults to N. TMGREF defaults to N. SYNCMSG defaults to Y. SENDDUS defaults to N. PJMON defaults to 0. SFBER defaults to 1E-4. SDBER defaults to 1E-7. MODE defaults to SDH. PST defaults to UNLOCKED.

SDH Line Protection

SDH Line Protection Default Values lists the default SDH line protection values that are applied by the system when they are not explicitly specified during SDH line protection provisioning.

Table 1-12 SDH Line Protection Default Values

Commands	Parameter Default

EX-SW-<STM>	ST (switch type) is optional. For MS-SPRing protection switch only, ST defaults to MS-SPRing switch type.
STM 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. RVRTV defaults to N (nonrevertive mode). RVTM defaults to 5.0 minutes. PSDIRN defaults to UNI.
OPR-PROTNSW-<STM>	ST (switch type) is optional. For MS-SPRing protection switch only, ST defaults to MS-SPRing switch type.

VC Paths

VC Paths Default Values lists the default VC path values that are applied by the system when they are not explicitly specified during VC path provisioning.

Table 1-13 VC Paths Default Values

VC Paths	Parameter Default
VC Path	SFBER, SDBER, RVRTV, and RVTM apply to SNCP VC paths only. SFBER defaults to 1E-4. SDBER defaults to 1E-6. RVRTV defaults to N. RVTM defaults to empty because RVRTV is N when SNCP VCp is created. EXPTRC defaults to a copy of the provisioned string or NULL when TRCMODE is OFF mode. EXPTRC defaults to the user entered string when the TRCMODE is MANUAL mode. 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. INCTRC defaults to the incoming string (NULL) when the TRCMODE is under OFF mode. 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.

Synchronization

Synchronization Default Values lists the default synchronization values that are applied by the system when they are not explicitly specified during synchronization provisioning.

Table 1-14 Synchronization Default Values

Synchronization	Parameter Default

BITS	LINECDE defaults to HDB3. FMT defaults to E1-CRCMF. SYNCMSG defaults to Y. PST defaults to UNLOCKED.
NE-SYNCN	TMMDE defaults to EXTERNAL. RVRTV defaults to Y. RVTM defaults to 5.0 minutes.
SYNCN	PRI STATUS defaults to ACT. SEC STATUS defaults to STBY. THIRD STATUS defaults to STBY.

Testing

Testing Default Values lists the default testing values that are applied by the system when they are not explicitly specified during testing provisioning.

Table 1-15 Testing Default Values

Commands	Parameter Default
OPR-LPBK	LPBKTYPE defaults to FACILITY.
RLS-LPBK	LPBKTYPE defaults to the current existing loopback type.

Parameter Types

This section provides a description of all message parameter types defined for the TL1 messages used in the Cisco NCS 2000 series. Individual parameters are listed within each command description.

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.

   The ATAG format is x.y, where:

   - x is the sequence number of this alarmed event. This is an integer in the range of 0 to 9999.
   - y is the sequence number of the previous alarmed event that is related to this alarmed event. This is an integer in the range of 0 to 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.

   The ATAG format is x, where x is the sequence number of the database change update message. This is an integer in the range of 0 to 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.

   The ATAG format is x, where x is the sequence number of the PM report. This is an integer in the range of 0 to 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 CANC fall under this category. This is an integer in the range 0 to 9999. For example:

   TID-000 1998-06-20 14:30:00
   A 1 CANC
   “User”
   ;

CTAG Description

The 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 composed of identifiers (alphanumeric, beginning with a letter) or nonzero decimal numbers (a string of decimal digits with an optional nontrailing period).

A zero in the response field is valid when indicating an error; for example, issuing a semicolon by itself results in:

```
   TID-000 1998-06-20 14:30:00
M 0 DENY IISP
   /* Input, Garbage */
;
```

TID Description

The TID is the name of the NE where the command is addressed. TID is the Telcordia name for the system.

Parameter Notes

The following list contains general notes that apply to parameters:

- 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 is denied.

- 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 is denied.
- The correct way to issue a command where parameters might be in conflict is to:
  - Issue that command and change all relevant parameters to compatible values.
  - Issue the command again to change the target values.
- The default values for command attributes can be seen using the RTRV commands, provided they are not altered by a provisioning command.
- 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.

Log Out of TL1

When you have finished using TL1, you must log out of the session. Logging out of TL1 only has to be done once per session.

Step 1 If you logged into TL1 via Cisco Transport Controller (CTC), you must log out by pressing the **Disconnect** button or by issuing the CANC-USER command as shown in the following steps.

If you logged into TL1 via Telnet or craft interface, you must log out by issuing the CANC-USER command.

Input Format:

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

- TID is the name of the node you want to access. If you only want to query the node you connected to, leave the TID blank.
- USERID is the user ID. Maximum 10 alphanumeric characters.
- CTAG is any non-blank character series that does not have to be unique.

Input Example:

CANC-USER:PETALUMA:DXT:100;

Step 2 Confirm you receive a COMPLD response to indicate the command was completed successfully.

Response Example:

TID001 03-07-22 02:45:12

M 100 COMPLD;

Chapter 2: Provisioning Procedures

Setting Up TL1 Communication

The period during which a user is logged into the Cisco NCS 2000 Series is called a session. There are three options you can use to open a session (log in):

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

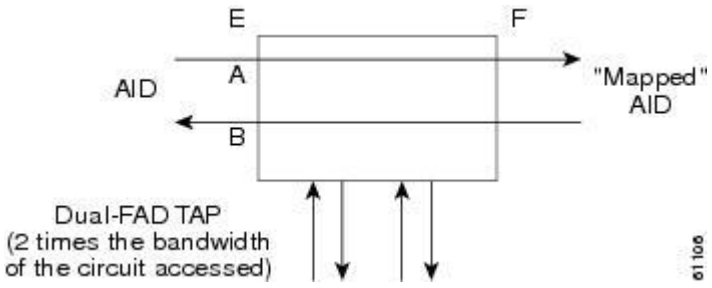
Test Access

The test access (TACC) feature allows a third-party Broadband Remote Test Unit (BRTU) to create nonintrusive test access points (TAPs) to monitor the circuits on the Cisco NCS 2000 Series 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 through the use of various bit test patterns. The two BRTUs supported by the Cisco NCS 2000 Series 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 Cisco NCS 2000 Series. You can view test access information in CTC; in node view click the **Maintenance > Test Access** tabs.

A TAP provides the capability to connect 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 (Circuit With No Access Dual FAD TAP).

Figure 2-1 Circuit With No Access Dual FAD TAP



A dual facility access digroup (FAD) TAP uses twice the bandwidth of the circuit under test. This can be specified by the

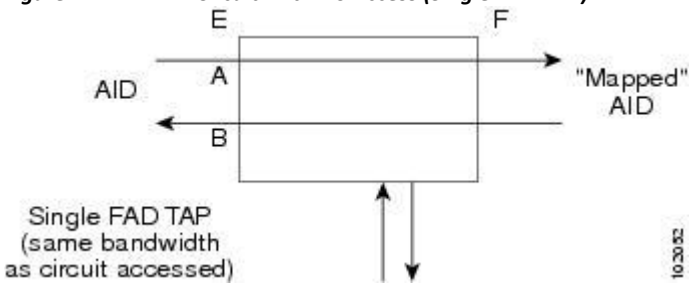
TAPTYPE parameter as shown in ED-<MOD2> command syntax in the TAP Creation and Deletion

. The values are SINGLE and DUAL. It defaults to DUAL.

A single FAD TAP uses half the bandwidth as that of the dual FAD, for example, 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

. The values are SINGLE and DUAL. The MONEF, SPLTEF, and LOOPEF modes are not supported by single FAD TAPs (Circuit With No Access (Single FAD TAP)).

Figure 2-2 Circuit With No Access (Single FAD TAP)



Test Access Terminology

The terminology in Test Access Terminology is used in conjunction with test access.

Table 2-2 Test Access Terminology

Term	Definition
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

The following path naming conventions apply to test access:

- 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)

TAP Creation and Deletion

TL1 supports commands to create, delete, connect, change, retrieve, and disconnect TAPs.

2.2.2.1 ED-<rr>

The edit command (ED-<rr>) is used to change an existing port/virtual container (VC) to a TAP.

Note <rr> indicates one of the following parameters: **E1, E3, DS3I, VC12, VC3, VC4, VC42C, VC43C, VC44C, VC48C, VC416C, VC464C.**

Input Format:

ED-(E1, E3, DS3I, VC12, VC3, VC4, VC42C, VC43C, VC44C, VC48C, VC416C, VC464C):[<TID>]:<AID>:<CTAG>[:::TACC=<TACC>],[TAPTYPE=<TAPTYPE>];

Edit an existing port/VC and change it to a TAP so it can be used when requesting TACC connections. This includes an optional parameter TACC=n that defines the port/VC as a test access point with a selected unique TAP number. This TAP number will be used when requesting test access connections to circuit cross-connects under test. The TAP creation will fail if the port/VC already has a cross-connect on it.

The TAPTYPE parameter values are SINGLE and DUAL. The MONEF, SPLTEF, and LOOPEF modes are not supported by single FAD TAPs. It defaults to DUAL.

Note • This command generates a REPT DBCHG message.

- The alarms and conditions on TACC paths can be retrieved by the RTRV-ALM-ALL or RTRV-ALM-<MOD2> commands.
- The TAP is a persistent object; it will exist even after the user has logged out of the TL1 session.

The following rules apply to TAP numbers:

- A TAP number is an integer in the range of 1 to 999. When TACC=0 is specified, the TAP is deleted (if already present).
- A TAP number is unique across E1, E3, DS3I, VC12, VC3, VC4, VC42C, VC43C, VC44C, VC48C, VC416C, and VC464C TAPs in the system.
- A TAP number is not editable.

2.2.2.2 ED-E1

When an ED-E1 command is executed with a specified TACC value for a given E1 port/facility, a dual facility access digroup (DFAD) is created by using the specified port/facility and the consecutive port/facility.

The command in Create a DFAD on FAC-1-1 and FAC-1-2 creates a DFAD on FAC-1-1 and FAC-1-2.

Example 2-1 Create a DFAD on FAC-1-1 and FAC-1-2

```
    ED-E1::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-connections until the TAP is deleted.

2.2.2.3 ED-E3

When an ED-E3 is executed with a specified TACC value for a given E3 port/facility, a DFAD is created by using the specified port/facility and the consecutive port/facility.

The command in Create an E3 DFAD on FAC-2-1 and FAC-2-2 creates an E3 DFAD on FAC-2-1 and FAC-2-2.

Example 2-2 Create an E3 DFAD on FAC-2-1 and FAC-2-2

```
    ED-E3:: 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-connections until the TAP is deleted.

2.2.2.4 ED-DS3I

The ED-DS3I command is used for DS3 access on a DS3i card. When an ED-DS3I is executed with a specified TACC value for a given DS3i card, a DFAD is created by using the specified facility and the consecutive port/facility.

The command in Create a DFAD on FAC-16-1 and FAC-16-1 creates DFAD on FAC-16-1 and FAC-16-1.

Example 2-3 Create a DFAD on FAC-16-1 and FAC-16-1

```
    ED-DS3I::FAC-16-1:12:::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-connections until the TAP is deleted.

2.2.2.5 ED-VC4n

When an ED-VC4n is executed for a TACC, it assigns the VC path for the first two-way test access connection and VC+1 as the second two-way connection. Similarly, for VC42c, VC43c, VC44c, VC48c, VC416c, the next consecutive VC of the same width is chosen. The TAP creation will fail if either of the consecutive VC's are not available.

The command in Create a TAP on VC4-5-1-1 and VC4-5-1-2. creates a TAP on VC4-5-1-1 and VC4-5-1-2.

Example 2-4 Create a TAP on VC4-5-1-1 and VC4-5-1-2.

```
ED-VC4::VC4-5-1-1:12:::TACC=4;

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

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

The command in Create a VC48C Dual TAP on VC4-6-1-1 and VC4-6-1-25. creates a VC48C Dual TAP on VC4-6-1-1 and VC4-6-1-25.

Example 2-5 Create a VC48C Dual TAP on VC4-6-1-1 and VC4-6-1-25.

```
ED-VC48C::VC4-6-1-1:12:::TACC=5;

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

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

2.2.2.6 ED-VC12

When an ED-VC12 is executed for a TACC, a VC12 TAP is created. The specified VC12 access identifier (AID) is taken as the first VC12 connection, and the consecutive VC12 connection is used as the second path for the TAP.

The command in Create a VC12 TAP on VC12-1-1-1-1-1 and VC12-1-1-1-2-1 creates a VC12 TAP on VC12-1-1-1-1-1 and VC12-1-1-1-2-1.

Example 2-6 Create a VC12 TAP on VC12-1-1-1-1-1 and VC12-1-1-1-2-1

```
    ED-VC12::VC12-1-1-1-1-1:12:::TACC=6;

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

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

2.2.2.7 ED-VC3

When an ED-VC3 is executed for a TACC, a VC3 TAP is created. The specified VC3 AID is taken as the first VC3 connection, and the consecutive VC3 connection is used as the second path for the TAP.

The command in Create a VC3 TAP on VC3-1-1-1 and VC3-1-1-2 creates a VC3 TAP on VC3-1-1-1 and VC3-1-1-2.

Example 2-7 Create a VC3 TAP on VC3-1-1-1 and VC3-1-1-2

```
    ED-VC3::VC3-1-1-1:12:::TACC=6;

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

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

Connect Test Access Points

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

> **Note** <rr> indicates one of the following parameters: **E1, E3, DS3I, VC12, VC3, VC4, VC42c, VC43c, VC44c, VC48c, VC416c, VC464c.**

Input Format:

CONN-TACC-(E1, E3, DS3I, VC12, VC3, VC4, VC42c, VC43c, VC44c, VC48c, VC416c, VC464c):[<TID>]:<AID>:<CTAG>::<TAP>:MD=<MD>;

Connect the port/VC4n/VC3 defined by <AID> to the port/VC4n/VC3 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 (nonintrusive), Split, or Loop (intrusive) modes. The various modes are described in the **Error! Reference source not found.**.

> **Note** The connection is maintained only for the duration of the TL1 session (nonpersistent).
>
> **Note** The TAP number is displayed at the output if the CONN-TACC command completes successfully.

The following error codes are 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 Create a Connection Between TAP 1 and FAC-1-3 creates a connection between TAP number one and the port/facility FAC-1-3 with the access mode defined as MONE. The various modes are described in the **Error! Reference source not found.**.

Example 2-8 Create a Connection Between TAP 1 and FAC-1-3

```
CONN-TACC-E1::FAC-1-3:12::1:MD=MONE;

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

Change Access Mode

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

> **Note** <rr> indicates one of the following parameters: **E1, E3, DS3I, VC12, VC3, VC4, VC42c, VC43c, VC44c, VC48c, VC416c, VC464c.**

Input Format:

CHG-ACCMD- (E1, E3, DS3I, VC12, VC3, VC4, VC42c, VC43c, VC44c, VC48c, VC416c, VC464c):[<TID>]:<TAP>:<CTAG>::<MD>;

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

The following error codes are supported:

- SRCN—Requested condition already exists
- SRAC—Requested access configuration is invalid
- RTEN—Requested TAP does not exist

The command in Change TAP 1 Access Mode to LOOPE changes the access mode of TAP 1 to LOOPE.

Example 2-9 Change TAP 1 Access Mode to LOOPE

```
CHG-ACCMD-E1::1:12::LOOPE;

   DV9-99 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.

Retrieving Test Access Point Information

The following sections retrieve TAP information using the RTRV-<rr> and RTRV-TACC commands.

2.2.5.1 RTRV-<rr>

The RTRV-<rr> command retrieves TAP information.

Note A generic ALL AID would behave similarly to an ALL AID such as, SLOT-ALL or FAC-1-ALL for all the RTRV-<rr> commands that support a generic ALL AID.

Note <rr> indicates one of the following parameters: **E1, E3, DS3I, VC12, VC3, VC4, VC42c, VC43c, VC44c, VC48c, VC416c, VC464c.**

Input Format:

RTRV- (E1, E3, DS3I, VC12, VC3, VC4, VC42c, VC43c, VC44c, VC48c, VC416c, VC464c):[<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 appear in the output list if the requested <AID> is defined as a TAP. The example in Retrieve TAP Information for FAC-1-1 retrieves TAP information for FAC-1-1.

Example 2-10 Retrieve TAP Information for FAC-1-1

```
RTRV-E1::FAC-1-1:D;

   VA454E-96 2003-04-24 20:06:46
M  D COMPLD
"FAC-1-1::LINECDE=HDB3,FMT=E1-MF,TACC=1,TAPTYPE=DUAL,SOAK=32:UNLOCKED,"
;
```

2.2.5.2 RTRV-TACC

The RTRV-TACC command can also be used to retrieve details associated with a TAP.

Input Format:

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

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. An example of the RTRV-TACC command is provided in Retrieve Details for TAP 241.

Example 2-11 Retrieve Details for TAP 241

```
RTRV-TACC:CISCO:241:CTAG;

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

Disconnect Test Access Points

TAPs can be disconnected in the following ways:

- Issue the DISC-TACC command.
- Delete or modify the accessed connection.
- Drop the TL1 session for any reason, including logout or a dropped Telnet session.
- Switch or reset a TCC2/TCC2P/TCC3/TSC card.

The disconnect TAP (DISC-TACC) command disconnects the TAP and puts the connection back to its original state (no access).

Input Format:

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

The command in disconnects TAP 1 from the circuit/cross-connect under test.

Example 2-12 Disconnect TAP 1 from the Circuit/Cross-Connect Under Test

```
DISC-TACC::1:12;

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

Note This command generates a REPT DBCHG message.

The following error codes are supported:

- SADC—Already disconnected
- SRTN—Unable to release TAP

Delete Test Access Points

To delete a TAP, issue the edit TAP command with the TACC set to zero.

Input Format:

ED-<VC_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 VC bandwidth will be stranded.

Test Access Configurations

This section shows single node and multinode test access configurations. Single Node View (Node 1) shows a single node test access configuration. Multi-Node View (MONE Example) shows a multinode (MONE) test access configuration.

Use the following commands to configure test access:

Step 1 **ED-VC4::VC4-1-1-1:90:::TACC=1;**

This command changes VC4-1 and VC4-2 on Slot 1 to a TAP. The CTAG is 90. It sets the TACC number to 1.

Step 2 **CONN-TACC-VC4::**<AID for E or F depending on MD>**:91::1:MONE**

This command connects the <AID> to the TACC defined by TAP 1 on the E side. The 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, then the top line would be connected to the other side of the path, or what is shown in Single Node View (Node 1) as the F side. When a CONN-TACC is set up, these designations cannot change until a DISC-TACC or another CONN-TACC command is executed. The connection is based on the AID supplied.

Figure 2-3 Single Node View (Node 1)

In the Single Node View (Node 1) configuration, there might be a single DS-3 port wired up, configured as 14 dual FADs (28 VTs).

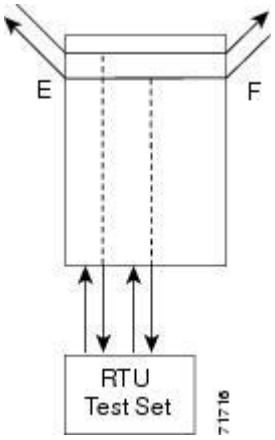
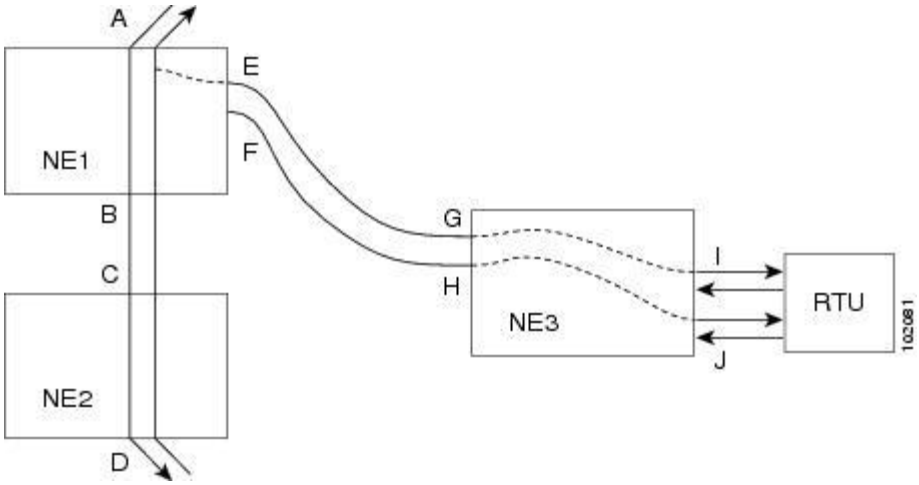


Figure 2-4 Multi-Node View (MONE Example)



The following commands are performed on NE3:

ENT-CRS-VC4::<AID I-G>:100::2WAY;

A connection, not a TAP. CTAG is 100.

ENT-CRS-VC4::<AID J-H>:101::2WAY;

Second connection, not a TAP.

The following commands are performed on NE1:

Assuming the path from A to B is already entered, the A and B points in Multi-Node View (MONE Example) refer to entry and exit points on the node or different cards. The E/F designators refer to the two-way connections from NE3.

The following command creates a TAP with VC4-1-1-1 and VC4-1-1-2 through NE1. TAP number assigned is 4.

ED-VC4::VC4-1-1-1:D:::TACC=4;

The following command connects TAP 4 to the circuit:

CONN-TACC-VC4::<AID A or B>:102::4:<MD>

> **Note** The I and J connections above are TAPs in Single Node View (Node 1), but normal connections in Multi-Node View (MONE Example).

Unmapped AID Test Access Point Connections

The Cisco NCS 2000 Series support connections to unmapped AIDs (unmapped circuits). The TAPs can be connected to an unmapped AID, for example, an AID that does not have a cross-connect on it. The access modes supported are: MONE, SPLTE, and LOOPE.

Create a TAP on VC4-5-1-1 creates a TAP on VC4-5-1-1.

Example 2-13 Create a TAP on VC4-5-1-1

```
ED-VC4::VC4-5-1-1:12:::TACC=1;

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

Create an Unmapped AID Connection with a MONE Access Mode creates an unmapped AID connection with a MONE access mode.

Example 2-14 Create an Unmapped AID Connection with a MONE Access Mode

```
CONN-TACC-VC4::VC4-5-1-3:12::1:MD=MONE;

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

Note VC4-5-1-3 does not have a cross-connect on it. VC4-5-1-3 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 one-way circuits (1-way, SNCP_HEAD, SNCP_DROP, SNCP_DC, SNCP_EN), if the AID specified is the source AID, the direction is designated as From E in Modes Supported by Circuit Type . If the AID specified is the destination AID or the drop side, the direction is designated as From F in Modes Supported by Circuit Type .

One-Way Circuit

The examples in this section assume that a VC TAP is already created with a TAP number of 1.

ENT-CRS-VC3::VC-5-1,VC-5-2:12::1WAY;
DV9-99 1970-07-01 20:29:06
M 12 COMPLD;

CONN-TACC-VC3::VC-5-1:12::1:MD=MONF;
DV9-99 1970-01-01 20:29:47
M 12 DENY
EANS
VC-5-1
/*INCORRECT TAP MODE*/

The AID specified in the above CONN-TACC command is the source AID for the one-way circuit. In this case, only MONE and SPLTA modes are allowed because there is no B path in the case of a one-way circuit (see Modes Supported by Circuit Type).

CONN-TACC-VC3::VC-5-1:12::1:MD=MONE;
DV9-99 1970-01-01 20:30:09
M 12 COMPLD

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.

CONN-TACC-VC3::VC-5-2:12::1:MD=MONF;
DV9-99 1970-01-01 20:30:32
M 12 COMPLD

Note
- The same examples apply for SNCP_HEAD, SNCP_DROP, SNCP_DC, and SNCP_EN, which are all one-way circuits.
- The connections are made only to the working path, irrespective of which path is currently active.

Two-Way Circuits

For two-way circuits, all the modes are allowed as shown in Modes Supported by Circuit Type . The same applies for SNCP_SNCP and SNCP circuit types. In the case of SNCP_SNCP and SNCP circuits, the working path is connected irrespective of which path is currently active.

2.2.10.3 Unmapped AID

As explained in the Unmapped AID Test Access Point Connections

, connections can be made to an AID without a cross-connect on it. The modes supported are MONE, SPLTE, and LOOPE as shown in Modes Supported by Circuit Type .

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

Table 2-3 Modes Supported by Circuit Type

Circuit Type (Direction)	MONE	MONF	MONEF	SPLTE	SPLTF	SPLTEF	LOOPE	LOOPF	SPLTA	SPLTB
One-way (from E[2])	X	—	—	—	—	—	—	—	X	—
One-way (from F[3])	—	X	—	—	—	—	—	—	—	X
Two-way	X	X	X	X	X	X	X	X	X	X
SNCP	X	X	X	X	X	X	X	X	X	X
SNCP_HEAD (from E)	X	—	—	—	—	—	—	—	X	—
SNCP_HEAD (from F)	—	X	—	—	—	—	—	—	—	X
SNCP_DROP SNCP_DC SNCP_EN (from E)	X	—	—	—	—	—	—	—	X	—

[2]In the case of all one-way circuits (1-way, SNCP_HEAD, SNCP_DROP, SNCP_DC, and SNCP_EN), if the AID specified is the source AID, the direction is designated as “from E” in this table.

[3]In the case of all one-way circuits (1-way, SNCP_HEAD, SNCP_DROP, SNCP_DC, and SNCP_EN), if the AID specified is the destination AID or the drop side, the direction is designated as “from F” in this table.

SNCP_DROP SNCP_DC SNCP_EN (from F)	—	X	—	—	—	—	—	—	—	X
SNCP_SNCP	X	X	X	X	X	X	X	X	X	X
Unmapped AID	X	—	—	X	—	—	X	—	—	—

TL1 Gateway

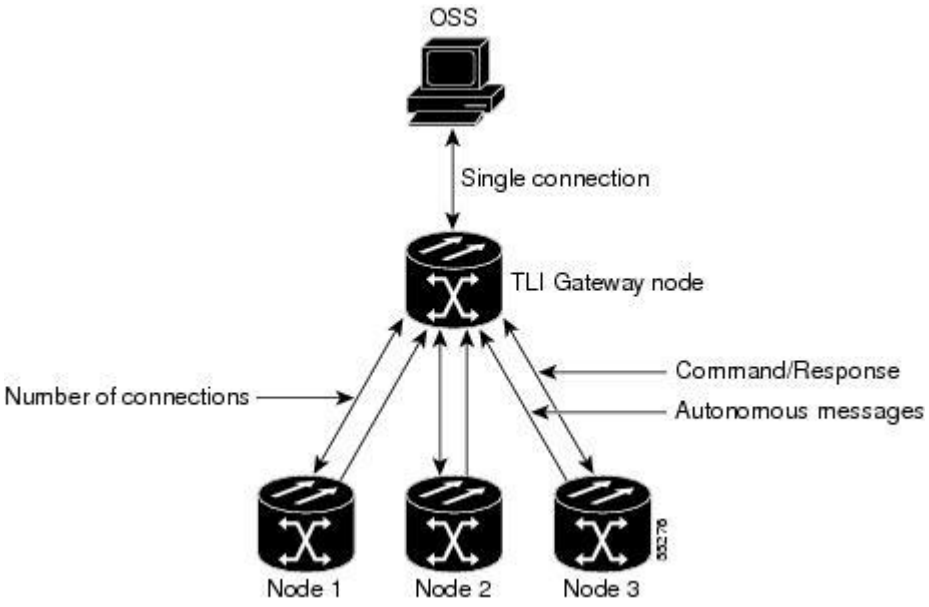
This section describes the TL1 gateway and provides procedures and examples for implementing TL1 gateway on the Cisco NCS 2000 Series.

Gateway Network Element Topology

You can issue TL1 commands to multiple nodes through a single connection through the TL1 gateway. Any node can serve as a Gateway Network Element (GNE), End 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.

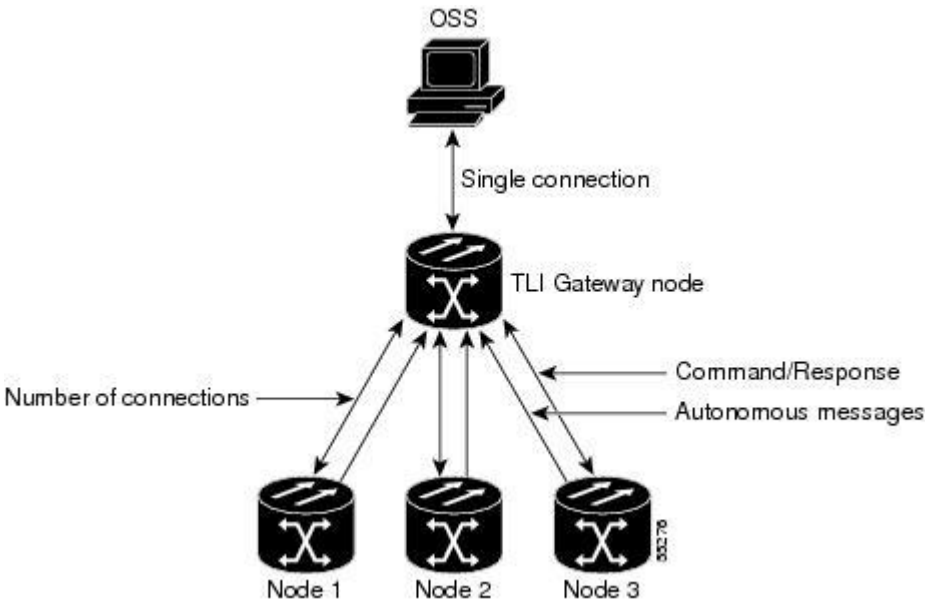
To implement the TL1 gateway, use the desired ENE's TID in the ACT-USER command to initiate a session between the GNE and the ENE. After a session is established, you must enter the ENE's TID in all subsequent commands that are destined for the ENE. From the GNE, you can access several remote nodes, which become the ENEs. The ENEs are the message destinations or origins. The INE handles the data communications channel (DCC) TCP/IP packet exchange. However, if the ENE is directly connected through DCC to the GNE, the INE does not exist.

Figure 2-25 ***The GNE session is the connection that multiplexes TL1 messages between the operation support system (OSS)/craftsperson and the GNE. The GNE demulitplexes incoming 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.***



shows the GNE topology.

Figure 2-25 Example of a GNE Topology



TL1 Sessions

Each NE can support up to a maximum of 20 concurrent communication sessions (connections from an OS/NE to the GNE). The TL1 connections can be made through telnet sessions from the LAN or from the craft/serial port connection on the NE. One TL1 session is reserved for the active serial port connection. The remaining 19 sessions are used for TL1 sessions through the LAN (wire-wrap, active serial port, or DCC). Number of TL1 Sessions per Platform shows the number of serial port and LAN connections per platform.

Table 2-4 Number of TL1 Sessions per Platform

Platform	Number of Serial Port Sessions	Number of LAN Sessions	Total Number of TL1 Sessions
Cisco NCS 2002	1	19	20
Cisco NCS 2006	1	19	20

TL1 Gateway and ENE Sessions

Only a limited number of TL1 users logged into an NE at any given time can establish sessions to other ENEs. The active serial port sessions are reserved and can always become a GNE session. The number of ENE sessions is based on the number of gateway communications sessions (GNE sessions).

Each NE can support up to 12 concurrent communication gateway sessions, depending on the NE type. The maximum number of ENE sessions also varies depending on the NE type.

You can dynamically distribute the maximum number of ENE sessions to balance the number of concurrent gateway communication sessions. The GNE treats the concurrent gateway communication sessions and ENE/GNE limit as a resource pool. It continues to allocate resources until the pool is exhausted. When the pool is exhausted, the GNE returns an “All Gateways in Use” message or an “All ENE Connections in Use” message.

Note The speed of the TL1 gateway and the maximum number of connections are limited by shared system resources, such as CTC, CTM, etc. The response time is slow as connections are increased and activity on these connections increases. Alarm storms, additional users, network latency, etc. also increase response time.

The gateway resource pools for each platform are shown in Gateway Resource Pool.

Table 2-5 Gateway Resource Pool

Platform	Maximum Number of GNE Sessions	Maximum Number of ENEs over IP DCC	Maximum Number of ENEs over OSI DCC
Cisco NCS 2002	11 (10 + 1)	176	176
Cisco NCS 2006	11 (10 + 1)	176	176

Log Into a Remote ENE

Step 1 Telnet or connect through the 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)

To forward commands when you are logged into ENE 1 and ENE 3, enter a command and designate a specific TID, as shown in the following examples.

Enter the following command to retrieve the header of Node 1:

RTRV-HDR:NODE1::1;

Enter the following command to retrieve the header of Node 3:

RTRV-HDR:NODE3::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 begin to receive 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. To disconnect ENE1, enter the following command:

CANC-USER:NODE1:<USERNAME>:1;

To disconnect ENE2, enter the following command:

CANC-USER:NODE3:<USERNAME>:3;

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

Ring Provisioning

This section provides information and sample procedures for setting up VC circuits over existing subnetwork connection protection (SNCP) ring and multiplex section-shared protection ring (MS-SPRing) configurations using TL1, including:

- SNCP topology
- SNCP cross-connections
- Ring-to-ring interconnection
- One-way drop and continue

In Sections SNCP-to-SNCP Connection Example through One-Way Drop and Continue, the form “5/1/1” (for example) represents “Slot 5, Port 1, VC 1.” For VCs, add the normal VC Group and VC ID extensions. These examples also assume that the slots/ports have been autoprovisioned (through a plug-in event) and that the ports involved have been placed into the in-service (IS) state using a port configuration command, for example, ED-STMn.

SNCP Topology

No special configuration of the physical SNCP topology is required other than connecting the fibers to the desired ports on the desired nodes. The east and west paths must exit a node at different ports (to ensure link diversity), but there are no other physical topology restrictions.

Cisco NCS 2000 Series networks give you the option to set up path-protected mesh networks (PPMNs). PPMNs extend the protection scheme of an SNCP from the basic ring configuration to the meshed architecture of several interconnected rings.

SNCP Cross-Connections

To create an SNCP cross-connection using TL1, you only need to designate it as a one-way or two-way cross-connect. The AID must be more explicit. For example, to create a one-way SNCP circuit over the network with Nodes A, B, C, and D and Segments A-B, B-D, A-C, C-D, enter the following commands (Node A is the source node and Node D is the destination node):

ENT-CRS-VC1:A:FROM,TO1&TO2:CTAG1::1WAY;
ENT-CRS-VC1:B:FROM,TO:CTAG2::1WAY;
ENT-CRS-VC1:C:FROM,TO:CTAG3::1WAY;
ENT-CRS-VC1:D:FROM1&FROM2,TO:CTAG4::1WAY;

Ring-to-Ring Interconnection

In this section, both rings traverse the same node; therefore, only a single cross-connection is required to create the ring-to-ring connection. This is shown in Network Map With Cisco Node Showing Ring-to-Ring Interconnection. The node named “Cisco” is in the nexus.

Figure 2-28 Network Map With Cisco Node Showing Ring-to-Ring Interconnection

SNCP-to-SNCP Connection Example

This example, illustrated in SNCP-to-SNCP Connection Specifications Through The Cisco Node, uses an STM-3-4 to feed Ring 2. Ring 1 can have any STM-N trunk card, but the trunk card is most likely a single-port STM-16 or STM-4.

Note The VC calculation formula is: (((Port # – 1) * Number of VC per port) + VC#).
VC 12/3/2 maps to VC-12-8 (((3 – 1) * 3) + 2).

Figure 2-29 SNCP-to-SNCP Connection Specifications Through The Cisco Node

Use the following command to create a selector between 5/1/1 and 6/1/1, which is bridged to Ring 2 (12/3/2 and 13/3/2):

ENT-CRS-VC1:CISCO:VC-5-1&VC-6-1,VC-12-8&VC-13-8:CTAG1::2WAY;

Figure 2-30 This is illustrated in

.

Figure 2-30 Selector Between 5/1/1 and 6/1/1

Figure 2-31 The command also creates a selector between 12/3/2 and 13/3/2 to a bridge to Ring 1 (5/1/1 and 6/1/1), as shown in

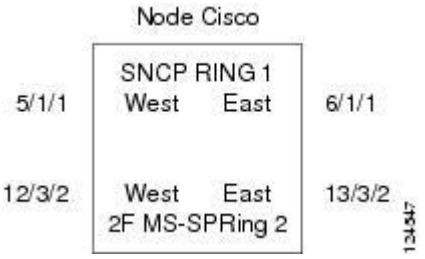
.

Figure 2-31 Selector Between 12/3/2 and 13/3/2

SNCP to Two-Fiber MS-SPRing Connection Example

This example, illustrated in SNCP to Two-Fiber MS-SPRing, uses a SNCP endpoint with a drop on a two-fiber MS-SPRing and the west span of the two-fiber MS-SPRing (Ring 2) for the active path of the circuit. The example also uses multiport addressing for Ring 2 and is based on a multiport STM-4 card, where 13/3/2 = VC-13-26 and where 26 = (((3 – 1) * 12) + 2). (This is only important for computing the VC AID for multiport cards.)

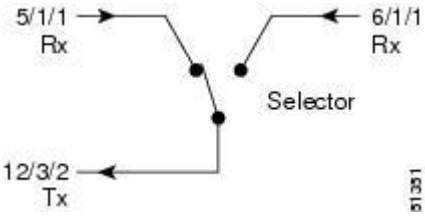
Figure 2-32 SNCP to Two-Fiber MS-SPRing



Use the following command to create a selector between 5/1/1 and 6/1/1, which connects to 12/3/2 on Ring 2:

ENT-CRS-VC1:CISCO:VC-5-1&VC-6-1,VC12-26:CTAG2::2WAY;

Figure 2-33 This is shown in



.

Figure 2-33 Selector Between 5/1/1 and 6/1/1

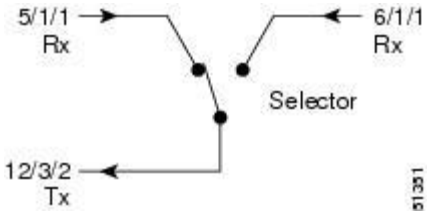
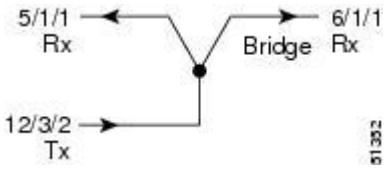


Figure 2-34 The command also creates a bridge from 12/3/2 to Ring 1 (5/1/1 and 6/1/1), as shown in

.

Figure 2-34 Bridge From 12/3/2 to Ring 1

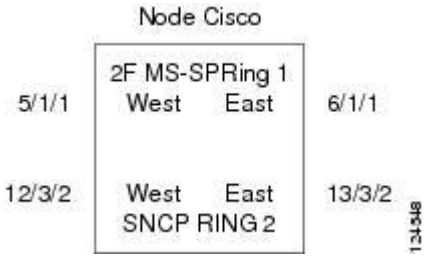


In this configuration, a two-fiber MS-SPRing switch can automatically reconnect the selector output to the protection path on the east port (12/3/2 assuming STM-4) if necessary.

Two-Fiber MS-SPRing to SNCP Connection Example

This example, illustrated in Two-Fiber MS-SPRing to SNCP, uses a SNCP endpoint with a drop on a two-fiber MS-SPRing and uses the east span of the two-fiber MS-SPRing (Ring 1) for the active path of the circuit. For VC addressing, the SNCP is an STM-1 (for example, VC-13-8).

Figure 2-35 Two-Fiber MS-SPRing to SNCP

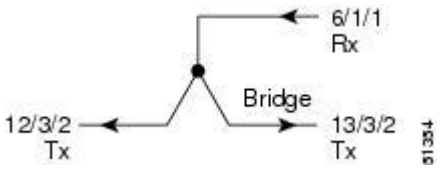


Use the following command to create a bridge from 6/1/1 to Ring 2 (12/3/2 and 13/3/2):

ENT-CRS-VC1:CISCO:VC-6-1,VC-12-8&VC-13-8:CTAG3::2WAY;

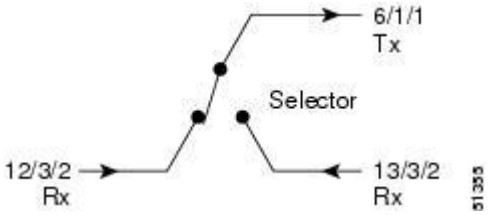
This is shown in Bridge From 6/1/1 to Ring 2.

Figure 2-36 Bridge From 6/1/1 to Ring 2



The command also creates a selector between 12/3/2 and 13/3/2 to Ring 1 (6/1/1) as shown in Selector Between 12/3/2 and 13/3/2 to Ring 1.

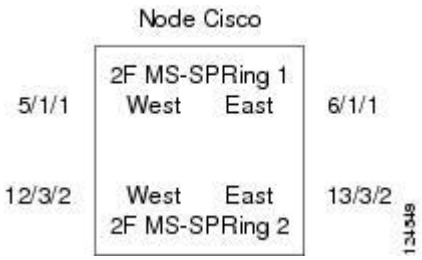
Figure 2-37 Selector Between 12/3/2 and 13/3/2 to Ring 1



Two-Fiber MS-SPRing to Two-Fiber MS-SPRing Connection Example

All protection for a two-fiber MS-SPRing interconnecting to a two-fiber MS-SPRing is performed at the line level. You can make the connection with a two-way cross-connect from a VC on the working side of the two-fiber MS-SPRing span of Ring 1 to a VC on the working side of a two-fiber MS-SPRing span on Ring 2. The connections can be east-to-east, east-to-west, west-to-east, and west-to-west. This example, illustrated in Two-Fiber MS-SPRing to Two-Fiber MS-SPRing, uses Ring 1 west to Ring 2 east and assumes an STM-12-4 in Slots 12 and 13 for subtending to a two-fiber MS-SPRing (Ring 2).

Figure 2-38 Two-Fiber MS-SPRing to Two-Fiber MS-SPRing

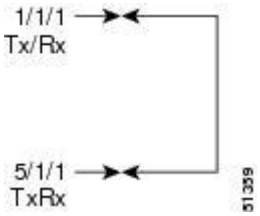


Use the following command to create a two-way connection from 5/1/1 to 13/3/2:

ENT-CRS-VC1:CISCO:VC-5-1,VC-13-26:CTAG4::2WAY;

This is shown in Two-Way Connection from 5/1/1 to 13/3/2.

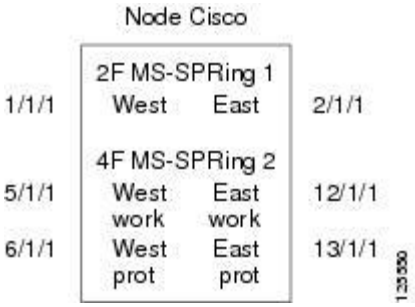
Figure 2-39 Two-Way Connection from 5/1/1 to 13/3/2



Two-Fiber MS-SPRing to Four-Fiber MS-SPRing Connection Example

All protection for a two-fiber MS-SPRing interconnecting to a four-fiber MS-SPRing is performed at the line level. You can make the connection with a simple two-way cross-connect from the appropriate side, east or west, of the two-fiber MS-SPRing to the working fiber of the appropriate side, east or west, of the four-fiber MS-SPRing, as shown in Two-Fiber MS-SPRing to Four-Fiber MS-SPRing.

Figure 2-40 Two-Fiber MS-SPRing to Four-Fiber MS-SPRing

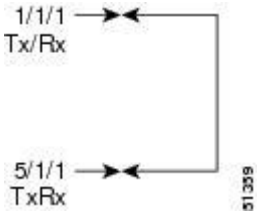


Use the following command to create a two-way connection from 1/1/1 to 5/1/1:

ENT-CRS-VC1:CISCO:**VC-1-1,VC-5-1**:CTAG5::2WAY;

This is shown in Two-Way Connection from 1/1/1 to 5/1/1.

Figure 2-41 Two-Way Connection from 1/1/1 to 5/1/1

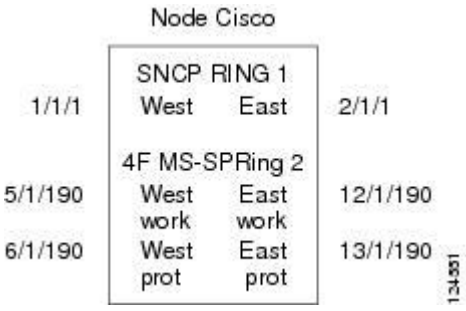


In the event of a failure, the software will automatically switch the traffic to the appropriate line and path.

SNCP to Four-Fiber MS-SPRing Connection Example

This example uses the west span of the four-fiber MS-SPRing (Ring 2) for the active path of the circuit. The example also assumes that the four-fiber MS-SPRing travels over STM-64 spans, as shown in SNCP to Four-Fiber MS-SPRing.

Figure 2-42 SNCP to Four-Fiber MS-SPRing

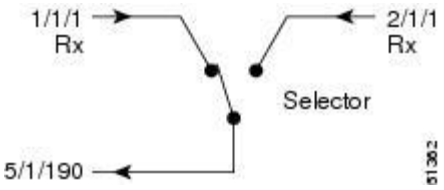


Use the following command to create a selector between 1/1/1 and 2/1/1 to Ring 2 (5/1/190):

ENT-CRS-VC1:CISCO:VC-1-1&VC-2-1&VC-5-190:CTAG6::2WAY;

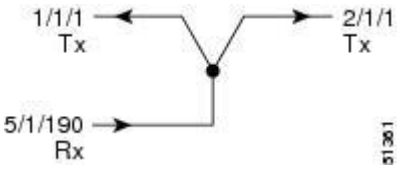
This is shown in Selector Between 1/1/1 and 2/1/1 to Ring 2 (5/1/190).

Figure 2-43 Selector Between 1/1/1 and 2/1/1 to Ring 2 (5/1/190)



The command also creates a bridge from 5/1/190 to Ring 1 (1/1/1 and 2/1/1), as shown in Bridge from 5/1/190 to Ring 1 (1/1/1 and 2/1/1).

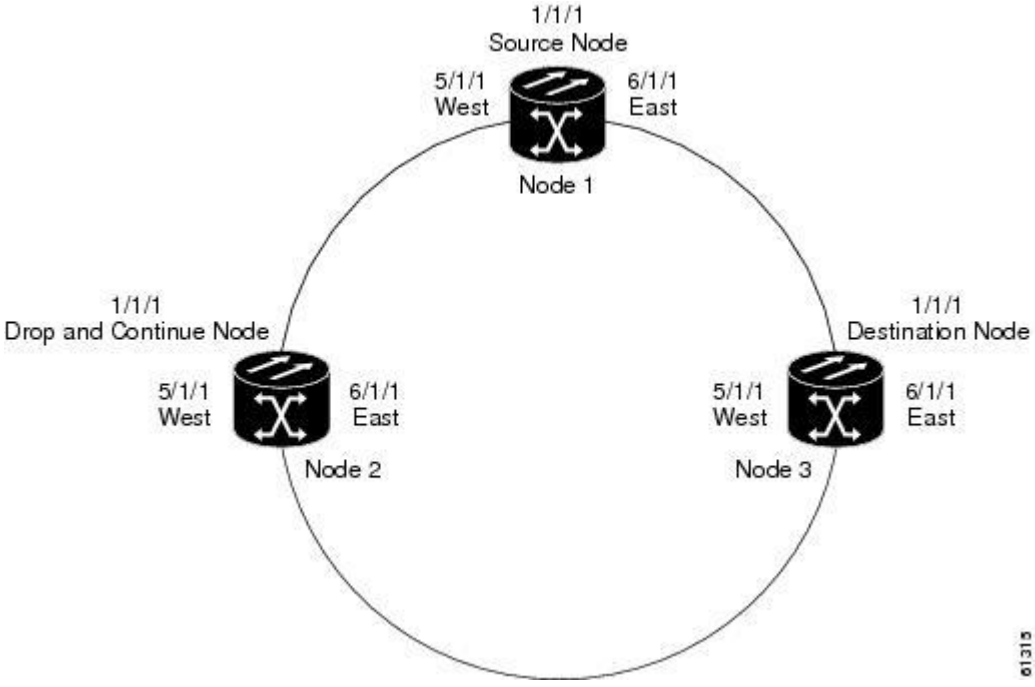
Figure 2-44 Bridge from 5/1/190 to Ring 1 (1/1/1 and 2/1/1)



One-Way Drop and Continue

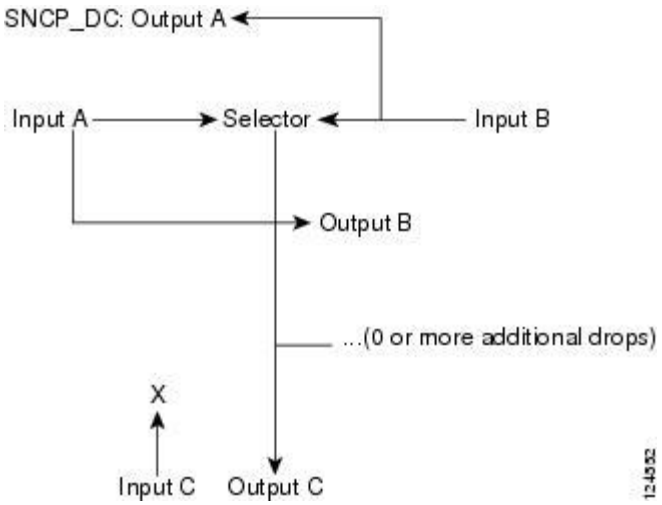
The following examples show how to create a one-way drop and continue cross-connect. The examples use three nodes (Node 1, Node 2, and Node 3) in a ring configuration (One-Way Drop and Continue). Node 1 is the source node, Node 2 has the drop and continue, and Node 3 is the destination.

Figure 2-45 One-Way Drop and Continue



Orientation of AIDs Used to Establish Drop and Continue Connections shows a circuit diagram example of the orientation of AIDs associated with the ENT-CRS command used to establish drop and continue connections.

Figure 2-46 Orientation of AIDs Used to Establish Drop and Continue Connections

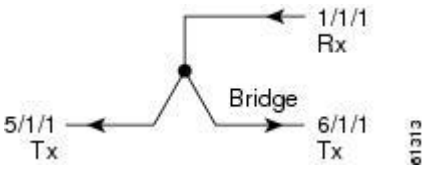


Node 1 Configuration Example (Source Node)

To configure Node 1 in the one-way drop-and-continue example, issue the following command on Node 1 (see Bridge from 1/1/1 to 5/1/1 and 6/1/1):

ENT-CRS-VCn::VC-1-1,VC-5-1&VC-6-1:CTAG::1WAY;

Figure 2-47 Bridge from 1/1/1 to 5/1/1 and 6/1/1

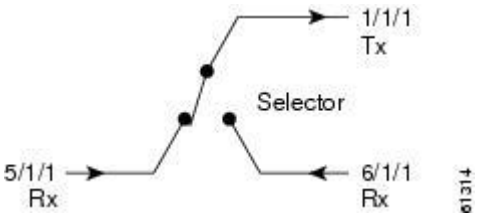


Node 2 Configuration Example (Drop and Continue Node)

To configure Node 2 in the one-way drop-and-continue example, issue the following command on Node 2 (see Selector Between 5/1/1 and 6/1/1 to 1/1/1):

ENT-CRS-VCn::VC-5-1&VC-6-1,VC-1-1:CTAG::1WAYDC;

Figure 2-48 Selector Between 5/1/1 and 6/1/1 to 1/1/1

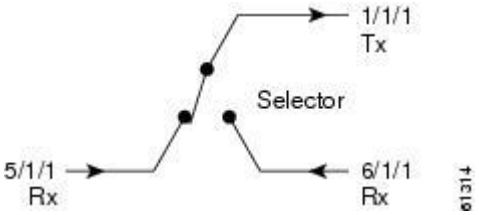


Node 3 Configuration Example (Destination Node)

To configure Node 3 in the one-way drop-and-continue example, issue the following command on Node 3 (see Selector Between 5/1/1 and 6/1/1 to 1/1/1):

ENT-CRS-VCn::VC-5-1&VC-6-1,VC-1-1:CTAG::1WAY;

Figure 2-49 Selector Between 5/1/1 and 6/1/1 to 1/1/1



PCA Provisioning

You can provision or retrieve protection channel access (PCA) cross-connections on two-fiber and four-fiber MS-SPRing topologies at these supported VC rates: STM-4 (two-fiber only), STM-16, and STM-64. 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 MS-SPRing, the extra traffic is provisioned on the upper half of the bandwidth path. In a four-fiber MS-SPRing, 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 MS-SPRing and the protection channel of the four-fiber MS-SPRing 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-VCp/VC12 commands. If the cross-connection is a PCA cross-connection, either 1WAYPCA or 2WAYPCA is shown in the cross-connect type field of the RTRV-CRS-VCp/VC12 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 STM-4, STM-16, or STM-64 MS-SPRing.

Note The VC path cross-connection can be established with TL1 commands (ENT-CRS-xxx).

Note Because the RTRV-CSR-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 contain both PCA and non-PCA cross-connections.

Provision a PCA Cross-Connection

Example 2-15 Provision a PCA Cross-Connect: Input Format

```
ENT-CRS-<PATH>:[<TID>]:<FROM>,<TO>:<CTAG>::[<CCT>][::];
<PATH>::={VC_PATH, VC12}
[<CCT>]::={1WAY, 1WAYDC, 1WAYEN, 2WAY, 1WAYPCA, 2WAYPCA},
{VC_PATH}::={VC3, VC4, VC42C, VC43C, VC44C, VC48C, VC416C, VC464C}
```

where:

- VC represents all of the VC bandwidth cross-connections.
- VC12 represents the VC12_5 cross-connection.
- CCT defaults to 2WAY.

Provision a PCA Cross-Connect: Example shows an input example of provisioning a VC4 PCA cross-connection.

Example 2-16 Provision a PCA Cross-Connect: Example

```
ENT-CRS-VC4::VC4-1-1,VC4-2-1:123::2WAYPCA;
```

Note If the cross-connect type (CCT) of this cross-connection provisioning command is either 1WAYPCA or 2WAYPCA, and the NONE value 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 CCT, and one or two AIDs are the PCA AIDs, an IIAC (The PCA AID Is Not Allowed for the Queried CCT Type) error message is returned.

Retrieve a PCA Cross-Connection

Use the input format in Retrieve a PCA Cross-Connect: Input Format to retrieve a PCA cross-connection.

Example 2-17 Retrieve a PCA Cross-Connect: Input Format

```
RTRV-CRS-[<PATH>]:[<TID>]:<AID>:<CTAG>[::::];<PATH>::={VC_PATH, VC12, VC}
```

If PATH is VC, it will retrieve all of the VC cross-connections based on the queried AIDs:

<AID>={FacilityAIDs, VCAIDs, VC12AIDs, ALL}

Output Format of PCA STSp Cross-Connect Retrieve Command shows the output format of the PCA VCp cross-connection retrieval command.

Example 2-18 Output Format of PCA STSp Cross-Connect Retrieve Command

```
"<FROM>,<TO>:2WAYPCA,VC4"
```

Output Format of PCA VT Cross-Connect Retrieve Command shows the output format of the PCA VC cross-connection retrieval command.

Example 2-19 Output Format of PCA VT Cross-Connect Retrieve Command

```
"<FROM>,<TO>:2WAYPCA"
```

FTP Software Download

Note FTP timeout is 30 seconds and is not user-configurable.

The file transfer protocol (FTP) software download feature downloads a software package to the inactive flash partition residing on the TCC2/TCC2P/TCC3/TSC/TNC/TNCE/TSC/TSCE/TNCS/TNCS-O card. FTP software download provides for simplex and duplex TCC2/TCC2P/TCC3/TSC/TNC/TNCE/TSC/TSCE/TNCS/TNCS-O card downloads, success and failure status, and in-progress status at 20 percent increments.

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 the TCC2/TCC2P/TCC3/TSC/TNC/TNCE/TSC/TSCE/TNCS/TNCS-O card. COPY-RFILE can also be used to back up and restore the database file.

Note PACKAGE_PATH is relative to your home directory, instead of being an absolute path from the root directory of the NE. If you want to specify an absolute path, start the path with the string '%2F'.

The input format of the COPY-RFILE command is:

COPY-RFILE:[<TID>]:<SRC>:<CTAG>::TYPE=<XFERTYPE>,[SRC=<SRC1>],
[DEST=<DEST>],[OVWRT=<OVWRT>],[FTTD=<FTTD>];

where:

- <SRC> is the type of file being transferred.
- <XFERTYPE> is the file transfer protocol.
- <SRC1> specifies the source of the file to be transferred. <SRC1> is a string. Only the FTP URL is supported. In a nonfirewall environment, the format for the URL is:

  “FTP://FTP_USER[:FTP_PASSWORD]]@FTP_HOST_IP[:FTP_PORT]
  /PACKAGE_PATH[:TYPE=I]”

  where:

  - FTP_USER is the user ID 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. Domain name server (DNS) lookup of hostnames is not supported.
  - <FTP_PORT> defaults to 21.
  - PACKAGE_PATH is the long path name to the package file starting from the home directory of the logged-in user.

    In a firewall environment, the hostname should be replaced with a list of IP addresses each separated by an ampersand (@) 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
- <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.
- <FTTD> is the format of the URL should be
  “FTTD://[FTTD_USER][:FTTD_PASSWORD]] @FTTD_HOST_TID”
  where:
  - FTTD_USER is the used to connect to the FTTD host.
  - FTTD_PASSWORD is the password used to connect to FTTD host.
  - FTTD_HOST_IP is the TID of the FTTD host. DNS and network service access point (NSAP) names are not supported.

Note • The use of the SWDL and the extended FTP URL syntax are required by the COPY-RFILE syntax.

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 you attempt to activate to an older software load or try to revert to a newer software load. If this

command is successful, the appropriate flash is selected and the TCC2/TCC2P/TCC3/TSC/TNC/TNCE/TSC/TSCE/TNCS/TNCS-O card will reboot.

The input format for the APPLY command is as follows:

APPLY:[<TID>]::<CTAG>::[<MEM_SW_TYPE>]:[FORCEENABLE=<forceEnable>];

where <MEM_SW_TYPE> indicates memory switch action during the software upgrade.

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 user ID/password, and loss of network connection.

Note The "FXFR_RSLT" is only sent when the "FXFR_STATUS" is COMPLD.

The "BYTES_XFRD" is only sent when the "FXFR_STATUS" is IP or COMPLD.

The output format of the REPT EVT FXFR message is as follows:

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.
- <FXFR_RSLT> indicates the file transferred result: success or failure. <FXFR_RSLT> is optional.
- <BYTES_XFRD> indicates the transferred byte count. <BYTES_XFRD> is a string and is optional.

Downloading New Software

The following procedure downloads new software to the TCC2/TCC2P/TCC3/TSC/TNC/TNCE/TSC/TSCE/TNCS/TNCS-O card using TL1.

Download New Software

Note Only Superusers can download and activate software.

Step 1 Copy the new software package (for example, 15XXXSDH-0340-X02E-2804.pkg) to an FTP host.

Step 2 Establish a TL1 session with the target NE.

Step 3 Log in with the ACT-USER command.

Step 4 Check the working and protect software on the NE by issuing the RTRV-NE-GEN command, for example:

RTRV-NE-GEN:::1;

The output should be similar to the following:

VA454-94 1970-01-06 22:22:12
M 1 COMPLD

"IPADDR=10.76.44.112,IPMASK=255.255.255.128,DEFRTR=10.76.44.1,IPV6ENABLE=N,
IIOPPORT=57790,NAME=\"454-SDH-112\",SWVER=9.00.00,LOAD=09.00-008G-19.05,
PROTSWVER=9.00.00,PROTLOAD=09.00-008F-06.23,DEFDESC=\"Factory Defaults\",
PLATFORM=NCS 2002,SECUMODE=NORMAL,SUPPRESSIP=NO,
MODE=SINGLESHELF,AUTOPM=NO,SERIALPORTECHO=Y,OSIROUTINGMODE=ES,
NET=39840F800000000000000000000059B12DB3000"
;

Issue the COPY-RFILE command. This command will initiate the download process.

Step 5 See the COPY-RFILE

for command syntax.

In Issue the COPY-RFILE Command, the package is located in "/%2FUSR/CET/VINTARA" in the host 10.77.22.199. The user ID and passwords are TL1 and CISCO454SDH. The directory path of the package is similar to what you will see during an FTP session.

Example 2-20 Issue the COPY-RFILE Command

```
COPY-RFILE::RFILE-
PKG:CTAG::TYPE=SWDL,SRC="FTP://TL1:CISCO454SDH@10.77.29.199
/%2FUSR/CET/VINTARA/NCS-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 errors. A download failure might be due to one or more of the following:

- Directory path of the package is invalid or not found.
- Package is invalid
- Package not found on specified path.
- User ID/password or hostname is invalid.
- Host is not accessible.
- Firewall user ID/password or host is invalid.
- Node rebooted or lost connection during download.
- Software download is already in progress.
- The node or the host timed out during FTP protocol (see REPT EVT FXFR when Node or Host Timed Out During FTP Protocol).

Example 2-21 REPT EVT FXFR when Node or Host Timed Out During FTP Protocol

```
   DEV208 1970-01-10 11:52:02
A  2816.2816 REPT EVT FXFR
   "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, as shown in REPT EVT FXFR Message Reporting an Active Start.

Example 2-22 REPT EVT FXFR Message Reporting an Active Start

```
   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 (SFTDOWN Minor Alarm). The SFTDOWN alarm will clear when the download is complete.

Example 2-23 SFTDOWN Minor Alarm

```
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 (RTRV-NE-GEN Command).

Example 2-24 RTRV-NE-GEN Command

```
RTRV-NE-GEN

VA454-94 1970-01-06 22:22;12
M  1  COMPLD
   "IPADDR=10.76.44.112,IPMASK=255.255.255.128,DEFRTR=10.76.44.1,IPV6ENABLE=N,II
OPPORT=57790,NAME=\"454-SDH-112\",SWVER=9.00.00,LOAD=09.00-008G-19.05,PROTSWV
ER=9.00.00,PROTLOAD=09.00-008F-06.23,DEFDESC=\"Factory Defaults\",PLATFORM=NCS
2002,SECUMODE=NORMAL,SUPPRESSIP=NO,MODE=SINGLESHELF,AUTOPM=NO,SERIALPORTECHO=Y,
OSIROUTINGMODE=ES,NET=39840F8000000000000000000000059B12DB3000"
;
```

Step 9 The download progress is reported by the REPT EVT FXFR message, which will report a message after every 20 percent of download is complete as shown (REPT EVT FXFR Messages During Software Download).

Example 2-25 REPT EVT FXFR Messages During Software Download

```
   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 (Verifying the PROTLOAD).

Example 2-26 Verifying the PROTLOAD

```
RTRV-NE-GEN:::1;

VA454-94 1970-01-06 22:22:12
M  1  COMPLD
   "IPADDR=10.76.44.112,IPMASK=255.255.255.128,DEFRTR=10.76.44.1,IPV6ENABLE=N,II
OPPORT=57790,NAME=\"454-SDH-112\",SWVER=9.00.00,LOAD=09.00-008G-19.05,PROTSWV
ER=9.00.00,PROTLOAD=09.00-008F-06.23,DEFDESC=\"Factory Defaults\",PLATFORM=NCS 2002,
SECUMODE=NORMAL,SUPPRESSIP=NO,MODE=SINGLESHELF,AUTOPM=NO,SERIALPORTECHO=Y,
OSIROUTINGMODE=ES,NET=39840F8000000000000000000000059B12DB3000"
;
```

Step 11 REPT EVT FXFR confirms the completion of the software download (Confirm Download Completion).

Example 2-27 Confirm Download Completion

```
 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 (Download is Complete).

Example 2-28 Download is Complete

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

Activating New Software

After the software is successfully downloaded, the new software that 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 (see the APPLY

Activate New Software

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

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, log out of the TL1 session using the CANC-USER command:

CANC-USER::CISCO15:1;

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

Step 3 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.

Remote Software Download/Activation Using the GNE

In a network with regenerator section data communications channel (RS-DCC)-connected Cisco NCS 2000 Seriess 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 and the Activate New Software, but ensure that the TID in each command is filled with the ENE node name.

Each GNE can support 11 (TCC2/TCC2P/TCC3) concurrent communication gateway sessions and up to a maximum of 176 (TCC2/TCC2P/TCC3) ENEs/GNE. For more information on TL1 gateway, see the TL1 Gateway.

After activating the nodes (Activating the Nodes for Simultaneous Software Downloads), five simultaneous software downloads can be initiated using the COPY-RFILE command with appropriate TIDs, as shown in Downloading Software on Multiple Nodes Simultaneously. All downloads will be independent of each other and download speeds might differ.

Example 2-29 Activating the Nodes for Simultaneous Software Downloads

```
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;
```

Example 2-30 Downloading Software on Multiple Nodes Simultaneously

```
COPY-RFILE:NODE1:RFILE-PKG:CTAG::TYPE=SWDL,SRC="FTP://TL1:
CISCO454@10.77.29.199/USR/CET/VINTARA/NCS 2002-0340-X02E-2804.PKG";

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

To download software to an ENE through a GNE, the FTTD URL in the COPY-RFILE command must be used as shown in Downloading Software to an ENE through a GNE. The FTTD parameter has the following format: "FTTD://USERID:PASSWORD@TL1 GNE NODENAME:21". Prior to Release 6.0, Port 21 is mandatory. In Release 6.0 and later, Port 21 is optional.

Example 2-31 Downloading Software to an ENE through a GNE

```
GNE = NODE1
ENE = NODE2
```

```
COPY-RFILE:NODE2:RFILE-PKG:1::TYPE=SWDL,SRC="FTP://USER-ID:PASSWORD@HOST-IP//USERS/JDOE/
NCS 2002-XXXX-XXXX-XXXX.PKG,OVWRT=YES,FTTD="FTTD://USERID:PASSWORD@NODE1:21"
```

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

Activate the software using the APPLY command (Activate the Software Load) on all of the nodes using the GNE node.

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

Example 2-32 Activate the Software Load

```
APPLY:NODE1::1::ACT;
APPLY:NODE2::1::ACT;
APPLY:NODE3::1::ACT;
APPLY:NODE4::1::ACT;
APPLY:NODE5::1::ACT;
```

SFTP Software Download

> **Note** SFTP timeout is 30 seconds and is not user-configurable.

The SSH file transfer protocol (SFTP) software download feature downloads a software package to the inactive flash partition residing on the TCC2/TCC2P/TCC3/TSC/TNC/TNCE/TSC/TSCE/TNCS/TNCS-O card. SFTP software download provides for simplex and duplex TCC2/TCC2P/TCC3/TSC/TNC/TNCE/TSC/TSCE/TNCS/TNCS-O card downloads, success and failure status, and in-progress status at 20 percent increments.

COPY-RFILE

The COPY-RFILE command downloads a new software package from the location specified by the SFTP URL into the inactive flash partition residing on the TCC2/TCC2P/TCC3/TSC/TNC/TNCE/TSC/TSCE/TNCS/TNCS-O card. COPY-RFILE can also be used to back up and restore the database file.

> **Note** PACKAGE_PATH must always be the home directory.

The input format of the COPY-RFILE command is:

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

Input Examples:

- Software Download:

  COPY-RFILE:HERNDON:RFILE-PKG:703::TYPE=SWDL,SRC="LONG_SFTP_PATH", OVWRT=YES;
- DC Restore:

  COPY-RFILE:HERNDON:RFILE-PKG:703::TYPE=RFR,SRC="LONG_SFTP_PATH", OVWRT=YES;
- DB Backup Input Example:

  COPY-RFILE:HERNDON:RFILE-PKG:703::TYPE=RFBU,DEST="LONG_SFTP_PATH",OVWRT=YES;

where:

- <SRC> is the type of file being transferred.
- <XFERTYPE> is the file transfer protocol.
  - RFBU: Remote File Backup. Applicable for Maintenance User.
  - RFR: Remote File Restore. Applicable for Super User.
  - SWDL: Software Download. Applicable for Maintenance User.

- <SRC1> specifies the source of the file to be transferred. <SRC1> is a string. The format for the URL is:

  "SFTP://SFTP_USER[:SFTP_PASSWORD]]@SFTP_HOST_IP/PACKAGE_PATH"

  - SFTP_USER is the user ID to connect to the computer with the package file.
  - SFTP_PASSWORD is the password used to connect to the computer with the package file.
  - SFTP_HOST_IP is the IP address of the computer with the package file. Domain name server (DNS) lookup of hostnames is not supported. IPv6 IP address is also not supported
  - The default port is always 22.
  - PACKAGE_PATH must always be the home directory.

  Note For SFTP, GNE/ENE environment is not supported. Only direct LAN connection is supported.

- <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> results in an error message.
- <FTTD> is not supported for SFTP
- The use of the SWDL and the extended SFTP URL syntax are required by the COPY-RFILE syntax.

Scheduled PM Report

Scheduled performance monitoring (PM) reporting is a feature that extends the capability of PM reporting for the Cisco NCS 2000 Series. With scheduled PM reports, the system automatically and periodically generates the PM report of any specified facility or cross-connection.

The following rules apply to the creation of scheduled PM reports:

- The current maximum number of schedules allowed to be created for an NE is 1000. If you try to create more schedules in the NE when the maximum number of schedules has been created, an error message "Reach Limits Of MAX Schedules Allowed. Can Not Add More" is returned.
- Identical schedules are not allowed for one NE. Two schedules are considered identical if they have the same AID, MOD2 type, performance monitor type, performance monitor level, location, direction, and time period.
- The error message "Duplicate Schedule" is returned if you create a schedule that 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 that there is no more performance monitoring report to be sent), then the new schedule with the identical parameter will replace the existing schedule.
- When you create a PM schedule, the minimum report interval should not be less than five minutes.

Use the following commands to schedule and manage PM reports:

- SCHED-PMREPT-<MOD2>
- ALW-PMREPT-ALL
- RTRV-PMSCHED-<MOD2>
- RTRV-PMSCHED-ALL
- INH-PMREPT-ALL
- REPT PM <MOD2>

Create a PM Schedule and Receive an Autonomous PM Report

Issue the SCHED-PMREPT-<MOD2> command to create a PM schedule.

- The minimum interval for the PM schedule cannot be set to less than five minutes.

Issue the ALW-PMREPT-ALL command to allow the current TL1 session to be able to receive the autonomous PM report.

Manage PM Schedules

Use the following commands to manage PM schedules:

- Create a PM schedule by issuing the SCHED-PMREPT-<MOD2> command.
- Delete a PM schedule by issuing the SCHED-PMREPT-<MOD2> command with the <NUMREPT> parameter equal to zero.

  - The PM schedules created on a facility or a cross-connect will be automatically deleted if the card or the cross-connect are unprovisioned.

- 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.

  - The system will not automatically delete the schedules that are expired. For example, assume that a schedule is created to report PM ten times. After ten 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 the RTRV-PMSCHED command.

Enable or Disable a TL1 Session to Receive Autonomous PM Reports

Enable a TL1 session to receive a scheduled PM report by issuing the ALW-PMREPT-ALL command.

- 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 and automatic autonomous performance monitoring (AutoPM) reports from the system, regardless of whether or not the schedule is created by this TL1 user or by any other TL1 user.

Disable a TL1 session to receive any scheduled PM report by issuing the INH-PMREPT-ALL command.

Automatic Autonomous PM

The automatic autonomous performance monitoring (AutoPM) report **Error! Bookmark not defined.** is a feature that extends the capability of PM reporting for the Cisco NCS 2000 Series. With this feature enabled, the system automatically generates the PM report for all cross-connections. AutoPM is disabled by default. When enabled, an automatic report is generated every 15 minutes, which is the default interval. AutoPM can be enabled or disabled only through CTC.

Issue the RTRV-NE-GEN TL1 command on the node to retrieve the AutoPM configuration.

To enable or disable a TL1 session to receive AutoPM reports see the Enable or Disable a TL1 Session to Receive

Autonomous PM Reports

Bridge and Roll

Bridge and roll functionality allows live traffic to be moved (rolled) from one entity to another. This section provides information and sample procedures for single-rolling, dual-rolling, and protection rolling for one-way or two-way circuits using TL1 commands, including:

- Path Level Rolling—Rolls cross-connections at the VC11, VC12, VC3, and VCNc rate for all supported time-division multiplexing (TDM) drops (STM1, STM4, STM16, and STM64). Individual rolls are done at the Path level.

- Line Level Rolling—Rolls all cross-connections from one port/facility to another port/facility.
- Bulk Rolling—Rolls a subset of cross-connections from one port/facility to another port/facility.

There are two roll modes:

- In automatic mode, the leg to be rolled is automatically dropped upon detection of a valid input signal on the new path.
- In manual mode, the leg to be rolled is retained upon detection of a valid signal on the new path. The leg must be dropped manually.

Caution If you have created a roll on the circuit and it has detected a valid signal, do not cancel it. Cancelling a valid roll will cause a traffic hit of more than 1300 ms. If you want to revert back from a valid roll, complete the roll and use bridge and roll again to roll it back.

Caution Performing bridge and roll on a VC4-64c (STM64c circuit) might cause a traffic hit of 50 ms.

- The path width rules for creating circuits apply when rolling circuits. For example, if you roll a VC4 starting at VC#1, you cannot roll it to another port and start it at VC#2. You have to start it at VC#1.

Restrictions

The following restrictions apply for bridge and roll using TL1 in this release:

- Rolling is not allowed on electrical cards or Ethernet cards.
- Rolling is not allowed on hairpin circuits.
- Rolling is not allowed on monitor circuits.
- Rolling is not allowed on any cross-connection that is involved in test access.
- Rolling is not allowed on any cross-connection that is involved in cross-connect loopbacks.
- Rolling is not allowed on any port that is involved in facility or equipment loopbacks. This restriction applies to both “roll from” and “roll to.”
- When rolling on a 1+1 protected circuit, the “roll to” cannot be on the protect port of the protection group.
- Rolling on a MS-SPRing protected circuit cannot violate the rules governing MS-SPRing circuits: a circuit that traverses a MS-SPRing must use the same STS number on the ring between source and destination.
- Rolling on an MS-SPRing protected circuit will be denied if there is an existing protection switch on the ring. If the protection switch happens after the roll is initiated, the system will not monitor valid signals on the “roll to” path until the protection switching is cleared.
- Rolling on an SNCP protected circuit cannot violate the rules governing SNCP circuits: SNCP circuits must have one bridge and one selector.
- The bridge and selector of an SNCP protected circuit cannot be rolled away.
- In the case of a dual roll on an SNCP protected circuit, both roll points have to be on either the working or protect path of the circuit. For example, you cannot specify one roll point on the working path and the other roll point on the protect path of the circuit being rolled.
- When rolling on a SNCP protected circuit, the “roll to” cannot be line protected (1+1 or MS-SPRing protected). TL1 can only ensure this on the bridge and selector node, not on the intermediate node.
- When rolling on a mixed protection circuit, the roll points have to be within the same protection domain.
- Rolling using TL1 can be performed on a CTC-created cross-connection.

- If a roll is created using TL1, it cannot be edited or deleted by CTC.

- Rolling using TL1 can be performed on a TL1 cross-connection.

- If a roll is created using CTC, it cannot be edited or deleted by TL1.

- If the intermediate path of a circuit is being rolled away to another circuit, the second circuit cannot carry any live traffic.

- After a roll is completed, the second circuit will form the new intermediate path of the original circuit.

- Rolling cannot be performed on low order path tunnel or VC low order path aggregation point (VAP) circuits passing through less than four nodes.

The following restrictions apply for bridge and roll using TL1 virtual concatenation (VCAT) in this release:

- For non-open-ended VCAT circuits, you cannot change the source or destination of the circuit.
- For open-ended VCAT circuits, you can change the source or destination of the circuit, but only on the open end.

The following restrictions apply for bridge and roll using TL1 common fiber-routed VCAT circuits in this release:

- Rolling cannot change the common fiber property of a common fiber-routed VCAT circuit.
- When rolling on a VCAT member circuit, in order not to change the common fiber property of a common fiber-routed VCAT circuit, you can roll the member from one time slot to a different time slot within the same fiber.

Bridge and Roll TL1 Commands

The following commands are used for bridge and roll:

- DLT-BULKROLL-<STM_TYPE>

  This command deletes an attempted rolling operation or completes an attempted rolling operation. This command supports Line level and bulk rolling, but cannot be used for Path level rolling. The rolls that are created using the ENT-BULKROLL-<STM_TYPE> command can be deleted using the DLT-BULKROLL-<STM_TYPE> command.

- DLT-ROLL-<MOD_PATH>

  This command deletes an attempted rolling operation or completes an attempted rolling operation.

- ED-BULKROLL-<STM_TYPE>

  This command edits information about rolling traffic from one endpoint to another without interrupting service. This command can use the CMDMDE option to force a valid signal. The only parameter that can be edited is CMDMDE. The time slots cannot be edited. This commands supports Line level and bulk rolling, but cannot be used for Path level rolling.

- ED-ROLL-<MOD_PATH>

  This command edits information about rolling traffic from one endpoint to another without interrupting service. This command can use the CMDMDE option to force a valid signal. The only parameter that can be edited is CMDMDE. The time slots cannot be edited.

- ENT-BULKROLL-<STM_TYPE>

  This command enters information about rolling traffic from one endpoint to another without interrupting service. This commands supports Line level and bulk rolling, but cannot be used for single Path level rolling.

- ENT-ROLL-<MOD_PATH>

  This command enters information about rolling traffic from one endpoint to another without interrupting service. This command supports VC Path-level rolling only.

- RTRV-BULKROLL-<STM_TYPE>

  This command retrieves roll data parameters. This command supports Line level and bulk rolling, but cannot be used for Path level rolling.

- RTRV-ROLL-<MOD_PATH>

This command retrieves roll data parameters.

Two-Way Circuit Single Roll and Dual Roll Procedures

Single roll operation moves either the source or destination of a circuit to a new endpoint on the same node or on a different node. In single roll operation, you only choose one roll point during the process.

Dual roll operation reroutes a segment between two roll points of a circuit. In dual roll operation, you choose two roll points during the process.The new route can be one of the following:

- A new link (no circuit is required)
- Another circuit (created before or during the bridge and roll process)

Create a Two-Way Circuit Single Roll or Dual Roll

To create a two-way circuit single roll or dual roll, enter the ENT-ROLL-<MOD_PATH> command or the ENT-BULKROLL-<STM_TYPE> command depending on the type of roll you want to perform.

The input formats are as follows:

- ENT-ROLL-<MOD_PATH>:[<TID>]:<FROM>,<TO>:<CTAG>:::RFROM=<RFROM>, RTO=<RTO>,RMODE=<RMODE>,[CMDMDE=<CMDMDE>];
- ENT-BULKROLL-<STM_TYPE>:[<TID>]:<FROM>:<CTAG>:::RTOSTART=<RTOSTART>, [RFROMSTART=<RFROMSTART>],[RFROMEND=<RFROMEND>],RMODE=<RMODE>, [CMDMDE=<CMDMDE>];

Step 1 Choose the type of roll you want to perform and enter the corresponding command:

- For automatic rolling onto the same facility, but different STS (path roll), use the ENT-ROLL-<MOD_PATH> command as shown in the following example:

  ENT-ROLL-VC3:CISCO:VC4-1-1-1,VC4-2-1-1:1:::RFROM=VC4-2-1-1,RTO=VC4-3-1-1, RMODE=MAN,CMDMDE=FRCD;

- For manual rolling onto the same facility, but different VC (path roll), use the ENT-ROLL-<MOD_PATH> command as shown in the following example:

  ENT-ROLL-VC3:CISCO:VC4-1-1-1,VC4-2-1-1:1:::RFROM=VC4-2-1-1,RTO=VC4-3-1-1, RMODE=MAN,CMDMDE=FRCD;

- For rolling onto a different facility with the same or different VC (line roll), use the ENT-BULKROLL-<STM_TYPE> command as shown in the following example:

  ENT-BULKROLL-STM16:CISCO:FAC-5-1:123:::RTOSTART=VC4-6-1-1, RFROMSTART=VC4-5-1-1,RFROMEND=VC4-5-1-4,RMODE=AUTO,CMDMDE=FRCD;

  This command will roll all the VC paths to a facility on Slot 6 with the same VC as shown in Two-Way Circuit Single or Dual Line Roll with ENT-BULKROLL .

Table 2-6 Two-Way Circuit Single or Dual Line Roll with ENT-BULKROLL

Path	Before Roll	After Roll
VC4#1	VC4-5-1-1	VC4-6-1-1
VC4#2	VC4-5-1-2	VC4-6-1-2
VC11#1 on VC4#3	VC11-5-1-3-1-1	VC11-6-1-3-1-1

VC11#2 on VC4#3	VC11-5-1-3-2-4	VC11-6-1-3-2-4
VC4#4	VC4-5-1-4	VC4-6-1-4
VC4#5	VC4-5-1-5	VC4-6-1-5
VC11#3 on VC4#6	VC11-5-1-6-1-1	VC11-6-1-6-1-1

- For rolling a set of circuits onto a different facility (bulk roll), use the ENT-BULKROLL-<STM_TYPE> command as shown in the following example:

  ENT-BULKROLL-STM16:CISCO:FAC-5-1:123:::RTOSTART=VC4-6-1-1, RFROMSTART=VC4-5-1-1,RFROMEND=VC4-5-1-4,RMODE=AUTO,CMDMDE=FRCD;

  This command will roll the paths shown in Two-Way Circuit Single or Dual Bulk Roll with ENT-BULKROLL .

Table 2-7 Two-Way Circuit Single or Dual Bulk Roll with ENT-BULKROLL

Path	Before Roll	After Roll
VC4#1	VC4-5-1-1	VC4-6-1-1
VC4#2	VC4-5-1-2	VC4-6-1-2
VC11#1 on VC4#3	VC11-5-1-3-1-1	VC11-6-1-3-1-1
VC11#2 on VC4#3	VC11-5-1-3-2-4	VC11-6-1-3-2-4
VC4#4	VC4-5-1-4	VC4-6-1-4

Step 2 If you performed a manual roll, you must confirm the circuit is valid by issuing the RTRV-BULKROLL-<STM_TYPE> command. The input format of the command is as follows:

RTRV-BULKROLL-<STM_TYPE>:[<TID>]:<SRC>:<CTAG>;

The following is an example of the command input:

RTRV-BULKROLL-STM4:CISCO:FAC-3-1:1;

One-Way Circuit Single Roll and Dual Roll Procedures

Single roll operation moves either the source or destination of a circuit to a new endpoint, either onto the same node or ont o a different node. In single roll operation you only choose one roll point during the process.

Dual roll operation reroutes a segment between two roll points of a circuit. In dual roll operation, you choose two roll points during the process. The new route can be one of the following:

- A new link (no circuit is required)
- Another circuit (created before or during the bridge and roll process)

Create a One-Way Circuit Single Roll

To create a one-way circuit single roll, enter the ENT-ROLL-<MOD_PATH> command or the ENT-BULKROLL-<STM_TYPE> command, depending on the type of roll you want to perform. The input formats for these commands are as follows:

- ENT-ROLL-<MOD_PATH>:[<TID>]:<FROM>,<TO>:<CTAG>:::RFROM=<RFROM>, RTO=<RTO>,RMODE=<RMODE>,[CMDMDE=<CMDMDE>];

  - For a one-way destination roll, the roll mode (RMODE) must be manual (MAN).

- ENT-BULKROLL-<STM_TYPE>:[<TID>]:<FROM>:<CTAG>:::RTOSTART=<RTOSTART>, [RFROMSTART=<RFROMSTART>],[RFROMEND=<RFROMEND>],RMODE=<RMODE>, [CMDMDE=<CMDMDE>];

Step 1 Choose the type of roll that you want to perform and enter the corresponding command:

- For automatic rolling onto the same facility, but different VC (path roll), use the ENT-ROLL-<MOD_PATH> command as shown in the following example:

  ENT-ROLL-VC3:CISCO:VC4-1-1-1,VC4-2-1-1:1:::RFROM=VC4-2-1-1,RTO=VC4-3-1-1, RMODE=MAN,CMDMDE=FRCD;

- For manual rolling onto the same facility, but different VC (path roll), use the ENT-ROLL-<MOD_PATH> command as shown in the following example:

  ENT-ROLL-VC3:CISCO:VC4-1-1-1,VC4-2-1-1:1:::RFROM=VC4-2-1-1,RTO=VC4-3-1-1, RMODE=MAN,CMDMDE=FRCD;

- For rolling onto a different facility with the same or different VC (line roll), use the ENT-ROLL-<MOD_PATH> command as shown in the following example:

  ENT-ROLL-VC3:CISCO:VC4-1-1-1,VC4-2-1-1:1:::RFROM=VC4-2-1-1,RTO=VC4-3-1-1, RMODE=MAN,CMDMDE=FRCD;

  This command will roll all the VC paths to a facility on Slot 6 with the same STS as shown in One-Way Circuit Single Line Roll with ENT-BULKROLL .

Table 2-8 One-Way Circuit Single Line Roll with ENT-BULKROLL

Path	Before Roll	After Roll
VC4#1	VC4-5-1-1	VC4-6-1-1
VC4#2	VC4-5-1-2	VC4-6-1-2
VC11#1 on VC4#3	VC11-5-1-3-1-1	VC11-6-1-3-1-1
VC11#2 on VC4#3	VC11-5-1-3-2-4	VC11-6-1-3-2-4
VC4#4	VC4-5-1-4	VC4-6-1-4
VC4#5	VC4-5-1-5	VC4-6-1-5
VC11#3 on VC4#6	VC11-5-1-6-1-1	VC11-6-1-6-1-1

- For rolling a set of circuits onto a different facility (bulk roll), use the ENT-BULKROLL-<STM_TYPE> command as shown in the following example:

  ENT-BULKROLL-STM16:CISCO:FAC-5-1:123:::RTOSTART=VC4-6-1-1, RFROMSTART=VC4-5-1-1,RFROMEND=VC4-5-1-4,RMODE=AUTO,CMDMDE=FRCD;

  This command will roll the paths shown in One-Way Circuit Single Bulk Roll with ENT-BULKROLL .

Table 2-9 One-Way Circuit Single Bulk Roll with ENT-BULKROLL

Path	Before Roll	After Roll
VC4#1	VC4-5-1-1	VC4-6-1-1
VC4#2	VC4-5-1-2	VC4-6-1-2
VC11#1 on VC4#3	VC11-5-1-3-1-1	VC11-6-1-3-1-1
VC11#2 on VC4#3	VC11-5-1-3-2-4	VC11-6-1-3-2-4
VC4#4	VC4-5-1-4	VC4-6-1-4

Step 2 If you performed a manual roll, you must confirm that the circuit is valid by issuing the RTRV-BULKROLL-<STM_TYPE> command using the following format:

RTRV-BULKROLL-<STM_TYPE>:[<TID>]:<SRC>:<CTAG>;

An example of the RTRV-BULKROLL-<STM_TYPE> input follows:

RTRV-BULKROLL-STM4:CISCO:FAC-3-1:1;

Create a One-Way Circuit Dual Roll

In this procedure, both the source and destination nodes are rolled. There are two types of dual rolls:

- Dual roll for a single circuit within the same facilities but to a different time slot.
- Dual roll for a single circuit from one span card to another span card.

Step 1 Determine the type of roll that you want to perform on the source node and follow the steps in the Create a One-Way Circuit Single Roll.

Step 2 Determine the type of roll that you want to perform on the destination node and follow the steps in the Create a One-Way Circuit Single Roll.

2.10.2 Protection Rolling Procedures

To perform protection rolls, follow the procedures in the Two-Way Circuit Single Roll and Dual Roll Procedures

and the One-Way Circuit Single Roll and Dual Roll Procedures

.

- Before performing a protection roll, either from one protection group to another or within the same protection group, the protection group must already be provisioned.

Supported Protection shows the kind of protection rolls that are supported from one domain to another. In the table, an X indicates that the roll is allowed and a dash indicates that the roll is not allowed.

Table 2-10 Supported Protection Rolls

	Roll To Domain				
Roll From Domain	**MS-SPRing**	**PCA**	**1+1**	**SNCP**	**Unprotected**
MS-SPRing	X	X	X	—	X
PCA	X	X	X	—	X
1+1	X	X	X	—	X
SNCP	—	—	—	X	—
Unprotected	X	X	X	—	X

Remote Monitoring-Managed PMs

This section describes the retrieval, threshold setting, threshold crossing alerts (TCAs), and scheduled PM reporting for all remote monitoring (RMON)-managed PM data.

The cards that support RMON PMs include: G1K-4, CE-1000-4, ML1000-2/ML100T-12, FC_MR-4, MXP_MR_2.5G/MXPP_MR_2.5G, and ML-100T-8/CE-100T-8. The PM types for these cards include Ethernet statistic types defined in the standard SNMP/RMON MIB, and also include other statistic types managed by RMON, for example, the Fibre Channel statistical types.

When creating an RMON threshold, there are two threshold values that need to be specified. The first threshold is the rising threshold and the other is the falling threshold. There are other parameters that need to be specified when creating the RMON threshold, for example, the startup type and the sample type.

- There can be more than one threshold defined for each RMON statistic type.

The current bucket is not defined by the RMON. RMON-managed PM only shows the history data of the PMs and the data accumulated since the last time the counters are cleared (RAW-DATA).

In the RMON TCA, the accumulation time period is not the predefined PM bucket accumulation time, such as 15-MIN or 1-DAY. It can be any integer (any time greater than 10 seconds) that is defined when creating the RMON threshold.

RTRV-PM-<MOD2>

The RTRV-PM-<MOD2> command retrieves the RMON-managed PMs.

The TL1 modifiers FSTE, GIGE, and POS are used to retrieve the RMON-managed Ethernet PM, if the Ethernet port is an FSTE, GIGE, or POS port type. The FC modifier retrieves the RMON-managed Fibre Channel PM.

There are three accumulation time periods for RMON statistics: 1-MIN, 1-HR, and RAW-DATA. For RMON-managed PMs, only history PM buckets and RAW-DATA are supported and there is no current bucket defined for RMON-managed PMs. When RAW-DATA is specified in the input of RTRV-PM, the date and time specified in the input will be ignored. The MONDAT and MONTM in the output will be the last time the counters were cleared. RAW-DATA is the default TMPER value for RMON-managed PM retrieval.

Because RMON PM only supports the history data if the accumulation time period is 1-MIN, 15-MIN, 1-HR, or 1-DAY, you must specify the correct history PM bucket for the RTRV-PM command to succeed.

When retrieving PM, if an unsupported MONTYPE is specified, an error message is returned.

Currently there is no support of LOCN (location) and DIRN (direction) for RMON-managed data statistics.

Input Format

RTRV-PM-<MOD2>:[<TID>]:<AID>:<CTAG>::[<MONTYPE>],[<MONLEV>],[<LOCN>],
[<DIRECTION>],[<TMPER>],[<DATE>],[<TIME>];

Input Example

RTRV-PM-GIGE:TID:FAC-2-1:123::ETHERSTATSOCTETS,,,,1-MIN,04-11,12-45;

RTRV-PM-GIGE:TID:FAC-2-1:123::,,,,RAW-DATA;

Output Format

SID DATE TIME
M CTAG COMPLD
""<AID>,[<AIDTYPE>]:<MONTYPE>,<MONVAL>,[<VLDTY>],[<LOCN>],[<DIRECTION>],
[<TMPER>],[<MONDAT>],[<MONTM>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"FAC-2-1,GIGE:etherStatsOctets,21,COMPL,,,1-MIN,04-11,12-45"
;

Error Messages for RTRV-PM-<MOD2> shows the error messages associated with the RTRV-PM-<MOD2> command.

Table 2-11 Error Messages for RTRV-PM-<MOD2>

Error Code	Description	Scenario When the Error Message is Sent
IDNV	TMPER Type Not Supported	The TMPER parameter specified is not applicable for the MOD2 type. For example, 1-MIN is not applicable for STM16 PM types.
IDNV	Current Interval Not Supported For RMON PMs	The current interval is specified by default, or is explicitly specified by MONDAT/MONTM, when the TMPER is 1-MIN, 15-MIN, 1-HR, or 1-DAY.

ENT-RMONTH-<MOD2_RMON>

The ENT-RMONTH-<MOD2_RMON> command creates a threshold type (an entry in the RMON alarm table) for an RMON statistic, for the RMON-managed PMs. An event (TCA) is generated and reported when the threshold is crossed in the appropriate direction during the sampled time period. More than one threshold can be created by using different parameters (rising/falling threshold), for each MONTYPE.

This command applies to G1000, GIGE, FSTE, POS, and FC data objects.

Input Format

ENT-RMONTH-<MOD2_RMON>:[<TID>]:<SRC>:<CTAG>::<MONTYPE>,,,,<INTVL>:
RISE=<RISE>,FALL=<FALL>,[SAMPLE=<SAMPLE>],[STARTUP=<STARTUP>][:];

Input Example

The following example creates an entry in the RMON threshold table for the etherStatsOctets statistic type with an interval equal to 100 seconds, rising threshold of 1000, falling threshold of 100, DELTA sampling type and the startup type of RISING-OR-LTING.

ENT-RMONTH-GIGE:CISCO:FAC-2-1:123::ETHERSTATSOCTETS,,,,100:RISE=1000,
FALL=100,SAMPLE=DELTA,STARTUP=RISING-OR-LTING;

Error Messages for ENT-RMONTH-<MOD2_RMON> shows the error messages associated with the ENT-RMONTH-<MOD2_RMON> command.

Table 2-12 Error Messages for ENT-RMONTH-<MOD2_RMON>

Error Code	Description	Scenario When the Error Message is Sent
IDNV	Invalid Interval	The input interval value is less than 10.
IDRG	Invalid Threshold Value	The rising or falling threshold is less than 0, or the falling threshold is greater than or equal to the rising threshold.
IDNV	Invalid MONTYPE value	The MONTYPE is not applicable to the data type (represented by the MOD2).
IIDT	Cannot Create More RMON Threshold	The number of RMON threshold created reached the maximum (256).
IIDT	Duplicate RMON Threshold	There is already a threshold created with the exact parameters.

DLT-RMONTH-<MOD2_RMON>

The DLT-RMONTH-<MOD2_RMON> command deletes a threshold type (an entry in the RMON alarm table) created for a MONTYPE (RMON statistic type). Because there can be multiple thresholds created for a particular MONTYPE, you must specify all the necessary parameters for the threshold in order to identify the particular threshold to be deleted.

This command applies to G1000, GIGE, FSTE, POS, and FC data objects.

Input Format

DLT-RMONTH-<MOD2>:[<TID>]:<AID>:<CTAG>::<MONTYPE>,,,,<INTVL>:RISE=<RISE>,
FALL=<FALL>,[SAMPLE=<SAMPLE>,][STARTUP=<STARTUP>][:];

Input Example

The following example deletes an entry in the RMON threshold table for the etherStatsOctets statistic type, with an interval equal to 100 seconds, rising threshold of 1000, falling threshold of 100, DELTA sampling type, and the startup type of BOTH.

DLT-RMONTH-GIGE:CISCO:FAC-2-1:123::ETHERSTATSOCTETS,,,,100:RISE=1000,FALL=100, SAMPLE=DELTA,STARTUP=BOTH;

Error Messages for DLT-RMONTH-<MOD2_RMON> shows the error messages associated with the DLT-RMONTH-<MOD2_RMON> command.

Table 2-13 Error Messages for DLT-RMONTH-<MOD2_RMON>

Error Code	Description	Scenario When the Error Message is Sent
IDNV	Invalid Interval	The input interval value is less than 10.
IDRG	Invalid Threshold Value	The rising or falling threshold is less than 0, or the falling threshold is greater than or equal to the rising threshold.
IDNV	Invalid MONTYPE value	The MONTYPE is not applicable to the data type (represented by the MOD2).
SROF	RMON Threshold Does Not Exist	The RMON threshold you are trying to delete does not exist.

RTRV-RMONTH-<MOD2_RMON>

The RTRV-RMONTH-<MOD2_RMON> command retrieves the thresholds defined in the RMON alarm table.

Input Format

RTRV-RMONTH-<MOD2>:[<TID>]:<AID>:<CTAG>::[<MONTYPE>]>,,,,[<INTVL>]: [RISE=<RISE>,][FALL=<FALL>,][SAMPLE=<SAMPLE>,][STARTUP=<STARTUP>];

Input Example

The following example retrieves all the thresholds defined in the RMON threshold table for the etherStatsOctets statistics type.

RTRV-RMONTH-GIGE:TID:FAC-2-1:123::ETHERSTATSOCTETS;

The following example retrieves all the thresholds with the DELTA sampling type, RISING startup type, and etherStatsOctets statistics type, defined in the RMON threshold table.

RTRV-RMONTH-GIGE:CISCO:FAC-2-1:123::ETHERSTATSOCTETS:SAMPLE=DELTA, STARTUP=RISING;

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>,[<AIDTYPE>]:<MONTYPE>,,,,[<INTVL>]:INDEX=<INDEX>,RISE=<RISE>,

FALL=<FALL>,SAMPLE=<SAMPLE>,STARTUP=<STARTUP>”
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
“FAC-2-1,GIGE:ETHERSTATSOCTETS,,,,100:INDEX=2,RISE=1000,FALL=100,
SAMPLE=DELTA,STARTUP=RISING”
;

Error Messages for RTRV-RMONTH-<MOD2_RMON> shows the error messages associated with the RTRV-RMONTH-<MOD2_RMON> command.

Table 2-14 Error Messages for RTRV-RMONTH-<MOD2_RMON>

Error Code	Description	Scenario When the Error Message is Sent
IDNV	Invalid Interval	The input interval value is less than 10.
IDRG	Invalid Threshold Value	The rising or falling threshold is less than 0, or the falling threshold is greater than or equal to the rising threshold.
IDNV	Invalid MONTYPE value	The MONTYPE is not applicable to the data type (represented by the MOD2).
SROF	RMON Threshold Does Not Exist	The RMON threshold that you are trying to delete does not exist.

REPT EVT <MOD2ALM> for Threshold Crossing Events

The REPT EVT <MOD2ALM> autonomous message reports the threshold crossing event for the RMON statistics.

The HT or LT is appended to the CONDTYPE when crossing the rising or falling threshold.

The table index for the threshold in the RMON alarm table is enclosed in the text of the TCA description. This table index is displayed in the output of the RTRV-RMONTH command also. You can retrieve additional information regarding the threshold that generates the TCA by issuing the RTRV-RMONTH command and comparing the output with corresponding table index.

Output Format

SID DATE TIME
M CTAG COMPLD
“<AID>:<CONDTYPE>,[<CONDEFF>],[<OCRDAT>],[<OCRTM>],[<LOCN>],[<DIRN>],
[<MONVAL>], [<THLEV>],[<TMPER>]:[<DESC>],[<AIDDET>]”
;

Output Example

VA454-23 2000-02-20 08:47:03
A 512.512 REPT EVT G1000

"FAC-2-1,G1000:T-ETHERSTATSOCTETS-HT,TC,09-30,23-59-59,,,1003,
1000,:\"RMON THRESHOLD CROSSING ALARM # 1 \",G1000-4"
;

INIT-REG-<MOD2>

This command initializes the PM registers. This command applies to G1K-4, GIGE, FSTE, and FC data objects.

Only RAW-DATA is allowed to be specified for TMPER because no history data will be cleared for RMON-managed PMs by INIT-REG-<MOD2>.

SCHED-PMREPT-<MOD2>

This command schedules or reschedules the NE to report the PM data. The three accumulation time periods for RMON statistics are: 1-MIN, 1-HR, and RAW-DATA.

RTRV-PMSCHED-<MOD2>

This command retrieves the RMON statistics reporting schedule that was set for the NE by the SCHED-PMREPT-<MOD2> command.

The LOCN parameter is optional in the output of RTRV-PMSCHED-<MOD2>, and no LOCN information will be given in the output of RTRV-PMSCHED for RMON PM schedule.

REPT PM <MOD2>

This message reports autonomous monitoring statistics as a result of the schedule created by SCHED-PMREPT-<MOD2>.

The LOCN parameter is optional in the output of REPT PM <MOD2> message, and no LOCN information will be given in the output of REPT PM <MOD2>.

REPT DBCHG

Reports any changes to the NE that result from issuing the following commands:

- ENT-RMONTH-<MOD2>
- DLT-RMONTH-<MOD2>

Also reports when an RMON PM schedule is created or deleted through the SCHED-PMREPT-<MO2> command.

MONTYPE Defined for Ethernet Statistics and Condition Type for TCA

The names of Ethernet and Fibre Channel MONTYPEs are defined exactly as they are defined in the corresponding SNMP MIB statistics group. For example, etherStatsUndersizePkts will be used as the name for the same RMON statistics defined in RFC 1757.

Unlike the PM of other SDH entities (such as VC path, STM), there are two condition types defined for the TCAs of each RMON-managed statistics type (Ethernet or Fibre Channel MONTYPE). One condition type is for the rising threshold, and the other is for the falling threshold. For example, there are two condition types for the etherStatsUndersizePkts statistics type: T-etherStatsUndersizePkts-HT for the rising threshold, and T-etherStatsUndersizePkts-LT for the falling threshold.

- For platform-specific PM information, refer to the Procedure Guide and Reference Manual of that platform.

Enumerated Types

TMPER

TMPER Type shows the possible TMPER values.

Table 2-15 TMPER Type

Value	Description

1-DAY	Performance Parameter Accumulation Interval Length - Every 24 Hours. For RMON managed data statistics, 7 days of history data are available.
15-MIN	Performance Parameter Accumulation Interval Length - Every 15 Minutes. 32 days of history data are available.
1-MIN	Performance Parameter Accumulation Interval Length - Every 1 minute. Only applicable to RMON statistics. 60 days of history data are available.
1-HR	Performance Parameter Accumulation Interval Length - Every 1 Hours. Only applicable to RMON statistics. 24 days of history data are available.
RAW-DATA	The data shown is accumulated starting from the last time that the counters are cleared. This is only applicable to RMON managed PMs.

SAMPLE_TYPE

SAMPLE_TYPE (SAMPLE_TYPE) describes how the data will be calculated during the sampling period.

Table 2-16 SAMPLE_TYPE

Value	Description
ABSOLUTE	Comparing directly
DELTA	Comparing with the current value of the selected variable subtracted by the last sample.

STARTUP_TYPE

STARTUP_TYPE (STARTUP_TYPE) indicates whether an event will be generated when the first valid sample is crossing the rising or falling threshold.

Table 2-17 STARTUP_TYPE

Value	Description
RISING	Generate the event when the sample is greater than or equal to the rising threshold.
FALLING	Generate the event when the sample is smaller than or equal to the falling threshold.
RISING-OR-FALLING	Generate the event when the sample is crossing either the rising threshold or it the falling threshold.

Notes for Card Types

The PM for the client port and/or chunk port (OCH) can include both the RMON-managed PM and the SDH PM when the client payload is provisioned as 1GFC, 2GFC, 10GFC, 1GFICON, 2GFICON, GIGE, or 10GIGE for the following cards:

- MXP_2.5G_10G
- TXP_MR_10G
- TXP_MR_2.5G
- TXP_MR_10E
- MXP_MR_2.5G

Client Port of Cards

When the client port of a card is provisioned as 1GFC, 2GFC, 10GFC, 1GFICON, 2GFICON, GIGE, or 10GIGE, the applicable PM for the client port includes both the RMON-managed PM and the SDH PM. Therefore, the behavior of the RTRV-PM-MMOD2>, INIT-REG-<MOD2>, and SCHED-PMREPT-<MOD2> commands is different from the Ethernet or Fibre Channel port of the other cards where only RMON PM is applicable. The differences include:

- LOCN and DIRN parameters are applicable to the RTRV-PM-<MOD2>, INIT-REG-<MOD2>, and SCHED-PMREPT-<MOD2> commands because they are applicable to the SDH PM. When the LOCN or DIRN parameter is specified, it only applies to the SDH PM.
- Because 1-MIN, 1-HR, and RAW-DATA are not applicable to SDH PM, no SDH PM would be returned in the output of the RTRV-PM command. If RAW-DATA is specified in the input of the INIT-REG command, no SDH PM counter will be cleared.
- When the accumulation time period is specified as 15-MIN or 1-DAY and the PM history bucket is specified as 0 (current bucket), only SDH PM will be returned in the output of the RTRV-PM command. No RMON-managed PM will be included in the output of the RTRV-PM command because RMON PM does not have current bucket.
- An SDH PM MONTYPE cannot be specified in the input of the INIT-REG command. Only the SDH PM counters are cleared. When the ALL MONTYPE is specified, both the RMON and the SDH PM counters are cleared.
- The commands used to manage RMON thresholds (ENT-RMONTH, DLT-RMONTH, and RTRV-RMONTH) are only applicable to the RMON PM of the client port. The SDH PM thresholds of the client port are still managed by the SET-TH and RTRV-TH commands. For example, if the client port type of an MXP_MR_2.5G card is provisioned as GIGE, the following commands would be used to create an RMON threshold:

  ENT-RMONTH-GIGE::FAC-2-1-1:1::IFINOTETS,,,,1000:RISE=1000,FALL=900;

  and the following command would be used to set the SDH PM threshold:

  SET-TH-GIGE::FAC-2-1-1:1LBCL-MIN,0.2;

OCH Port of Cards

The optical channel (OCH) port of the TXP_MR_10G and TXP_MR_10E cards include the RMON-managed 8B10B PM as well as the other SDH PM when their client port is provisioned as GIGE, 10GIGE, 1GFC, 2GFC, or 10GFC.

The RTRV-PM-OCH, INIT-REG-OCH, SCHED-PMREPT-OCH, and REPT PM OCH commands have similar behaviors as mentioned in the Client Port of Cards.

Rules for Framing Type Autoprovisioning in CTC Versus TL1

The E1, E3, and DS3i cards can autosense framing and set the format accordingly; however, this framing autosense feature can only be set using CTC. Use CTC to set the frame format (FMT) attribute on E1, E3, and DS3i cards to autoprovision.

The FMT field will blank out for a few seconds while the card determines the framing mode received by that particular port. The FMT field is set accordingly to unframed, M23, or CBit. If the card is not present (preprovisioned), 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 E1, E3, and DS3i cards; it only supports unframed, M23, or CBit. If autoprovision is selected from CTC and at the same time the TL1 command RTRV-E3 is issued, the TL1 output will indicate the FMT field as unframed during the time period that the card (if present) is autosensing the frame format. If the card is not present (preprovisioned), the response of the RTRV-E3 command (after CTC sets the FMT to autoprovision) will indicate the FMT field as unframed.

Provisioning Rules for Transponder and Muxponder Cards

This section provides provisioning rules associated with the following cards and their pluggable port modules (PPMs):

- MXP_2.5G_10G
- TXP_MR_10G
- TXP_MR_2.5G
- TXPP_MR_2.5G
- MXP_2.5G_10E
- TXP_MR_10E
- MXP_MR_2.5G
- MXPP_MR_2.5G
- GE_XP
- 10GE_XP
- GE_XPE
- 10GE_XPE
- OTU2_XP
- ADM_10G

PPM Provisioning Rules

To provision PPMs, use the **ENT-EQPT** command.

Provision the first PPM on Slot 2 provisions the first PPM.

Example 2-33 Provision the first PPM on Slot 2

ENT-EQPT::PPM-2-1:100::PPM-1PORT;

To delete PPM provisioning, use the DLT-EQPT command.

Payload Provisioning Rules

Use the following rules when provisioning payload:

- PPM must first be provisioned.
- When changing the payload data type:
  - All ports being edited must be in the OutOfServiceandManagement,Disabled state because this change is traffic affecting.
  - All ports being edited must not have any DCC terminations.
  - All ports being edited must not be part of any timing source.
  - The section trace mode of all ports being edited must be OFF.

  - For all regeneration and retiming (2R) payload types, trunk ports must not have generic communications channel (GCC) termination or optical transport network/forward error correction (OTN/FEC) enabled.
  - Payload cannot be changed if any ports being edited are part of a Y-cable protection group.
  - The payload cannot be changed if any of the ADM-10G and OTU2_XP ports being edited are part of the APS (Automatic Protection Switching) protection group.
  - Only the TXP, GE_XP, 10GE_XP, GE_XPE, 10GE_XPE, and OTU2_XP cards can be used for the 10GIGE payload. Termination mode must be set to TRANSPARENT-ALARM INDICATION SIGNAL (AIS) or TRANSPARENT-SQUELCH (TRANSPARENT-SQUELCH is only supported on TXP_MR_10E).
- To set the payload to other than STM1, STM4, STM16, or STM64, the termination mode must be set to TRANSPARENT-AIS or TRANSPARENT-SQUELCH (TRANSPARENT-SQUELCH is only supported on TXP_MR_10E). For Fibre Channel cards and all 2R payload types, the termination mode is not applicable and must be set to TRANSPARENT-AIS or TRANSPARENT-SQUELCH.
- Changing the payload while in a regeneration group requires unprovisioning the regeneration group, unprovisioning the payload, reprovisioning the payload, and reprovisioning the regeneration group.

To provision the payload, use the following commands:

- **ENT-(OCn, nGIGE, nGFC, 2R)**
- **DLT-(OCn, nGIGE, nGFC, 2R)**
- **ED-(OCn, nGIGE, nGFC, 2R)**

Examples of provisioning payload commands include:

- ENT-STM4
- ENT-10GIGE
- ED-2GFC

STM Payload Provisioning Parameters

SDH payloads are supported by NCS cards according to Payload/Card Mode Support . These payloads are configurable only for the Section and Line layers. STM layers cannot be provisioned or retrieved.

Table 2-18 Payload/Card Mode Support

Card Type	Payload	Card Mode
TXP_MR_10G	STM64	NCS-LINE
	10GIGE	NCS-SECTION NCS-TRANS-AIS With REGEN group: NCS-TRANS-AIS
MXP_2.5G_10G	STM16	NCS-LINE NCS-SECTION NCS-TRANS-AIS
TXP_MR_2.5G and TXPP_MR_2.5G	1GIGE, 1GF, 1GFICON, 2GFICON, ESCON, ISC1, ISC3, ETRCLO, DV6000, HDTV, D1VIDEO	With REGEN group: NCS-TRANS-AIS Must be NCS-TRANS-AIS. Requires the DWRAP and FEC disabled on the network/OCH ports.

	STM1, STM4, STM16	NCS-LINE NCS-SECTION NCS-TRANS-AIS
TXP_MR_10E	STM64	NCS-LINE NCS-SECTION NCS-TRANS-AIS NCS-TRANS-SSQUELCH
	10GIGE, 10GFC	NCS-TRANS-AIS NCS-TRANS-SQUELCH With REGEN group: NCS-TRANS-AIS NCS-TRANS-SQUELCH
MXP_2.5G_10E	STM16	NCS-SECTION NCS-TRANS-AIS NCS-TRANS-SQUELCH
MXP_MR_2.5G AND MXPP_MR_2.5G	Port 1: 1GFC, 1GFICON, GIGE Port 2: 1GFC, 2GFC, 1GFICON, 2GFICON, GIGE[4]	FCGE[5]
GE_XP and GE_XPE	GIGE, 10GIGE	GEXP-10x1Gx2-MXP GEXP-20x1G-MXP GEXP-L2ETH
10GE_XP and 10GE_XPE	GIGE, 10GIGE	10GEXP-TXP 10GEXP-L2ETH
OTU2_XP	OC192, 10GIGE	NCS-TRANS-AIS NCS-TRANS-SQUELCH NCS-SECTION NCS-LINE
ADM_10G	OC3, OC12, OC48, GIGE	—

The configuration parameters for STM ports can be edited and retrieved using the ED-<STM_TYPE> and RTRV-<STM_TYPE> commands. The following conditions apply when using the parameters for these commands:

- Regenerator Section DCC (RS-DCC) and Multiplex Section DCC (MS-DCC) parameters are used to enable and disable RS-DCC and MS-DCC functionality, respectively.
- SYNMSG and SENDDUS synchronization parameters are applicable only to cards supporting synchronization: MXP-2.5G-10G, TXP-MR-10E, and MXP-2.5G-10E, OTU2_XP, and ADM-10G.
- Signal fail and signal degrade can be provisioned using SFBER and SDBER parameters, respectively.

[4]If 2GFC or 2GFICON is on Port 2, then Port 1 must be unprovisioned. If Port 1 is provisioned then Port 2 cannot contain 2GFC or 2GFICON because of bandwidth limitations. Ports 3 through 8 are not available. ESCON payload is not supported.

[5]ESCON and mixed card modes are not supported.

- Soak time and administrative/service state parameters can be provisioned using SOAK, SOAKLEFT, PST, SST, and CMDMDE parameters.
- The SONET/SDH selection can be provisioned using the MODE parameter.
- The name of the facility can be provisioned using the NAME parameter.
- The J0 Section Trace parameters can be provisioned using the EXPTRC, TRC, INCTRC, TRCMODE, and TRCFORMAT parameters.

Termination Mode Provisioning Rules

The following rules apply when provisioning the termination mode:

- It is a card-level operation.
- Termination mode provisioning is only applicable to the STM1, STM4, STM16, and STM64 payload types.
- Changing termination mode requires:
  a. All ports must be in OutOfService state because this change is traffic-affecting.
  b. All ports must not have DCC termination (GCC is not applicable).
  c. The J0 Section Trace Mode on all ports must be <OFF>.
  d. The trunk port must not be part of any timing source.
  e. If any port is Y-cable protected, these rules also apply to the peer slot.
- Section and Line termination mode is supported for the STM1, STM4, STM16, and STM64 payloads.
- You cannot change the termination mode if the port is part of a Y-cable protection or regeneration group.
- Termination mode provisioning does not apply to MXP_MR_2.5G, MXPP_MR_2.5G, and ADM-10G cards.

To set the termination mode, use the following commands:

- ENT-EQPT
- ED-EQPT

Set the Termination Mode sets the termination mode of the card in Slot 1 to NCS-LINE.

Example 2-34 Set the Termination Mode

```
ED-EQPT::SLOT-1:116:::CARDMODE=NCS-LINE;
```

Wavelength Provisioning Rules

The following rules apply when provisioning the wavelength:

- Change the trunk wavelength of all the trunk ports to be in the Locked-Disabled state, because this change is traffic-affecting.
- 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.
- If the provisioned wavelength is set to the first tunable wavelength, any removal of an operational card and subsequent replacement with a card for a different wavelength will not cause a mismatch alarm to be raised.
- To receive the mismatch alarm notification, you need to explicitly provision the wavelength and not use the first tunable wavelength.

To set the card-level wavelength, use the following commands:

- **ENT-EQPT**
- **ED-EQPT**

Set the Card-Level Wavelength sets the card-level wavelength of the card in Slot 1 to 150.33.

Example 2-35 Set the Card-Level Wavelength

```
ED-EQPT:VA454-22:SLOT-1:116:::PWL=1530.33;
```

Regeneration Group Provisioning Rules

The following rules apply when provisioning the regeneration group:

- The TXPP and TXP versions of the transponder card can be used in a regeneration group.
- When the TXPP card is used as a regeneration group, the LOCKOUT_OF_PROTECTION, inhibit switching command is issued on the working trunk port.
- The inhibit switching command cannot be unlocked until the regeneration group is unprovisioned for the TXPP.
- Regeneration group provisioning is denied if there is a FORCE or MANUAL switching command already provisioned on the trunk ports for the TXPP.
- A regeneration group enables the continuation of the client signal across multiple spans.
- Peer slot must not be itself.
- Peer slot must at least be preprovisioned.
- Peer slot must not be part of another regeneration group.
- Peer slot must not be part of a Y-cable protection group.
- Same card type.
- Same payload type and data rate.
- Same ITU-T G.709 OTN status.
- Same FEC status.
- Termination mode has to be set to TRANSPARENT-AIS or TRANSPARENT-SQUELCH mode.

To set the card-level regeneration group, use the following commands:

- **ED-EQPT**
- **ENT-EQPT**

Set Card-Level Regeneration Group sets a card-level regeneration group for Slot 2.

Example 2-36 Set Card-Level Regeneration Group

ED-EQPT::SLOT-2:CTAG:::PROTID=SLOT-2,NAME=REGENGROUPNAME;

DCC/GCC Provisioning Rules

The following rules apply when provisioning DCC and GCC:

- The DCC can be provisioned on the client port of a TXP or MXP card.
- No 2R payload types support GCC.
- Provisioning a DCC requires:
  - Payload data type is set to STM1, STM4, STM16, or STM64.
  - Termination mode is set to Line or Section terminated if the card supports provisionable termination mode.
- The DCC can be provisioned on the trunk line provided that ITU-T G.709 is provisionable and ITU-T G.709 OTN status is turned off:
  - To provision a GCC on the trunk port, the ITU-T G.709 should be enabled.

  - To provision a DCC on the trunk port, the ITU-T G.709 should be disabled.
- Only the working client port in a Y-cable protection scheme is allowed to be provisioned with DCC.
- Only the working trunk port in a splitter protection scheme can be provisioned with DCC or GCC.

To provision DCC, use the **ED-(OCn, nGIGE, NGFC)** command.

Provision DCC provisions DCC.

Example 2-37 Provision DCC

```
ED-STM64::FAC-1-1-1:100:::COMM=DCC:OutOfService,AutomaticInService;
```

To provision GCC, use the **ED-OCH** command.

Provision GCC provisions GCC.

Example 2-38 Provision GCC

```
ED-OCH::CHAN-6-2:114::COMM=GCC:OutOfService,AutomaticInService;
```

ITU-T G.709 OTN, FEC, and OTN SDBER/SFBER Provisioning Rules

The following rules apply when provisioning ITU-T G.709 OTN, FEC, and OTN SDBER/SFBER:

- The ITU-T G.709 OTN, FEC, and OTN SDBER/SFBER can only be provisioned on the trunk port.
- 2R (transparent) payload types (HDTV and passthrough) do not support ITU-T G.709 OTN or FEC.
- To enable ITU-T G.709 OTN:
  - All trunk ports must be in the OutOfService state.
  - All trunk ports must not have any RS-DCC provisioned.
- To disable ITU-T G.709 OTN:
  - All trunk ports must be in the OutOfService state.
  - All trunk ports must not have any GCC or active trail trace identification (TTI) mode provisioned.
- FEC status can be enabled only if ITU-T G.709 is enabled.
- To change FEC status, all trunk ports must be in the OutOfService state.
- Only ITU-T G.709 OTN, FEC status, and SDBER/SFBER settings on the working trunk port can be changed in the protected version of the TXP card. The value provisioned on the working trunk port is reflected on the protect trunk port.
- The ITU-T G.709 OTN is only provisionable in non-2R (or unframed) payload type.
- When ITU-T G.709 is turned on, the OTN SFBER value is always set to 1E-5 and no other bit error rate (BER) values are provisionable.

To provision ITU-T G.709, FEC, and OTN SDBER/SFBER, use the **ED-OCH** command.

Provision ITU-T G.709, FEC, and OTN SDBER/SFBER provisions ITU-T G.709, FEC, and OTN SDBER/SFBER.

Example 2-39 Provision ITU-T G.709, FEC, and OTN SDBER/SFBER

```
ED-OCH::CHAN-6-2:114:::OSDBER=1E-6,DWRAP=Y,FEC=Y,:
OutOfService,AutomaticInService;
```

Synchronization Provisioning Rules

The following rules apply when provisioning synchronization:

- The TXP_MR_10G, TXP_MR_2.5G, and TXPP_MR_2.5G cards are through-timed (passthrough) and cannot be used as a timing source. The GE_XP, 10GE_XP, GE_XPE, and 10GE_XPE cards do not support synchronization provisioning.
- The TXP_MR_10E card can be used as a timing reference (only on the client port, not the trunk port).
- A MXP_MR_2.5G, MXPP_MR_2.5G, OTU2_XP, or ADM-10G card trunk port can be used as a timing source.
- Only MXP ports can be used for a timing source. A trunk port is only allowed as a timing reference if ITU-T G.709 is off and the termination mode is Line or Section.
- All client ports of the ADM-10G cards are available for timing source when configured as SDH. GIGE payload cannot be used for timing source. Interlink port cannot be used for synchronization.
- All client ports of the MXP cards are available for timing source irrespective of termination mode.

To set port-level synchronization attributes, use the following commands:

- **ENT-OCn**
- **ED-OCn**
- **ED-OCH**

Set Port-Level Synchronization Attributes sets port-level synchronization attributes.

Example 2-40 Set Port-Level Synchronization Attributes

```
ED-OC48::FAC-1-1-1:CTAG:::SYNCMSG=Y,SENDDUS=N:;
ED-OCH::CHAN-6-2:114:::SYNCMSG=N,SENDDUS=Y;:
```

Section Trace Provisioning (J0) Rules

The following rules apply when provisioning section trace (J0):

- The client and trunk ports support section trace only if the payload is STM1, STM4, STM16, or STM64.
- The client and the trunk ports support the section trace only in Line or Section termination mode.
- In Line termination mode, the supported trace modes are MANUAL and MANUAL_NO_AIS trace modes.
- In Section termination mode, the supported trace mode is only the MANUAL_NO_AIS trace mode.
- The section trace supports a 1- or 16-byte length trace format.
- The trace mode of AUTO and AUTO-NO-AIS are not supported.
- No trace is applicable for 2R (unframed) payload types, for example, DV-6000, HDTV, and ESCON.
- The section trace received string should appear when the card is in TRANSPARENT-AIS or TRANSPARENT-SQUELCH termination mode and the payload is STM1, STM4, STM16, or STM64.
- When the client port is configured in a Y-cable or APS protection group, the received string is always retrieved from the active client port.
- If the line is Y-cable or APS protected, section trace can only be provisioned on the working port. However, the provisioning is duplicated between the two ports. Both ports contain the same values. This rule applies to the following parameters: Mode, Format, Send String, and Expected String.
- The MXP_2.5G_10E card is used for client test connection on client ports. For the trunk port, the trail trace identification (TTI) is used.
- The TXP_MR_10E card is used to test connections on client trunk ports.
- On MXP_MR_2.5G/MXPP_MR_2.5G cards, the trunk port section trace can be provisioned following the rules for line terminated SDH.
- Section trace provisioning is not supported on GE_XP, 10GE_XP, GE_XPE, 10GE_XPE cards.

For section trace provisioning of client ports provisioned for OCn payload, use the ED-OCn command.

Section trace provisioning of client ports provisions section trace for client ports.

Example 2-41 Section trace provisioning of client ports

```
ED-OC48::FAC-6-1-1:10:::EXPTRC="AAA",TRC="AAA",TRCMODE=MAN,
TRCFORMAT=16-BYTE;
```

For section trace provisioning of trunk/OCH NCS ports, use the ED-TRC-OCH command.

Section Trace Provisioning of Trunk/OCH NCS Ports provisions section trace for client ports.

Example 2-42 Section Trace Provisioning of Trunk/OCH NCS Ports

```
ED-TRC-OCH::CHAN-6-2:10:::EXPTRC="AAA",TRC="AAA",TRCMODE=MAN,
TRCLEVEL-J0,TRCFORMAT=64-BYTE;
```

Trail Trace Identification Provisioning Rules

The following rules apply when provisioning trail trace identification (TTI):

- For the TXPP_MR_2.5G card, TTI can be provisioned only on the working trunk port. However, the provisioning will be duplicated between the two ports. Both ports will contain the same values. This rule applies to the following parameters: Mode, Format, Send String, and Expected String.
- The TTI level trace supports only 64-byte length trace format.
- The TTI level trace supports only the MANUAL and MANUAL_NO_AIS trace modes.
- The TTI received string is always retrieved from the active trunk port.
- The TTI level trace can be provisioned for the section and path monitoring.
- MXP_MR_2.5G and MXPP_MR_2.5G cards do not support TTI.

To provision port-level trace, use the **ED-TRC-OCH** command.

Provision Port-Level Traceprovisions port-level trace.

Example 2-43 Provision Port-Level Trace

```
ED-TRC-OCH::CHAN-6-2:10:::EXPTRC="AAA",TRC="AAA",TRCMODE=MAN,
TRCLEVEL=TTI-PM,TRCFORMAT=64-BYTE;
```

PM (Performance Monitoring) and Alarm Threshold Provisioning Rules

The following rules apply when provisioning PM parameters and alarm thresholds:

- When framing type is unframed, for example, HDTV or DV6000, only optics threshold provisioning and PM are applicable. Support for optics threshold provisioning and PM depends on the ESCON SFP type.
- Optics PM supports only Near End, 15MIN, and 1DAY interval buckets.
- When framing type is Fibre Channel or Ethernet (for example, 1GFC or 1G Ethernet):
  - (TXP_MR_2.5G/TXPP_MR_2.5G, MXP_2.5G_10G, and TXP_MR_10G only) Only 8B10B threshold provisioning and PM are available.
  - 2G Fibre Channel does not support 8B10B threshold provisioning and PM.
- When the framing type is GIGE/10GIGE, all monitored PM parameter terminology will follow the current chassis type.
- (TXP_MR_2.5G/TXPP_MR_2.5G, MXP_2.5G_10G, and TXP_MR_10G only) 8B10B applies to both transmit (Tx) and receive (Rx) directions.
- 8B10B PM supports only Near End, 15MIN, and 1DAY interval buckets.
- The 8B10B layer is not used for MXP_2.5G_10E and TXP_MR_10E cards.

- When the framing type is SONET/SDH, all monitored PM parameter terminology follows the current chassis type.
- The OTN thresholds are only applicable if the ITU-T G.709 OTN status is enabled.
- The FEC thresholds are only applicable if the ITU-T G.709 and FEC are enabled.
- If the line is configured in a Y-cable, APS protection, 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 ITU-T G.709 OTN and FEC thresholds.
- Payload PM can be independently retrieved for both the working and protect port.

To set port-level thresholds, use the **SET-TH-(OCn, nGIGE, nGFC, OCH)** command.

Set Port-Level Thresholds sets port-level thresholds.

Example 2-44 Set Port-Level Thresholds

```
SET-TH-OC48::FAC-1-1-1:123::CVL,12,NEND,,15-MIN;
SET-TH-OCH::CHAN-6-1:123::ES-PM,12,NEND,,15-MIN;
```

To retrieve port-level thresholds, use the **RTRV-PM-(OCn, nGIGE, nGFC, OCH)** command.

Retrieve Port-Level Thresholds retrieves port-level thresholds.

Example 2-45 Retrieve Port-Level Thresholds

```
RTRV-PM-OC48::FAC-1-1-1:123::CVL,10-UP,NEND,BTH,15-MIN,04-11,12-45;
RTRV-PM-OCH::CHAN-6-1:123::ES-PM,10-UP,NEND, BTH,15-MIN,04-11,12-45:
```

Y-Cable Protection Group Provisioning Rules

The following rules apply when provisioning a Y-cable protection group:

- A Y-cable protection group can be created between the client ports of two unprotected TXPs and OTU2_XP cards.
- While in Y-cable protection, a TXP card cannot be part of a regeneration group.
- Only the working client port can be provisioned with RS-DCC.
- Y-cable cannot be provisioned for a protect version of the TXP_MR_2.5G card.
- Y-cable protection group is not supported on the ADM-10G card.
- Only the working ports (not the protect) can be provisioned with DCC and timing reference.

To provision Y-cable protection groups, use the following commands:

- ENT-FFP-(OCn, nGIGE, nGFC)
- DLT-FFP-(OCn, nGIGE, nGFC)
- ED-FFP-(OCn, nGIGE, nGFC)

Provision Y-Cable Protection Groups provisions Y-Cable Protection Groups.

Example 2-46 Provision Y-Cable Protection Groups

```
ENT-FFP-OC48::FAC-1-1-1,FAC-2-1-1:100:::PROTTYPE=Y-CABLE,
PROTID=DC-METRO-1,RVRTV=Y,RVTM=1.0,PSDIRN=BI:
ENT-FFP-10GIGE::FAC-1-1-1,FAC-2-1-1:100:::PROTTYPE=Y-CABLE,
PROTID=DC-METRO-2,RVRTV=Y,RVTM-1.0,PSDIRN=BI;
```

Splitter Protection Group Provisioning Rules

The following rules apply when provisioning a splitter protection group:

- Splitter protection group provisioning rules apply only to the protect version of the TXP and OTU2_XP cards.

- Splitter protection groups cannot be created or deleted.
- Splitter protection groups are created automatically when a protect TXP card is provisioned.
- The only editable attributes for a splitter protection group are Revertive, Revertivetime, and Transponder mode.

To provision a splitter protection group, use the **ED-FFP-OCH** command.

Provisioning Splitter Protection Group Attributes: provisions a splitter protection group:

Example 2-47 Provisioning Splitter Protection Group Attributes:

```
ED-FFP-OCH::CHAN-2-1:100:::PROTID=DC-METRO3,RVRTV=Y,
RVTM=5.0,PSDIRN=BI;
```

Loopback Provisioning Rules

The following rules apply when provisioning loopbacks:

- Loopbacks can be provisioned on the client and trunk ports.
- Both terminal and facility loopback types can be provisioned.
- Loopbacks are not applicable when the framing type is UNFRAMED (HDTV or DV6000).
- For the protect TXP card, the following loopback rules apply to the trunk ports:
  - Only one loopback is allowed to be provisioned at the trunk ports at any given time.
  - Loopback is allowed only if the sibling trunk port is in the OutOfService-Maintenance state.
  - Provisioning a loopback on a trunk port will trigger the LOCKOUT_OF_PROTECTION or LOCKOUT_OF_WORKING inhibit switching command, depending on whether the working or the protect port is placed in the loopback.
  - When a loopback is provisioned on a trunk port, both trunk ports will transmit the signal of the loopback port.
  - A loopback is denied if there is a FORCE or MANUAL switching command in place on the trunk ports.
  - 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.

  Use the **OPR-LPBK-OCH** command to provision loopbacks.

  Operating a Loopback is an example of operating a loopback.

Example 2-48 Operating a Loopback

```
OPR-LPBK-OCH::CHAN-2-1:1::,,,TERMINAL;
```

Automatic Laser Shutdown Provisioning Rules

The following rules apply when provisioning automatic laser shutdown (ALS):

- ALS can be provisioned on the client and trunk ports. For an ADM-10G card, ALS can be provisioned on interlink ports as well.
- If the trunk port is configured in a splitter protection group, only the working trunk can be provisioned for ALS. However, provisioning on the working trunk port is reflected on the protect port.
- For an OTU2-XP card, ALS can be provisioned on the trunk ports. If the trunk port is configured in an APS protection group, only the working trunk port can be provisioned for ALS. However, provisioning on the working trunk port is reflected on the protect port.
- For the protected TXP card, ALS mode will only take effect when both ports receive a loss of signal (LOS).

To provision ALS, use the following commands:

- **ED-ALS**

- **ED-ALS-(OCn, nGIGE, nGFC, OTS, OMS, OCH)**

Provision ALS provisions ALS.

Example 2-49 Provision ALS

```
ED-ALS::FAC-1-1-1:100:::ALSMODE=Y,ALSRCINT=130,ALSRCPW=35.1,RLASER=Y;
ED-ALS-OC192::FAC-1-1-1:100:::ALSMODE=Y,ALSRCINT=130,ALSRCPW=35.1,
RLASER=Y;
```

Ethernet Provisioning Rules

Ethernet provisioning is applicable only when the card is configured in the GEXP-L2ETH or 10GEXP-L2ETH mode.

Bandwidth Profile Provisioning Rules

The following rules apply when provisioning Bandwidth profile:

- Bandwidth Profile (BWP) database (DB) is applicable to the entire node.
- Any row of the BWP represents a set of VLAN profile attributes.
- Each BWP is identified by a unique number in the range of 1 to 10000.
- BWP 0 is reserved for default profile. Since it contains the default manufacturing data, only retrieve (RTRV) command is applicable.
- NAME, CIR, CBS, PBS, PIR, and CFMSTATE parameters can be configured.

To provision BWP, use the following commands:

- **ENT-BWP-ETH**
- **DLT-BWP-ETH**
- **ED-BWP-ETH**
- **RTRV-BWP-ETH**

Provision BWP provisions BWP.

Example 2-50 Provision BWP

```
ENT-BWP-ETH:ROCKS:BWP-75:123:::NAME="MyBWP75",CIR=10,CBS=1M,PBS=1M,PIR=20,CFMSTATE=Y;
DLT-BWP-ETH:ROCKS:BWP-75:123;
ED-BWP-ETH:ROCKS:BWP-75:123:::NAME="MyBWP75",CIR=10,CBS=1M,PBS=1M,PIR=25,CFMSTATE=N;
RTRV-BWP-ETH:ROCKS:BWP-75:123;
```

When a BWP is created using the ENT-BWP-ETH command, it can be used in the ED-VLAN-ETH command to set up a relationship between the ETH port, VLAN, and BWP parameters.
If BWP field is omitted the first time the ENT-VLAN-ETH command is executed, then BWP-0 default value is assumed.
When a BWP is already associated with the ETH Port-VLAN couple, to detach the Profile and restore the default value, a BWP=0 is requested using the ED-VLAN-ETH command.

TL1 examples of BWP attach, retrieve, or detach are:

```
ED-VLAN-ETH:ROCKS:ETH-1-1-1:123::100:BWP=34;
RTRV-VLAN-ETH:ROCKS:ETH-1-1-1:123::100:;
ED-VLAN-ETH:ROCKS:ETH-1-1-1:123::100:BWP=0;
```

VLAN Provisioning Rules

The following rules apply when provisioning the VLAN:

- The VLAN database (DB) is applicable to the entire node.
- Any row of the database represents a VLAN.

- The VLAN DB can be in the range of 1 to 4069. VLAN 0 is reserved for untagged VLAN.
- Name and Protected parameters can be configured.
- There is a hardware limitation on the maximum number of VLANs on which the CIR (Committed Information Rate), CBS (Committed Burst Size), EBS (Excess Burst Size), EIR (Excess Information Rate), and Ingress rate limit is set:
  - For GE_XP and 10GE_XP cards, Ingress rate limit is set on 128 (maximum) VLANs per board.
  - For GE_XPE and 10GE_XPE cards, Ingress rate limit is set on 256 (maximum) VLANs per board.
- A VLAN can be created (ENT), deleted (DLT), modified (ED), and retrieved (RTRV).

To provision VLAN, use the following commands:

- **ENT-VLAN**
- **DLT-VLAN**
- **ED-VLAN**
- **RTRV-VLAN**

Provision VLAN provisions VLAN.

Example 2-51 Provision VLAN

```
ENT-VLAN::VLAN-100:123::NAME="My VLAN",PROTN=N;
DLT-VLAN::VLAN-100:123;
ENT-VLAN::VLAN-100:123::NAME="Your VLAN",PROTN=Y;
RTRV-VLAN::VLAN-100:123
```

Link Integrity Rules

Link Integrity must be provisioned on a specific VLAN setting, that is, CFMSTATE=Y, in the bandwidth profile used by the VLAN.

To activate link integrity, use the **ED-BWP-ETH** command.

Activate Link Integrity activates link integrity.

Example 2-52 Activate Link Integrity

```
ED-BWP-ETH:ROCKS:BWP-56:1:::NAME="MyBWP56",CIR=10,CBS=1M,PBS=1M,PIR=20,CFMSTATE=Y
```

The VLAN-AIS action depends on the AISACTION parameter set on the ETH port. The possible values are AIS-SQUELCH and AIS-NONE.

To set and retrieve the AISACTION value use the following commands:

- **ED-L2-ETH**
- **RTRV-L2-ETH**

Set and Retrieve AISACTION Parameter sets and retrieves AISACTION parameter

Example 2-53 Set and Retrieve AISACTION Parameter

```
ED-L2-ETH::ETH-5-3-2-1:502:::AISACTION=AIS-SQUELCH;
RTRV-L2-ETH:TID:ETH-5-3-2-1:CTAG;
```

Since VLAN-AIS alarm on a ETH port is a summarization of multiple possible VLAN-X-AIS, the RTRV-VLAN-ETH command can be used to retrieve specific VLAN-X-AIS status on a single port as shown in the following examples:

```
RTRV-VLAN-ETH:TID:ETH-1-1-1:CTAG::110;
```

```
RTRV-VLAN-ETH:TID:ETH-1-1-1:CTAG;
```

Link Integrity can be activated on a limited number of VLANs per board:

- For GE_XP and 10GE_XP cards, link integrity is enabled on 128 (maximum) VLANs.
- For GE_XPE and 10GE_XPE cards, the link integrity feature is enabled on 256 (maximum) VLANs.

L2 Provisioning Rules

An L2 Ethernet port is present for every 22 ports of the GE-XP card, and for every 4 ports of the 10GE-XP card.

The following rules apply when provisioning L2:

- An L2 Ethernet port is accessed by the ETH modifier.
- The access identifier (AID) of an L2 Ethernet port is same as the supporting facility, with ETH prefix instead of FAC.
- The following parameters can be edited:
  - PST, SST, CMDMDE, and so on—administrative or service state parameters.
  - NIMODE (UNI,NNI)—client ports default to UNI and trunk ports default to NNI.
  - MACLEARNING, INGRESSCOS, ETHERCETYPE (CE type), ETHERSTYPE (Service Provider Type), BPDU, and BRIDGESTATE.
  - ALWMACADDR and INHMACADDR—mutually exclusive parameters.
  - QNQMODE and TRNSPSVLAN—when QNQMODE is SELECTIVE the QNQ-ETH table should be referred for detailed VLAN association; when QNQMODE is TRANSPARENT, TRANSPSVLAN contains VLAN ID of the only service provider's VLAN configured for the port.
  - NAME—name of the facility.

To provision L2, use the following commands:

- **ED-L2-ETH**
- **RTRV-L2-ETH**

Provision L2 provisions L2.

Example 2-54 Provision L2

```
ED-L2-ETH:CISCO:ETH-1-1-1:123:::NIMODE=NNI,MACLEARNING=Y,INGRESSCOS=7, ETHERCETYPE=8100,ETHERSTYPE=8100,
ALWMACADDR=[aa-bb-cc-dd-ee-ff&zz-yy-ww-tt-ss-rr],BPDU=Y,BRIDGESTATE=DISABLED,
QNQMODE=TRANSPARENT,TRNSPSVLAN=4096,NAME="Ethernet",IGMPROUTER=STATIC, AISACTION=AIS-SQUELCH
RTRV-L2-ETH:PETALUMA:FAC-1-1:CTAG;
```

L2 Queue In Queue (QinQ) Provisioning Rules

The following rules apply when provisioning L2 Queue In Queue (QinQ):

- L2 QinQ associates a customer-end VLAN to a service provider VLAN.
- L2 QinQ is valid on port basis only when QNQMODE is SELECTIVE.
- The following association rules apply between the two VLAN types:
  - Add (ADD) the service provider VLAN when the customer-end VLAN (or a range of customer-end VLAN) matches, *or*
  - Translate (XLTE) the customer-end VLAN (or a range of customer-end VLAN) with service provider VLAN when it matches.

    The default rule is ADD.
- The XLTE-ADD and DOUBLE-ADD rules for QinQ settings are not supported by the GE_XP and 10GE_XP cards.

- DOUBLE-ADD and XLTE-ADD are the newly introduced L2 QinQ rules. INTERNALVLAN and INGRESSCOS are the newly added parameters.
- When the DOUBLE-ADD and XLTE-ADD rules are activated, INTERNALVLAN parameter has to be provided.
- When DOUBLE-ADD rule is activated, the C-VLANs identified by FIRSTCEVLANID and LASTCEVLANID parameters will be added by the INTERNALVLAN parameter first and then added by the SVLANID parameter.
- When XLTE-ADD rule is activated, the C-VLANs identified by FIRSTCEVLANID and LASTCEVLANID parameters will be first translated to the INTERNALVLAN parameter and then will be added by the SVLANID parameter.
- The INGRESSCOS parameter is requested only if the INGRESSCOS parameter on the ETH port is set to VLAN operating mode. This this means the INGRESSCOS parameter applied to this port may be different depending on the VLAN and its QinQ setting.
- Only when the Ethernet port Ingress COS value is set to CVLAN, the ENT-QNQ-ETH command can set the ingress value for QinQ.
- Ingress values for QinQ cannot be set when VLAN ranges are configured for QinQ.
- In retrieve command, the VLAN IDs can be optionally specified to filter CVLAN ID (or a range of them) and SVLAN ID. When the VLAN ID is not specified, all the VLAN IDs associated to the Ethernet port are returned.

To provision QinQ, use the following commands:

- **ENT-QNQ-ETH**
- **ED-QNQ-ETH**
- **RTRV-QNQ-ETH**
- **DLT-QNQ-ETH**

Provision QinQ provisions QinQ.

Example 2-55 Provision QinQ

```
ENT-QNQ-ETH::ETH-2-10-1:123::10,10,100:RULE=XLTE;
RTRV-QNQ-ETH::ETH-2-10-1:123;
```

2.12.17.4.2 L2 Selective NNI Provisioning Rules

The L2 Selective NNI Provisioning applies to an L2 Ethernet port configured as NNI. The following rules apply when provisioning L2 Selective NNI:

- Any entry associates a SVLAN to the Ethernet port.
- User can add (ENT), remove (DLT), and retrieve (RTRV) a VLAN associated to the Ethernet port.
- In the RTRV command, the VLAN ID can be optionally specified in order to filter the SVLAN ID. If the VLAN ID is not specified, then all the VLAN IDs associated to the Ethernet port are returned.

To provision NNI, use the following commands:

- ENT-NNI-ETH
- ED-QNQ-ETH
- RTRV-NNI-ETH

Provision NNI provisions NNI

Example 2-56 Provision NNI

```
ENT-NNI-ETH::ETH-2-10-1:123::10;
RTRV-NNI-ETH::ETH-2-10-1:123::10;
```

Internet Group Management Protocol Rules

The Internet Group Management Protocol (IGMP) can be activated on a specific VLAN by setting IGMPENABLE=Y in the ED-VLAN command. Also, IGMPFASTLEAVE=Y can be set in the ED-VLAN command to decrease the delay for forwarding multicast.

To activate IGMP, use the ED-VLAN command.

Example 2-57 Activate IGMP

```
ED-VLAN:ROCKS:VLAN-1-2-84:1:::NAME="VLAN84",PROTN=N,MACLEARNING=N,IGMPENABLE=Y,IGMPFASTLEAVE=Y,IGMPSUPP=N
```

To indicate which port is connected to the router, set the parameter IGMPROUTER=STATIC in the ED-L2-ETH command.

To set and retrieve IGMP router, use the following commands:

- ED-L2-ETH
- RTRV-L2-ETH

Set and Retrieve IGMP Router sets and retrieves IGMP Router.

Example 2-58 Set and Retrieve IGMP Router

```
ED-L2-ETH:CISCO:ETH-1-1-1:123:::IGMPROUTER=STATIC;
RTRV-L2-ETH:TID:ETH-1-1-1:CTAG;
```

The IGMP Snooping feature can be activated on a limited number of VLANs per board:

- For GE_XP and 10GE_XP cards, the IGMP snooping feature is enabled on 256 (maximum) VLANs.
- For GE_XPE and 10GE_XPE cards, the IGMP snooping feature is enabled on 512 (maximum) VLANs.

Multicast VLAN Registration Rule

Multicast VLAN Registration (MVR) can be activated using ED-MCAST command.

To set and retrieve MVR, use the following commands:

- ED-MCAST
- RTRV-MCAST

Set and Retrieve MVR sets and retrieves MVR.

Example 2-59 Set and Retrieve MVR

```
ED-MCAST:CISCO:SLOT-1-4:321:::MVRSTATE=Y,MVRSVLAN=46,MVRSTARTIP=230.64.72.57,MVRIPRANGE=20:;
RTRV-MCAST:CISCO:SLOT-1-4:33;
```

1+1 Protection Rule

The 1+1 Protection in L2-over-NCS mode can be activated using the ENT-FFP-GIGE command with a new ONEPLUSONEL2 protection type. The cards must be set in the L2 mode and a double link must be established between the trunk ports.

To establish double link between the trunk ports, use the **ENT-LNK** command.

Establish Double Link between Trunk Ports establishes double link between trunk ports.

Example 2-60 Establish Double Link between Trunk Ports

```
ENT-LNK::CHAN-4-12-21-1,CHAN-4-14-21-1:1482;
ENT-LNK::CHAN-4-14-21-1,CHAN-4-12-21-1:1486;
```

To create 1+1 L2 protection, use the **ENT-FFP-GIGE** command.

Create 1+1 L2 Protection creates 1+1 L2 Protection.

Example 2-61 Create 1+1 L2 Protection

```
ENT-FFP-GIGE::FAC-4-12-1-1,FAC-4-14-1-1:1487:::PROTTYPE=ONEPLUSONEL2;
```

To operate on switch protection, use the OPR-PROTNSW and RLS-PROTNSW-GIGE commands.

The laser status of the standby port in the protection unit can be decided using the PROTACTION parameter set on the ETH port. PROT-SQUELCH and PROT-NONE are the possible values.

To set and retrieve the PROTACTION value, use the following commands:

- **ED-L2-ETH**
- **RTRV-L2-ETH**

Set and Retrieve the PROTACTION value sets and retrieves the PROTACTION value.

Example 2-62 Set and Retrieve the PROTACTION value

```
ED-L2-ETH::ETH-5-3-2-1:506:::PROTACTION=PROT-SQUELCH;
RTRV-L2-ETH:TID:ETH-5-3-2-1:CTAG;
```

Resilient Ethernet Protocol Provisioning Rule

The Resilient Ethernet Protocol (REP) can be configured on the ethernet port of GE_XP or 10GE_XP card. The following rules apply when provisioning the REP:

- You can configure REP only if the card is in ETH-L2 card mode.
- When REP is enabled, the interface is a regular segment port unless it is configured as an edge port.
- If only one port on the card is configured in a segment, the port should be an edge port.
- If two ports on the card belong to the same segment, both ports must be an edge ports or both ports must be a regular segment ports.

  - If one of the port is an Edge with No Neighbor, the other port can be a Regular segment port.

- Each card can have a maximum of 3 segments.
- Each segment can have a maximum of 2 ports (in the same card).

Connectivity Fault Management Provisioning Rules

The following rules apply when provisioning the Connectivity Fault Management (CFM):

- MAC security and CFM is mutually exclusive per card. You can enable CFM only if the MAC security is not enabled and vice versa.
- You cannot disable CFM when Maintenance End Point (MEP) or Maintenance Intermediate Point (MIP) is configured on the interface.
- Maintenance domain profile name length should not exceed more than 43 characters.
- The level of the maintenance domain should be in the range of 0 to 7.
- No two domains can have the same name.
- You cannot modify or delete the maintenance domain profile when the domain is associated with maintenance association (MA) profile.
- You cannot modify or delete the maintenance domain if the domain is associated with the MEP.

- A maximum of 1000 profiles can be created.
- There should not be a duplicate entry for VLAN and MA name on the profile table.
- You cannot delete the MA if it is associated with any domain.
- You can crate MEP or MIP only on the CFM enabled interfaces.
- You cannot detach the VLAN from the interface if the MEP is configured on the port for the VLAN.
- You cannot modify MEP.
- You cannot configure MIP if MEP with higher or same level is already configured on the port with the same VLAN ID.
- You cannot detach the VLAN from the interface if it is associated with any of the MIPs on the interface.
- A maximum of 1000 MEPs can be created per card.
- A maximum of 1500 MIPs can be created per card.

Ethernet in the First Mile Rules

The following rules apply when provisioning the Ethernet in the First Mile (EFM:

- The EFMSTATE parameter should be “enabled” for the facility by ED-FSTE to edit the EFM parameters.
- You cannot enable or disable the remote loopback through the local interface on the remote OAM peer entity if any other type of loopback (facility/terminal) is already configured on the local interface.
- CFM, REP, link integrity, LACP, FAPS, IGMP on SVLAN and L2 1+1 protection are not supported with EFM.

Link Aggregation Control Protocol Rules

The following rules apply when provisioning the Link Aggregation Control Protocol (LACP):

- When the GE_XP card is provisioned in the switch mode (L2 Mode), you can configure the channel group interfaces as follows:
  - MXP: Up to 11 channel group with a maximum of 8 port for each channel group.
  - TXP: Up to 2 Channel group with a maximum of 3 ports for each channel group.

LEX Provisioning Rules

The following rules apply when provisioning the LEX:

- You can provision LEX only on ADM-10G card.
- You can provision LEX provisioning on any of the 8 GigE Ports.
- LEX framing supports 16-bit or 32-bit CRC configuration. The default CRC for LEX framing is CRC-32 bit.

Port State Model Provisioning Rules

The following rules apply when provisioning the port state model:

- The OutOfService,AutomaticInService state is not supported for the 1GigE and 2GigE payload types.
- The working and protect port can be put in InService and OutOfService independently.
- For the protect TXP card:
  - Setting the protect trunk port to OutOfService enables the suppression of alarms on that port and enables the card to be used like an unprotected card, but the card still cannot be used in a Y-cable protection group.
  - Setting the protect trunk port to OutOfService does not switch off the transmit laser unless both trunk ports are OutOfService.
  - The protect trunk port cannot be InService if a loopback or a regeneration group is provisioned.

To edit the port state, use the **ED-(OCn, nGIGE, nGFC, OCH**) command.

Edit Port State edits port state.

Example 2-63 Edit Port State

```
ED-STM16::FAC-6-1-1:114::::OutOfService,AutomaticInService;
ED-10GIGE::FAC-6-1:114::::OutOfService,AutomaticInService;
ED-OCH::CHAN-6-1:114::::IS;
```

SDH-Related Provisioning Rules

Use the following rule when editing SDH trunk port attributes:

When provisioning SDH-related parameters, the SDBER and SFBER can only be provisioned on the working trunk port (OCH) for the protect TXP card. Values set at the working port will be reflected on the trunk port.

To edit SDH trunk port attributes, use the **ED-OCH** command.

Edit SDH Trunk Port Attributes edits SDH Trunk port attributes.

Example 2-64 Edit SDH Trunk Port Attributes

```
ED-OCH::CHAN-6-2:114:::RDIRN=W-E,EXPWLEN=1530.32,VOAATTN=2.5,VOAPWR=7.5,
CALOPWR=0,CHPOWER=2.0,NAME="NYLINE",SFBER=1E-5,SDBER=1E-6,
ALSMODE=MAN,ALSRCINT=60,ALSRCPW=35.1,COMM=DCC,GCCRATE=192K,
OSDBER=1E-6,DWRAP=Y,FEC=Y,MACADDR=OO-OE-AA-BB-CC-DD,SYNCMSG=N,
SENDDUS=Y,RLASER=Y,SOAK=10,OSPF=Y:OutOfService,AutomaticInService;
```

Overhead (OH) Circuit Provisioning Rules

Use the following rules when provisioning overhead circuits:

- Local orderwire/express orderwire (LOW/EOW) is possible between the AIC-I, STM, and TXP/TXPP cards in any combination in line-terminated mode.
- Creating a F1/D4-D12 user data channel (UDC) is:
  - Not possible between TXP/TXPP and AIC-I cards in line-terminated mode.
  - Not possible between TXP/TXPP and STM cards in line-terminated mode.
  - Possible between STM ports.
- All overhead (OH) bytes are passed across client and NCS ports in transparent mode.
- RS-DCC and MS-DCC tunneling is not possible in line-terminated mode.
- No end-to-end OH circuit provisioning is allowed.
- For MXP_MR_2.5G and MXPP_MR_2.5G cards, these rules apply to the trunk port only.

Accessing and Configuring the Controller Cards Using Link in TL1

This topic describes how to access the controller cards in factory mode with link-local subnet IP address (169.254.0.2) when there is no admin access available for the laptop to configure the controller cards using default IP address of (192.1.0.2).

Note: This feature is applicable for all the controller cards.

For accessing and configuring the controller cards using link in TL1 follow the process given below:

1. Disable Wi-Fi connection on your laptop.
2. Check to ensure that NCS 2000 is set in the default factory mode.
3. Connect the laptop Ethernet port to either the controller cards front port, the ECU EMS port, or the ECU craft port, to enable the laptop OS (Windows, Mac, or Linux) to assign the IP address (169.254.0.2) in the link-local subnet.
   Note: The initial DHCP discovery phase run by the laptop can fail when the controller cards do not support it.
4. Enter the ping link-local address in the command prompt to verify the connectivity between NCS 2000 and the laptop.
5. Log into NCS 2000 using TL1 with the default User ID: user given id and password: user given password
6. Use the **ED-PID** command to change the default password.

For example: **ED-PID:**user_id:6:123::old password,new password;

7. Use the **APPLY:::1::REBUILDDB;** command to initialize the node configuration **REBUILDDB** to exit factory mode.
8. Use **ED-NE-GEN** command to configure the new IP address. Enter the IP address, subnet mask, and gateway address. For example, **ED-NE-GEN:::123:::IPADDR=129.9.0.6, IPMASK=255.255.255.0, DEFRTR=0.0.0.0; Note:** This will reboot NCS 2000 to activate the new IP address.
9. Use the **RTRV-NE-GEN** command to verify NCS 2000 is configured with the new IP address.

   For example:

   BH-Site1 2023-05-10 11:05:59
   M 1 COMPLD
   "IPADDR=192.10.20.55,IPMASK=255.255.255.0,DEFRTR=192.10.20.1,IPV6ENABLE=N,IIOP-PORT=57790,NTP=192.10.20.1,NAME="Site1",SWVER=11.1.3,LOAD=11.13-023D-29.08-S-SPA,PROTSWVER=11.1.12,PROTLOAD=11.112-020-E2519-S-SPA,DEFDESC="Factory Defaults",PLATFORM=NCS2KFS-M6,SECUMODE=NORMAL,SUPPRES-SIP=NO,MODE=MULTISHELFETH,MSPUBVLANID=1,MSINTLVLANID=2,AUTOPM=NO,SERIALPORTECHO=Y,OSIROUTING-MODE=IS1,OSIL1BUFSIZE=512,NET=39840F800000000000000000064E950BE556000,BKUPNTP=10.58.228.2,SYS-TEMMODE=SONET,ALARMSUPPRESS=N,CVSTATUS=VERIFICATION_IDLE,DEGILTHR=1.5,FAILILTHR=4.0,LATITUDE=N010001,LONGI-TUDE=W0010100,LCDSETTING=ALLOW-CONFIGURATION,NODEID=50BE5560,NODECVSTATUS=FALSE,ENABLESOCK-SPROXY=TRUE,PROXYTYPE=SOCKS-PROXY,PROXYPORT=1080,ALARMPROFILENAME="Default",COOLINGPROFILECTRL=AUTO,MAC-ADDR=64-e9-50-be-55-60,SUBNETMASKLEN=22,FORWARDDHCPENABLE=N,UPTIME="7days/15hours/57mins/12secs",DISCAR-DOTDRALARM=NO,CVTIMEBTWRUN=360"
10. Disconnect the Ethernet.
11. Connect the NCS 2000 to the site LAN using the EMS port.
12. Enable the Wi-Fi connection on your laptop and verify that the NCS 2000 chassis is managed locally and remotely using the assigned IP address.
13. The remote admin can now begin deploying the node using TL1 node.

SSON MCH Guardband Tuning to Force Larger Spectrum Allocation

You can extend the channel width from the default value allocated by the GMPLS control plane for the SSON MCH circuits. During the MCH circuit creation, it is possible to specify (only through TL1, this feature is not supported in CTC) the filtering guard band and modulation guard band parameters to extend the channel width. The values set for the guard band parameters in TL1 are a hundredth of GHz. For example, you must enter 1500 for 15 GHz.

To calculate final channel width, it is necessary to add the maximum value between guardband modulation and filtering to the specific signal length provided by the alien wavelength. For example, if modulation is 1300 and filtering is 1500, the value to consider for the calculation is 1500. This number is added twice because it is added on both sides of the alien signal.

For example: Create 100 GHz SSON MCH spectrum using filtering guard band.

ENT-MCH::PSLINE-2-1-9-RX:123::10.58.229.22,PSLINE-2-1-9-RX,2WAY,ADD:NAME=NCS1004-SD-27-DE-OFF-100GHZ,CKTLABEL=BH1,VALMODE=FULL,VALZONE=RED,GUARDBANDFILTERING=1500;

For example: Create 100 GHz SSON MCH spectrum using modulation guard band.

ENT-MCH::PSLINE-2-1-9-RX:123::10.58.229.22,PSLINE-2-1-9-RX,2WAY,ADD:NAME=NCS1004-SD-27-DE-OFF-100GHZ,CKTLABEL=BH1,VALMODE=FULL,VALZONE=RED,GUARDBANDMODULATION=1500;

Chapter 3: ACT Commands

This chapter provides ACT (activate) commands for the Cisco NCS 2000 Series.

ACT-USER

The Activate User (ACT) command opens a session with the network element (NE).

Usage Guidelines

- 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 Transaction Language 1 (TL1) session through any means will have the password masked. The Cisco Transport Controller (CTC) Request History and Message Log will also show the masked commands. When a password-masked command is reissued 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 reissuing it.
- For the ACT-USER command:

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

  - The syntax of the user ID (first [STRING]) and the password (second [STRING]) are not checked.
  - Invalid syntax for both the user ID and password is permitted, but the user can only log in if the user ID/password match what is in the database.
  - The user ID and password cannot exceed 10 characters.
- For the ACT-USER command, no error code is transmitted except to convey that the login is granted or denied. According to Telcordia 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 might reveal clues to an intruder attempting unauthorized entry."
- In some configurations, 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. When 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. This feature can be turned on or off. The default is off.

Category

Security

Security

N/A

Input Format

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

Input Example

ACT-USER:PETALUMA:TERRI:100::MYPASSWD;

Table 3-1 ACT Commands - Input Parameter Support

Input Parameters	Description
<UID>	The user identifier (user ID) of the person logged in. UID can be any combination of up to 10 alphanumeric characters. UID is a string. It must not be null.
<PID>	The user password. PID is any combination of up to 10 alphanumeric characters. Passwords are encrypted for security reasons and will appear as asterisks (*). PID is a string. It must not be null.
<TID>	Optional. Target ID where you want to give the command. This is usually the node name where you want to login.

Output Format

SID DATE TIME
M CTAG COMPLD
"<UID>:<LASTLOGINTIME>,<LAST2LASTLOGINTIME>,<UNSUCCESSFULLOGINS>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"CISCO15:2012-12-21 11-44-51,2012-12-21 11-43-45,0"
;

Table 3-2 ACT Commands - Output Parameter Support

Output Parameters	Description
<UID>	The user ID of the person logged in. The UID can be any combination of up to 10 alphanumeric characters. UID is a string. It must not be null.
<LASTLOGINTIME>	The date and time of the last successful connection to the NE (not including current login). LASTLOGINTIME is a string.
<<LAST2LASTLOGINTIME>>	The date and time of the previous to last successful connection to the NE (not including current login). LASTLOGINTIME is a string.
<UNSUCCESSFULLOGINS>	The number of unsuccessful login attempts since the last successful login. UNSUCCESSFULLOGINS is an integer.

Chapter 4: ALW Commands

This chapter provides allow (ALW) commands for the Cisco NCS 2000 Series.

ALW-CONSOLE-PORT

The Allow Console Port (ALW-CONSOLE-PORT) command is used to turn on the console port for the ML1000-2, ML100T-12 and ML-100T-8 cards.

Usage Guidelines

None

Category

Security

Security

Superuser

Input Format

ALW-CONSOLE-PORT:[<TID>]:<AID>:<CTAG>;

Input Example

ALW-CONSOLE-PORT:CISCONODE:SLOT-2:123;

Input Parameters

<AID>	Access identifier.in Chapter 27.

ALW-MSG-ALL

The Allow Message All (ALW-MSG-ALL) command instructs the NE to enter a mode where 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.

Usage Guidelines

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

Category

System

Security

Retrieve

Input Format

ALW-MSG-ALL:[<TID>]:[<AID>]:<CTAG>[::,,];

Input Example

ALW-MSG-ALL:PETALUMA:ALL:549;

Input Parameters

<AID>	Access identifier in Chapter 27.. Support is limited to the AID ALL. AID is a string.

ALW-MSG-DBCHG

The Allow Database Change Message (ALW-MSG-DBCHG) 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.

Usage Guidelines

None

Category

Log

Security

Retrieve

Input Format

ALW-MSG-DBCHG:[<TID>]::<CTAG>[::,,];

Input Example

ALW-MSG-DBCHG:CISCO::123;

Input Parameters

None

ALW-MSG-SECU

The Allow Message Security (ALW-MSG-SECU) command enables the REPT EVT SECU and REPT ALM SECU autonomous messages.

Usage Guidelines
None

Category
Security

Security
Superuser

Input Format
ALW-MSG-SECU:[<TID>]::<CTAG>[::,,];

Input Example
ALW-MSG-SECU:PETALUMA::123;

Input Parameters
None

ALW-PMREPT-ALL

The Allow Performance Report All (ALW-PMREPT-ALL) command resumes processing for all of the performance monitoring (PM) reports that have been inhibited. The allowance of the PM reporting is session-based, which means that the command is only effective for the TL1 session that issues this command.

Usage Guidelines
None

Category
Performance

Security
Retrieve

Input Format
ALW-PMREPT-ALL:[<TID>]::<CTAG>;

Input Example
ALW-PMREPT-ALL:CISCONODE::123;

Input Parameters
None

ALW-SWDX-EQPT

The Allow Switch Duplex Equipment (ALW-SWDX-EQPT) 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.

Usage Guidelines

ALW-SWDX-EQPT is not used for SONET line or electrical card protection switching. For SONET line or path protection switching commands, see the 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-VXL-10G, XC-VXL-2.5G, and XC-VXC-10G cards only in R9.0.

Category

Equipment

Security

Maintenance

Input Format

ALW-SWDX-EQPT:[<TID>]:<AID>:<CTAG>[::];

Input Example

ALW-SWDX-EQPT:CISCO:SLOT-8:1234;

Input Parameters

<AID>	Access identifier in Chapter 27.

ALW-SWTOPROTN-EQPT

The Allow Switch to Protection Equipment (ALW-SWTOPROTN-EQPT) 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.

Usage Guidelines

ALW-SWTOPROTN-EQPT is used for electrical cards that can participate in and electrical protection group (for cards, E1, E3, E4, DS3i-N-12, E1-21-E3-DS3-3, and E1-63-E3-DS3-3). When this command is given to a working card, the working unit will be allowed to switch to the protection card. When this command is given to a protection card, any working card in the protection group is allowed to switch to the protection card.

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

Note • This command supports only the BTH value of the <DIRN> parameter. A command with any other value is considered an incorrect use of the command. An Input, Data Not Valid (IDNV) error message is returned.

- This command is not used for the common control (TCC2, TCC2P, TCC3, XC-VXL-10G, XC-VXL-2.5G, or XC-VXC-10G) cards. A command on a common control card will return an Input, Invalid Access Identifier (IIAC) error message. To allow switching for common control card, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
- This command is not used for NCS (STM) cards. A command on a SONET card will return an IIAC error message. To allow switching on an NCS card, use the OPR-PROTNSW and RLS-PROTNSW commands.
- If this command is used on a card that is not in a protection group, the Status, Not in Valid State (SNVS) error message is returned.
- If this command is used on a card that is not in the inhibit state, the Status, Already Allowed (SAAL) error message is returned.
- As long as none of the previous error conditions apply, sending this command to missing cards is allowed and will not generate any error response.

Category

Equipment

Security

Maintenance

Input Format

ALW-SWTOPROTN-EQPT:[<TID>]:<AID>:<CTAG>[::<DIRN>];

Input Example

ALW-SWTOPROTN-EQPT:CISCO:SLOT-2:123::BTH;

Table 4-1 ALW-SWTOPROTN-EQPT Command - Parameter Support

Input Parameters	Description
<AID>	Access identifier. This parameter can either be the protection card for which carrying traffic is to be allowed (release of lockout) or the working card for which switching to protect is to be allowed (release of lock on).
<DIRN>	(Optional) The direction relative to the entity defined in the AID field.Tthe direction of the switching. This command only supports one value of the DIRN parameter, BTH. Defaults to BTH. The parameter type is DIRECTION (transmit and receive directions).
• BTH	Both transmit and receive directions.

• RCV	Receive direction only
• TRMT	Transmit direction only

ALW-SWTOWKG-EQPT

The Allow Switch to Working Equipment (ALW-SWTOWKG-EQPT) command allows automatic or manual switching of an equipment card 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 electrical cards that can participate in an electrical protection group (for example, E1, E3, E4, and DS3i-N-12).

Usage Guidelines

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

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

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

Note • This command only supports the BTH value of the <DIRN> parameter. A command with any other value is considered an incorrect use of the command. An Input, Data Not Valid (IDNV) error message is returned.

- This command is not used for the common control (TCC2, TCC2P, TCC3, XC-VXL-10G, XC-VXL-2.5G, or XC-VXC-10G) cards. A command on a common control card will receive an IIAC error message. To switch the common control cards, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
- This command is not used for NCS (STM) cards. A command on a NCS card will receive an IIAC error message. To switch an NCS card, use the OPR-PROTNSW and RLS-PROTNSW commands.
- If this command is used on a card that is not in a protection group, the SNVS error message is returned.
- If this command is used on a card that is not in the inhibit state, the SAAL error message is returned.
- As long as none of the previous error conditions apply, sending this command to missing cards is allowed and will not generate any error response.

Category

Equipment

Security

Maintenance

Input Format

ALW-SWTOWKG-EQPT:[<TID>]:<AID>:<CTAG>[::<DIRN>];

Input Example
ALW-SWTOWKG-EQPT:CISCO:SLOT-2:123::BTH;

Table 4-2 ALW-SWTOWKG-EQPT Command - Parameter Support

Input Parameters	Description
<AID>	Access identifier in Chapter 27. This parameter can either be the protection card for which carrying traffic is to be allowed (release of lockout) or the working card for which switching to protect is to be allowed (release of lock-on).
<DIRN>	(Optional) The direction relative to the entity defined in the AID field.The direction of the switching. This command only supports the BTH value of the DIRN parameter. Defaults to BTH. The parameter type is DIRECTION (transmit and receive directions).
• BTH	Both transmit and receive directions.
• RCV	Receive direction only
• TRMT	Transmit direction only

ALW-USER-SECU

The Allow User Security (ALW-USER-SECU) command enables a user ID that has been disabled using the INH-USER-SECU command so the user can reestablish a session with the NE.

Usage Guidelines
None

Category
Security

Security
Superuser

Input Format
ALW-USER-SECU:[<TID>]::<CTAG>::<UID>;

Input Example
ALW-USER-SECU:PETALUMA::123::UID;

Input Parameters		
	<UID>	The user ID of the person logged in. UID can be a list of user IDs separated by “&”. The keyword ALL cannot be used to specify all users on an NE. UID is a string.

Chapter 5: APPLY Commands

This chapter provides apply (APPLY) commands for the Cisco NCS 2000 Series.

APPLY

The Apply (APPLY) command activates or reverts a software load during a software upgrade or downgrade process.

Usage Guidelines

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

Category

File Transfer

Security

Superuser

Input Format

APPLY:[<TID>]::<CTAG>::[<MEM_SW_TYPE>]:[FORCEENABLE=<FORCEENABLE>];

Input Example

APPLY:::4::ACT:FORCEENABLE=YES;

Table 5-1 APPLY Commands - Parameter Support

Input Parameters	Description
<MEM_SW_TYPE>	(Optional) Memory switch action during the software upgrade. The parameter type is DL_TYPE, which indicates the software download type. The default value is ACT.
• ACPT	Activates to a newer software load on the active controller card and resets the active card.
• CANC	Cancels the software download.
• RVRT	Reverts to an older software load during software download.
• ACT	Activates to a new software load.
<FORCEENABLE>	(Optional) This parameter is used only if there are Database Out of Sync alarms and indicates whether the command should proceed even if there are Database Out of Sync alarms.
• YES	Yes

• NO	No

Chapter 6: CANC Commands and Messages

This chapter provides cancel (CANC) commands and autonomous messages for the Cisco NCS 2000 Series.

CANC

The Cancel (CANC) message reports the occurrence of a session timeout event.

Usage Guidelines

CANC is an autonomous message transmitted by the network element (NE) to a user when a session established by that user is terminated because no messages were exchanged for a long period of time and the session times out. There is a default timeout period based on the user's privilege/security level. Timeouts can be provisioned through Cisco Transport Controller (CTC). Timeouts can be provisioned with the SET-ATTR-SECUDFLT command. The default timeouts based on privilege/security level are:

- The Superuser (SUPER) has a timeout period of 15 minutes.
- The Provisioning user (PROV) has a 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 the session 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 (for example, forced logout or loss of communication), the REPT EVT SESSION message is used.

Category

Security

Security

Retrieve

Output Format

```
    SID DATE TIME
A ATAG CANC
    "<UID>"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
A 100.100 CANC
    "CISCO15"
;
```

Output Parameters

<UID>	The user identifier (user ID) of the person whose session is terminated due to timeout. UID is a string.

CANC-USER

The Cancel User (CANC-USER) command logs a user out of an active session with the NE.

Usage Guidelines

For the CANC-USER command, the syntax of USERID is not checked. Invalid syntax for the user ID is permitted and the user ID must not exceed 10 characters.

Category

Security

Security

Retrieve

Input Format

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

Input Example

CANC-USER:PETALUMA:TERRI:101;

Input Parameters

<USERID>	Identifies the user to the system. USERID can be up to 10 alphanumeric characters. USERID is a string.

CANC-USER-SECU

The Cancel User Security (CANC-USER-SECU) command forces a user off of the NE.

Usage Guidelines

The UID specified can be a single user ID or a list of user IDs separated by “&”. The keyword ALL is not permitted. The UID specified cannot be the user ID of the administrator issuing the command.

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

Category
Security

Security
Superuser

Input Format
CANC-USER-SECU:[<TID>]:<UID>:<CTAG>;

Input Example
CANC-USER-SECU:PETALUMA:CISCO10:100;

Input Parameters

<UID>	The user ID of the person who is being forced off the NE. UID can be a list of user IDs separated by "&". The keyword ALL cannot be used to specify all users on an NE. UID is a string.

CANC-USER-SESSION

The TL1 session can be logged out with CANC-USER-SESSION command.

Usage Guidelines

To execute CANC-USER-SESSION, the TL1 login should be active. AID is a mandatory parameter. The keyword ALL is not permitted in AID.

Category
System

Security

Superuser

Input Format

CANC-USER-SESSION:[<TID>]:<aid>:<CTAG>:::[LOCKOUT=<lockout>]

Input Parameter

<AID>	AID will be the session id retrieve from RTRV-ACTIVELOGINS.

Output Format

NA

Output Example

```
> CANC-USER-SESSION::940770:1;
   node113 2016-08-11 08:00:55
M   1 COMPLD
;
```

Output Parameters

NA

Chapter 7: CHG Commands

This chapter provides change (CHG) commands for the Cisco NCS 2000 Series.

CHG-ACCMD-<MOD_TACC

The Change Test Access Mode for DS3I, E1, E3, VC3, VC44C, VC38C, VC464C, VC48C, VC36C, VC4, VC416C, VC42C, VC43C, VC11, or VC12 (CHG-ACCMD-<MOD_TACC>) command changes the test access (TACC) mode for the circuit being tested. This can be a change from monitoring the data to inserting data into the VC.

Usage Guidelines

This command can only be applied to an existing test access point (TAP) connection.

Caution For this command to be applicable, 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 Out of Service, Maintenance (OOS-MT) state. The forced transition could be traffic-affecting. The present state of the facility/path is stored by the network element (NE) and is restored when the TAP connection is terminated. Test access connections are dropped automatically if the TL1 session is terminated or is timed out.

Note • If there is no TAP connection, a DENY error message is returned.

- If a requested condition already exists, a SRCN error message is returned.
- If a requested access configuration is invalid, a SRAC error message is returned.
- If a requested TAP does not exist, a RTEN error message is returned.

Category

Troubleshooting and Test Access

Security

Maintenance

Input Format

CHG-ACCMD-<MOD_TACC>:[<TID>]:<TAP>: <CTAG>::<MD>;

Input Example

CHG-ACCMD-STS1:CISCO:8:123::MONE;

Input Parameters

<TAP>	The test access point number. The TAP number must be an integer with a range of 1 to 999. It is a string. **Note** This command only supports changing the mode for a single TAP number at a time.

<MD>	The test access mode. (SPLTE, SPLTF, LOOPE, and LOOPF require an external quasi-random signal [QRS] input signal.) Single facility access digroup (FAD) test access does not support MONEF, SPLTEF, and SPLTAB modes. The parameter type is test access mode (TACC_MODE).
• LOOPE	Splits both the A and B paths. Connect the line incoming from the 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 will have a QRS connected, and the line incoming from the F direction will be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.
• LOOPF	Splits 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 will have a QRS connected, and the line incoming from the E direction will be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.
• MONE	Indicates that a monitor connection will be provided from the FAD to the A transmission path of the accessed circuit.
• MONEF	Indicates that a monitor connection will be provided for the following: • From the FAD1 to a dual FAD (DFAD), or from the odd pair of a facility access path (FAP) to the A transmission path • From the 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 will be provided from the FAD to the B transmission path of the accessed circuit.
• SPLTA	Indicates that a connection will 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. Intrusive test access mode.
• SPLTB	Indicates that a connection will 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. Intrusive test access mode.
• SPLTE	Splits 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 will have a QRS connected, the line incoming from the F direction will have a QRS connected, and the line incoming from the E direction will be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.
• SPLTEF	Splits both the A and B paths, and connect the E side of the accessed circuit to FAD1 and the F side to FAD2. Intrusive test access mode.

• SPLTF	Splits 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 will have a QRS connected, the line incoming in the E direction will have a QRS connected, and the line incoming from the E direction will be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.

CHG-EQPT

The Change Equipment (CHG-EQPT) command performs an in-service upgrade from low density (LD) electrical cards (DS1 [DS1-14, DS1N-14], DS3 [DS3-12, DS3N-12, DS3NE-12], EC1, and DS3XM-6) to high density (HD) electrical cards (DS1/E1-56, DS3/EC1-48, and DS3XM-12).

Usage Guidelines

- Optical (STM) card upgrades and downgrades are supported within the limitations of the MRC-12 card.
- Two upgradable cards provisioned in a 1:1 protection group cannot be upgraded.

Category

Equipment

Security

Maintenance

Input Format

CHG-EQPT:[<TID>]:<AID>:<CTAG>::<EQPTTYPE>:[PPMTYPE=PPMTYPE>], [PPMNUM=<PPMNUM>],[PORTNUM=<PORTNUM>],[PORTRATE=<PORTRATE>];

Input Example

CHG-EQPT::SLOT-14:1::MRC-2.5G-4:PPMTYPE=PPM-1,PPMNUM=1,PORTNUM=1, PORTRATE=OC48;

Input Parameters

Input Parameters	Description
<SRC>	The source access identifier from the "28.15 EQPT" section on page 28-39.
<EQPTTYPE>	The equipment type to be upgraded. The parameter type is EQUIPMENT_TYPE.
• 10GE-XP	2 x 10 Gbps. muxponder/L2 ethernet switch card

• 100G-LC-C	100G-LC-C card
• 100G-CK-C	100G-CK-C card
• 10X10G-LC	10X10G-LC card
• CFP-LC	CFP-LC card
• AR-MXP	Any rate muxponder
• AR-XP	Any rate xponder
• AR-XPE	Any rate enhanced xponder.
• 16-WXC-FS	16-WXC-FS card.
• 15216-MD-40-EVEN	Thermal Multiplex/Demultiplex Passive Unit, spaced at 50 GHz on even grid
• 15216-MD-40-ODD	Thermal Multiplex/Demultiplex Passive Unit, spaced at 50 GHz on odd grid
• 15216-MD-ID-50	Thermal Interleaver Passive Unit, spaced at 50 GHz grid
• 15216-FLD4-30-3	Edge 4-Ch Bi-Directional OADM Module 1530.33 to 1532.68.
• 15216-FLD4-33-4	Edge 4-Ch Bi-Directional OADM Module 1533.47 to 1535.82.
• 15216-FLD4-36-6	Edge 4-Ch Bi-Directional OADM Module 1536.61 to 1538.98.
• 15216-FLD4-39-7	Edge 4-Ch Bi-Directional OADM Module 1539.77 to 1542.14.
• 15216-FLD4-42-9	Edge 4-Ch Bi-Directional OADM Module 1542.94 to 1545.32.
• 15216-FLD4-46-1	Edge 4-Ch Bi-Directional OADM Module 1546.12 to 1548.51.
• 15216-FLD4-49-3	Edge 4-Ch Bi-Directional OADM Module 1549.32 to 1551.72.
• 15216-FLD4-52-5	Edge 4-Ch Bi-Directional OADM Module 1552.52 to 1554.94.
• 15216-FLD4-55-7	Edge 4-Ch Bi-Directional OADM Module 1555.75 to 1558.17.
• 15216-FLD4-58-9	Edge 4-Ch Bi-Directional OADM Module 1558.98 to 1561.42.

• 32DMX-L	3- channel demultiplexer for L-band
• 32WSS-L	32-channel wavelength switch selector for L-band
• 40-MXP-C	40 Gbit/Sec Multirate Muxponder
• 40-SMR1-C	The single module 40-channel ROADM on C-band
• 40-SMR2-C	The single module 40-channel ROADM with EDFA on C-band
• 40-TXP-C	40 Gigabits per second Multirate Transponder
• 80-WXC-C	80-channel wavelength cross-connect spaced at 100 GHz grid
• AD-1B	OADM 1-Band Filter
• AD-1C	OADM 1-Channel Filter
• AD-2C	OADM 2-Channel Filter
• AD-4B	OADM 4-Band Filter
• AD-4C	OADM 4-Channel Filter
• AICI	AIC-I card
• AIP	Alarm Indication Panel
• ALM-PWR	Alarm Power
• ASAP-4	ASAP carrier card with four PIM slots
• BP	The backplane of the NE
• CE-100T-8	8-port 100T card
• CE-1000-4	4-port GIGE mapper card
• CRFT-TMG	Craft Timing
• DCC	Data Communications Channel
• DCU	Dispersion Compensation Unit
• DMX-32	Optical DMX 32 Channels
• DS3i-N-12	DS3i-N-12 card
• E1	E1 card
• E1-42	42-port E1 card

• E1000T-2	2-port interface card supporting 1000BaseT Ethernet facilities
• E100T-12	12-port interface card supporting 100BaseT Ethernet facilities
• E100T-4	Four-port interface card supporting 100BaseT Ethernet facilities
• E1N	E1N card
• E3	E3 card
• EDRA-1-26	EDRA-1-26 amplifier
• EDRA-1-35	EDRA-1-35 amplifier
• EDRA-2-26	EDRA-2-26 amplifier
• EDRA-2-35	EDRA-2-35 amplifier
• FBGDCU-1157	
• FBGDCU-1322	
• FBGDCU-165	
• FBGDCU-1653	
• FBGDCU-1983	
• FBGDCU-331	
• FBGDCU-496	
• FBGDCU-661	
• FBGDCU-826	
• FBGDCU-992	
• FILLER_CARD	Filler card
• FMEC-155E-1TO1	The equipment type for FMEC STM1E12 card
• FMEC-155E-1TO3	The equipment type for FMEC STM1E12 card with 1:3 protection
• FMEC-155E-UNPROT	The equipment type for FMEC STM1E12 card without protection
• FMEC-SMZ-E1	FMEC card corresponding to E1 card
• FMEC-SMZ-E3	FMEC card corresponding to E3 card

• FTA	Fan Tray of the NE
• FTA1	Fan Tray 1 of the NE
• FTA2	Fan Tray 2 of the NE
• G1K-4	G1K-4 card
• MD-4	Optical Multiplexer/Demultiplexer with 4 Channels
• MD-48-CM	
• MD-48-EVEN	
• MD-48-ODD	
• MESH-PP-SMR	The passive unit Patch Panel device used to connect upto four 40-SMR2-C cards
• MF-16AD-CFS	16-channels - 1 direction, colorless, omnidirectional add/drop unit.
• MF-4x4-COFS	4-channels, 4-directions, colorless, omnidirectional add/drop unit.
• MF-AST-EDFA	MF-AST-EDFA unit
• MF-DEG-5	5-degrees mesh patch panel
• MF-MPO-8LC	MPO to 8-LC adapter
• MF-UPG-4	4-degrees upgrade module
• ML100X-8	8-port 100X card with optical interface
• ML-100T-8	8-port 100T card with optical interface
• MMU	Multiring mesh upgrade unit
• MS-ISC-100T	Fast Ethernet switch card used for internal shelf connection
• MUX-32	Optical MUX 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder card
• MXP-MR-10DME	10 Gbps datamux with enhanced FEC
• OPT-AMP-L	Optical preamplifier for L-band
• OPT-BST	Optical booster amplifier
• OPT-BST-L	Optical booster for L-band
• OPT-EDFA-17	MAL-less EDFA Optical Amplifier - C-band - 17dB Gain

• OPT-EDFA-24	MAL-less EDFA Optical Amplifier - C-band - 24dB Gain
• OPT-PRE	Optical Preamplifier
• OPT-RAMP-C	Raman pump amplifier C-band
• OPT-RAMP-CE	An extended version of Raman pump amplifier
• OPT-RAMP-COP	Raman COP card.
• OPT-RAMP-CTP	Raman CTP card.
• OPT-RAMP-E	Raman pump amplifier E-band
• OSC-CSM	Optical Service Channel with Combiner/Separator Module
• OSCM	Optical Service Channel Module
• OTU2-XP	A 4x10G transponder that is capable to operate with multiple bit rates - 10G FC, 10GE, and OC192/STM64
• PIM-4	Pluggable interface module with 4 PPM slots
• PP-4-SMR	Patch-Panel, 4 degrees, for SMR cards
• PP-MESH-4	Patch-Panel, 4 degrees
• PP-MESH-8	Patch-Panel, 8 degrees
• PPM-1	Pluggable port module with 1-port SFP module
• PSM	Protection Service Module card
• PTF-4	Fabric card.
• PTM-4	Line card.
• PTSA	CPT 50 panel.
• PTSYS- Fan-Out-Group	PTSYS Fan-Out-Group.
• SHELF	Shelf entity
• STM4	An interface card that supports one or more STM4 (622 Mbps) optical facilities
• STM4-4	A four port STM4 card
• STM4-IR-1	An interface card that supports one intermediate range STM4 (622 Mbps) optical facilities
• STM4-LR-1	An interface card that supports one long range STM4 (622 Mbps) optical facilities

• STM4-SR-1	An interface card that supports one short range STM4 (622 Mbps) optical facilities
• STM64-4	A four port STM64 card
• STM64-LR-1	An interface card that supports one or more STM64 optical facilities
• STM1	An interface card that supports multiple STM1 (155 Mbps) optical facilities
• STM1-IR-4	An interface card that supports four intermediate range STM1 (155 Mbps) optical facilities
• STM1-SR-4	An interface card that supports four short range STM1 (155 Mbps) optical facilities
• STM1ATM-IR-6	An interface card that supports six intermediate range STM1 (155 Mbps) ATM optical fibers
• STM1IR-STM1SH-1310-8	An STM1 card which has 8 ports over the lower speed slot with XC-VXL-10G/XC-VXL-2.5G
• STM1POS-SR-4	An interface card that supports four short range STM1 (155 Mbps) POS optical facilities
• STM16	An interface card that supports one or more STM16 (10 Gbps) optical facilities
• STM16-AS-1	An interface card that supports one short range OC-48 (10 Gbps) optical facilities that can be provisioned in any I/O slot
• STM16-ELR-1	An interface card that supports one short range STM16 (2.5 Gbps) optical facility
• STM16-IR-1	An interface card that supports one intermediate range STM16 (10 Gbps) optical facility
• STM16-LR-1	An interface card that supports one long range STM16 (10 Gbps) optical facility
• STM16-SR-1	An interface card that supports one short range STM16 (10 Gbps) optical facilities
• TCC	Timing, Communications, and Control card
• TDC-CC	Coarse tunable dispersion compensation unit
• TDC-FC	Fine tunable dispersion compensation unit
• TXP-MR-10G	10G Multirate Transponder card
• TXP-MR-2.5G	Multirate 2.5G Unprotected

• TXPP-MR-2.5G	Multirate 2.5G Protected
• UNKNOWN	Unknown equipment type
• UNPROVISIONED	Unprovisioned equipment type
• WSE	Wire Speed Encryption (WSE) card
• XC-VXC-10G	XC-VXC-10G cross-connect card
• XCVXL-10G	XC-VXL-10G cross-connect card
• XCVXL-2.5G	XC-VXL-2.5G cross-connect card
• FLD-OSC	
• VPP-MESH-4-1	
• VPP-MESH-4-2	
• VPP-MESH-4-3	
• VPP-MESH-4-4	
• VPP-MESH-8-1	
• VPP-MESH-8-2	
• VPP-MESH-8-3	
• VPP-MESH-8-4	
• VPP-MESH-8-5	
• VPP-MESH-8-6	
• VPP-MESH-8-7	
• VPP-MESH-8-8	
• AD-12-FS	Line Card
• AD-16-FS	Line Card
• ECU	
• MF-10AD-CFS	
• MF-16AE-CFS	
• MF-2MPO-ADP	
• MF-MPO-16LC	
• MF-PPMESH8-5AD	

• SMR20-FS	Line Card
• SMR9-17-FS	Line Card
• SMR9-24-FS	Line Card
• SMR9-34-FS	Line Card
• MR-MXP	
<PPMTYPE>	Identifies the pluggable port module type. This parameter can take only one value.
• PPM-1	Single-port PPM
<PPMNUM>	Identifies the pluggable port module number. This parameter is an Integer.
• 1	PPM No. 1
• 2	PPM No. 2
• 3	PPM No. 3
• 4	PPM No. 4
• 5	PPM No. 5
• 6	PPM No. 6
• 7	PPM No. 7
• 8	PPM No. 8
• 9	PPM No. 9
• 10	PPM No. 10
• 11	PPM No. 11
• 12	PPM No. 12
<PORTNUM>	Identifies the port number, which is used on the entity port with PPM. This para meter is an integer.
• 1	Port No. 1
<PORTRATE>	Identifies the port rate, which is used to specify the port rate of the multi-rate card.
• STM1	STM-1 rate
• STM4	STM-4 rate

• STM16	STM-16 rate

Chapter 8: CLR Commands

This chapter provides CLR (clear) commands for the Cisco NCS 2000 Series.

CLR-CCDB-CFM

The Clear Continuity Check Message Data Base Connectivity Fault Management (CLR-CCDB-CFM) command clears the continuity check message data base on a given slot.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Equipment

Security

Provisioning

Input Format

CLR-CCDB-CFM:[<TID>]:<AID>:<CTAG>;

Input Example

CLR-CCDB-CFM::SLOT-4:a;

CLR-COND-SECU

The Clear Security Condition (CLR-COND-SECU) command clears the specified standing condition.

Usage Guidelines

In Software Release 6.0 and later, only the INTRUSION-PSWD parameter value is supported.

Category

Security

Security

Superuser

Input Format

CLR-COND-SECU:[<TID>]::<CTAG>[::<SECUALMTYPE>];

Input Example

CLR-COND-SECU:CISCO::123::INTRUSION-PSWD:

Table 8-1 CLR-COND-SECU Command - Parameter Support

Input Parameters	Description
<SECUALMTYPE>	(Optional) Secure alarm type. Defaults to INTRUSION-PSWD. The parameter type is SECUALMTYPE, which is the security alarm type.
INTRUSION-PSWD	Condition raised after an invalid password is used during login. Condition is raised only if the password is used a specified number of times.

CLR-MACTABLE

The CLR-MACTABLE command clears the MAC table that has all the learned MAC addresses.

Usage Guidelines

The card should be in Layer2 over DMDM mode to clear the MAC address.

Category

System

Security

Retrieve

Input Format

CLR-MACTABLE:[<TID>]:<AID>:<CTAG>;

Input Example

CLR-MACTABLE::SLOT-2:1;

CLR-MEPSTATS-CFM

The Clear Maintenance End Point Statistics Connectivity Fault Management (CLR-MEPSTATS-CFM) command clears the maintenance end point statistics.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Equipment

Security
Provisioning

Input Format
CLR-MEPSTATS-CFM:[<TID>]:<AID>:<CTAG>;

Input Example
CLR-MEPSTATS-CFM::SLOT-15:1;

Chapter 9: CONN and Connection Verification Commands

This chapter provides connect (CONN) and Connection verification commands for the Cisco NCS 2002 and Cisco NCS 2006 series.

CONN-TACC-<MOD_TACC>

The Connect Test Access for DS3I, E1, E3, VC3, VC44C, VC38C, VC464C, VC48C, VC36C, VC4, VC416C, VC42C, VC43C, VC11, and VC12 (CONN-TACC-<MOD_TACC>) command connects the Virtual Container (VC) or Virtual Tributary (VT) defined by AID to the VC specified by the test access point (TAP) number.

Usage Guidelines

For this command to be applicable, you must first create the TAP using the ED-<VC_PATH> or ED-VC12 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 Locked-Maintenance 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.

The following actions will return error messages:

- If all TAPs are busy, a RABY error message is returned.
- If a requested TAP is busy, a RTBY error message is returned.
- If a requested TAP does not exist, a RTEN error message is returned.
- If a circuit is already connected to another TAP, a SCAT error message is returned.
- If a requested condition already exists, a SRCN error message is returned.
- And invalid AID will return an Input, Invalid Access Identifier (IIAC) error message.
- If an access is not supported, an EANS error message is returned.
- If a requested access configuration is invalid, a SRAC error message is returned.
- You cannot connect a TACC to a cross-connect that is in pending roll.
- A connection can be made to a cross-connection, in which case all modes of access are supported. A connection to an Unmapped AID (an AID without a cross-connect on it) will allow only MONE, SPLTE, and LOOPE modes.
- 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 multiplex section-shared protection ring (MS-SPRing) is supported. This will be preempted when a MS-SPRing switch occurs.
- When you connect a TACC to a protect subnetwork connection protection (SNCP) trunk, you will always be connected to the working trunk instead.

Category

Troubleshooting and Test Access

Security

Maintenance

Input Format

CONN-TACC-<MOD_TACC>:[<TID>]:<SRC>:<CTAG>::<TAP>:MD=<MD>;

Input Example

CONN-TACC-VC4:CISCO:VC4-4-1-1-1:123::8:MD=MONE;

Table 9-1 CONN-TACC-<MOD_TACC> Command - Parameter Support

Input Parameters	Description
<SRC>	Source AID. SRC must not be null.
<TAP>	The test access path (TAP) number. TAP must be an integer with a range of 1 to 999. When TACC is 0 (zero), the TAP is deleted.
<MD>	The test access mode. (SPLTE, SPLTF, LOOPE and LOOPF require an external quasi-random signal [QRS] input signal.) Single facility access digroup (FAD) Test Access does not support MONEF, SPLTEF, and SPLTAB modes. MD must not be null. The parameter type is TACC_MODE, which is the test access mode.
• 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. Intrusive test access mode.
• 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. Intrusive test access mode.
• 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. Intrusive test access mode.
• 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. Intrusive test access mode.
• 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. Intrusive test access mode.
• 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. Intrusive test access mode.

• 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. Intrusive test access mode.

Output Format

SID DATE TIME
M CTAG COMPLD
"<TAP>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"8"
;

Output Parameters

<TAP>	The TAP number. TAP must be an integer with a range of 1 to 999. When TACC is 0 (zero), the TAP is deleted.

OPR-LNK

This command allows you to configure various parameters for connection verification (CV).

Usage Guidelines

- You cannot use 'ALL' as an AID for this command.
- You can only acknowledge an alarmed patch cord.
- You can clear the acknowledgement of only an acknowledged patch cord.

Category

Connection Verification

Security

Maintenance

Input Format

OPR-LNK:[<TID>]:<from>,<to>:<CTAG>::<action>;

Input Example

opr-lnk::LINE-6-27-TX,PLINE-2-7-RX:1::CONNVERFCHK;

opr-lnk::LINE-6-27-TX,PLINE-2-7-RX:1::ILVERFCHK;

Table 9-2 OPR-LNK Command - Parameter Support

Input Parameters	Description
<from>	Source AID (Tx) of the patch cord.
<to>	Destination AID (Rx) of the patch cord.
<action>	Choose from one of the following actions: • CONNVERFCHK—Execute connection verification • ILVERFCHK—Execute insertion loss (IL) measurement • EXCLVERFCHK—Disable connection verification on a patch cord • INCLVERFCHK—Enable connection verification on patch cord • ACKNOWLEDGEIL—Acknowledge IL for alarms • CLEAR_ACKNOWLEDGE—Clear acknowledgment for alarms

RTRV-CONNVERF-LNK

This command allows you to retrieve connection verification (CV) parameters.

Usage Guidelines

You can use 'ALL' as an AID for this command.

Category

Connection Verification

Security

Maintenance

Input Format

RTRV-CONNVERF-LNK::<from>:<CTAG>;

Input Example

```
rtrv-connverf-lnk::PLINE-1-1-TX:1;

       vxrtarget 2016-06-07 14:03:49
       M  1 COMPLD
       "PLINE-1-1-TX:LINE-1-4-4-RX,ConnLastChange=\"2-1-2016 2:17:36\",ConnResult=Connected,I
LLastChange=\"2-1-2016 2:17:36\",ILResult=MinDegree,LastRefresh=\"2-1-2016 10:56:2\",ExcessIL=
0,ACK=FALSE"
       ;
```

```
rtrv-connverf-lnk::all:1;
          vxrtarget 2016-06-07 14:06:08
       M  1 COMPLD
       "PLINE-1-1-TX:LINE-1-4-4-RX,ConnLastChange=\"2-1-2016 2:17:36\",ConnResult=Connected,I
LLastChange=\"2-1-2016 2:17:36\",ILResult=MinDegree,LastRefresh=\"2-1-2016 10:56:2\",ExcessIL=
0,ACK=FALSE"
       "LINE-1-4-4-TX:PLINE-1-1-RX,ConnLastChange=\"2-1-2016 2:17:36\",ConnResult=Connected,I
LLastChange=\"2-1-2016 2:17:36\",ILResult=MinDegree,LastRefresh=\"2-56-105 10:56:2\",ExcessIL=
0,ACK=FALSE"
        "PLINE-1-2-TX:LINE-1-4-5-RX,ConnLastChange=\"2-1-2016 2:17:36\",ConnResult=Connected,
ILLastChange=\"2-1-2016 2:17:36\",ILResult=MinDegree,LastRefresh=\"2-1-2016 10:56:2\",ExcessIL
=0,ACK=FALSE"
        "PSLINE-2-1-5-TX,LINE-1-6-25-RX,CONNLASTCHANGE=\"2-1-2016 8:47:51\",CONNRESULT=CONNEC
TED,ILLASTCHANGE=\"2-1-2016 8:52:12\",ILRESULT=OKAY,LASTREFRESH=\"2-1-2016 0:1:33\",EXCESSIL=1
.1,ACK=FALSE"
```

Table 9-2 RTRV-CONNVERF-LNK Command - Parameter Support

Input Parameters	**Description**
<from>	Source AID (Tx) of the patch cord for which you want to retrieve the CV.
Output Parameters	**Description**
Src AID	Source AID (Tx) of the patch cord.
Dst AID	Destination AID (Rx) of the patch cord.
CONNLASTCHANGE	Timestamp of the last connection verification.
CONNRESULT	Status of the connection verification on the patch cord. This parameter can have the following values: • NOT_VERIFIED • NOT_MEASURABLE • CONNECTED

	• DISCONNECTED • DISABLED
ILLASTCHANGE	Last timestamp of IL.
ILRESULT	Value of the IL check. This parameter can have the following values: • NOT_VERIFIED • NOT_MEASURABLE • OK • DEGRADE • FAIL • DISABLED
LASTREFRESH	Timestamp of the last refresh.
EXCESSIL	String value showing the excess Insertion Loss.
ACK	Boolean value that specifies whether acknowledgement is set on the patch cord or not.

Chapter 10: COPY Commands

This chapter provides copy (COPY) commands for the Cisco NCS 2000 Series.

COPY-IOSCFG

The Copy Cisco IOS Configuration File (COPY-IOSCFG) command supports the following types of operations on the Cisco IOS configuration file of ML-Series Ethernet cards:

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

   FTP and SFTP protocols allowed for uploading. When doing this operation, the SRC field must be an FTP or SFTP URL string specifying the user name and password for FTP or SFTP authentication, and specifying the host and the directory to locate the startup configuration file from the network. The DEST field must be a string of "STARTUP".

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

   When doing this operation, the SRC field must be a string of "STARTUP". The DEST field must be a FTP or SFTP URL string specifying the user name and password for FTP or SFTP authentication, and specifying the host and the directory to store the startup configuration file.

Usage Guidelines

- This FTP/SFTP timeout is 30 seconds and is not configurable.
- The Cisco IOS configuration file is unique for each ML-Series card, and is specified by the SLOT number in the AID field of the command.
- In the gateway network element/end network element (GNE/ENE) environment, you are not allowed to download (backup the Cisco IOS configuration file through TL1 if a GNE firewall exists. Any such attempt will receive a "Data Connection Error" from the GNE. For the upload of Cisco IOS configuration file through TL1, the 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."
- The format of the FTP URL string used in the SRC or DEST field of the command is as follows:
  - In a nonfirewall environment, the format of the URL should be:

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

    where:

    FTPUSER is the user ID 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. Domain name system (DNS) lookup of hostnames is not supported.

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

    Note that USERID and PASSWORD are optional if the user does not need to log into the host computer. Also note that the password might 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 the "@" character. The first IP address should be for the machine where the package file is stored. Subsequent IP addresses should 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

Category
File Transfer

Security
Provisioning

Input Format
COPY-IOSCFG:[<TID>]:<AID>:<CTAG>::SRC=<SRC>,DEST=<DEST>,[FTTD=<FTTD>];

Input Example
COPY-IOSCFG::SLOT-1:CTAG::SRC="LONG_FTP_PATH",DEST="STARTUP",
FTTD="FTTD_URL";

Table 10-1 COPY-IOSCFG Command - Parameter Support

Input Parameters	Description
<AID>	Access identifier. Specifies the slot number of the card where the Cisco IOS configuration file belongs.
<SRC>	Source AID. Specifies where the Cisco IOS configuration file is copied from. SRC is a string.
<DEST>	Specifies where the Cisco IOS configuration file is copied to. DEST is a string.
<FTTD>	FTTD is a string.

- The format of the SFTP URL string used in the SRC or DEST field of the command is as follows:
  - In a nonfirewall environment, the format of the URL should be:

    "SFTP://[SFTPUSER[:SFTPPASSWORD]]@SFTPHOST/PACKAGE_PATH"

    where:

    SFTPUSER is the user ID to connect to the computer with the package file.

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

    <SFTPHOST> is the IP address of the computer with the package file. Domain name system (DNS) lookup of hostnames is not supported.

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

Note For SFTP, GNE/ENE environment is not supported. Only direct LAN connection is supported.

USERID and PASSWORD are mandatory. Also note that the password might be optional if the user does not need to log in. All the other portions of the URL are required, including the initial "SFTP:\\" string.

Category
File Transfer

Security
Provisioning

Input Format
COPY-IOSCFG:[<TID>]:<AID>:<CTAG>::SRC=<SRC>,DEST=<DEST>;

Input Example
COPY-IOSCFG::SLOT-1:CTAG::SRC="LONG_SFTP_PATH",DEST="STARTUP";

Table 10-1 COPY-IOSCFG Command - Parameter Support

Input Parameters	Description
<AID>	Access identifier. Specifies the slot number of the card where the Cisco IOS configuration file belongs.
<SRC>	Source AID. Specifies where the Cisco IOS configuration file is copied from. SRC is a string.
<DEST>	Specifies where the Cisco IOS configuration file is copied to. DEST is a string.

COPY-RFILE (FTP)

The Copy File (COPY-RFILE) 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.

Prerequisite
To run the **COPY-RFILE** command, do the following:

- Run the FTP server on the remote machine.
- Register the FTP server on the GNE using the **ENT-FTPSERVER** command.

Here is an example that explains the execution of **COPY-RFILE** command:

```
> ENT-FTPSERVER:::A:::IPADDR=72.163.210.211,ENABLE=Y,IPMASK=255.255.255.
> 0,TIMER=0;
Infy600-162 2009-01-23 07:18:27
M  A COMPLD
;
>
> RTRV-FTPSERVER:::A;
Infy600-162 2009-01-23 07:18:43
M  A COMPLD
   "IPADDR=10.77.29.252,IPMASK=255.255.255.0,ENABLE=Y,TIMER=0"
   "IPADDR=72.163.210.211,IPMASK=255.255.255.0,ENABLE=Y,TIMER=0"
   "IPADDR=64.103.135.83,IPMASK=255.255.255.0,ENABLE=Y,TIMER=0"
   "IPADDR=10.65.72.136,IPMASK=255.255.255.0,ENABLE=N,TIMER=0"
;
```

>

Usage Guidelines

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 not able to connect to the remote IP address (host). A host can either be a PC or a workstation running an FTP server application.

Note PACKAGE_PATH is relative to your home directory instead of being an absolute path from the root directory of the NE. If you want to specify an absolute path, start the path with the string '%2F'.

Note FTP timeout is 30 seconds and is not configurable.

Note

- 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.

- FTP is the only allowed file transfer method.
- The extended FTP URL syntax is required by the COPY-RFILE syntax.
- FTP_PORT defaults to 21 and is optional. Leaving this field blank defaults to 21.
- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. In order to obtain the current value, issue the RTRV-XX command.

RFILE-COMPDB

RFILE-COMPDB is supported option of COPY-RFILE. RFILE-COMPDB is used to transfer the provisioning and system database together. RFILE-COMPDB works only for TYPE= RFR (Remote File Restore) and not for TYPE=RFBU (Remote File Backup) and TYPE=SWDL (Software Download).

The syntax of RFILE-COMPDB is as follows:

COPY-RFILE::RFILE-COMPDB:1::TYPE=RFR,SRC="FTP://FTP_USER[:FTP_PASSWORD]]@FTP_HOST_IP[:FTP_PORT],/PACKAGE_PATH[;TYPE=I]";

Category

File Transfer

Security

Superuser

Input Format

COPY-RFILE:[<TID>]:[<SRC>]:<CTAG>::TYPE=<XFERTYPE>,[SRC=<SRC1>],
[DEST=<DEST>],[OVWRT=<OVWRT>],[FTTD=<FTTD>][FORCEENABLE=<FORCEENABLE>];

Input Example

COPY-RFILE:HERNDON:RFILE-PKG:703::TYPE=SWDL,SRC="LONG_FTP_PATH",
DEST="LONG_FTP_PATH",OVWRT=YES,FTTD="FTTD_URI,FORCEENABLE=YES";

Table 10-2 COPY-RFILE Command - Parameter Support

Input Parameters	Description
<SRC>	(Optional) Source AID. The type of file being transferred.
<XFERTYPE>	The file transfer protocol. The parameter type is TX_TYPE, which specifies the type and direction of the file transferred.
• RFBU	Remote File Backup. Applicable for Maintenance User (and above).
• RFR	Remote File Restore. Applicable for Superuser.
• SWDL	Software Download. Applicable for Maintenance User (and above).
<SRC1>	(Optional) Specifies the source of the file to be transferred. Only the FTP URL is supported. In a nonfirewall environment, the format of the URL should be: "FTP://FTP_USER[:FTP_PASSWORD]]@FTP_HOST_IP[:FTP_PORT], /PACKAGE_PATH[;TYPE=I]" where: • <FTP_USER> is the user ID 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. • <FTP_PORT> defaults to 21. • <PACKAGE_PATH> is the long path name to the package file starting from the home directory of the logged-in user. Userid and password are optional if the user does not need to log into the host computer. 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 separated by a "@" character. The first IP address should be for the machine where the package file is stored. Subsequent IP addresses should 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. For example, if the topology is "FTP_HOST_IP <-> GNE3 <->GNE2 <-> GNE1 <-> ENE", the FTP URL is: FTP://FTP_USER:FTP_PASSWORD@FTP_HOST_IP@GNE3@GNE2@ GNE1/PACKAGE_PATH The FTP_HOST_IP must be one of the IP addresses that is configured on the node as a secure FTP Host. SRC1 is a string.

OVWRT	(Optional) If OVWRT is YES, the files should be overwritten. If OVWRT is NO, the file transfers will fail if the file already exists at the destination. Using the NO value will result in a error message. The NO value is not supported for database restore or software download. the parameter type is YES_NO, which indicates whether the user's password is about to expire; the user is logged into the NE; or the user is locked out of the NE.
• NO	No
• YES	Yes
<FTTD>	(Optional) The format of the URI should be "FTTD://[FTTD_USER][:FTTD_PASSWORD]]@FTTD_HOST_TID" where: • FTTD_USER is the user ID to connect to the FTTD host. • FTTD_PASSWORD is the password used to connect to FTTD host. • FTTD_HOST_IP is the TID of the FTTD host/. DNS and network service access point (NSAP) names are not supported. FTTD is a string.
<FORCEENABLE>	(Optional) Indicates whether the command should proceed even if there are Database Out of Sync alarms.
• YES	Yes
• NO	No

COPY-RFILE (SFTP)

The COPY-RFILE command downloads a new software package from the location specified by the SFTP URL into the inactive flash partition residing on the TCC2/TCC2P/TCC3/TSC/TNC/TNCE/TSC/TSCE/TNCS/TNCS-O card. COPY-RFILE can also be used to back up and restore the database file.

Note
PACKAGE_PATH is the long path name to the package file starting from the home directory of the logged-in user. PACKAGE_PATH must always be the home directory.

For SFTP, GNE/ENE environment is not supported. Only direct LAN connection is supported.

The input format of the COPY-RFILE command is:

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

Input Examples:

- Software Download:

  COPY-RFILE:HERNDON:RFILE-PKG:703::TYPE=SWDL,SRC="LONG_SFTP_PATH", OVWRT=YES;

- DC Restore:

  COPY-RFILE:HERNDON:RFILE-PKG:703::TYPE=RFR,SRC="LONG_SFTP_PATH", OVWRT=YES;

- DB Backup Input Example:

COPY-RFILE:HERNDON:RFILE-PKG:703::TYPE=RFBU,DEST="LONG_SFTP_PATH",OVWRT=YES;

where:

- <SRC> is the type of file being transferred.
- <XFERTYPE> is the file transfer protocol.
  - RFBU : Remote File Backup. Applicable for Maintenance User.
  - RFR: Remote File Restore. Applicable for Superuser.
  - SWDL: Software Download. Applicable for Maintenance User .
- <SRC1> specifies the source of the file to be transferred. <SRC1> is a string. The format for the URL is:

  "SFTP://SFTP_USER[:SFTP_PASSWORD]]@SFTP_HOST_IP/PACKAGE_PATH"

  - where:
  - SFTP_USER is the user ID to connect to the computer with the package file.
  - SFTP_PASSWORD is the password used to connect to the computer with the package file.
  - SFTP_HOST_IP is the IP address of the computer with the package file. Domain name server (DNS) lookup of hostnames is not supported. IPv6 ip address is also not supported
  - <SFTP_PORT> defaults to 22.
  - PACKAGE_PATH must always be the home directory..

  Note For SFTP, GNE/ENE environment is not supported. Only direct LAN connection is supported.

- <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.
- <FTTD> is not supported for SFTP
- The use of the SWDL and the extended SFTP URL syntax are required by the COPY-RFILE syntax.

Chapter 11: DISC Commands

This chapter provides disconnect (DISC) commands for the Cisco NCS 2000 Series.

DISC-TACC

The Disconnect Test Access (DISC-TACC) command disconnects the TAP and puts the connection back to its original state (no splits).

Usage Guidelines

For this command to be applicable, you must first create the TAP using the ED-<VC_PATH> or ED-VC12 command.

The following actions will return error messages:

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

> **Note** If the test access connection is intrusive, the original state of the facility/path is restored after this command is executed. Test access connections are dropped automatically if the TL1 session is terminated or is timed out.

Category

Troubleshooting and Test Access

Security

Maintenance

Input Format

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

Input Example

DISC-TACC:CISCO:8:123;

Input Parameters

<TAP>	The test access path number. The TAP number must be an integer with a range of 1 to 999. TAP is a string. **Note** This command only supports disconnecting one TAP at a time.

Chapter 12: DLT Commands

This chapter provides delete (DLT) commands for the Cisco NCS 2000 Series.

DLT-<MOD1PAYLOAD>

The Delete 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 1GISC3, 2GFC, 2GFICON, 2GISC3, 4GFC, 4GFICON, 5GIB, 8GFC, CHGRP, D1VIDEO, DV6000, DVBASI, EC1, ESCON, ETRCLO, FSTE, GIGE, HDTV, ISC1, ISC3PEER1G, ISC3PEER2G, ISC3PEER2R, ISCCOMPAT, OC12, OC192, OC3, OC48, OC768, OTU3, OTU4, T3, 3GVIDEO, SDSDI , HDSDI, AUTO, OTU1, OTU2, OTU4C2, ISC3STP1G, or ISC3STP2G (DLT-<MOD1PAYLOAD>) command deletes the specified port.

Usage Guidelines

The command supports the 3GVIDEO, SDSDI , HDSDI, AUTO, OTU1, ISC3STP1G, and ISC3STP2G modifiers.

The ports must be in out of service (OOS) state and must not have any circuits on them while deleting.

Category

Ports

Security

Provisioning

Input Format

DLT-<MOD1PAYLOAD>:[<TID>]:<AID>:<CTAG>[::::];

Input Example

DLT-100GIGE:100G-LC-C:AGGR-3-1-1:1;

Input Parameters

<AID>	Access identifier. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC AID.

DLT-ACL

The Delete ACL command deletes the IP addresses from the ACL list.

Usage Guidelines

Used for deleting IP addresses from the ACL list. The user can delete the IP addresses as per the position value. AID can be used in place of position. AID is obtained using command RTRV-ACL.

Category
System

Security
Provisioning

Input Format
DLT-ACL:[<TID>]::<CTAG>:::IPADDR=<ipaddr>;

Input Example
DLT-ACL:::1:::IPADDR=10.64.107.166;
N-6 2023-01-08 16:40:37
M 1 COMPLD
;

Input Parameters

<IPADDR>	Specifies the IP address of the ACL server entry to be deleted. IPADDR=ALL specifies that all entries are deleted from the list. IPADDR is a string.

DLT-ALMTYPE

The Delete Alarm Type (DLT-ALMTYPE) command deletes only user-defined alarm types.

Usage Guidelines
ALMTYPE must not contain blank spaces or special characters other than the hyphen (-). The maximum ALMTYPE length allowed is 20 characters.

Only one alarm type can be deleted at a time using this command. There is no option available to delete all user-defined alarm types.

Category
System

Security
Provisioning

Input Format
DLT-ALMTYPE:[<TID>]::<CTAG>::<ALMTYPE>;

Input Example

DLT-ALMTYPE:::1::USERDEFINEDALARM;

Input Parameters

<ALMTYPE>	Specifies user-defined alarm types associated with virtual wires in environmental alarm inputs.

DLT-ALM-CPS

The Delete Alarm Control Plane Service (DLT-ALM-CPS) command deletes a alarm reported on the Control Plane Service.

Usage Guidelines

- Specify the alarm index displayed against the alarm in the RTRV-ALM-CPS response.
- This command is applicable only to WSON alarms.

Category

DWDM

Security

Provisioning

Input Format

DLT-ALM-CPS:[<TID>]:<SRC>:<CTAG>::[:INDEX=<INDEX>][:];

Input Example

DLT-ALM-CPS::LINE-5-1-RX:1:::INDEX=3;

Input Parameters

<SRC>	Source AID.
INDEX	Index of the alarm to be deleted or acknowledged. To be taken from the RTRV-ALM-CPS response.

DLT-AUTO

The Delete Auto (DLT-AUTO) command deletes AUTO ports.

Usage Guidelines
The ports must be in OOS state and must not have any circuits on them while deleting.

Category
Ports

Security
Provisioning

Input Format
DLT-AUTO:[<TID>]:<AID>:<CTAG>;

Input Example
DLT-AUTO::VFAC-1-3-2-1:1;

Input Parameters

<AID>	The AR-MXP, AR-XP, and AR-XPE cards use the VFAC AID.

DLT-AWCFG

The Delete Alien Wavelength Configuration (DLT-AWCFG) deletes the alien wavelength configured.

Usage Guidelines
None

Category
DWDM

Security
Provisioning

Input Format
DLT-AWCFG:[<TID>]:<SRC>:<CTAG>::[:];

Input Example
DLT-AWCFG::CHAN-3-4-RX:1;

Table 12-1 Parameter Support

Parameter	Description
<SRC>	Source access identifier.
<ALIENID>	Indicates the operating mode for alien wavelength. ALIENID is a STRING.
<FECMODE>	Specifies the FEC mode for alien wavelength.
• ENH	Enhanced FEC is enabled.
• ENH-I4	Enhanced FEC 1.4 is enabled.
• ENH-I7	Enhanced FEC 1.7 is enabled.
• HG-7	7% High Gain FEC is enabled.
• HG-20	20% High Gain FEC is enabled.
• OFF	FEC is disabled.
• STD	Standard FEC is enabled.

DLT-BULKROLL-<OCN_TYPE>

The Delete Bulkroll for OC12, OC192, OC3, OC48, OC768 (DLT-BULKROLL-<OCN_TYPE>) command deletes an attempted bulk rolling operation of a facility or completes an attempted rolling operation. This command is used for bulk line level rolling. Use DLT-ROLL-<MOD_PATH> for single path level rolling.

Usage Guidelines

See Table 30-1 on page 30-1 for supported modifiers by platform.

Category

Bridge and Roll

Security

Provisioning

Input Format

DLT-BULKROLL-<OCN_TYPE>:[<TID>]:<FROM>:<CTAG>:::
[RFROMSTART=<RFROMSTART>],[RFROMEND=<RFROMEND>],WHY=<WHY>;

Input Example

DLT-BULKROLL-OC12:CISCO:FAC-1-1:6:::RFROMSTART=STS-1-1-1,
RFROMEND=STS-1-1-11,WHY=STOP;

Input Parameters

<FROM>	One of the end points. Access identifier for line level rolling and bulk rolling.
<RFROMSTART>	The starting time slot in the source roll port. For bulk rolling only. Defaults to STS-<FROMSLOT>-<FROMPORT>-1, where <FROMSLOT> and <FROMPORT> are the slot and port of the <FROM> AID.
<RFROMEND>	The ending time slot in the source roll port. For bulk rolling only. Defaults to STS-<FROMSLOT>-<FROMPORT>-N, where <FROMSLOT> and <FROMPORT> are the slot and port of the <FROM> AID and N is the value of OC-N (for example, in the case of OC48, N=48).
<WHY>	The reason for deletion. The parameter type is WHY, which is the reason for deletion.
• END	Drop the leg to be rolled; this leg is identified by the RFROM parameter in ENT-ROLL or ENT-BULKROLL command.
• STOP	The rolling operation will be cancelled and reverted to the previous configuration.

DLT-BWP-ETH

The Delete Bandwidth Profile ETH (DLT-BWP-ETH) command deletes a bandwidth profile from the bandwidth profile database (BWP DB). The BWP DB is a collection of BWP used in a Network Element.

Usage Guidelines

Error conditions for deleting bandwidth profile can be:

- Invalid AID. If the AID is invalid an IIAC (Invalid AID) error message is returned.
- The “ALL” AID is invalid for this command.

Category

Ethernet

Security

Provisioning

Input Format

DLT-BWP-ETH:[<TID>]:<AID>:<CTAG>[::::];

Input Example
DLT-BWP-ETH:ROCKS:BWP-10000:1;

Input Parameters

<AID>	This AID is used to access BWP.
• BWP-ALL	All AID for BWP.
• BWP-{1-10000}	Single AID for BWP. The valid identifier ranges from 1 to 10000.

DLT-CPS

The Delete Control Plane Service (DLT-CPS) command deletes a Control Plane Service parameter.

Usage Guidelines

- Specify only the source port to identify the CPS
- Specify both the source AIDs, if the CPS is of type ADD 2WAY

Category
DWDM

Security
Provisioning

Input Format
DLT-CPS:[<TID>]:<SRC>:<CTAG>::[:CKTID=<CKTID>][:];

Input Example
DLT-CPS:100G:AGGR-3-1-1:1;

Input Parameters

<SRC>	Source AID.
<CKTID>	Circuit identification parameter can be used to filter this command

DLT-CRS-<PATH>

The Delete Cross-Connection for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, VT1, or VT2 (DLT-CRS-<PATH>) command deletes a cross-connection between synchronous transport signal (STS) paths. STS paths are specified using their STS AIDs.

Note • The fields after CTAG (including the trailing colons) are optional.

- For one-way cross-connections, the AIDs must be in the same order as originally entered; for two-way cross-connections, either order will work.
- This command does not support the deletion of multiple STS cross-connections.
- Using "&" in the AID field of this command can delete a path protection STS cross-connection.
  - The following command is used to delete a one-way selector or two-way selector and bridge with:

    from points: F1, F2

    to points: T1

    DLT-CRS-{STS_PATH}:[<TID>]:F1&F2,T1:<CTAG>;
  - The following command is used to delete a one-way bridge or two-way selector and bridge with:

    from point: F1

    to points: T1, T2

    DLT-CRS-{STS_PATH}:[<TID>]:F1,T1&T2:<CTAG>;
  - The following command is used to delete a one-way or two-way subtending path protection connection with:

    from point: F1, F2

    to points: T1, T2

    DLT-CRS-{STS_PATH}:[<TID>]:F1&F2,T1&T2:<CTAG>;
  - 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.
  - The following command is used to delete a path protection IDRI (integrated dual-ring interconnect) cross-connection:

    DLT-CRS-{STS_PATH}:[<TID>]:A&B,C&D:<CTAG>;

    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.
  - The following command is used to delete a path protection dual-ring interconnect (DRI) cross-connection:

    DLT-CRS-{STS_PATH}:[<TID>]:A&B,C:<CTAG>;

    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.

- All A&B AIDs in the TL1 cross-connection command are in the format of WorkingAID&ProtectAID.
- You can experience some implementation behavior problems if additional drops have been added to the connection object.
- The facility AID is only valid for slots holding the G1K-4 card.
- The virtual facility AID (VFAC) is only valid on slots holding an ML-Series card.
- CKTID is a string of ASCII characters. The maximum length of CKTID can be 48 characters. If the CKTID is EMPTY or NULL, the field will not appear.
- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use a retrieve command to retrieve current values.

Category
Cross Connections

Security
Provisioning

Input Format
DLT-CRS-<PATH>:[<TID>]:<SRC>,<DST>:<CTAG>[:::[CKTID=<CKTID>],
[CMDMDE=<CMDMDE>]];

Input Example
DLT-CRS-STS12C:VINBURG:STS-1-1-1,STS-12-1-1:102:::CKTID=XYZ,CMDMDE=NORM;

Input Parameters

<SRC>	Source AID.
<DST>	Destination AID.
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null, the CKTID field will not be displayed.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.

• 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 might make the command fail.

DLT-CRS-ETH

The Delete Cross-Connect ETH (DLT-CRS-ETH) command deletes a cross connection between the ethernet paths. Ethernet paths are specified by using their ethernet facilities AID and SVLAN.

Usage Guidelines

This command deletes an ethernet connection between two or more ethernet connection end points inside an ethernet port. Specify all the ethernet connection end points associated in order to identify a unique cross-connection inside the node.

Category

DWDM

Security

Provisioning

Input Format

DLT-CRS-ETH:[<TID>]:<SRC>,<DST>:<CTAG>:::[CKTID=<CKTID>],[CMDMDE=<CMDMDE>];

Input Example

DLT-CRS-ETH:VA454-22:ETHID-1-3-2-1-15,ETH-1-3-21-1-15:116:::CKTID=CIRCUIT,CMDMDE=FRCD;

Input Parameters

<SRC>	Ethernet connection identifier AIDs used to access L2 ethernet connection end point.
• ALL	The ALL AID is applicable for RTRV-only commands, basically the RTRV-rr type of commands.
• ETHID[-{1-12}]-{1-5,12-16}-{1-22}-1-{1-20}	Ethernet connection end point aid for GE-XP card.
• ETHID[-{1-12}]-{1-6,12-17}-{1-4}-1-{1-20}	Facility aid for 10GE-XP card.
<DST>	Ethernet connection identifier AIDs used to access L2 ethernet connection end point

• ALL	The ALL aid is applicable for RTRV-only commands, basically the RTRV-rr type of commands.
• ETHID[-{1-12}]-{1-5,12-16}-{1-22}-1-{1-20}	Ethernet connection end point aid for GE-XP card.
• ETHID[-{1-12}]-{1-6,12-17}-{1-4}-1-{1-20}	Facility aid for 10GE-XP card.
<CKTID>	(Optional) Circuit identification parameter contains the Common Language Circuit ID or other alias of the circuit being provisioned. May not contain blank spaces. CKTID is a string of ASCII characters. The maximum length of CKTID can be 48. cktid is a string. Default value is - “NULL”.
<CMDMDE>	Command Mode is used to force the system to execute a given irrespective of any standing conditions. Default value is -NORM
• 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.

DLT-CRS-ODU

The command deletes ODU Circuit.

Usage Guidelines

The AID is mandatory for this command.

Category

DWDM

Security

Provisioning

Input Format

DLT-CRS-ODU::<FROM>,<TO>:<CTAG>:::BANDWIDTH=<bandwidth>;

Input Example

DLT-CRS-ODU::ODU-1-4-11-1-1-20,ODU-1-4-12-1-1-10:a:::BANDWIDTH=ODU2E;

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Input Parameters		
	<FROM>	ODU AID of From End Point. Ex- ODU-1-5-7-1-1-1. In case of Protected- ODU-1-5-7-1-1-1& ODU-1-5-7-1-2-1.
	<TO>	ODU AID of To End Point. In case of Protected- ODU-1-5-7-1-1-1& ODU-1-5-7-1-2-1.
	BANDWIDTH	ODU Level (ODU2E).

DLT-EQPT

The Delete Equipment (DLT-EQPT) 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 endpoint.

The DLT-EQPT command can also be used to delete a shelf that is no longer used. A shelf can only be deleted if there is no equipment present or if the equipment and its attributes are not in use and can be deleted as well. Only one REPT-DBCHG message will be reported on SHELF-{1-8} in the latter case. The node controller shelf (the shelf whose shelf ID is 1) cannot be deleted.

Usage Guidelines

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 can be:

- The error message SPLD (Equipment In Use) will be returned in the following conditions:
  - The card is in a protection group.
  - The card has a cross-connection, a data communications channel (DCC), a generic communications channel (GCC), an optical service channel (OSC), or a provisionable patchcord termination.
  - If any of its facilities is being used as a synchronization source.
- If a card is not provisioned, an error message is returned.

Category

Equipment

Security

Provisioning

Input Format

DLT-EQPT:[<TID>]:<AID>:<CTAG>[:::];

Input Example

DLT-EQPT:10x10G-LC:SLOT-2:1;

Input Parameters

<AID>	Access identifier. Identifies an equipment unit to act on.

- MD-48-EVEN
- MD-48-ODD
- MD-48-CM
- EDRA-1-26
- EDRA-1-35
- EDRA-2-26
- EDRA-2-35
- 16-WXC-FS
- MF-16AD-CFS
- MF-4x4-COFS
- MF-DEG-5
- MF-UPG-4
- MF-MPO-8LC
- MF-AST-EDFA
- SMR20-FS
- SMR9-17-FS
- SMR9-24-FS

- SMR9-34-FS
- AD-12-FS
- AD-16-FS
- MF-MPO-16LC
- MF-2MPO-ADP
- MF-16AE-CFS
- MF-10AD-CFS
- MF-PPMESH8-5AD
- PSHELF-MF-6RU
- PSHELF-MF10-6RU
- SMR20-FS-CV
- MF-MPO-20LC
- MF-6AD-CFS
- MF-8X10G-FO
- MD-48-ODD-E
- MD-48-EVEN-E
- MD-48-CM-E

DLT-FFP-<MOD2DWDMPAYLOAD>

The Delete Facility Protection Group for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 1GISC3, 2GFC, 2GFICON, 2GISC3, 4GFC, 4GFICON, 8GFC, D1VIDEO, DV6000, DVBASI, ETRCLO, FSTE, GIGE, HDTV, ISC1, ISC3, OTU1, OTU2, OTU3, OTU4, OTU4C2, PASSTHRU, OCH, ISC3STP1G, or ISC3STP2G (DLT-FFP-<MOD2DWDMPAYLOAD>) command deletes Y-cable protection on client facilities.

Usage Guidelines

- The command does not support 3GVIDEO, SDSDI, HDSDI, and AUTO payloads on AR-MXP, AR-XP, and AR-XPE cards.
- The command deletes the facility protection group on that port.

Category

Protection

Security

Provisioning

Input Format

DLT-FFP-<MOD2DWDMPAYLOAD>:[<TID>]:<SRC>,<DST>:<CTAG>[:::];

Input Example

DLT-FFP-HDTV:CISCO:FAC-1-1-1,FAC-2-1-1:100;

DLT-FFP-OTU1:ROCCIANERA:VFAC-2-1-1,VFAC-1-1-1:1;

Input Parameters

<SRC>	The working facility AID. The AR-MXP, AR-XP, and AR-XPE cards use working facility VFAC AID.
<DST>	The protecting facility AID. The AR-MXP, AR-XP, and AR-XPE cards use protecting facility VFAC AID.

DLT-FFP-<OCN_TYPE>

The Delete Facility Protection Group for OC3, OC12, OC48, OC192, OC768 (DLT-FFP-<OCN_TYPE>) command deletes an OC-N facility protection group in a 1+1 protection scheme.

Usage Guidelines

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

Category
Protection

Security
Provisioning

Input Format
DLT-FFP-<OCN_TYPE>:[<TID>]:<WORK>,<PROTECT>:<CTAG>[:::];

Input Example
DLT-FFP-OC3:PETALUMA:FAC-2-1,FAC-1-1:1;

Input Parameters

<WORK>	The working facility AID.
<PROTECT>	The protect facility AID.

DLT-FIBERATTR

Description
Deletes Fiber Attributes on WSON for a WDMSIDE.

Usage Guidelines
- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The ALL AID is invalid for this command.

Category
NCS

Security
Maintenance

Input Format
DLT-FIBERATTR:[<TID>]:<aid>:<CTAG>[::::];

Input Example

dlt-fiberattr::WDMSIDE-C:1;

Input Parameters

Parameter	Description
AID	The AID used to access the WDM side of a Multiservice Transport Platform (MSTP) node.
• WDMSIDE-{UN-KNOWN,A,B,C,D,E,F,G,H}	MSTP side identifier.

DLT-FOG

The Delete Fan-Out-Group (DLT-FOG) command deletes the provisioned Fan-out-Group.

Usage Guidelines

- Deletes the provisioned FOG.
- If AID is invalid, an IIAC (Invalid AID) error message is returned.
- An error message will be returned if the unprovisioned FOG AID is entered.

Category

Equipment

Security

Provisioning

Input Format

DLT-FOG:[<TID>]:<AID>:<CTAG>[:::];

Input Examples

DLT-FOG::FOG-1-37:1;

Input Parameters

<AID>	Access identifier of the Fan-out-group. The ALL AIDs are not allowed for deleting the FOGs.

DLT-FTPSERVER

The Delete FTP Server (DLT-FTPSERVER) command deletes FTP server entries.

Usage Guidelines

None.

Category

ENE

Security

Superuser

Input Format

DLT-FTPSERVER:[<TID>]::<CTAG>:::IPADDR=<IPADDR>;

Input Examples

1. DLT-FTPSERVER:[<TID>]::<CTAG>:::IPADDR=10.20.30.40;
2. DLT-FTPSERVER:TID::CTAG:::IPADDR="[3ffe:0501:0008:0000:0260:97ff:fe40]":efab;

Input Parameters

<IPADDR>	Specifies the IP address of the FTP server entry to be deleted. IPADDR=ALL specifies that all entries are deleted from the list.

DLT-LMP-CTRL

The Delete Link Management Protocol Control Channel (DLT-LMP-CTRL) command deletes an LMP control channel.

Usage Guidelines

This command is only applicable on nodes that support the LMP protocol and have the LMP protocol enabled.

Category

DWDM

Security

Maintenance

Input Format

DLT-LMP-CTRL:[<TID>]:<SRC>:<CTAG>;

Input Example

DLT-LMP-CTRL:PETALUMA:CTRL-3:704;

Input Parameters

<SRC>	The LMP control channel.
• CTRL-ALL	Specifies all the control channels.
• CTRL-{1-4}	Specifies an individual control channel.

DLT-LMP-TLINK

The Delete Link Management Protocol Traffic Engineering (TE) Link (DLT-LMP-TLINK) command deletes an LMP TE link.

Usage Guidelines

This command is only applicable on nodes that support the LMP protocol and have the LMP protocol enabled.

Category

DWDM

Security

Maintenance

Input Format

DLT-LMP-TLINK:[<TID>]:<SRC>:<CTAG>;

Input Example

DLT-LMP-TLINK:PETALUMA:TLINK-3:704;

Input Parameters

<SRC>	LMP TE link.
• TLINK-ALL	Specifies all the TE links.
• TLINK-{1-256}	Specifies an individual TE link.

DLT-LMP-DLINK

The Delete Link Management Protocol Data Link (DLT-LMP-DLINK) command deletes an LMP data link.

Usage Guidelines

This command is only applicable on nodes that support the LMP protocol and have the LMP protocol enabled.

Category

DWDM

Security

Maintenance

Input Format

DLT-LMP-DLINK:[<TID>]:<SRC>:<CTAG>;

Input Example

DLT-LMP-DLINK:PETALUMA:FAC-14-1-1:704;

Input Parameters

<SRC>	Access identifier.

DLT-LNK

The Delete Optical Link for OCH, OMS, or OTS (DLT-LNK) command deletes an optical link between two optical connection points. The optical link is specified by using the AID of the involved optical connection points.

Usage Guidelines

None

Category

DWDM

Security

Provisioning

Input Format

DLT-LNK:[<TID>]:<FROM>,<TO>:<CTAG>;

Input Example

DLT-LNK:PENNGROVE:BAND-6-1-TX,BAND-13-1-RX:114;

Input Parameters

<FROM>	The identifier at one end of the optical link from the AID.
<TO>	The identifier at the other end of the optical link from the AID.

DLT-LNKTERM

The Delete a Provisionable Patchcord Termination (DLT-LNKTERM) command deletes a provisionable patchcord termination that is present on a node. All termination points of a link/provisionable patchcord have to be deleted in order for the link to be deleted fully.

Usage Guidelines

This command accepts multiple AIDs, but does not accept the ALL AID.

A suitable error will be responsed if the link termination does not exist.

Category

Provisionable Patchcords

Security

Provisioning

Input Format

DLT-LNKTERM:[<TID>]:<AID>:<CTAG>;

Input Example

DLT-LNKTERM::LNKTERM-1:CTAG;

Input Parameters

<AID>	Access identifier. Indicates a link (provisionable patchcord) termination on the local node.

DLT-MA-CFM

The Delete Maintenance Association Connectivity Fault Management (DLT-MA-CFM) command deletes the maintenance association present on the card.

Usage Guidelines

- The “ALL” AID is invalid for this command.
- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Equipment

Security

Provisioning

Input Format

DLT-MA-CFM:[<TID>]:<AID>:<CTAG>:::MANAME=<MANAME>,SVLANID=<SVLANID>;

Input Example

DLT-MA-CFM:454-156:SLOT-1:1:::MANAME=MANAME,SVLANID=4;

Input Parameters

<AID>	Access identifier.
<MANAME>	Maintenance Association Name. It is a string. The MA name length should not exceed more than 43 characters.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

DLT-MCH

The Delete Media Channel (DLT-MCH) command deletes the maintenance domain present on the card.

Usage Guidelines

- The AID is mandatory for this command.

Category
Equipment

Security
Provisioning

Input Format
DLT-MCH:<AID>:<CTAG>:::[:NAME=<name>][:];

Input Example

Input Parameters

<AID>	Access identifier.
<NAME>	Circuit Name

DLT-MCHG

The Delete Media Channel Group Creation (DLT-MCHG) command deletes the maintenance domain present on the card.

Usage Guidelines
- The AID is mandatory for this command.

Category
Equipment

Security
Provisioning

Input Format
DLT-MCHG:<AID>:<CTAG>:::[:NAME=<name>][:];

Input Example

Input Parameters

<AID>	Access identifier.

<NAME>	Circuit Name

DLT-MD-CFM

The Delete Maintenance Domain Connectivity Fault Management (DLT-MD-CFM) command deletes the maintenance domain present on the card.

Usage Guidelines

- The “ALL” AID is invalid for this command.
- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Equipment

Security

Provisioning

Input Format

DLT-MD-CFM:[<TID>]:<AID>:<CTAG>:::MDNAME=<MANAME>,LEVEL=<LEVEL>;

Input Example

DLT-MD-CFM:454-156:SLOT-1:1:::MDNAME=MDNAME,LEVEL=5;

Input Parameters

<AID>	Access identifier.
<MDNAME>	Maintenance Domain Name. It is a string. The MD name length should not exceed more than 43 characters.
<LEVEL>	This indicates the level of the maintenance domain. The value ranges from 0 to 7.

DLT-MDMAMAP-CFM

The Delete Maintenance Domain and Maintenance Association mapping Connectivity Fault Management (DLT-MDMAMAP-CFM) command deletes the maintenance domain and maintenance association mapping.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.

- The card should be in Layer2 over DMDM mode.

Category
Equipment

Security
Configuration

Input Format
DLT-MDMAMAP-CFM:[<TID>]:<AID>:<CTAG>:::MDNAME=<MANAME>,MAPACTION=<MAPACTION>,[MANAME=<MANAME>],[SVLANID=<SVLANID>];

Input Example
DLT-MDMAMAP-CFM::SLOT-17:1:::MDNAME=CISCO,MAPACTION=DETACH,MANAME=MA1,SVLANID=10;

Input Parameters

<AID>	Access identifier.
<MDNAME>	Maintenance Association Name. It is a string. The MA name length should not exceed more than 43 characters.
<MAPACTION>	Describes the mapping action while deleting the attached MAs with MDs.
• DETACH	Deletes the specified MA.
• DETACH-ALL	Deletes all the MAs attached to the MD.
<MANAME>	Maintenance Association Name. It is a string. The MA name length should not exceed more than 43 characters.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

DLT-MEP-CFM

The Delete Maintenance End Point Connectivity Fault Management (DLT-MEP-CFM) command deletes the maintenance end points on the port.

Usage Guidelines
- This command is applicable only to GE_XP and 10GE_XP cards.

- The card should be in Layer2 over DMDM mode.

Category
Ports

Security
Provisioning

Input Format
DLT-MEP-CFM:[<TID>]:<AID>:<CTAG>:::SVLANID=<SVLANID>,MDNAME=<MDNAME>,MPID=<MPID>;

Input Example
DLT-MEP-CFM::ETH-12-3-1:1:::SVLANID=100,MDNAME=MD2,MPID=20;

Input Parameters

<AID>	Access identifier.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<MDNAME>	Maintenance Domain Name. It is a string. The MD name length should not exceed more than 43 characters.
<MPID>	Maintenance Point Identifier. It is an integer.

DLT-MIP-CFM

The Delete Maintenance Intermediate Point Connectivity Fault Management (DLT-MIP-CFM) command deletes the maintenance intermediate points on the port.

Usage Guidelines
- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category
Ports

Security
Provisioning

Input Format

DLT-MIP-CFM:[<TID>]:<AID>:<CTAG>:::VLANID=<VLANID>;

Input Example

DLT-MIP-CFM::ETH-1-1-1:1:::VLANID=2;

Input Parameters

<AID>	Access identifier.
<VLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

DLT-NNI-ETH

The Delete Ethernet Network-to-Network Interface (DLT-NNI-ETH) command deletes the NNI S-VLAN ID for the NNI of an L2 Ethernet port.

Usage Guidelines

- The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use the RTRV-ETH command to obtain the current value.
- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The ALL AID is invalid for this command.

Category

Ethernet

Security

Provisioning

Input Format

DLT-NNI-ETH:[<TID>]:<AID>:<CTAG>::<SVLANID>[::];

Input Example

DLT-NNI-ETH:PETALUMA:ETH-1-1-1:1::1010;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier.

<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

DLT-NNI-CHGRP

The Delete Channel Group Network-to-Network Interface (DLT-NNI-CHGRP) command deletes the NNI S-VLAN ID for the NNI of a channel group.

Usage Guidelines

- The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use the RTRV-ETH command to obtain the current value.
- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The ALL AID is invalid for this command.

Category

Channel group

Security

Provisioning

Input Format

DLT-NNI-CHGRP:[<TID>]:<AID>:<CTAG>::<SVLANID>[::];

Input Example

DLT-NNI-CHGRP:CISCO:CHGRP-1-1:1::1010;

Input Parameters

<AID>	Access identifier.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

DLT-QNQ-ETH

The Delete Ethernet QinQ (DLT-QNQ-ETH) command deletes the IEEE 802.1Q tunneling (QinQ) relationship between the CE-VLAN and the S-VLAN for Gigabit Ethernet uniport provisioning associated to an L2 Ethernet port.

Usage Guidelines

The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use the RTRV-ETH command to obtain the current value.

Category

Ethernet

Security

Provisioning

Input Format

DLT-QNQ-ETH:[<TID>]:<AID>:<CTAG>::<FIRSTCEVLANID>,<LASTCEVLANID>,<SVLANID>[::];

Input Example

DLT-QNQ-ETH:PETALUMA:ETH-1-1-1:1::10,11,100;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier.
<FIRSTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<LASTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

DLT-OCHCC

The Delete Optical Channel Client Connection (DLT-OCHCC) command deletes the OCH client connection.

Usage Guidelines

None

Category

DWDM

Security

Provisioning

Input Format

DLT-OCHCC:[<TID>]:<AID>:<CTAG>[:::CKTID=<CKTID>],[CMDMDE=<CMDMDE>];

Input Example

DLT-OCHCC:VA454-22:FAC-2-1-1:116:::CKTID=\"OCHCC-1\",CMDMDE=FRCD;

Input Parameters

<AID>	Access identifier.
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null, the CKTID field will not be displayed.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• 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 might make the command fail.

DLT-OCHNC

The Delete Optical Channel Network Connection (DLT-OCHNC) command deletes the OCH network connection.

Usage Guidelines

Two OCHNC endpoints must be specified in order to identify the wavelength channel inside the node.

Category

DWDM

Security

Provisioning

Input Format

DLT-OCHNC:[<TID>]:<SRC>,<DST>:<CTAG>:::[CKTID=<CKTID>],[CMDMDE=<CMDMDE>];

Input Example

DLT-OCHNC:VA454-22:CHANWL-1-3-TX-1530.33,
CHANWL-4-1-RX-1530.33:116:::CKTID=CIRCUIT,CMDMDE=FRCD;

Input Parameters

<SRC>	Source access identifier. In two-way wavelength connection sources, both directions need to be indicated.
<DST>	Destination access identifier. In two-way wavelength connection sources, both directions need to be indicated.
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null, the CKTID field will not be displayed.
<CMDMDE>	The parameter type is command mode, which forces the system to execute a given command regardless of any standing conditions. NORM mode is the default behavior for all commands but you can specify FRCD to force the system to override a state in which the command would normally be denied.
• 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 might make the command fail.

DLT-OPMODE

The Delete Operating Mode (DLT-OPMODE) command deletes the operating mode created on the trunk. Operating mode cannot be deleted when ports are provisioned.

Usage Guidelines

- Enter the trunkport on which you want to delete the operating mode
- Need not enter clientport, ctmap, or rate for deleting any operating mode.
- In protect operating modes, enter the working trunk port number to delete that operating mode.
- Client port should not be provisioned to delete any opmode.
- OPMODE is the mandatory parameter to delete any operating mode on the 100G-LC-C, 10x10G-LC, and CFP-LC Cards.
- TRUNKPORT parameter is mandatory for all the operating modes on the AR-MXP, AR-XP, and AR-XPE cards.
- TRUNKPORT parameter is optional for 100G cards and is used along with the OPMODE parameter for few operating such as Low-latency, TXP-10G, and RGN-10G.

Category

DWDM

Security

Provisioning

Input Format

DLT-OPMODE[:<TID>]:<AID>:<CTAG>[:::OPMODE=<OPMODE>],[TRUNKPORT=<TRUNKPORT>];

Input Example

DLT-OPMODE:FUM:SLOT-5:1:::OPMODE=CFP-TXP;

DLT-OPMODE::10x10G-LC:SLOT-2:1:::OPMODE=RGN-10G,TRUNKPORT=2;

Input Parameters

<AID>	SLOT Access Identifier.
<OPMODE>	Specifies the opmode created on the card provisioned. Parameter type is OPMODE.
• MXP-10x10G	Muxponder mode between 10X10G-LC and 100G-LC-C card.
• RGN-100G	Regenator mode between two 100G-LC-C cards.

• TXP-100G	Transponder mode on standalone 100G-LC-C card.
• RGN-10G	Ginsu regerator mode among SFP+ ports on 10X10G-LC card.
• CFP-MXP	Muxponder mode between one CFP-LC and one 100G-LC-C cards.
• CFP-TXP	Transponder mode among SFP+ ports on 10X10G-LC card.
• TXP-10G	Transponder mode among SFP+ ports on 10X10G-LC card.
• LOW-LATENCY	Low latency opmode is supported only on 10x10G-LC card.
• MXPP-MR-S	Operating mode on AR-MXP, AR-XP, or AR-XPE card.
• MXP-MR-S	Operating mode on AR-MXP, AR-XP, or AR-XPE card.
• MXP-2x40G	Operating mode on AR-MXP, AR-XP, or AR-XPE card.
• AR-XP-MXP	
• TXPP-10G	
• MXP-1S-HIGH	
• FANOUT-100G	
• MXP-100G	
• MXP-10x10G-100G	
• MXP-200G	
• MXP-2x50G	
• MXP-CK-100G	
• RGN-200G	
• TXP-2x50G-CK	
<TRUNKPORT>	Trunk port number of the operating mode being deleted.

DLT-QNQ-CHGRP

The Delete Channel Group QinQ (DLT-QNQ-CHGRP) command deletes the IEEE 802.1Q tunneling (QinQ) relationship between the CE-VLAN and the S-VLAN for Gigabit Ethernet uniport provisioning associated to a channel group.

Usage Guidelines

The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use the RTRV-ETH command to obtain the current value.

Category

Channel Group

Security

Provisioning

Input Format

DLT-QNQ-CHGRP:[<TID>]:<AID>:<CTAG>::<FIRSTCEVLANID>,<LASTCEVLANID>,<SVLANID>[::];

Input Example

DLT-QNQ-CHGRP:CISCO:CHGRP-1-1:1::10,11,100;

Input Parameters

<AID>	Access identifier.
<FIRSTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<LASTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

DLT-RADIUSSERVER

This command is used to delete a configured RADIUS server.

Usage Guidelines

The user can delete the RADIUS server as per the position value. AID can be used in place of position. AID is obtained using command RTRV-RADIUSSERVER.

Category
System

Security
Provisioning

Input Format
DLT-RADIUSSERVER:[<TID>]:<aid>:<CTAG>;

Input Example
DLT-RADIUSSERVER::2:a;

Input Parameters

<AID>	AID (Access identifier) is the position field given by RTRV-RADIUSSERVER command.

DLT-REP

The Delete Resilient Ethernet Protocol (DLT-REP) command deletes the ethernet port from the Resilient Ethernet Protocol (REP) segment.

Usage Guidelines

- This command deletes all REP configuration configured on ETH ports on the card.
- This command is applicable only to GE_XP and 10GE_XP cards.
- This command is only applicable if the card is in ETH-L2 card mode.
- If the port is not part of any segment, the NE generates an error message.

Category
Ethernet

Security
Provisioning

Input Format
DLT-REP:[TID]:<AID>:<CTAG>[:::];

Input Example
DLT-REP:CISCO:ETH-1-1-1-1:123;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier.

DLT-RMONTH-<MOD2_RMON>

The Delete Remote Monitoring Threshold for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 4GFC, 4GFICON, 8GFC, CHGRP, ETH, FSTE, G1K-4, GFPOS, GIGE, HDLC, OCH, POS, SDSDI , HDSDI, OTU1, OTU2, OTU3, OTU4, OTU4C2, ISC3STP1G, or ISC3STP2G (DLT-RMONTH-<MOD2_RMON>) command deletes a threshold entry in the remote monitoring (RMON) alarm table. Because multiple thresholds can be created for a particular MONTYPE, you must specify all of the necessary parameters for the specific threshold that you want to delete.

Usage Guidelines

The command supports the modifier SDSDI , HDSDI, OTU1, OTU2, ISC3STP1G, and ISC3STP2G.

Category

Protection

Security

Provisioning

Input Format

DLT-RMONTH-<MOD2_RMON>:[<TID>]:<SRC>:<CTAG>::<MONTYPE>,,,,<INTVL>:
RISE=<RISE>,FALL=<FALL>,[SAMPLE=<SAMPLE>],[STARTUP=<STARTUP>][:];

Input Example

DLT-RMONTH-GIGE:CISCO:FAC-2-1:1234::etherStatsOctets,,,,100:RISE=1000,FALL=100
SAMPLE=DELTA,STARTUP=RISING;

DLT-RMONTH-ISC3STP1G:CISCO:VFAC-4-2-1:1234::mediaIndStatsRxLcvErrors,,,,10:rise=10,fall=1,sample=absolute;

Input Parameters

<SRC>	Source access identifier. AID for the facility that manages the data statistics. AR-MXP, AR-XP, and AR-XPE cards use the VFAC AID.
<MONTYPE>	Monitored type. Type of RMON monitored data statistics. The parameter type is monitoring type list (ALL_MONTYPE).
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values

• 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 one tenth of a percentage
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A—Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B—Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path

• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address.
• etherStatsCollisions	Number of transmit packets that are collisions.
• etherStatsCRCAlignErrors	The total number of packets received that have a length between 64 and 1518 octets (excluding framing bits, but including frame check sequence [FCS] octets).
• etherStatsDropEvents	Number of received frames dropped at the port level.
• etherStatsFragments	The total number of packets received that were less than 64 octets.
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets.
• etherStatsOctets	The total number of octets of data.
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets.
• etherStatsPkts	The total number of packets received (including bad packets, broadcast packets, and multicast packets).
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets.
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High Order Path Negative Pointer Justification Count
• HP-NPJC-PGEN	High Order Path, Negative Pointer Justification Count
• HP-OI	Outage Intensity

• HP-PJCDIFF	High Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High Order Path Pointer Justification Count
• HP-PJCS-PGEN	High Order Path Pointer Justification Count Seconds
• HP-PPJC-PDET	High Order Path Positive Pointer Justification Count
• HP-PPJC-PGEN	High Order Path, Positive Pointer Justification Count
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset.
• ifInDiscards	The number of inbound packets.
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors.
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset.
• ifInOctets	Number of bytes transmitted since the last counter reset.
• ifInUcastPkts	Number of unicast packets received since the last counter reset.
• ifOutBroadcastPkts	Number of broadcast packets transmitted.
• ifOutDiscards	The number of outbound packets.
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors.
• ifOutMulticastPkts	Number of multicast packets transmitted.
• ifOutPayloadCrcErrors	Received payload cyclic redundancy check (CRC) errors.
• ifOutUcastPkts	Number of unicast packets transmitted.
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in microamps

• LBCL-MAX	Maximum Laser Bias current in microamps
• LBCL-MIN	Minimum Laser Bias current in microamps
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds—A
• LP-ESB	Low-Order Path Errored Seconds—B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order Positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in tenths of a microwatt

• OPR-MAX	Maximum Receive Power in tenths of a microwatt
• OPR-MIN	Minimum Receive Power in tenths of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in tenths of a microwatt
• OPT-MAX	Maximum Transmit Power in tenths of a microwatt
• OPT-MIN	Minimum Transmit Power in tenths of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• PRE-FECBER	Enum to hold PRE-FECBER value
• 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
• SASCPP	Severely Errored Framing/Alarm Indication Signal (AIS) Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path

• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<INTVL>	The interval, in seconds, during which the data is sampled and compared with the rising and falling threshold. A valid value is any integer greater than or equal to 10 (seconds).
<RISE>	The rising threshold for the sampled statistics. A valid value is any integer.
<FALL>	The falling threshold. A valid value is any integer smaller than the rising threshold.

<SAMPLE>	The method of calculating the value to be compared to the thresholds. The parameter type is SAMPLE_TYPE, which describes how the data will be calculated during the sampling period.
• ABSOLUTE	Comparing directly
• DELTA	Comparing with the current value of the selected variable subtracted by the last sample
<STARTUP>	Dictates whether an event will generate if the first valid sample is greater than or equal to the rising threshold, less than or equal to the falling threshold, or both. The parameter type is STARTUP_TYPE, which indicates whether an event will be generated when the first valid sample is crossing the rising or falling threshold.
• FALLING	Generates the event when the sample is smaller than or equal to the falling threshold
• RISING	Generates the event when the sample is greater than or equal to the rising threshold
• RISING-OR-FALLING	Generates the event when the sample is crossing the rising threshold, or the falling threshold

DLT-ROLL-<MOD_PATH>

The Delete Roll on STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, VT1, or VT2 (DLT-ROLL-MOD_PATH>) command deletes or completes an attempted rolling operation.

Usage Guidelines

Note STS18C and STS36 are not supported for this command in this release.

Category

Bridge and Roll

Security

Provisioning

Input Format

DLT-ROLL-<MOD_PATH>:[<TID>]:<FROM>,<TO>:<CTAG>:::WHY=<WHY>;

Input Example

DLT-ROLL-STS1:CISCO:STS-1-1-1,STS-2-1-1:6:::WHY=STOP;

Input Parameters	
<FROM>	Source access identifier. It is one of the termination points (legs) of the existing cross-connection. If the existing cross-connection is one-way, this termination point (leg) should be the FROM-AID termination point. Otherwise, FROM is not significant. FROM and TO should be entered as they are entered in the ENT-CRS command. You can issue RTRV-CRS command, and use the response for the FROM and TO parameters.
<TO>	Destination access identifier. It is one of the termination points (legs) of the existing cross-connection. If the existing cross-connection is one-way, this termination point (leg) should be the TO-AID termination point. Otherwise, TO is not significant. FROM and TO should be entered as they are entered in the ENT-CRS command. You can issue RTRV-CRS command, and use the response for the FROM and TO parameters.
<WHY>	The reason for deletion. The parameter type is WHY, which is the reason for deletion.
• END	Drop the leg to be rolled; the leg is identified by the RFROM parameter in the ENT-ROLL command.
• STOP	The rolling operation will be deleted and reverted to the previous configuration.

DLT-ROUTE

The Delete Route (DLT-ROUTE) command deletes static routes.

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

DLT-ROUTE:[<TID>]::<CTAG>::<DESPID>;

Input Example

DLT-ROUTE:CISCO::123::10.64.72.57;

Input Parameters

<DESPID>	Destination IP address. DESPID is a string.

DLT-ROUTE-GRE

The Delete Route Generic Routing Encapsulation (DLT-ROUTE-GRE) command deletes a GRE tunnel.

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

DLT-ROUTE-GRE:[<TID>]::<CTAG>:::IPADDR=<IPADDR>,IPMASK=<IPMASK>,
NSAP=<NSAP>;

Input Example

DLT-ROUTE-GRE:CISCO::123:::IPADDR=10.64.72.57,IPMASK=255.255.255.0,
NSAP="39840F80FFFFFF0000DDDDAA000010CFB4910200";

Input Parameters

<IPADDR>	IP address of the tunnel endpoint. IPADDR is a string.
<IPMASK>	Subnet mask for the tunnel endpoint. IPMASK is a string.
<NSAP>	NSAP address for the tunnel endpoint. NSAP is a string.

DLT-TADRMAP

The Delete Target Identifier Address Mapping (DLT-TADRMAP) command instructs a gateway NE to delete an entry in the TADRMAP table.

Usage Guidelines

None

Category
System

Security
Provisioning

Input Format
DLT-TADRMAP:[<TID>]::<CTAG>:::[TIDNAME=<TIDNAME>],[ADDRTYPE=<ADDRTYPE>];

Input Example
DLT-TADRMAP:DXT::CTAG:::TIDNAME=ENENODENAME,ADDRTYPE=IPADDR;

Input Parameters

<TIDNAME>	TID of the entity to be removed from the TADRMAP. TIDNAME is a string.
<ADDRTYPE>	Specifies to remove either the IP address entry, the NSAP address entry, or both entries from the TADRMAP.
• IP	IP address
• IP-AND-NSAP	IP and NSAP addresses
• NSAP	NSAP address

DLT-TRAPTABLE

The Delete Trap Table (DLT-TRAPTABLE) command deletes a Simple Network Management Protocol (SNMP) trap destination entry. Entering ALL will delete the whole table.

Usage Guidelines
None

Category
System

Security
Provisioning

Input Format
DLT-TRAPTABLE:[<TID>]:<AID>:<CTAG>;

Input Examples

1. DLT-TRAPTABLE::1.2.3.4:1;
2. DLT-TRAPTABLE::“[3ffe:0501:0008:0000:0260:97ff:fe40:efab]”:1;

Input Parameters

<AID>	Access identifier. IP address identifies the trap destination. Only numeric IP addresses are allowed.

DLT-TUNNEL-FIREWALL

The Delete Tunnel Firewall (DLT-TUNNEL-FIREWALL) command deletes a firewall tunnel.

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

DLT-TUNNEL-FIREWALL:[<TID>]::<CTAG>:::SRCADDR=<SRCADDR>, SRCMASK=<SRCMASK>,DESTADDR=<DESTADDR>,DESTMASK=<DESTMASK>;

Input Example

DLT-TUNNEL-FIREWALL:TID::CTAG:::SRCADDR=192.168.100.52, SRCMASK=255.255.255.0,DESTADDR=192.168.101.14,DESTMASK=255.255.255.0;

Input Parameters

<SRCADDR>	Source IP address. SRCADDR is a string.
<SRCMASK>	Source mask. SRCMASK is a string.
<DESTADDR>	Destination IP address. DESTADDR is a string.
<DESTMASK>	Destination mask. DESTMASK is a string.

DLT-TUNNEL-PROXY

The Delete Tunnel Proxy (DLT-TUNNEL-PROXY) command deletes a proxy tunnel.

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

DLT-TUNNEL-PROXY:[<TID>]::<CTAG>:::SRCADDR=<SRCADDR>,
SRCMASK=<SRCMASK>,DESTADDR=<DESTADDR>,DESTMASK=<DESTMASK>;

Input Example

DLT-TUNNEL-PROXY:TID::CTAG:::SRCADDR=192.168.100.52,
SRCMASK=255.255.255.0,DESTADDR=192.168.101.14,DESTMASK=255.255.255.0;

Input Parameters

<SRCADDR>	Source IP address. SRCADDR is a string.
<SRCMASK>	Source mask. SRCMASK is a string.
<DESTADDR>	Destination IP address. DESTADDR is a string.
<DESTMASK>	Destination mask. DESTMASK is a string.

DLT-UNICFG

The Delete User Network Interface Configuration (DLT-UNICFG) deletes the UNI Configuration created.

Usage Guidelines

- Specify only source access identifier to delete UNI Configuration.

Category

DWDM

Security
Provisioning

Input Format
DLT-UNICFG:[<TID>]:<src>:<CTAG>::[:];

Input Example
DLT-UNICFG::LINE-2-3:1;

Table 12-2 Parameter Support

Parameter	Description
<SRC>	Source AID.

DLT-USER-SECU

The Delete User Security (DLT-USER-SECU) command deletes a user. It can only be performed by a Superuser. Privilege levels are described in the ENT-USER-SECU command.

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

For the DLT-USER-SECU command, the syntax of the <UID> is not checked. The user is deleted if the <UID> exists in the database.

Category
Security

Security
Superuser

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

Input Example
DLT-USER-SECU:PETALUMA:CISCO15:123;

Input Parameters

<UID>	User Identifier. Any combination of up to 20 alphanumeric characters. The minimum UID size is 2. UID is a string.

DLT-VCG

The Delete Virtual Concatenated Group (DLT-VCG) command deletes a virtual concatenation group (VCG) object.

Usage Guidelines

None

Category

VCAT

Security

Provisioning

Input Format

DLT-VCG:[<TID>]:<SRC>:<CTAG>:::[CMDMDE=<CMDMDE>][:];

Input Example

DLT-VCG:NODE1:FAC-1-1:1234:::CMDMDE=FRCD;

Input Parameters

<SRC>	Source AID. ML-Series cards use the VFAC AID and FC_MR-4 cards use the FAC AID.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• 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 might make the command fail.

DLT-VLAN

The Delete Virtual LAN (DLT-VLAN) command deletes a VLAN from the VLAN database. The VLAN database is a collection of VLANs used in an NE.

Usage Guidelines

- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The ALL AID is invalid for this command.

Category

Ethernet

Security

Provisioning

Input Format

DLT-VLAN:[<TID>]:<AID>:<CTAG>[::::];

Input Example

DLT-VLAN:PETALUMA:VLAN-4096:1;

Input Parameters

<AID>	The AID is used to access the VLAN.
• VLAN-ALL	All AIDs for the VLAN.
• VLAN-{0-4096}	The AID used for a single VLAN. VLAN ID 0 is reserved for untagged VLANs.

DLT-WDMANS

The Delete Wavelength Division Multiplexing Automatic Node Setup (DLT-WDMANS) command deletes the automatic optical node setup application attributes.

Usage Guidelines

- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The ALL AID is invalid for this command.

Category

DWDM

Security

Maintenance

Input Format

DLT-WDMANS:[<TID>]:<AID>:<CTAG>::<PARAM>,[<WLEN>][::];

Input Example

DLT-WDMANS:PENNGROVE:WDMNODE:114::VOAATT,1530.33;

Input Parameters

<AID>	The AID is used to access the WDM node or a single port of the DWDM node.
• WDMNODE	Indicates the WDM node of an MSTP and accesses the NTWTYPE and DITHER WDMANS node parameters.
• LINE	The optical transport section port.
• BAND	The optical multiplex section port.
• CHAN	The optical channel port.
<WLEN>	(Optional) The parameter type is OPTICAL_WLEN, which indicates the optical wavelength.
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1528.77	Wavelength 1528.77
• 1529.16	Wavelength 1529.16
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90

• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54

• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33

• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05
• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27
• 1564.68	Wavelength 1564.68

• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50
• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52

• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83

• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60

• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
<VOAATTN>	The value of calibrated attenuation for the VOA expressed in dBm. The range is 0.0 to +30.0. VOAATTN is a float.
<POWEROSC>	WDM-ANS OSC power parameter.
<NTWTYPE>	WDM-ANS network type parameter.
<CHLOSS>	WDM-ANS channel loss parameter.
<GAIN>	WDM-ANS amplifier gain parameter.
<TILT>	WDM-ANS amplifier tilt parameter.
<CHPWR>	WDM-ANS channel power parameter.
<CHPWROFFSET>	Optical power setting, channel power setting.
<ENABLELOGO>	Enable logo.
<AMPLMODE	WDM-ANS amplifier mode parameter.
<AMPLIGAINRANGE>	Gain in Amplitude Range
<RATIO>	WDM-ANS Raman amplifier pump ratio parameter.
<OSCLOSS>	WDM-ANS OSC channel loss parameter.
<DITHER>	WDM-ANS WXC dithering parameter.
<TOTALPWR>	WDM-ANS Raman amplifier total power in mW.
<HIGHSLVEXP>	Span loss verification—high value.
<LOWSLVEXP>	Span loss verification—low value.

DLT-WDMSIDE

The Delete Wavelength Division Multiplexing Side (DLT-WDMSIDE) command deletes a WDM side.

Usage Guidelines

- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The ALL AID is invalid for this command.

Category
DWDM

Security
Maintenance

Input Format
DLT-WDMSIDE:[<TID>]:<AID>:<CTAG>[::::];

Input Example
DLT-WDMSIDE:PENNGROVE:WDMSIDE-A:114;

Input Parameters

<AID>	The AID used to access the WDM side of a Multiservice Transport Platform (MSTP) node.
• WDMSIDE-{UNKNOWN,A,B,C,D,E,F,G,H}	MSTP side identifier.

DLT-ALMPROFILE

This command will delete an existing alarm profile.

Usage Guidelines
Cannot delete inherited and default profile. Only user-defined alarm profile can be deleted. PROFILENAME is a mandatory parameter and can be retrieved with RTRV-ALMPROFILE command.

Category
System

Security
Provisioning

Input Format
DLT-ALMPROFILE:[<TID>]::<CTAG>:::PROFILENAME=<profilename>;

Input Parameters

<PROFILENAME>	Existing profile name to be deleted.

Output Format

NA

Output Example

> DLT-ALMPROFILE:::1:::PROFILENAME="wwwwwwwwwwwwwwwwjjjjjjjjjjjjjjjjjjjjjjjjjjjjjjjjgggggggggggggggg";

node113 2016-06-10 12:39:28

M 1 COMPLD

Output Parameters

NA

Chapter 13: ED Commands

This chapter provides edit (ED) commands for the Cisco NCS 2000 Series.

ED-AAASERVERAUTH

This command is used to configure the RADIUS server for authentication. The user must configure the RADIUS server before enabling or disabling the authentication.

Usage Guidelines

- Accounting and final authentication is changed (Enable/Disable) only if, the authentication is enabled.
- TACACS server is not configured using TL1 interface.

Category

System

Security

Provisioning

Input Format

ED-AAASERVERAUTH:::<CTAG>:::[AUTHTYPE=<authtype>],[ENABLEAUTH=<enableauth>],[FINALAUTH=<finalauth>],[ENABLERADIUSACCT=<enableradiusacct>];

Input Example

ED-AAASERVERAUTH:::1::: AUTHTYPE=RADIUS-SERVER,ENABLEAUTH=Y,FINALAUTH=Y,ENABLERADIUSACCT=Y;

Input Parameters

<AUTHTYPE>		Enum for Authentication server, the available options are:
	• NO-REMOTE-SERVER	No server configuration
	• RADIUS-SERVER	Radius server configuration
	• TACACS-SERVER	TACACS server configuration
<ENABLEAUTH>		Enum to enable or disable the authentication server:
• Y		Enable
• N		Disable
<FINALAUTH>		Enum to enable or disable final authentication when RADIUS server is not reachable:
• Y		Enable
• N		Disable
<ENABLERADIUSACCT>		Enum to enable or disable accounting for server:
• Y		Enable

- N Disable

ED-CPS

This command can be used to modify Control Plane Service parameter. The user needs to specify only the source port to identify the CPS. If the CPS is of type ADD 2WAY , both src AIDs have to be specified

Usage Guidelines

- If the AID is invalid, an IIAC (invalid AID) error message is returned. The following AIDs are supported:
  - CLIENT cps type support FAC and VFAC AID type.
  - TRUNK cps type support CHAN AID type.
  - ADD cps type support CHAN, PCHAN and LINEWL AID type.
- The ALL AID is invalid for this command
- In case of 1WAY, unidirectional connection, SRC and DST are single AIDs. In case of 2WAY, bidirectional connection, SRC and DST are double AIDs. However, in case of CLIENT or TRUNK cpstype, src and dst are single AID and the connection is of type 2WAY because of bidirectional ports hence this rule is not applicable.
- If the RESTTYPE is REVERT, it is required to set the REVERTMODE and SOAK parameters.
- If the RESTTYPE is REVERT, it is mandatory to set the REVERTMODE parameter as MANUAL or AUTO.
- SOAK time is mandatory if the REVERTMODE parameter is set to MANUAL or AUTO.

Category

DWDM

Security

Provisioning

Input Format

ED-CPS:[<TID>]:<src>:<CTAG>:::[CKTID=<cktid>],[VALMODE=<valmode>],[VALZONE=<valzone>],[VALMODESEC=<valmodesec>],[VALZONESEC=<valzonesec>],[CMDMDE=<cmdmde>],[RESTTYPE=<resttype>],[REVERTMODE=<revertmode>],[SOAK=<HH-MM-SS>],[CKTLABEL=<cktlabel>],[CKTPRIORITY=<cktpriority>],[DSPWROFS=<dspwrofs>],[USPWROFS=<uspwrofs>],[RESTVALMODE=<restvalmode>],[RESTVALZONE=<restvalzone>],[LSPDIVERSITY=<lspdiversity>],[DIVERSITYTYPE=<diversitytype>],[ISLOOSE=<isloose>],[DIVERSITYVAL=<diversityval>]:[<pst>[,<sst>]];
>

Input Example

ED-CPS::PCHAN-1-1-RX&PCHAN-1-1-TX:8:::CKTID=twoway_add-passive,VALMODE=FULL,VALZONE=GREEN:;

ED-CPS::CHAN-1-2-2:1:::RESTTYPE=REVERT,REVERTMODE=MANUAL,SOAK=00-00-10;

ED-CPS::LINE-1-6-3-RX:1:::CKTLABEL="CISCO234", CKTPRIORITY=6, USPWROFS=45.6, DSPWROFS=89.2;

Input Parameters

<SRC>	Source access identifier.
• 1WAY	A unidirectional connection from a source port to a destination port. In 1WAY wavelength connection only one AID is requested
• 2WAY	A bidirectional connection between the two ports. CLIENT or TRUNK 2WAY is requested together with one AID.
<CKTID>	(Optional) Circuit identification parameter contains the Common Language Circuit ID or other alias of the circuit being provisioned. Does not contain blank spaces. CKTID is a string of ASCII characters. The maximum length of CKTID can be 48.
<VALMODE>	Identifies the validation mode.
• NONE	No Optical validation is performed.
• FULL	The optical validation is performed as indicated in VALZONE parameter.
• INHERITED	
<VALZONE>	Identifies the validation operate zone.
• UNKNOWN	Not evaluated
• GREEN	Margin > 3 sigma
• YELLOW	1 < margin < 3 sigma
• ORANGE	0 < margin < 1 sigma
• RED	-3 < margin < 0 sigma
• OUT	Margin < -3 sigma
<VALMODESEC>	Identifies the validation mode for secondary circuit
<VALZONESEC>	Identifies the validation operate zone for secondary circuit
<RESTTYPE>	Specifies the restoration type on CPS circuit or UNI configuration. Parameter type is RESTTYPE.
• NONE	Restore type is not specified.
• RESTORE	Only restoration is allowed. The circuit is not revertible.
• REVERT	The circuit is revertible, manually or automatically.
<REVERTMODE>	Specifies the revertive mode type. Paraneter type is REVERTMODE.

• AUTO	Circuit is automatically revertible after the soak time expires.
• MANUAL	Manually revert the circuit.
• NONE	Not revertible.
<SOAK>	This is the soak time specified in HH-MM-SS format. After the soak time expires, if the revertive mode is AUTO, the circuit reverts automatically. If revertive mode is MANUAL, the soak time is ignored.
<CKTLABEL>	Circuit label.
<CKTPRIORITY>	Circuit Priority.
<DSPWROFS>	Down stream power offset.
<USPWROFS>	Up stream power offset.

<DIVERSITYVAL>	This parameter is a combination of three values, which are Service ID, Diversity type and ISLOOSE (Example: 1531/SRLG/Y&1533/NODE/N) In the above example, there are two entries where • The first value is the serviceID, which is unique at the node level. • The second value is the Diversity type, which is one of the following values: LINK NODE SRLG • The third value is ISLOOSE flag. The flag value is Y for LOOSE and N for not LOOSE (STRICT).
• ISLOOSE	Indicates if the required diversity is LOOSE (TRUE) or STRICT (FALSE).
• DIVERSITYTYPE	The parameter takes one of the following values: NONE LINK NODE SRLG
• LSPDIVERSITY	The source identifier of the diversified circuit, Example (CHAN-1-2-2)

ED-<GIGE_TYPE>

The Edit 10GIGE, 100GIGE, 40GIGE, or GIGE (ED-<GIGE_TYPE>) command edits Ethernet facility attributes.

Usage Guidelines

- The SYNCMSG, SENDDUS, ADMSSM, and ESMC parameters are applicable only for AR-MXP and AR-XP cards.
- The following parameters apply only to ED-GIGE; ADMINSTATE, LINKSTATE, MTU, FLOWCTRL, AUTONEG, HIWMRK, LOWMRK, DUPLEX, SPEED, and SOAK.
- The MACADDR parameter is applicable for ED-10GIGE only.
- The ENCAP parameter applies to 10GIGE SFP+ ports on 10x10G-LC only.
- In the CFP-TXP mode, the ED-<GIGE_TYPE> is applicable for SOAK, SYNCMSG, and SENDDUS paramters on the CFP-LC card on the VFAC AID.
- In the CFP-TXP mode, the ED-<GIGE_TYPE> is applicable for MTU and MACADDR paramters on the 100G-LC-C virtual ports on VCFAC AID.
- Autonegotiation parameters such as AUTONEG, DUPLEX, SPEED, ACTDUPLEX, and ACTSPEED are not applicable for 10GIGE on AR-XPE, AR-XP, AR-MXP cards and GIGE on AR-XPE card only.
- The SQUELCH parameter is applicable for FAC ports, and SQUELCHMODE is applicable for VFAC ports

Category

Ports

Security

Provisioning

Input Format

ED-GIGE[:<TID>]:<AID>:<CTAG>[:::ADMINSTATE=<ADMINSTATE>],[LINKSTATE=<LINK-STATE>],[MTU=<MTU>],[MFS=<MFS>],[FLOW=<FLOW>],[FLOWCTRL=<FLOWCTRL>],[AUTONEG=<AU-TONEG>],[HIWMRK=<INT>],[LOWMRK=<INT>],[OPTICS=<OPTICS>],[DUPLEX=<DU-PLEX>],[SPEED=<SPEED>],[NAME=<NAME>],[CMDMDE=<CMDMDE>],[MACADDR=<MAC-ADDR>],[FREQ=<FREQ>],[LOSSB=<LOSSB>],[SUPPRESS=<SUP-PRESS>],[SOAK=<SOAK>],[SQUELCH=<SQUELCH>],[CIR=<CIR>],[CBS=<CBS>],[EBS=<EBS>],[LIENA-BLE=<LIENABLE>],
[LITIMER =<LITIMER>],[ENCAP=<EN-CAP>],[PAUSEFRAME=<PAUSEFRAME>],[CLNTDST=<CLNTDST>],[SYNCMSG=<SYNCMSG>],[SEND-DUS=<SENDDUS>],[ADMSSM=<ADMSSM>],[ESMC=<ESMC>],[EXPDUPLEX=<EXPDU-PLEX>],[EXPSPEED=<EXPSPEED>],[SELECTIVEAUTO=<SELEC-TIVEAUTO>],[SQUELCHMODE=<SQUELCHMODE>],[ALARMSUPPRESS=<alarmsuppress>],[SQUELCH-

HOLDOFFTIMER=<SQUELCHHOLDOFFTIMER>],[GRIDLESS=<GRIDLESS>],[GRIDLESSFREQ=<GRIDLESS-FREQ>],[CDLOW=<CDLOW>],[CDHIGH=<CDHIGH>],[VOATXPOWER=<VOATXPOWER>],[TXLA-SERSHUTDN=<TXLASERSHUTDN>],[ALARMPROFILENAME=<ALARMPROFILENAME>][:<PST>[,<SST>]];

ED-10GIGE[:<TID>]:<AID>:<CTAG>[:::ADMINSTATE=<ADMINSTATE>],[LINKSTATE=<LINK-STATE>],[MTU=<MTU>],[MFS=<MFS>],[FLOW=<FLOW>],[FLOWCTRL=<FLOWCTRL>],[AUTONEG=<AU-TONEG>],[HIWMRK=<INT>],[LOWMRK=<INT>],[OPTICS=<OPTICS>],[DUPLEX=<DU-PLEX>],[SPEED=<SPEED>],[NAME=<NAME>],[CMDMDE=<CMDMDE>],[MACADDR=<MAC-ADDR>],[FREQ=<FREQ>],[LOSSB=<LOSSB>],[SUPPRESS=<SUP-PRESS>],[SOAK=<SOAK>],[SQUELCH=<SQUELCH>],[CIR=<CIR>],[CBS=<CBS>],[EBS=<EBS>],[LIENA-BLE=<LIENABLE>], [LITIMER=<LITIMER>],[ENCAP=<EN-CAP>],[PAUSEFRAME=<PAUSEFRAME>],[CLNTDST=<CLNTDST>],[SYNCMSG=<SYNCMSG>],[SEND-DUS=<SENDDUS>],[ADMSSM=<ADMSSM>],[ESMC=<ESMC>],[EXPDUPLEX=<EXPDU-PLEX>],[EXPSPEED=<EXPSPEED>],[SELECTIVEAUTO=<SELEC-TIVEAUTO>],[SQUELCHMODE=<SQUELCHMODE>],>],[ALARMSUPPRESS=<alarmsuppress>],>],[SQUELCH-HOLDOFFTIMER=<SQUELCHHOLDOFFTIMER>],[GRIDLESS=<GRIDLESS>],[GRIDLESSFREQ=<GRIDLESS-FREQ>],[CDLOW=<CDLOW>],[CDHIGH=<CDHIGH>],[VOATXPOWER=<VOATXPOWER>],[TXLA-SERSHUTDN=<TXLASERSHUTDN>],[ALARMPROFILENAME=<ALARMPROFILENAME>], [BJFEC=<bjfec>][:<PST>[,<SST>]];

ED-100GIGE[:<TID>]:<AID>:<CTAG>[:::ADMINSTATE=<ADMINSTATE>],[LINKSTATE= <LINK-STATE>],[MTU=<MTU>],[MFS=<MFS>],[FLOW=<FLOW>],[FLOWCTRL= <FLOWCTRL>],[AUTONEG=<AU-TONEG>],[HIWMRK=<INT>],[LOWMRK=<INT>], [OPTICS=<OPTICS>],[DUPLEX=<DU-PLEX>],[SPEED=<SPEED>],[NAME= <NAME>],[CMDMDE=<CMDMDE>],[MACADDR=<MAC-ADDR>],[FREQ=<FREQ>], [LOSSB=<LOSSB>],[SUPPRESS=<SUPPRESS>],[SOAK=<SOAK>],[SQUELCH=<SQUELCH>],[CIR=<CIR>],[CBS=<CBS>],[EBS=<EBS>],[LIENABLE= <LIENABLE>],[LITIMER=<LITIMER>],[EN-CAP=<ENCAP>],[PAUSEFRAME= <PAUSEFRAME>],[CLNTDST=<CLNTDST>],[SYNCMSG=<SYNCMSG>], [SENDDUS=<SENDDUS>],[ADMSSM=<ADMSSM>],[ESMC=<ESMC>], [EXPDUPLEX=<EXPDU-PLEX>],[EXPSPEED=<EXPSPEED>],[SELECTIVEAUTO= <SELEC-TIVEAUTO>],[SQUELCHMODE=<SQUELCHMODE>],[ALARMSUPPRESS=<alarmsuppress>],[SQUELCH-HOLDOFFTIMER=<SQUELCHHOLDOFFTIMER>],[GRIDLESS=<GRIDLESS>],[GRIDLESSFREQ=<GRIDLESS-FREQ>],[CDLOW=<CDLOW>],[CDHIGH=<CDHIGH>],[VOATXPOWER=<VOATXPOWER>],[TXLA-SERSHUTDN=<TXLASERSHUTDN>],[ALARMPROFILENAME=<ALARMPROFILENAME>],[BJFEC=<bjfec>] [:<PST>[,<SST>]];

ED-40GIGE[:<TID>]:<AID>:<CTAG>[:::ADMINSTATE=<ADMINSTATE>],[LINKSTATE= <LINK-STATE>],[MTU=<MTU>],[MFS=<MFS>],[FLOW=<FLOW>],[FLOWCTRL= <FLOWCTRL>],[AUTONEG=<AU-TONEG>],[HIWMRK=<INT>],[LOWMRK=<INT>], [OPTICS=<OPTICS>],[DUPLEX=<DU-PLEX>],[SPEED=<SPEED>],[NAME= <NAME>],[CMDMDE=<CMDMDE>],[MACADDR=<MAC-ADDR>],[FREQ=<FREQ>], [LOSSB=<LOSSB>],[SUPPRESS=<SUPPRESS>],[SOAK=<SOAK>],[SQUELCH=<SQUELCH>],[CIR=<CIR>],[CBS=<CBS>],[EBS=<EBS>],[LIENABLE= <LIENABLE>],[LITIMER=<LITIMER>],[EN-CAP=<ENCAP>],[PAUSEFRAME= <PAUSEFRAME>],[CLNTDST=<CLNTDST>],[SYNCMSG=<SYNCMSG>], [SENDDUS=<SENDDUS>],[ADMSSM=<ADMSSM>],[ESMC=<ESMC>], [EXPDUPLEX=<EXPDU-PLEX>],[EXPSPEED=<EXPSPEED>],[SELECTIVEAUTO= <SELEC-TIVEAUTO>],[SQUELCHMODE=<SQUELCHMODE>],[ALARMSUPPRESS=<alarmsuppress>],[SQUELCH-HOLDOFFTIMER=<SQUELCHHOLDOFFTIMER>],[GRIDLESS=<GRIDLESS>],[GRIDLESSFREQ=<GRIDLESS-FREQ>],[CDLOW=<CDLOW>],[CDHIGH=<CDHIGH>],[VOATXPOWER=<VOATXPOWER>],[TXLA-SERSHUTDN=<TXLASERSHUTDN>],[ALARMPROFILENAME=<ALARMPROFILENAME>],[BJFEC=<bjfec>] [:<PST>[,<SST>]];

Input Example

```
ED-GIGE:PETALUMA:FAC-1-1:123:::ADMINSTATE=DOWN,LINKSTATE=DOWN,MTU=1548,
FLOWCTRL=NONE,AUTONEG=Y,HIWMRK=485,LOWMRK=25,OPTICS=1000_BASE_LX,
DUPLEX=AUTO,SPEED=AUTO,NAME="GIGE PORT",CMDMDE=FRCD,
MACADDR=00-0E-AA-BB-CC-FF,FREQ=1550,LOSSB=SX,SOAK=32,LIENABLE=Y,
LITIMER=200:IS,AINS;
```

Input Parameters

<AID>	The AR-MXP, AR-XP, AR-XPE, and SQUELCHMODE cards use the VFAC Access Identifier.
<ADMINSTATE>	(Optional) The parameter type is UP_DOWN, which indicates an up or down value.
• DOWN	Down
• UP	Up
<LINKSTATE>	(Optional) The parameter type is UP_DOWN, which indicates an up or down value.
• DOWN	Down
• UP	Up
<MTU>	(Optional) Maximum transport unit. The parameter type is MTU_TYPE, which indicates the maximum transport unit used by an Ethernet card. Defaults to 9600.
• 10004	10004. Indicates jumbo size.
• 1500	1500
• 1548	1548
• 9600	9600. Indicates jumbo size.
• 64	64
• 9700	9700. Indicates jumbo size.
<MFS>	(Optional) Maximum frame size. The parameter type is MFS_TYPE, which is the maximum frame size used by an Ethernet card.
• 1548	Normal frame size
• JUMBO	Jumbo frame size
<FLOWCTRL>	(Optional) Flow control. The parameter type is FLOW, which indicates the type of flow control that has been negotiated for an Ethernet port. Defaults to NONE.

• ASYMMETRIC	Asymmetric flow control
• ASYMMETRIC_LOCAL	Asymmetric local flow control
• NONE	No flow control
• PASSTHRU	Passthrough flow control
• SYMMETRIC	Symmetric flow control
<AUTONEG>	(Optional) Autonegotiation. The parameter is ON_OFF, which disables or enables an attribute. Defaults to Y.
• N	Disable an attribute.
• Y	Enable an attribute.
<HIWMRK>	(Optional) High water mark. HIWMRK is an integer. Defaults to 485.
<LOWMRK>	(Optional) Low water mark. LOWMRK is an integer. Defaults to 25.
<OPTICS>	(Optional) The parameter is OPTICS, which indicates the type of Gigabyte Ethernet optics being used.
• 1000_BASE_CX	1000BaseCX
• 1000_BASE_LX	1000BaseLX
• 1000_BASE_SX	1000BaseSX
• 1000_BASE_T	1000BaseT
• 1000_BASE_ZX	1000BaseZX
• 100_BASE_BX_D	100BaseBX_D
• 100_BASE_BX_U	100BaseBX_U
• 100_BASE_FX	100BaseFX
• 100_BASE_LX	100BaseLX
• CWDM_1470	Coarse wavelength division multiplexing (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
• 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
• UNPLUGGED	Unplugged
<EXDUPLEX>	(Optional) The parameter is ETHER_DUPLEX, which indicates duplex mode. Defaults to AUTO.
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode
<SELECTIVEAUTO>	(Optional) Selective auto-negotiation. The parameter is Y or N (enable or disable auto-negotiation) This indicates selective auto-negotiation of EXPSPEED and EXPDUPLEX only.
• Y	Enable selective auto-negotiation.
• N	Disable selective auto-negotiation.
<EXSPEED>	(Optional) The parameter type is ETHER_SPEED, which indicates Ethernet speed. Defaults to AUTO.
• 100_MBPS	100 Megabits per second
• 10_GBPS	10 Gigabits per second
• 10_MBPS	10 Megabits per second
• 1_GBPS	1 Gigabit per second
• 40_GBPS	40 Gigabit per second
• AUTO_FDX	Enable auto negotiation with full duplex
• AUTO	Automatic

<NAME>	(Optional) Port name. NAME is a string. Defaults to NULL. Maximum length is 32 characters.
<CMDMDE>	(Optional) Command mode. Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in Unlocked-Enabled or Locked-Disabled, AutomaticInService service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<MACADDR>	(Optional) MACADDR is a string. Defaults to NULL. Maximum length is 18 characters.
<FREQ>	(Optional) The parameter type is OPTICAL_WLEN, which indicates the optical wavelength.
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1528.77	Wavelength 1528.77
• 1529.16	Wavelength 1529.16
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29

• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94

• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.30	Wavelength 1545.30
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.30	Wavelength 1553.30

• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05
• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27

• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50
• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10

• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41

• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17

• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	(Optional) The parameter type is REACH, which indicates the reach values.
• 100GBASE-LR4	100GBASE-LR4
• 100GBASE-SR10	100GBASE-SR10
• 40GBASE-FR	40GBASE-FR
• 40GBASE-LR4	40GBASE-LR4
• 40GBASE-SR4	Reach supported on 40GIGE payload on CFP-LC card.
• 4I1-9D1F	4I1-9D1F
• C4S1-2D1	C4S1-2D1
• FE-BX	FE-BX
• FX	FX
• GE-BX	GE-BX
• GE-EX	GE-EX
• LX-10	LX-10
• TEN-GE-LRM	TEN-GE-LRM
• TEN-GE-ZR	TEN-GE-ZR
• VSR2000-3R2	VSR2000-3R2
• AUTOPROV	Autoprovisioning
• CWDM	Coarse wavelength division multiplexing (CWDM)
• CWDM-40KM	CWDM 40 kilometers.
• CX	Reach CX
• CX1	Reach CX1
• DX	Reach DX
• HX	Reach HX

• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• P1I1-2D1	Long haul 10G Ethernet with 1310 nm wavelength
• P1L1-1D2	Longhaul 2.5G Ethernet with 1550 nm wavelength
• P1L1-2D2	Long haul 10G Ethernet with 1550 nm wavelength
• P1S1-1D1	Shorthaul 2.5G Ethernet with 1310 nm wavelength
• P1S1-2D1	Short haul 10G Ethernet in 1310 nm wavelength
• SC	Reach SC
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• TEN-GE-ER	10 GE extended range
• TEN-GE-LR	10 GE long range
• TEN-GE-SR	10 GE short range
• ULH	Reach ULH
• VSR	Reach VSR
• VX	Reach VX

• ZX	Reach ZX
<SOAK>	(Optional) Locked-AutomaticInService to Unlocked transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer. Defaults to 32.
<LIENABLE>	(Optional) Enable or Disable link integrity timer. Takes either Y or N. Value Y enables the LITIMER and value N disables LITIMER. By default LITIMER is enabled. **Note** The LIENABLE parameter is supported on only CE-1000-4 and CE-1000T-8 cards.
<LITIMER>	(Optional) Link integrity timer duration in the range between 200 ms and 10000 ms in multiples on 100 ms. **Note** The LITIMER parameter is supported on only CE-1000-4 and CE-1000T-8 cards.
<ENCAP>	(Optional) Frame encapsulation type. The parameter type is ENCAP, which is the frame encapsulation type.
• GFP	GFP frame mode.
• HDLC	HDLC frame mode.
• WIS	WIS mode.
• CBR	CBR mapping mode.
• GMP	GMP mapping mode. Supported only on 8GFC on 10x10G-LC card.
• TRP	Transparent mapping mode.
• GFP-F	
• GFP-T	
<OSC>	To enable or disable the OSC on the port.

<PAUSEFRAME>	To Enable or Disable the Pause Frame.
• Y	Enable
• N	Disable
<CLNTDST>	Client distance in kilometers.

• 10KM	10 kilometers.
• 30KM	30 kilometers.
<SYNCMSG>	Indicates if the BITS facility supports synchronization status message. Default is ON (Y). The parameter type is EXT_RING, which indicates whether the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<SENDDUS>	The facility will send the DUS (Do not use for Synchronization) value as the SSM for that facility. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<ADMSSM>	SSM selectable value. It will only appear when SSM is disabled. Defaults to STU. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not 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
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<ESMC>	By enabling ESMC, Gige port can be enabled as timing reference
• N	Disable
• Y	Enable
<PAUSEFRAME>	To Enable or Disable the Pause Frame.

• N	Disable
• Y	Enable
<LPBKTYPE>	
• FAC-DROP	
• TER-DROP	
• BACKPLANE-TER-DROP	
• BACKPLANE-FAC-DROP	
<PST>	(Optional) Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	(Optional) Secondary state. Defaults to AINS. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped
<ALARMSUPPRESS>	It is an enum which has values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress
<SQUELCHHOLDOFFTIMER>	Laser will be turned off, once this timer expire
<CDLOW>	(Optional) Lower limit of CD working range.
<CDHIGH>	(Optional) Upper limit of CD working range.

<VOATXPOWER>	(Optional) VOA Transmit Power. The parameter type is VOATXPOWER, indicates the VOA transmit power on a fixed trunk.
<GRIDLESSFREQ>	Gridless Frequency
<GRIDLESS>	Gridless data transmission
<TXLASERSHUTDN>	(Optional) Transmit Laser Shut down. The parameter type is TXLASERSHUTDN indicates the transmit laser shut down status as Y or N.
<ALARMPROFILENAME>	Name of the profile created using the command ENT-ALMPROFILE
<BJFEC>	This is an enum whose values are:
• NA	
• AUTO	For 100GIGE, default option (Line card will set ON/OFF automatically)
• FORCE-FEC-ON	Force ON from NMS
• FORCE-FEC-OFF	Force OFF from NMS
<SQUELCHMODE>	Shuts down the far-end laser in response to certain defects.
• NONE	Transparent
• SQUELCH	Squelch is enabled
• LF	
SQUELCHMODE	SQUELCHMODE is applicable for VFAC ports on GIGE payload.
< SQUELCH>	SQUELCH attribute is applicable for FAC on GIGE payload..

ED-<MOD1FCPAYLOAD>

The Edit 1GISC3, 2GISC3, D1VIDEO, DV6000, ESCON, ETRCLO, HDTV or PASSTHRU (ED-<MODFCPAYLOAD>) command edits the attributes related to the Fibre Channel (FC) facility. The state IS,AINS is not supported on the FC port.

The user can change the service state of a facility to locked-enabled or disabled, only if all the following conditions are met

- The facility is not sourcing a synchronization clock
- The facility's DCC is disabled.
- The facility is not part of a protection group
- The facility is not supporting cross-connects

Note The conditions stipulated can be overridden by using the CMDMDE=FRCD option. The FRCD option will immediately remove the facility from service with no consideration for orderly interruption. Do not use in scripts or automated batch operations.

Note To completely disable the CMDMDE=FRCD option, provision the <to be defined parameter> in the NE defaults to FALSE. This will prevent the FRCD option from being honored by the NE. The NE default parameter can be provisioned using the CTC only.

Note •
- The port parameters VIZ, LINKRCVRY, DISTEXTN, AUTODETECTION, LINKCREDITS, and MFS can be edited only if the port state is OOS,MT or OOS,DSBLD.
- The port parameters AUTODETECTION, LINKCREDITS, and MFS can be edited only if distance extension is enabled (set to B2B).
- When 1GFICON and 2GFICON payloads are provisioned, distance extension=B2B is the default and only valid setting. Setting distance extension (using the ED-nGFICON command) to any other setting will be denied with an error message, for example, Provisioning Rules Failed.

Category
Ports

Security
Provisioning

Input Format
ED-<MOD1FCPAYLOAD>:[<TID>]:<AID>:<CTAG>:::[LINKRCVRY=<LINKRCVRY>],[DISTEXTN=<DISTANCE_EXTENSION>],[AUTODETECTION=<AUTO_DETECTION>],[LINKCREDITS=<CREDITS>],[FASTSWITCH=<FASTSWITCH>],[MFS=<MAXFRMSIZE>],[NAME=<NAME>],[CMDMDE=<CMDMDE>],[SOAK=<SOAK>],[FREQ=<FREQ>],[LOSSB=<LOSSB>],[SQUELCH=<SQUELCH>],[ENCAP=<ENCAP>][:<PST>[,<SST>]];

Input Example
ED-1GFC:PETALUMA:FAC-6-1:1:::LINKRCVRY=Y,DISTEXTN=NONE,AUTODETECTION=Y,LINKCREDITS=10,FASTWITCH= ,MFS=2148,NAME="FC PORT",CMDMDE=NORM,SOAK=32,FREQ=1550,LOSSB=LR-1:OOS,MT;

Input Parameters

<AID>	Access identifier.

<LINKRCVRY>	Link recovery. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<DISTEXTN>	Distance extension. It can be set to Buffer-to-Buffer (B2B) Credit Management state or None. **Note** B2B and link recovery are mutually exclusive. You cannot turn on both B2B and link recovery at the same time. The parameter type is DISTANCE_EXTENSION (distance extension).
• B2B	Buffer to buffer flow control
• NONE	No distance extension
<AUTODETECTION>	Autodetection. Turns autodetection on or off. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute
• Y	Enable an attribute
<LINKCREDITS>	Number of link credits. If autodetection is set to off, the value of the link credits will be used to configure the hardware. LINKCREDITS is an integer.
<FASTSWITCH>	When Fast Switchover is ON switchover must be less than 150 ms. In case of client Failure Fast Switchover is not supported. This switch time is achieved for fc1g/fc2g/fc4g traffic for trunk failures and manual/forced/lockout switches only. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<MFS>	Maximum frame size. MFS is an integer.
<NAME>	String. User-assigned port name.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.

• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<SOAK>	OOS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer.
<FREQ>	The parameter type is OPTICAL_WLEN, which is the optical wavelength.
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1528.77	Wavelength 1528.77
• 1529.16	Wavelength 1529.16
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04

• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72

• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55

• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05
• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27
• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50
• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24

• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85

• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22

• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	The parameter type is REACH, which is the reach value.
• 100GBASE-LR4	100GBASE-LR4
• 100GBASE-SR10	100GBASE-SR10
• 40GBASE-FR	40GBASE-FR
• 40GBASE-LR4	40GBASE-LR4

• 40GBASE-SR4	Reach supported on 40GIGE payload on CFP-LC card.
• 4I1-9D1F	4I1-9D1F
• C4S1-2D1	C4S1-2D1
• FE-BX	FE-BX
• FX	FX
• GE-BX	GE-BX
• GE-EX	GE-EX
• LX-10	LX-10
• TEN-GE-LRM	TEN-GE-LRM
• TEN-GE-ZR	TEN-GE-ZR
• VSR2000-3R2	VSR2000-3R2
• AUTOPROV	Autoprovisioning
• CX	Reach CX
• CX1	Reach CX1
• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• S1	Reach S1
• S2	Reach S2

• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• TEN-GE-ER	10 GE extended range
• TEN-GE-LR	10 GE long range
• TEN-GE-SR	10 GE short range
• VX	Reach VX
• ZX	Reach ZX
<ENCAP>	Specifies the mapping mode on the port provisioned. Parameter Type is ENCAP.
• CBR	CBR mapping mode.
• GFP	GFP mapping mode.
• GMP	GMP mapping mode is supported only on 8GFC on 10x10G-LC card.
• TRP	Transparent mapping mode.
<PST>	Primary state. the parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned

• UEQ	Unequipped

ED-<MOD1FICONPAYLOAD>

The Edit 1GFICON, 2GFICON, 4GFICON, or EFCON (ED-<MOD1FICONPAYLOAD>) command edits the attributes related with the fiber connectivity (FICON) payload facility. The state IS,AINS is not supported on the FICON port.

Usage Guidelines

See Table 30-1 on page 30-1 for supported modifiers by platform.

Category

Ports

Security

Provisioning

Input Format

ED-<MOD1FICONPAYLOAD>[:<TID>]:<AID>:<CTAG>[:::LINKRCVRY=<LINKRCVRY>],[DISTEXTN=<DISTANCE_EXTENSION>],[AUTODETECTION=<AUTO_DETECTION>],[LINKCREDITS=<CREDITS>],[FASTSWITCH=<FASTSWITCH>],[MFS=<MAXFRMSIZE>],[NAME=<NAME>],[CMDMDE=<CMDMDE>],[SOAK=<SOAK>],[FREQ=<FREQ>],[LOSSB=<LOSSB>],[SQUELCH=<SQUELCH>],
[SQUELCHMODE=<SQUELCHMODE>],[ENCAP=<ENCAP>],[ALARMSUPPRESS=<alarmsuppress>],[ALARMPROFILENAME=<alarmprofilename>][:<PST>[,<SST>]];

Input Example

ED-1GFICON:PETALUMA:FAC-6-1:1:::LINKRCVRY=Y,DISTEXTN=NONE,
AUTODETECTION=Y, LINKCREDITS=10, FASTSWITCH= ,MFS=2148,NAME="FCPORT",CMDMDE=CMDMDE,
SOAK=32,FREQ=1550,LOSSB=LR-1:OOS,MT;

Input Parameters

<AID>	Access identifier.
<LINKRCVRY>	Link recovery. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute
• Y	Enable an attribute

<DISTEXTN>	Distance extension. It can be set to B2B Credit Management state or None. **Note** B2B and link recovery are mutually exclusive. You cannot turn on both B2B and link recovery at the same time. The parameter type is DISTANCE_EXTENSION (distance extension).
• B2B	Buffer-to-buffer flow control
• NONE	No distance extension
<AUTODETECTION>	Autodetection. Turns autodetection on or off. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute
• Y	Enable an attribute
<LINKCREDITS>	Number of link credits. If autodetection is set to off the value of the link credits will be used to configure the hardware. LINKCREDITS is an integer.
<FASTSWITCH>	When Fast Switchover is ON switchover must be less than 150 ms. In case of client Failure Fast Switchover is not supported. This switch time is achieved for fc1g/fc2g/fc4g traffic for trunk failures and manual/forced/lockout switches only. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<MFS>	Maximum frame size. MFS is an integer.
<NAME>	String. User-assigned port name.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.

<SOAK>	OOS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer.
<FREQ>	The parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.16	Wavelength 1529.16
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61

• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32

• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17

• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05
• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27
• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50
• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89

• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53

• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34

• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	The parameter type is REACH, which is the reach value.
• 100GBASE-LR4	100GBASE-LR4
• 100GBASE-SR10	100GBASE-SR10
• 40GBASE-FR	40GBASE-FR
• 40GBASE-LR4	40GBASE-LR4
• 40GBASE-SR4	Reach supported on 40GIGE payload on CFP-LC card.
• 4I1-9D1F	4I1-9D1F
• C4S1-2D1	C4S1-2D1
• FE-BX	FE-BX

• FX	FX
• GE-BX	GE-BX
• GE-EX	GE-EX
• LX-10	LX-10
• TEN-GE-LRM	TEN-GE-LRM
• TEN-GE-ZR	TEN-GE-ZR
• VSR2000-3R2	VSR2000-3R2
• AUTOPROV	Autoprovisioning
• CX	Reach CX
• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• VX	Reach VX

• ZX	Reach ZX
<ENCAP>	Specifies the mapping mode on the port provisioned. Parameter Type is ENCAP.
• CBR	CBR mapping mode.
• GFP	GFP mapping mode.
• GMP	GMP mapping mode is supported only on 8GFC on 10x10G-LC card.
• TRP	Transparent mapping mode.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<ALARMSUPPRESS>	It is an enum which has values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress
<ALARMPROFILENAME>	Name of the profile created using the command ENT-ALMPROFILE
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ED-<MOD2DWDMPAYLOAD>

The Edit 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 1GISC3, 2GFC, 2GFICON, 2GISC3, 4GFC, 4GFICON, 5GIB, 8GFC, D1VIDEO, DV6000, DVBASI, ESCON, ETRCLO, GIGE, HDTV, ISC1, ISC3, OTU3, OTU4, OTU4C2, PASSTHRU, AUTO, 3GVIDEO, SDSDI , HDSDI, OTU1, OTU2, ISC3STP1G, or ISC3STP2G (ED-<MOD2DWDMPAYLOAD>) command edits the operating parameters for a dense wavelength division multiplexing (DWDM) client facility. This command creates GCC with a given GCCRATE.

Usage Guidelines

The command supports the modifier AUTO, 3GVIDEO, SDSDI , HDSDI, OTU1, ISC3STP1G, and ISC3STP2G. See Table 30-1 on page 30-1 for other supported modifiers by platform.

- Squelchmode applicable for SDSDI, HDSDI, 3GVIDEO, ISC3STG1G, ISC3STP2G, and ESCON are NONE and SQUELCH.
- Squelchmode applicable for 1GFC, 2GFC, 4GFC in NON-TXP mode and 8GFC are NONE, NOS and SQUELCH.
- Squelchmode for 4GFC client in TXP modes are NONE and NOS.
- The only allowed Squelchmode for 4GFC trunk is SQUELCH
- Video RATES - NTSC/PAL can be set based on ANSI/ETSI chassis types respectively for HDSDI and 3GVIDEO.
- Video RATE is not applicable for other video payloads - SDSDI, ESCON, ISC3STP1G, and ISC3STP2G.
- Video RATE is also not applicable for 1G/2G/3G/4G/8G-FC payloads.
- Editing the working port will automatically edit the protect port.
- OVRCLK is the new parameter added and applicable for OTU2 payload on SFP+ ports of 10x10G-LC only.

Category

DWDM

Security

Provisioning

Input Format

ED-<MOD2DWDMPAYLOAD>[:<TID>]:<AID>:<CTAG>[:::LINKRCVRY=<LINKRCVRY>],[DISTEXTN=<DISTANCE_EXTENSION>],[AUTODETECTION=<AUTO_DETECTION>],[LINKCREDITS=<CREDITS>],[FASTSWITCH=<FASTSWITCH>],[MFS=<MAXFRMSIZE>],[NAME=<NAME>],[CMDMDE=<CMDMDE>],[SOAK=<SOAK>],[FREQ=<FREQ>],[LOSSB=<LOSSB>],[SQUELCH=<SQUELCH>],[SQUELCHMODE=<SQUELCHMODE>],[ENCAP=<ENCAP>],[ALARMSUPPRESS=<alarmsuppress>] [:<PST>[,<SST>]];

- ED-OTU1[:<TID>]:<AID>:<CTAG>[:::OSDBER=<SDBER>],[GCC=<GCC>],[DWRAP=<DRWAP>],[FEC=<FEC>],[PAYLOADMAP=<PAYLOADMAP>],[PMMODE=<PMMODE>],[FREQ=<FREQ>],[LOSSB=<LOSSB>],[NAME=<PORTNAME>],[SOAK=<SOAK>],[GCCRATE=<GCCRATE>],[SQUELCHMODE=<SQUELCHMODE>],[OTNTRMAP=<OTNTRMAP>],[SYNCMSG=<SYNCMSG>],[SENDDUS=<SENDDUS>],

[ADMSSM=<ADMSSM>],[ODUTRANSMODE=<ODUTRANSMODE>],[PORTMODE=<PORTMODE>],[CMDMDE=<CMDMDE>],[PPR=<PPR>],[TRIGTH=<TRIGTH>],[RVRTTH=<RVRTTH>],[TRIGWINDOW=<TRIGWINDOW>],[RVRTWINDOW=<RVRTWINDOW>],[OVRCLK=<OVRCLK>],[FECALMSUPRESS=<FECALMSUPRESS>],[EGRESSFRR=<EGRESSFRR>],[ENCAP=<ENCAP>],[ALARMSUPPRESS=<alarmsuppress>][SQUELCHHOLDOFFTIMER=<SQUELCHHOLDOFFTIMER>],[GRIDLESS=<GRIDLESS>],[GRIDLESSFREQ=<GRIDLESSFREQ>],[CDLOW=<CDLOW>],[CDHIGH=<CDHIGH>],[VOATXPOWER=<VOATXPOWER>],[TXLASERSHUTDN=<TXLASERSHUTDN>],[ALARMPROFILENAME=<ALARMPROFILENAME>][:<PST>[,<SST>]];

- ED-OTU2[:<TID>]:<AID>:<CTAG>[:::OSDBER=<SDBER>],[GCC=<GCC>],[DWRAP=<DRWAP>],[FEC=<FEC>],[PAYLOADMAP=<PAYLOADMAP>],[PMMODE=<PMMODE>],[FREQ=<FREQ>],[LOSSB=<LOSSB>],[NAME=<PORTNAME>],[SOAK=<SOAK>],[GCCRATE=<GCCRATE>],[SQUELCHMODE=<SQUELCHMODE>],[OTNTRMAP=<OTNTRMAP>],[SYNCMSG=<SYNCMSG>],[SENDDUS=<SENDDUS>],[ADMSSM=<ADMSSM>],[ODUTRANSMODE=<ODUTRANSMODE>],[PORTMODE=<PORTMODE>],[CMDMDE=<CMDMDE>],[PPR=<PPR>],[TRIGTH=<TRIGTH>],[RVRTTH=<RVRTTH>],[TRIGWINDOW=<TRIGWINDOW>],[RVRTWINDOW=<RVRTWINDOW>],[OVRCLK=<OVRCLK>],[FECALMSUPRESS=<FECALMSUPRESS>],[EGRESSFRR=<EGRESSFRR>],[ENCAP=<ENCAP>],[ALARMSUPPRESS=<alarmsuppress>],[SQUELCHHOLDOFFTIMER=<SQUELCHHOLDOFFTIMER>],[GRIDLESS=<GRIDLESS>],[GRIDLESSFREQ=<GRIDLESSFREQ>],[CDLOW=<CDLOW>],[CDHIGH=<CDHIGH>],[VOATXPOWER=<VOATXPOWER>],[TXLASERSHUTDN=<TXLASERSHUTDN>],[ALARMPROFILENAME=<ALARMPROFILENAME>][:<PST>[,<SST>]];

- ED-OTU3[:<TID>]:<AID>:<CTAG>[:::OSDBER=<SDBER>],[GCC=<GCC>],[DWRAP=<DRWAP>],[FEC=<FEC>],[PAYLOADMAP=<PAYLOADMAP>],[PMMODE=<PMMODE>],[FREQ=<FREQ>],[LOSSB=<LOSSB>],[NAME=<PORTNAME>],[SOAK=<SOAK>],[GCCRATE=<GCCRATE>],[SQUELCHMODE=<SQUELCHMODE>],[OTNTRMAP=<OTNTRMAP>],[SYNCMSG=<SYNCMSG>],[SENDDUS=<SENDDUS>],[ADMSSM=<ADMSSM>],[ODUTRANSMODE=<ODUTRANSMODE>],[PORTMODE=<PORTMODE>],[CMDMDE=<CMDMDE>],[PPR=<PPR>],[TRIGTH=<TRIGTH>],[RVRTTH=<RVRTTH>],[TRIGWINDOW=<TRIGWINDOW>],[RVRTWINDOW=<RVRTWINDOW>],[OVRCLK=<OVRCLK>],[FECALMSUPRESS=<FECALMSUPRESS>],[EGRESSFRR=<EGRESSFRR>],[ENCAP=<ENCAP>],[ALARMSUPPRESS=<alarmsuppress>],[SQUELCHHOLDOFFTIMER=<SQUELCHHOLDOFFTIMER>],[GRIDLESS=<GRIDLESS>],[GRIDLESSFREQ=<GRIDLESSFREQ>],[CDLOW=<CDLOW>],[CDHIGH=<CDHIGH>],[VOATXPOWER=<VOATXPOWER>],[TXLASERSHUTDN=<TXLASERSHUTDN>],[ALARMPROFILENAME=<ALARMPROFILENAME>][:<PST>[,<SST>]];

- ED-OTU4[:<TID>]:<AID>:<CTAG>[:::OSDBER=<SDBER>],[GCC=<GCC>],[DWRAP=<DRWAP>],[FEC=<FEC>],[PAYLOADMAP=<PAYLOADMAP>],[PMMODE=<PMMODE>],[FREQ=<FREQ>],[LOSSB=<LOSSB>],[NAME=<PORTNAME>],[SOAK=<SOAK>],[GCCRATE=<GCCRATE>],[SQUELCHMODE=<SQUELCHMODE>], [OTNTRMAP=<OTNTR-MAP>],[SYNCMSG=<SYNCMSG>],[SENDDUS=<SENDDUS>], [ADMSSM=<ADMSSM>],[ODUTRANS-MODE=<ODUTRANSMODE>],[PORTMODE=

<PORTMODE>],[CMDMDE=<CMDMDE>],[PPR=<PPR>],[TRIGTH=<TRIGTH>], [RVRTTH=<RVRTTH>],[TRIG-WINDOW=<TRIGWINDOW>],[RVRTWINDOW= <RVRTWINDOW>],[OVRCLK=<OV-RCLK>],[FECALMSUPRESS=<FECALMSUPRESS>],[EGRESSFRR=<EGRESSFRR>],[ENCAP=<EN-CAP>],[ALARMSUPPRESS=<alarmsuppress>],[SQUELCHHOLDOFFTIMER=<SQUELCH-HOLDOFFTIMER>],[GRIDLESS=<GRIDLESS>],[GRIDLESSFREQ=<GRIDLESS-FREQ>],[CDLOW=<CDLOW>],[CDHIGH=<CDHIGH>],[VOATXPOWER=<VOATXPOWER>],[TXLA-SERSHUTDN=<TXLASERSHUTDN>],[ALARMPROFILENAME=<ALARMPROFILENAME>][:<PST>[,<SST>]];

Input Example

ED-SDSDI::VFAC-3-1-1:1:::SQUELCHMODE=SQUELCH;

Input Parameters

<AID>	Access identifier. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.
<SQUELCHMODE>	Shuts down the far-end laser in response to certain defects.
• DISABLE	Disable
• AIS	AIS
• G-AIS	Generis AIS
• ODU-AIS	ODU AIS
• SQUELCH	Squelch is enabled
• NONE	Transparent
• NOS	Disable in FC payloads.
<ALARMSUPPRESS>	It is an enum which has values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress

<SQUELCHHOLDOFFTIMER>	Laser will be turned off, once this timer expire
<CDLOW>	(Optional) Lower limit of CD working range.
<CDHIGH>	(Optional) Upper limit of CD working range.
<VOATXPOWER>	(Optional) VOA Transmit Power. The parameter type is VOATXPOWER, indicates the VOA transmit power on a fixed trunk.

<GRIDLESSFREQ>	Gridless Frequency
<GRIDLESS>	Gridless data transmission
<TXLASERSHUTDN>	(Optional) Transmit Laser Shut down. The parameter type is TXLASERSHUTDN indicates the transmit laser shut down status as Y or N.
<ALARMPROFILENAME>	Name of the profile created using the command ENT-ALMPROFILE
<ENCAP>	Specifies the mapping mode on the port provisioned. Parameter Type is ENCAP.
• CBR	CBR mapping mode.
• GFP	GFP mapping mode.
• GMP	GMP mapping mode is supported only on 8GFC on 10x10G-LC card.
• TRP	Transparent mapping mode.

ED-<MOD_PATH>

The Edit STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, VC12, VC3, VT1, or VT2 (ED-<MOD_PATH>) command edits the attributes associated with synchronous transport signal (STS) and Virtual Tributary (VT) paths.

Usage Guidelines

The SFBER, SDBER, RVRTV, and RVTM parameters only apply to path protection configurations at the STS path level and ONS 15454 VT paths.

SWPDIP does not apply to the VT path level (VT1 and VT2).

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 that 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.

Path trace 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 that is set to a previously received string. If there is a

mismatch, a TIM-P alarm is raised. When the path trace is in OFF mode, there is no path trace processing, and all of 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 or VT for the first two-way connection and STS+1 as the second two-way connection. For single facility access digroup (FAD) test access, only a single STS/VT is used for the test access point (TAP) creation. For more information on TACC, refer to the *Cisco ONS SDH and Cisco ONS 15600 SONET TL1 Reference Guide*.

J1 is implemented on the DS1/DS1N, DS3E/DS3NE, DS3XM, EC1, OC3, OC12-4, OC48AS, and OC192 cards.

DS3/DS3N, OC12, OC48, E100, and E1000 cards do not support path trace.

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

EC1, OC3, OC48AS, and OC192 only support EXPTRC in the ED-STS-PATH 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.

The following actions will produce error messages:

- Sending this command to edit SFBER, SDBER, RVRTV, or RVTM for the non-path protection STS path.
- Sending this command to edit the EXPTRC string with the AUTO path trace mode (TRCMODE=AUTO).
- Sending this command to edit TRC on any card other than DS3(N)E, DS1(N), and DS3XM cards, will return the “TRC-not allowed for monitor paths. Incorrect card type” error message.
- Sending this command to edit both TACC and any other attribute(s) will return the “Parameters Not compatible” error message.
- Sending this command to edit TACC on an AID with cross-connections will return the “STS in Use” error message.

Note • TACC creation will be denied on the protect ports/cards for 1:1, 1:N, and 1+1 protection.

- The VFAC AID is only valid on slots containing an ML-Series card. TACC is not supported for the ML-Series cards.
- After bidirectional line switched ring (BLSR) switching, provisioning of the J1 trace string or trace mode is not allowed on the protection path.
- TACC creation is allowed on protection channel access (PCA) for two-fiber and four-fiber BLSR.
- TACC is not supported on G1000, MXP_2.5G_10G, TXP_MR_10G, ML1000-2, and ML100T-12 cards.
- 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.
- The test set physical connection set up through ED-T3/DS1/STS1/VT1 of the DS3XM-12 card is only allowed on the physical front ports (PORTED ports, Ports 1 to 12), which are the monitoring ports.
  - The monitoring test access ports follow the common rules for the other cards. For example, with an ED-T3 command on Port 2 (FAC-6-2) that has a TACC number (8), the next port, Port 3 (FAC-6-3) is used as the monitoring point also. The RTRV-T3 on both Port 2 and Port 3 return the same TACC number (8) used to monitor the cross-connection end (A-B). The last port (Port 12) is not allowed to set up a physical connection with the test set because there is no next available port to be the monitoring port.
  - The TACC disconnection (DISC-TACC) and the test access mode change command (CHG-TACC) follow the same requirement as in the previous step, but it is applied on the ported ports of the DS3XM-12 card.
  - The test access connection setup command (CONN-TACC) has monitored points, which can be portless ports. This command is applied on both ported and portless ports of the DS3XM-12 card.

- If the entity has a TACC connection, the entity is not allowed to have ported or portless STS/VT cross-connection (or circuit) provisioning on the DS3XM-12 card.
- The cross-connects on the DS3i-N-12 card will be STS3c width, but the individual STS 1s within the 3C will be accessible. To edit the path attributes, use the ED-STS1 command with the FAC AID.

  For TACC creation, use the ED-STS3C command because the TACC path width (like the cross-connect) has to be 3C on the DS3i-N-12 card. In this case, you are creating a new entity (TAP) on the DS3i-N-12 card that has to be of 3C width. On the DS3i-N-12 card, the ED0STS command can be used either with STS1 or STS3C depending on the parameter to be modified.
- For the selector path on a BLSR, the SWPDIP is not editable and is always in the ON state. If you attempt to edit SWPDIP (for the selector path on a BLSR), an error message will be returned.
- You can create an STS1 or VT1.5 single TAP on the DS3XM-12 card's last ported port (12) if the bandwidth is available on that port.
- Optical ports do not support MAN and AUTO trace mode because they are not capable of raising AIS on TIM-P. Use the AUTO-NO-AIS or MAN-NO-AIS trace mode on optical ports.
- Sending the ED-VT1/VT2 commands over path protection paths to edit SFBER or SDBER will return the "Invalid Operation For The XCON" error message.
- Sending the ED-VT1/VT2 commands to edit SDBER with 1E-9 will return the "Out Of Range" error message.

Category
Paths

Security
Provisioning

Input Format
ED-<MOD_PATH>:[<TID>]:<AID>:<CTAG>:::[SFBER=<SFBER>],[SDBER=<SDBER>],
[RVRTV=<RVRTV>],[RVTM=<RVTM>],[SWPDIP=<SWPDIP>],
[HOLDOFFTIMER=<HOLDOFFTIMER>],[EXPTRC=<EXPTRC>],[TRC=<TRC>],
[TRCMODE=<TRCMODE>],[TRCFORMAT=<TRCFORMAT>][TACC=<TACC>],
[TAPTYPE=<TAPTYPE>],[CMDMDE=<CMDMDE>]:[<PST>[,<SST>]];

Input Example
ED-STS3C:FERNDALE: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,TRCFORMAT=64-BYTE,TACC=8,TAPTYPE=SINGLE,
CMDMDE=CMDMDE:IS,AINS;

Input Parameters

<AID>	Access identifier.

<SFBER>	Signal failure threshold. Applies only to path protection. Defaults to 1E-4. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	Signal degrade threshold. Applies only to path protection. 1E-9 is not allowed for VT-level/LO paths. Defaults to 1E-6. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<RVRTV>	Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. Only applies to path protection. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. RVTM is not allowed to be set while RVRTV is N. Only applies to path protection. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<SWPDIP>	On/off switch for path protection payload defect level switching. Applicable only to STS-level paths in SONET (STSn). For the selector path on a BLSR, SWPDIP is not editable and always ON. Defaults to N. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.

• Y	Enable an attribute.
<HOLDOFFTIMER>	Hold off timer for path protection dual-ring interconnect (DRI). Values must be within 0 and 10000 ms (0 to 10 seconds), with increments of 100 ms. Defaults to “existed value.” HOLDOFFTIMER is an integer.
<EXPTRC>	Expected path trace content. Indicates the expected path trace message (J1) contents. EXPTRC is any 64-character ASCII string, including the terminating CR (carriage return) and LF (line feed). Applicable to STS-level paths in SONET (STSn). Applicable to VT-level paths for the DS3XM-12 and CE-100T-8 card. Defaults to 64 null characters. EXPTRC is a string.
<TRC>	The path trace message to be transmitted. The trace byte (J1) continuously transmits a 64-byte, fixed length ASCII string, one byte at a time. A null value defaults to the network element (NE) transmitting 62 null characters (hex 00) and CR and LF. Applicable to STS-level paths in SONET (STSn). Applicable to VT-level paths for the DS3XM-12 and CE-100T-8 card
<TRCMODE>	Path trace mode. Applicable only to STS-level paths in SONET (STSn). Defaults to the OFF mode. The parameter type is TRCMODE (trace mode).
• AUTO	Use the previously received path trace string as the expected string. Not applicable to muxponder (MXP) and transponder (TXP) cards.
• AUTO-NO-AIS	Use the previously received path trace string as the expected string and do not turn on the alarm indication signal (AIS) and remote defect indication (RDI) if TIM-P is 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 TIM-P is detected.
• OFF	Turn off path trace capability. Nothing will be reported.
<TRCFORMAT>	Path trace format. Only 64-byte is supported. Defaults to 64-byte. The parameter type is TRCFORMAT (trace format).
• 64-BYTE	64 byte trace message
<TACC>	TAP number within a range of 0 to 999. Indicates whether the digroup being provisioned is to be used as a test access digroup. When TACC is 0 (zero), the TAP is deleted. TACC is an integer.

<TAPTYPE>	TAP type. Defaults to DUA The parameter type is TAPTYPE, which is the test access point type.
• DUAL	Dual FAD
• SINGLE	Single FAD
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. Defaults to IS. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. Defaults to AINS. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ED-<OCN_TYPE>

The Edit OC3, OC12, OC48, OC192, or OC768 (ED-<OCN_TYPE>) command edits the attributes (for example, service parameters) and status of an OC-N facility. Allowable states for a facility are Out Of Service (OOS), Out Of Service and Automatic In Service (OOS-AINS), Out Of Service and Maintenance (OOS-MT), and In Service (IS).

Usage Guidelines

- Squelchmode applicable for OC3/OC12/OC48 payloads are NONE, G-AIS and SQUELCH
- The OPRNOMINAL parameter is supported only by optical card types that support Optical PM. The following cards support OPRNOMINAL: OC3-8, MRC-12, MRC-12-2.5G, MRC-4-2.5G, OC192-XFP, CTX-2500, CTX, OC192-4, OC48-16, OC192-4-DWDM, ASAP-4.
- The data communications channel (DCC) transmit side is bridged to both working and protect in a 1+1 protection scheme. On the receive side, the active one is selected for DCC. The DCC is provisioned on the working port only in a 1+1 protection scheme.
- 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.
- You cannot directly transition a facility from IS to OOS-MA,DSBLD service state. You can transition a facility to OOS-MA,DSBLD service state from any state except OOS-MA,MT. To transition a facility from OOS-MA,MT to OOS-MA,DSBLD service state, all the following conditions must be met:
  - The facility is not sourcing a synchronization clock
  - The facility's DCC is disabled
  - The facility is not part of a protection group
  - The facility is not supporting cross-connects
  - The facility is not using overhead connections or overhead terminations (such as express orderwire, local orderwire, or user data channels [UDCs])

Note The conditions stipulated can be overridden by using the CMDMDE=FRCD option. The FRCD option will immediately remove the facility from service (except for IS to OOS-MA,DSBLD transition) with no consideration for orderly interruption.

Note OSI parameters are not supported in Release 9.0 and 9.1.

Category

Ports

Security

Provisioning

Input Format

ED-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>:::[DCC=<DCC>],[AREA=<AREA>],[SYNCMSG=<SYNCMSG>],[SENDDUS=<SENDDUS>],[PJMON=<PJMON>],[SFBER=<SFBER>],[SDBER=<SDBER>],[MODE=<MODE>],[SOAK=<SOAK>],[OSPF=<OSPF>],[LDCC=<LDCC>],[NAME=<NAME>],[CMDMDE=<CMDMDE>],[EXPTRC=<EXPTRC>],[TRC=<TRC>],[TRCMODE=<TRCMODE>],[TRCFORMAT=<TRCFORMAT>],[ADMSSM=<ADMSSM>],[SENDDUSFF=<SENDDU

SFF>],[AISONLPBK=<AISONLPBK>],[FOREIGNFEND=<FOREIGNFAREND>],[FOREIGNIP=<FOREIGNIPADDRESS>],[FREQ=<FREQ>],[LOSSB=<LOSSB>],[OPRNOMINAL=<OPRNOMINAL>],[OSISDCC=<OSISDCC>],[OSILDCC=<OSILDCC>],[OSIROUTER=<OSIROUTER>],[PORTMODE=<PORTMODE>],[SQUELCHMODE=<SQUELCHMODE>],[ALARMSUPPRESS=<alarmsuppress>],[ALARMPROFILENAME=<alarmprofilename>][:<PST>[,<SST>]]

Input Example

ED-OC48:ROCCIANERA:VFAC-12-1-1:1:::SQUELCHMODE=G-AIS;

Input Parameters

<AID>	Access identifier.
<DCC>	Indicates whether or not the SDCC is to be used. Identifies the SDCC connection of the port. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<AREA>	The area ID and shows up only if the DCC is enabled. AREA is a string.
<SYNCMSG>	Synchronization status message. The parameter type is EXT_RING, which indicates whether the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<SENDDUS>	The facility will send the DUS (Do not use for Synchronization) value as the SSM for that facility. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<PJMON>	Identifies an OC-N port PJMON. PJMON is an integer. It defaults to 0 (zero). Set a valid STS number of the optical port. **Note** The PJMON number displayed in TL1 interface does not correspond to the PJVC4MON number in CTC, but instead corresponds to the STS number of the optical port.
<SFBER>	Signal failure threshold. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.

• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	Signal degrade threshold. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<MODE>	This parameter identifies the facility's operating mode. The mode could be either SONET or SDH.
• SDH	SDH/ETSI mode
• SONET	SONET/ANSI mode
<MUX>	BLSR extension byte (supported only on the OC48AS card). MUX cannot be configured if: • The card is SONET and the media type is SDHT. • The card has an orderwire or user data channel (UDC) connection. • This is a protect line and the working line has an orderwire or UDC connection. The parameter type is MUX_TYPE, which is the BLSR extension type.
• E2	E2 byte (orderwire)
• F1	F1 byte (user)
• K3	K3 byte
• Z2	Z2 byte
<SOAK>	OOS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). Defaults to 32. SOAK is an integer.
<OSFP>	The Open Shortest Path First discovery. Defaults to Y. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.

• Y	Enable an attribute.
<LDCC>	The LDCC connection on the port. Defaults to N. the parameter type is EXT_RING, which indicates if the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<NAME>	NAME is a user-specified string to identify the facility. It defaults to NULL. Its maximum length is 32 characters.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<EXPTRC>	Expected section trace content. Indicates the expected section trace message (J1) contents. EXPTRC is any 64-character ASCII string, including the terminating CR (carriage return) and LF (line feed). Applicable to STS-level paths in SONET (STSn). Applicable to VT-level paths for the DS3XM-12 card. Defaults to NULL. EXPTRC is a string.
<TRC>	The section trace message to be transmitted. The trace byte (J1) continuously transmits a 64-byte, fixed length ASCII string, one byte at a time. A null value defaults to the NE transmitting 62 null characters (hex 00) and CR and LF. Applicable to STS-level paths in SONET (STSn). Applicable to VT-level paths for the DS3XM-12 card. TRC is a string.
<TRCMODE>	Section trace mode. Applicable only to STS-level paths in SONET (STSn). Defaults to MAN. The parameter type is TRCMODE (trace mode).
• AUTO	Use the previously received section trace string as the expected string. Not applicable to MXP or TXP cards.
• AUTO-NO-AIS	Use the previously received section trace string as the expected string and do not turn on AIS and RDI if TIMP is 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 is detected.
• OFF	Turn off section trace capability. Nothing will be reported.
<TRCFORMAT>	Trace message size. The parameter type is TRCFORMAT (trace format).
• 1-BYTE	1 byte trace message
• 16-BYTE	16 byte trace message
• 64-BYTE	64 byte trace message
<ADMSSM>	SSM selectable value. It will only appear when SSM is disabled. Defaults to STU. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not 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
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<SENDDUSFF>	The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<AISONLPBK>	The parameter type is AIS_ON_LPBK, which indicates if AIS is sent on a loopback.
• FACILITY	AIS is sent on facility loopbacks.
• ALL	AIS is sent on all loopbacks.
• OFF	AIS is not sent on loopbacks.

• TERMINAL	AIS is sent on terminal loopbacks.
<FREQ>	The parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1528.77	Wavelength 1528.77
• 1529.16	Wavelength 1529.16
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61

• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32

• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17

• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05
• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27
• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50
• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89

• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53

• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34

• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	The parameter type is REACH (reach value)
• 100GBASE-LR4	100GBASE-LR4
• 100GBASE-SR10	100GBASE-SR10
• 40GBASE-FR	40GBASE-FR
• 40GBASE-LR4	40GBASE-LR4
• 40GBASE-SR4	Reach supported on 40GIGE payload on CFP-LC card.
• 4I1-9D1F	4I1-9D1F
• C4S1-2D1	C4S1-2D1
• FE-BX	FE-BX

• FX	FX
• GE-BX	GE-BX
• GE-EX	GE-EX
• LX-10	LX-10
• TEN-GE-LRM	TEN-GE-LRM
• TEN-GE-ZR	TEN-GE-ZR
• VSR2000-3R2	VSR2000-3R2
• AUTOPROV	Autoprovisioning
• CX	Reach CX
• CX1	Reach CX1
• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• P1I1-2D1	Long haul 10G Ethernet with 1310 nm wavelength
• P1L1-1D2	Longhaul 2.5G Ethernet with 1550 nm wavelength
• P1L1-2D2	Long haul 10G Ethernet with 1550 nm wavelength
• P1S1-1D1	Shorthaul 2.5G Ethernet with 1310 nm wavelength
• P1S1-2D1	Short haul 10G Ethernet in 1310 nm wavelength
• SC	Reach SC

• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• TEN-GE-ER	10 GE extended range
• TEN-GE-LR	10 GE long range
• TEN-GE-SR	10 GE short range
• VX	Reach VX
• ZX	Reach ZX
<FOREIGNFEND>	Indicates whether the far-end NE on the DCC is a foreign NE. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<FOREIGNIP>	The IP address of the far-end NE on the DCC. Used only if FOREIGNFEND is Y. FOREIGHNIP is a string.
<OPRNOMINAL>	Reads the current raw optical receive power and sets the raw OPR value as the nominal optical receive power.
• N	Not Supported.
• Y	Sets the OPR.
OSISDCC	Indicates whether or not the OSI SDCC is to be used. Identifies the SDCC connection of the port. The parameter type is ON_OFF, which disables or enables an attribute.
• Y	Enable an attribute.
• N	Disable an attribute.
OSILDCC	Indicates whether or not the OSI LDCC is to be used. Identifies the SDCC connection of the port. The parameter type is ON_OFF, which disables or enables an attribute.
• Y	Enable an attribute.
• N	Disable an attribute.

OSIROUTER	The OSI virtual router number in the range of 1 to 3.
<PORTMODE>	Describes the termination mode of each interface on the OTU2-XP card.
• DWDM-LINE	Line terminating mode.
• DWDM-SECTION	Section terminating mode.
• DWDM-TRANS-AIS	Transparent mode AIS.
• DWDM-TRANS-SQUELCH	Transparent mode squelch.
• 10GLANWAN-SQUELCH	10G LAN to WAN Squelch.
<SQUELCHMODE>	Shuts down the far-end laser in response to certain defects
• NONE	Transparent
• SQUELCH	Squelch is enabled
• AIS	Generic AIS
• DISABLE	Squelch is disabled
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. Defaults to AINS. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

<ALARMSUPPRESS>	It is an enum which has the values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress
<ALARMPROFILENAME>	Name of the profile created using the command ENT-ALMPROFILE

ED-ALS

The Edit Automatic Laser Shutdown (ED-ALS) command is used to modify the ALS attributes of an OC-N facility and all the facilities that support the ALS feature. For transponder and muxponder cards, this command is used to modify the ALS parameter of the OC48 and OC192 ports.

Usage Guidelines

The ED-ALS command is applicable for the following:

- For all non-OTU payloads on 100G-LC-C, 10x10G-LC, and CFP-LC cards on the CHAN AID.
- Payload interfaces for OTU enabled ports.

Note: TL1 accepts only one decimal place, any value after the first decimal place is truncated

Category

Ports

Security

Provisioning

Input Format

ED-ALS[:<TID>]:<AID>:<CTAG>[:::ALSMODE=<ALSMODE>],[ALSRCINT=<ALSRCINT>],[ALSRCPW=<ALSRCPW>],[OSRI=<OSRI>],[:];

Input Example

ED-ALS::CHAN-1-1-1:100:::ALSMODE=AUTO,ALSRCINT=130,ALSRCPW=80.1;

Input Parameters

<SRC>	Access identifier.

<ALSMODE>	ALS is enabled or disabled. The parameter type is ALS_MODE, which is the working mode for automatic laser shutdown.
• AUTO	Automatic
• DISABLED	Disabled
• MAN	Manual
• MAN-RESTART	Manual restart for test
<ALSRCINT>	ALS recovery interval. The range is 60 to 300 seconds. ALSRCINT is an integer.
<ALSRCPW>	ALS recovery pulse width. The range is 2.0 to 100.00 seconds, in increments of 100 ms. ALSRCWP is a float.
<OSRI>	(Optional) OSRI enabled or disabled. Present only on a port where the safety is supported. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.

ED-APC

The Edit Amplification Power Control (ED-APC) command is used to modify the APC application attributes. The default value for an optional parameter is the NE default value. The value might not be the current value for the parameter. Use a retrieve command to retrieve the current value.

Usage Guidelines

None

Category

DWDM

Security

Provisioning

Input Format

ED-APC[:<TID>]:<AID>:<CTAG>[::<ROLE>][:APCENABLE=<APCENABLE>][:];

Input Example

ED-APC:PENNGROVE:WDMSIDE-A:CTAG:::APCENABLE=N;

Input Parameters	
<WDMSIDE>	The AID is used to access the WDM side of an MSTP node.
• WDMSIDE-{UNKNOWN,A,B,C,D,E,F,G,H}	MSTP side identifier
<ROLE>	The role the unit is playing in the protection group.
• PROT	The entity is the protection unit in the protection group.
• WORK	The entity is the working unit in the protection group.
<APCENABLE>	Enable or disable the APC application. Default is N. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.

ED-AUTO

The Edit Auto (ED-AUTO) command is used to retrieve the AUTO port provisioned. Port bandwidth changes to OC3/OC12/OC48/1GE as per the incoming signal when auto sense is enabled. Default is OC48 when auto sense is disabled.

Usage Guidelines

None

Category

DWDM

Security

Provisioning

Input Format

ED-AUTO:[<TID>]:<AID>:<CTAG>::: AUTOSENSE=<AUTOSENSE>;

Input Example

ED-AUTO:CISCO:VFAC-2-1-1:CTAG:::AUTOSENSE=Y;

Input Parameters	
<AID>	The AR-MXP, AR-XP, and AR-XPE cards use the VFAC AID.

<AUTOSENSE>	Specifies if auto sense must be enabled or disabled.
• Y	Enables auto sense.
• N	Disables auto sense.

ED-BITS

The Edit Building Integrated Timing Supply (ED-BITS) command edits the building integrated timing supply (BITS) reference attributes.

Usage Guidelines

The SYNC-BITS1 and SYNC-BITS2 AIDs can be used to set the BITS-OUT port state. For a BITS facility, 64 k and 6 MHz are only applicable to ON. The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

Category

Synchronization

Security

Provisioning

Input Format

ED-BITS:[<TID>]:<AID>:<CTAG>:::[LINECDE=<LINECDE>],[FMT=<FMT>],[LBO=<LBO>],
[SYNCMSG=<SYNCMSG>],[AISTHRSHLD=<AISTHRSHLD>],[SABIT=<SABIT>],
[BITSFAC=<BITSFAC>],[ADMSSM=<ADMSSM>][:<PST>];

Input Example

ED-BITS:SONOMA:BITS-2:779:::LINECDE=AMI,FMT=E1-MF,SYNCMSG=N,
,SABIT=BYTE-5,BITSFAC=E1,ADMSSM=G811:UNLOCKED

Input Parameters

<AID>	Access identifier.
<LINECDE>	The parameter type is LINE_CODE (line code).
• AMI	Line code value is AMI.
• B3ZS	Bipolar with three-zero substitution
• B6ZS	Line code value is B6ZS.

• B8ZS	Line code value is B8ZS.
• JBZS	JBZS
• ZBTSI	ZBTSI
<FMT>	Digital signal frame format. The parameter type is FRAME_FORMAT, which is the frame format for a T1 port.
• AUTOPROV	AUTOPROV
• CBIT	C-BIT line type applies to the DS3XM and DS3E cards.
• D4	Frame format is D4.
• DS2 FRAMED	DS2 FRAMED
• E2 FRAMED	E2 FRAMED
• E3-FRAME	E3-FRAME
• E3-PLCP	E3-PLCP
• ESF	Frame format is ESF.
• FRAMENA	FRAMENA
• G-751	G-751
• G-832	G-832
• M13	M13 line type applies to the DS3XM and DS3E cards.
• M23	M23
• SYNTRAN	SYNTRAN
• UNFRAMED	Frame format is unframed.
<IMPEDANCE>	(Optional) Impedance is the total opposition that a circuit presents to alternating current. The maximum power transfer that takes place from the source to load when the impedance match.
• 120 ohms	120 ohm termination.
• 100 ohms	100 ohm termination.
• 75 ohms	75 ohm termination.
<LBO>	Line build-out settings. BITS line build-out. Default value is 0 to 133. LBO is an integer. The parameter type is BITS_LineBuildOut (BITS line build-out).
• 0–133	BITS line build-out range is 0–133.
• 134–266	BITS line build-out range is 134–266.

• 267–399	BITS line build-out range is 267–399.
• 400–533	BITS line build-out range is 400–533.
• 534–655	BITS line build-out range is 534–655.
<SYNCMSG>	Indicates if the BITS facility supports synchronization status message. Default is ON (Y). The parameter type is EXT_RING, which indicates whether the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<AISTHRSHLD>	Alarm indication signal threshold. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not 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
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<SABIT>	When the frame format selection is E1, SABIT is the bit used to receive and transmit the SSM. The parameter type is SABITS (SA BITS).
• 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.

<IMPEDANCE>	When the frame format selection is E1, IMPEDANCE is the terminal impedance of the BITS-IN port. The parameter type is IMPEDANCE, which is the terminal impedance of the BITS-IN port.
• 120-OHM	Impedance of 120 ohm
• 75-OHM	Impedance of 75 ohm
<BITSFAC>	BITS facility settings. BITS-2 always inherits the value of BITS-1. The parameter type is BITS_FAC (the BITS facility rate). 64 k and 6 MHz are only applicable.
• 2 M	2 MHz rate
• 64 K	64 K rate
• 6 M	6 MHz rate
• E1	E1 rate
• T1	T1 rate
<ADMSSM>	SSM selectable. Only applicable to BITS-IN when SSM is disabled. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not 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
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<PST>	The primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service

ED-BULKROLL-<OCN_TYPE>

The Edit Bulkroll for OC12, OC192, OC3, OC48, or OC768 (ED-BULROLL-<OCN_TYPE>) command edits information about the rolling of traffic from one endpoint to another without interrupting service. This command uses the FORCE option to force a valid signal. The only parameters that can be edited are RMODE and FORCE. The time slots cannot be edited. Use ED-ROLL-<MOD_PATH> for single path level rolling.

Usage Guidelines

See Table 30-1 on page 30-1 for supported modifiers by platform.

Category

Bridge and Roll

Security

Provisioning

Input Format

ED-BULKROLL-<OCN_TYPE>:[<TID>]:<FROM>:<CTAG>:::
[RFROMSTART=<RFROMSTART>],[RFROMEND=<RFROMEND>],[CMDMDE=<CMDMDE>];

Input Example

ED-BULKROLL-OC48:PETALUMA:FAC-1-1:1:::RFROMSTART=STS-1-1-1,
RFROMEND=STS-1-1-11,CMDMDE=FRCD;

Input Parameters

<FROM>	One of the endpoints. Access identifier from the FACILITY section for line level rolling and bulk rolling.
<RFROMSTART>	The starting time slot in the source roll port. For bulk rolling only. The AID is from the CrossConnectId1 section (except VCM and FACILITY). Defaults to STS-<FROMSLOT>-<FROMPORT>-1, where <FROMSLOT> and <FROMPORT> are the slot and port of the <FROM> AID.
<RFROMEND>	The ending time slot in the source roll port. For bulk rolling only. The AID is from the CrossConnectId1 section (except VCM and FACILITY). Defaults to STS-<FROMSLOT>-<FROMPORT>-N, where <FROMSLOT> and <FROMPORT> are the slot and port of the <FROM> AID and N is the value of OCn. (for example, OC48, n=48).

<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.

ED-BWP-ETH

This command is used to modify a Bandwidth Profile entry in BWP DB. The BWP DB is a collection of BWP used in a Network Element.

Usage Guidelines

Error conditions for deleting bandwidth profile can be:

- Invalid AID. If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The "ALL" AID is invalid for this command.
- The BWP having the specified AID should be present in the node, that is, already been entered by ENT-BWP-ETH command.

Category

ETHERNET

Security

Provisioning

Input Format

ED-BWP-ETH:[<TID>]:<AID>:<CTAG>:::[NAME=<NAME>],[CIR=<CIR>],[CBS=<CBS>],[PBS=<PBS>],[PIR=<PIR>],[CFMSTATE=<CFM_STATE>][:];

Input Example

ED-BWP-ETH:ROCKS:BWP-10000:1:::NAME="MyBWP",CIR=10,CBS=1M,PBS=1M,PIR=20,CFMSTATE=Y;

Input Parameters	
<AID>	This AID is used to access BWP.BWP AID Format is: BWP-[bwpid]Values
• BWP-ALL	All aid for BWP.
• BWP-{1-10000}	Single AID for BWP. The valid identifiers ranges from 1 to 10000.
<NAME>	indicates the BWP name. bwp name is a String. - Default value is -
<CIR>	Ingress committed information rate. This is a value between 0.0 and 100.0. Default value is 100.0.
<CBS>	Ingress committed burst bucket size.
• 4K	4 Kbit bucket size
• 8K	16 Kbit bucket size
• 16K	32 Kbit bucket size
• 32K	64 Kbit bucket size
• 64K	128 Kbit bucket size
• 128K	256 Kbit bucket size
• 256K	512 Kbit bucket size
• 512K	1 Mbit bucket size
• 1M	2 Mbit bucket size
• 2M	4 Mbit bucket size
• 4M	8 Mbit bucket size
• 8M	16 Mbit bucket size
• 16M	16 Kbit bucket size
<EBS>	Ingress peak burst bucket size
• 4K	4 Kbit bucket size
• 8K	8 Kbit bucket size
• 16K	16 Kbit bucket size
• 32K	32 Kbit bucket size
• 64K	64 Kbit bucket size

• 128K	128 Kbit bucket size
• 256K	256 Kbit bucket size
• 512K	512 Kbit bucket size
• 1M	1 Mbit bucket size
• 2M	2 Mbit bucket size
• 4M	4 Mbit bucket size
• 8M	8 Mbit bucket size
• 16M	16 Mbit bucket size
<PIR>	Peak information rate. This is a value between 0.0 and 100.0. Default value is 100.0.
<CFMSTATE>	Link Integrity status
• Y	Enabled
• N	Disabled

ED-CFM

The Edit Connectivity Fault Management (ED-CFM) command edits the Connectivity Fault Management (CFM) protocol at the port level.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Port

Security

Provisioning

Input Format

ED-CFM:[<TID>]:<AID>:<CTAG>;

Input Example

ED-CFM:454-156:ETH-1-1-1:1:::CFMSTATE=enable;

Input Parameters

Table 13-1 ED-CFM Command - Parameter Support

Input Parameters	Description
<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the ETH section.
<CFM_STATE>	Indicates whether the CFM is enabled or disabled on the port.
• ENABLE	Indicates the CFM is enabled on the port.
• DISABLE	Indicates the CFM is disabled on the port.

ED-CHGRP

The Edit Channel Group (ED-CHGRP) command edits the layer 2 channel group information of GE_XP and 10GE_XP ethernet cards.

Usage Guidelines

The default values for all optional parameters are network element (NE) default values. These values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

Category

Channel Group

Security

Provisioning

Input Format

ED-CHGRP:[<TID>]:<AID>:<CTAG>:::[ATTACH=<ATTACH>],[DETACH=<DETACH>],[LACPMODE=<LACPMODE>],[HASHALGO=<HASHALGO>],[NIMODE=<NIMODE>],[MACLEARNING=<MACLEARNING>],[INGRESSCOS=<INGRESSCOS>],[ETHERCETYPE=<ETHERCETYPE>],[ETHERSTYPE=<ETHERSTYPE>],[BPDU=<BPDU>],[QNQMODE=<QNQMODE>],[TRNSPSVLAN=<TRNSP_SVLAN>],[MTU=<MTU>],[FLOWCONTROL=<FLOWCONTROL>],[SPEED=<SPEED>],[EXPSPEED=<EXPSPEED>],[CIR=<CIR],[CBS=<CBS>],[EBS=<EBS>]:[<PST>[,<SST>]];;

Input Example

ED-CHGRP::CHGRP-12-2:1:::ATTACH=ETH-12-5-1&ETH-12-1-1,LACPMODE=ON,HASHINGALGO=HASHING-UCAST-SA-DA-VLAN-INCOMING-PORT,NIMODE=UNI,MACLEARNING=Y,INGRESSCOS=0,ETHERCETYPE=8100,ETHERSTYPE=8100,BPDU=Y,QNQMODE=SELECTIVE,MTU=9700,FLOWCTRL=ASYMMETRIC,SPEED=10_GBPS,EXPSPEED=1_GBPS,CIR=100,CBS=4K,EBS=4k;

Input Parameters	
<AID>	Access identifier from the CHGRP section.
<NIMODE>	Identifies the Ethernet Network Interface Mode.
• NNI	(Default) Network-Network Interface Mode
• UNI	User-Network Interface Mode
<LACPMODE>	LACP mode values
• ON	Manual mode of LACP
• ACTIVE	Active mode of LACP
• PASSIVE	Passive mode of LACP
<HASHINGALGO>	Hashing algorithm value
• HASHING_SA_VLAN_INCOMING_PORT	The Hashing Algorithm value is HASHING_SA_VLAN_INCOMING_PORT.
• HASHING_DA_VLAN_INCOMING_PORT	The Hashing Algorithm is HASHING_DA_VLAN_INCOMING_PORT.
• HASHING_SA_DA_VLAN_INCOMING_PORT	The Hashing Algorithm is HASHING_SA_DA_VLAN_INCOMING_PORT.
• HASHING_SRC_IP_TCP_UDP	The Hashing Algorithm is HASHING_SRC_IP_TCP_UDP.
• HASHING_DST_IP_TCP_UDP	The Hashing Algorithm is HASHING_DST_IP_TCP_UDP
• HASHING_SRC_DST_ IP_TCP_UDP	The Hashing Algorithm is HASHING_SRC_DST_IP_TCP_UDP.
<MTU>	(Optional) Maximum transport unit. The parameter type is MTU_TYPE, which indicates the maximum transport unit used by an Ethernet card. Defaults to 9600.
• 10004	10004. Indicates jumbo size.
• 1500	1500
• 1548	1548
• 9600	9600. Indicates jumbo size.
• 64	64
• 9700	9700. Indicates jumbo size.

<ATTACH >	Ethernet AID for the ethernet port on GE_XP and 10GE_XP card.
<DETACH>	To remove or detach the port.
<SPEED>	(Optional) The parameter type is ETHER_SPEED, which indicates Ethernet speed. Defaults to AUTO.
• 100_MBPS	100 Megabits per second
• 10_GBPS	10 Gigabits per second
• 10_MBPS	10 Megabits per second
• 1_GBPS	1 Gigabit per second
<EXPSPEED>	(Optional) Ethernet speed. The parameter type is ETHER_SPEED, which is the Ethernet speed.
• 100_MBPS	100 Megabits per second
• 10_GBPS	10 Gigabits per second
• 10_MBPS	10 Megabits per second
• 1_GBPS	1 Gigabit per second
• 40_GBPS	40 Gigabit per second
• AUTO_FDX	Enable auto negotiation with full duplex
• AUTO	Auto
<CIR>	Ingress committed information rate. The value ranges from 0.0 to 100.0. The default value is 100.0.
<CBS>	Ingress committed burst bucket size.
• 4K	4 Kbit bucket size
• 8K	16 Kbit bucket size
• 16K	32 Kbit bucket size
• 32K	64 Kbit bucket size
• 64K	128 Kbit bucket size
• 128K	256 Kbit bucket size
• 256K	512 Kbit bucket size
• 512K	1 Mbit bucket size

• 1M	2 Mbit bucket size
• 2M	4 Mbit bucket size
• 4M	8 Mbit bucket size
• 8M	16 Mbit bucket size
• 16M	16 Kbit bucket size
<EBS>	Ingress excess burst bucket size.
<MACLEARNING>	MAC Address Learning Mode. This activates the MAC address learning on the interface to avoid packet broadcasting.
• Y	Enables the MAC learning on the interface.
• N	Disables the MAC learning on the interface.
<INGRESSCOS>	Identifies the COS value set in the S-VLAN tag.
• 0 to 7	Set a Cos value
• TRUST	Use the Customer COS
• VLAN	The COS will be provisioned on CVLAN basis (QinQ selective mode)
<ETHERCETYPE>	Identifies a customer foreseen Ethernet type. If the customer uses a non-standard Ethernet type, the incoming packets will be accepted only if the CE-VLAN Ethernet type matches this parameter.
<ETHERSTYPE>	Identifies a customer foreseen Ethernet type. If the customer uses a non-standard Ethernet type, the incoming packets will be accepted only if the CE-VLAN Ethernet type matches this parameter.
<BPDU>	BPDU (Bridge Protocol Data Unit) management mode; Drop/Passthrough BPDU tagged packets.
• Y	Enables the BPDU tag.
• N	Disables the BPDU tag.
<QNQMODE>	This is used to represent the QinQ mode operations.
• Selective	The S-VLAN tag is added only on specified CE-VLANs. The other packets are dropped.
• Transparent	The S-VLAN tag is always performed where all packets having the S-VLAN-ID identified by TRNSPSVLAN parameter are allowed.

<TRNSPSVLAN>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<NAME>	(Optional) NAME is a string. User-assigned port name.

ED-CMD-SECU

The Edit Command Security (ED-CMD-SECU) command edits the command security level of a particular command.

Usage Guidelines

None

Category

Security

Security

Superuser

Input Format

ED-CMD-SECU:[<TID>]:<AID>:<CTAG>::<CAP>;

Input Example

ED-CMD-SECU::INIT-REG:1::SUPER;

Input Parameters

<AID>	Access identifier string. Identifies the entity in the NE to which the command pertains. It is the command verb along with verb modifier(s), as it currently exists. It can be a single command or a block of commands, where the block might include all commands. Only INIT-REG will be supported. String. Must not be null.
<CAP>	Command access privilege. Must not be null. The parameter type is PRIVILEGE, which is the security level.
• PROV	Provision security level. 60 minutes of idle time.
• SUPER	Superuser security level. 15 minutes of idle time.
• ROOT_USER	Root user.

• SEC_SUPER	Security super user.
• SEC_USER	Security user.

ED-CRS-ODU

The command edits the ODU circuit.

Usage Guidelines

The AID is mandatory of this command

Category

Ethernet

Security

Provisioning

Input Format

ED-CRS-ODU::<FROM>,<TO>:<CTAG>:::BANDWIDTH=<bandwidth>,[CKTNAME=<cktid>],[CMDMDE=<cmdmde>],[NODEID=<nodeid>],[SERVICEID=<serviceId>],[RVRTV=<rvrtv>],[RVTM=<rvtm>],[HOLDOFFTIMER=<holdofftimer>]:[<pst>],[<sst>]

Input Example

ED-CRS-ODU::ODU-1-4-1-1-3-1,ODU-1-4-11-1-1-3&ODU-1-4-12-1-1-3:a:::BANDWIDTH=ODU2E,NODEID=ABC,RVTM=7.0,HOLDOFFTIMER=200,CKTNAME=CKT_19:IS;

vxTarget 2017-04-27 21:49:52

M a COMPLD

;

Input Parameters

<FROM>	The FROM AID of the ODU Circuit.
<TO>	The TO AID of the ODU Circuit.
BANDWIDTH	ODU Level (ODU2E). The ENUM is Mandatory.
CKTNAME	The Circuit Name is optional. The Default is empty string

CMDMDE	NORM, FRCD is used to set the Admin State. The type is ENUM.
NODEID	Node Id of the SourceNode.
SERVICEID	ServiceId of the CircuitInfo on the SRCNode.
RVRTV	Y or N. Default is N. It should be in Revertive Mode.
RVTM	Time set for the revartive in circuit level. Range is 5 min to 12 min. The increment is 0.5. Default is 5 min.
HOLDOFFTIMER	Hold off timer in circuit level. The range is 0 to 10 sec. The increment steps is 100 ms , and the default is 0.
PST	Primary State. The default is IS. The type is ENUM, optional.
SST	Secondary State. The default is AINS. The type is ENUM, optional.

ED-COS-ETH

The Edit Ethernet Cost of Service Table (ED-COS-ETH) command edits the egress parameter of a cost of service table associated to an L2 Ethernet port.

Usage Guidelines

The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

Category

Ethernet

Security

Provisioning

Input Format

ED-COS-ETH:[<TID>]:<AID>:<CTAG>:::[AISACTION=<AISACTION>],[IGMPROUTE=<IGMPROUTE>],[QOSENABLED=<QOSENABLED>],[BW0=<BWO>],
[WEIGHT0=<WEIGHT0>],[BW1=<BW1>],[WEIGHT1=<WEIGHT1>],[BW2=<BW2>],
[WEIGHT2=<WEIGHT2>],[BW3=<BW3>],[WEIGHT3=<WEIGHT3>],[BW4=<BW4>],
[WEIGHT4=<WEIGHT4>],[BW5=<BW5>],[WEIGHT5=<WEIGHT5>],[BW6=<BW6>],
[WEIGHT6=<WEIGHT6>],[BW7=<BW7>],[WEIGHT7=<WEIGHT7>][:];

Input Example

ED-COS-ETH:PETALUMA:ETH-1-1-1:1:::QOSENABLED=Y,BW0=10,WEIGHT0=0,BW1=20,
WEIGHT1=2,BW2=40,WEIGHT2=4,BW3=60,WEIGHT3=6,BW4=70,WEIGHT4=8,BW5=80,
WEIGHT5=10,BW6=85,WEIGHT6=12,BW7=100,WEIGHT7=15:;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the ETH section.
<AISACTION>	VLAN-AIS Action. Indicates what action take place on port when VLAN-AIS alarm is raised.
• AIS-NONE	No action after VLAN-AIS
• AIS-SQUELCH	The port is squelched.
<IGMPROUTE>	IGMP M Router port. Indicates the type of connection between this port and the IGMP M Router.
• STATIC	A static connection is present between this port and the IGMP M Router
• NONE	No connection is present
<INGRESSCOS>	Identifies the COS value set in the S-VLAN tag.
• 0 to 7	Set a Cos value
• TRUST	Use the customer COS
• VLAN	The COS to be provisioned on CVLAN basis (QinQ selective mode).
<QOSENABLED>	Used to enable or disable the egress QOS policy of an L2 Ethernet port.
• N	Disable the service.
• Y	Enable the service.
<BW0>	Bandwidth percentage, a value between 0 and 100.
<WEIGHT0>	Value represents the weighted round-robin (WRR) weight associated to the COS values, an integer value between 0 and 15.
<BW1>	Bandwidth percentage, a value between 0 and 100.
<WEIGHT1>	Value represents the WRR weight associated to the COS values, an integer value between 0 and 15.
<BW2>	Bandwidth percentage, a value between 0 and 100.

<WEIGHT2>	Value represents the WRR weight associated to the COS values, an integer value between 0 and 15.
<BW3>	Bandwidth percentage, a value between 0 and 100.
<WEIGHT3>	Value represents the WRR weight associated to the COS values, an integer value between 0 and 15.
<BW4>	Bandwidth percentage, a value between 0 and 100.
<WEIGHT4>	Value represents the WRR weight associated to the COS values, an integer value between 0 and 15.
<BW5>	Bandwidth percentage, a value between 0 and 100.
<WEIGHT5>	Value represents the WRR weight associated to the COS values, an integer value between 0 and 15.
<BW6>	Bandwidth percentage, a value between 0 and 100.
<WEIGHT6>	Value represents the WRR weight associated to the COS values, an integer value between 0 and 15.
<BW7>	Bandwidth percentage, a value between 0 and 100.
<WEIGHT7>	Value represents the WRR weight associated to the COS values, an integer value between 0 and 15.

ED-CRS-<PATH>

The Edit Cross-Connect for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, VT1, or VT2 (ED-CRS-<PATH>) command edits a cross-connection.

Usage Guidelines

See Table 30-1 on page 30-1 for supported modifiers by platform.

Note • ADD and REMOVE cannot be used together. The example provided is for informational purposes only. ADD and REMOVE are mutually exclusive.

- Add/Remove drops is possible only on ONEWAY, UPSR_DROP, UPSR_DC, and UPSR_EN type cross-connects (one-way only).
- Traditional cross-connections cannot be upgraded to DRI cross-connections using the ED_CRS command.
- CKTID is a string of ASCII characters. The maximum length of CKTID is 48. If the CKTID is EMPTY or NULL, this field will not appear.
- You cannot add a drop onto unidirectional connections on BLSR DRI primary or secondary nodes.

Category

Cross Connections

Security
Provisioning

Input Format
ED-CRS-<PATH>:[<TID>]:<SRC>,<DST>:<CTAG>::[<CCT>]:[ADD=<ADD>],
[REMOVE=<REMOVE>],[CKTID=<CKTID>],[CMDMDE=<CMDMDE>]:[<PST>[,<SST>]];

Input Example
ED-CRS-STS3C::STS-1-1-1,STS-2-1-1:1:::ADD=STS-13-1-1,REMOVE=STS-2-1-1,CKTID=CKTID
CMDMDE=FRCD:IS,AINS;

Input Parameters

<SRC>	Source AID from the CrossConnectId1 section.
<DST>	Destination AID from the CrossConnectId1 section.
<CCT>	Cross-connection. The parameter type is CCT which indicates the type of cross-connection to be created.
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	Path Protection multicast drop (one-way continue)
• 1WAYEN	Path Protection multicast end node (one-way continue)
• 1WAYMON	A bidirectional connection between the two tributaries
• 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 DRIs
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber
• DIAG	Diagnostics cross-connect. Supports BERT (BLSR PCA diagnostics cross-connect).
<ADD>	AID from the AidUnionId section.

<REMOVE>	AID from the AidUnionId section.
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null, the CKTID field will not be displayed.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ED-CRS-ETH

This command modifies an ethernet connection relationship between two or more ethernet connection end points inside the ethernet facilities.

Usage Guidelines

The default values for all optional parameters are NE default values. These values may not be the current value for a parameter. In order to obtain the current value use RTRV-XX command to retrieve them.

The ethernet connection end point identifier must be the same for all the ethernet ports inside the connection and must be kept the same for all the ethernet circuit.

CKTID is a string of ASCII characters. The maximum length of CKTID can be 48. If the CKTID is EMPTY or NULL this field is not displayed

If the AID is invalid, an IIAC (Invalid AID) error message is returned.

The "ALL" AID is invalid for this command.

Category

ETHERNET

Security

Provisioning

Input Format

ED-CRS-ETH:[<TID>]:<src>,<dst>:<CTAG>:::[ADD=<add>],[REMOVE=<remove>],[CKTID=<cktid>][:];

Input Example

ED-CRS-ETH:KARTHIK:ETH-1-1-1-12,ETH-1-21-1-12:1:::CKTID=NEW,ADD=ETH-1-2-1;

Input Parameters

<SRC>	Ethernet connection identifier AIDs are used to access L2 ethernet connection end point.
• ALL	The ALL aid is applicable for RTRV-only commands, basically the RTRV-rr type of commands. For e.g. RTRV-CRS-ETH with ALL aid returns all ETH connections on the node.
• ETHID[-{1-12}]-{1-5,12-16}-{1-22}-1-{1-20}	Ethernet connection end point aid for GE-XP card in the format of:ETHID-[shelf]-[slot]-[ppm]-[port]-[cepid], where [cepid] is the connection end point identifier, that identifies a single 1 Gbit/sec. circuit inside an ethernet port.
• ETHID[-{1-12}]-{1-6,12-17}-{1-4}-1-{1-20}	Facility aid for 10GE-XP card in the format of:ETHID-[shelf]-[slot]-[ppm]-[port]-[cepid], where [cepid] is the connection end point identifier, that identifies a single 1 Gbit/sec. circuit inside an ethernet port.
<DST>	Ethernet connection identifier AIDs are used to access L2 ethernet connection end point

• ALL	The ALL aid is applicable for RTRV-only commands, basically the RTRV-rr type of commands. For e.g. RTRV-CRS-ETH with ALL aid returns all ETH connections on the node.
• ETHID[-{1-12}]-{1-5,12-16}-{1-22}-1-{1-20}	Ethernet connection end point aid for GE-XP card in the format of:ETHID-[shelf]-[slot]-[ppm]-[port]-[cepid], where [cepid] is the connection end point identifier, that identifies a single 1 Gbit/sec. circuit inside an ethernet port.
• ETHID[-{1-12}]-{1-6,12-17}-{1-4}-1-{1-20}	Facility aid for 10GE-XP card in the format of:ETHID-[shelf]-[slot]-[ppm]-[port]-[cepid], where [cepid] is the connection end point identifier, that identifies a single 1 Gbit/sec. circuit inside an ethernet port.
<ADD>	add is the AID AidUnionId.Default value is - NULL
<REMOVE>	remove is the AID AidUnionId. Default value is - "NULL".
<CKTID>	Circuit identification parameter contains the Common Language Circuit ID or other alias of the circuit being provisioned. May not contain blank spaces. CKTID is a string of ASCII characters. The maximum length of CKTID can be 48. cktid is a String. cktid is optional. Default value is - "NULL"

ED-DAT

The Edit Date and Time (ED-DAT) command edits the date and the time.

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

ED-DAT:[<TID>]::<CTAG>::[<DATE>],[<TIME>];

Input Example

ED-DAT:PETALUMA::1234::99-12-21,14-35-15;

Input Parameters

<DATE>	The new date. DATE is a string

<TIME>	The new time. TIME is a string.

ED-DS1

The Edit DS1 (ED-DS1) command edits the test access attribute for DS1 access on a DS3XM-6 and DS3XM-12 card.

Usage Guidelines

- This command is not allowed if the card is a protect card.
- Both the MODE and FMT fields of this command apply to the DS3XM-12 card only.
- For the DS3XM-12 card, the DS1 frame format NE default is AUTO_PROV_FMT for the first 30 seconds to determine the real format. After 30 seconds, the DS1 frame format will be detected as FRAMED. If the frame format is not detected, it will be in the UNFRAMED format.
- For preprovisioning the DS3XM-12 card, the DS1 frame format defaults to UNFRAMED.
- For the DS3XM-12 card, the DS1 configurable attributes (PM, TH, alarm, etc.) only apply on the ported ports (Ports 1 to 12) and the VT-mapped (odd) portless ports in xxx-xxx-DS1 commands. If you provision or retrieve DS1 attributes on the DS3-mapped (even) portless port in xxx-xxx-DS1 commands, an error message will be returned.
- The test set physical connection that is set up through the ED-T3/DS1/STS1/VT1 command of the DS3XM-12 card is only allowed on the physical front ports (PORTED ports, Ports 1 to 12), which are the monitoring ports, as follows:
  - The monitoring test access ports follow the common rules for the other cards. For example, when issuing the ED-T3 command on Port 2 (FAC-6-2) with a TACC number (8), the next port, Port 3 (FAC-6-3) is used as the monitoring point also. The RTRV-T3 command on both Port 2 and Port 3 return the same TACC number (8) being used to monitor the cross-connection end (A-B). The last port (Port 12) is not allowed to set up a physical connection with the test set because there is no next available port to be the monitoring port.
  - The TACC disconnection (DISC-TACC) and the test access mode change command (CHG-TACC) follow the same requirement as in the previous step, but it is applied on the ported ports of the DS3XM-12 card.
  - The test access connection set-up command (CONN-TACC) has monitored points, which can be portless ports. This command is applied on both ported and portless ports of the DS3XM-12 card.
- If the entity has a TACC connection, the entity is not allowed to have ported or portless STS/VT cross-connection (or circuit) provisioning on the DS3XM-12 card.
- The parameters BERTMODE, BERTPATTERN, and BERTERRCOUNT apply only to DS1/E1-56 and DS3XM-12 cards
- BERT is implemented on a single port.

Category

Ports

Security

Provisioning

Input Format

ED-DS1:[<TID>]:<AID>:<CTAG>:::[TACC=<TACC>],[TAPTYPE=<TAPTYPE>],
[AISONLPBK=<AISONLPBK>],[MODE=<MODE>],[FMT=<FMT>],
[BERTMODE=<BERTMODE>],[BERTPATTERN=<BERTPATTERN>],
[BERTERRCOUNT=<BERTERRCOUNT>];

Input Example

ED-DS1:PETALUMA:DS1-2-1-6-12:123:::TACC=8,TAPTYPE=DUAL,MODE=FDL,
FMT=ESF,BERTMODE=NONE,BERTPATTERN=NONE;

Input Parameters

<AID>	Access identifier from the DS1 section.
<TACC>	TAP number within a range of 0 to 999. Indicates whether the digroup being provisioned is to be used as a test access digroup. When TACC is 0 (zero), the TAP is deleted. TACC is an integer.
<TAPTYPE>	TAP type. The parameter type is TAPTYPE (test access point type).
• DUAL	Dual FAD
• SINGLE	Single FAD
<AISONLPBK>	The parameter type is AIS_ON_LPBK, which indicates whether AIS is sent on a loopback.
• FACILITY	AIS is sent on facility loopbacks.
• ALL	AIS is sent on all loopbacks.
• OFF	AIS is not sent on loopbacks.
• TERMINAL	AIS is sent on terminal loopbacks.
<MODE>	Mode with which the command is to be implemented. DS1 path mode of the DS3XM-12 card. Defaults to FDL. The parameter type is DS1MODE, which is the DS1 path mode of the DS3XM-12 card.
• ATT	The DS1 path of the DS3XM-12 card is in AT&T 54016 mode.
• FDL	The DS1 path of the DS3XM-12 card is in FDL T1-403 mode.
<FMT>	Digital signal format. The DS1 path frame format of the DS3XM-12 card. Defaults to UNFRAMED. The parameter type is FRAME_FORMAT, which is the frame format for a T1 port.
• AUTOPROV	AUTOPROV
• CBIT	C-BIT line type applies to the DS3XM and DS3E cards.

• D4	Frame format is D4.
• DS2 FRAMED	DS2 FRAMED
• E2 FRAMED	E2 FRAMED
• E3-FRAME	E3-FRAME
• E3-PLCP	E3-PLCP
• ESF	Frame format is ESF.
• FRAMENA	FRAMENA
• G-751	G-751
• G-832	G-832
• M13	M13 line type applies to the DS3XM and DS3E cards.
• M23	M23
• SYNTRAN	SYNTRAN
• UNFRAMED	Frame format is unframed.
<BERTMODE>	Specifies the mode [Test Pattern Generator (TPG) or Test Pattern Monitor (TPM)] of the port for BERT.
• NONE	BERT mode not enabled.
• TPGM-L	Test pattern generator and monitor on line side.
• TPGM-B	Test pattern generator and monitor on backplane.
• TPG-L	Test pattern generator on line side.
• TPM-L	Test pattern monitor on line side.
• TPG-B	Test pattern generator on backplane.
• TPM-B	Test pattern monitor on backplane.
<BERTPATTERN>	Specifies the error pattern to be injected for BERT.
• NONE	BERT pattern not enabled.
• PRBS15	PRBS15 test pattern.
• PRBS20	PRBS20 test pattern.
• PRBS23	PRBS23 test pattern.
• QRSS	QRSS test pattern.
• ALT-ONE-ALT-ZERO	Alternate one and zero pattern.

<BERTERRCOUNT>	Integer value. Value –1 indicates that BERT is disabled/not supported.

ED-DSCP-<MOD2>

The Edit ETH or CHGRP (ED-DSCP-<MOD2>) command edits Differentiated Service Code Points (DSCP) to COS conversion table associated to a L2 ethernet port or a channel group.

Usage Guidelines

This command is applicable when the INGRESSCOS parameter is set to DSCP value on the ethernet port or channel group.

Category

Ethernet or Channel Group

Security

Provisioning

Input Format

ED-DSCP-MOD2:[<TID>]:<AID>:<CTAG>::<COS>:DSCPFIRST=<DSCP_FIRST>,DSCPLAST=<DSCP_LAST>[:];

Input Example

ED-DSCP-ETH::ETH-5-1-1:1234::3:DSCPFIRST=26,DSCPLAST=30;

ED-DSCP-CHGRP::CHGRP-5-1:1::3:DSCPFIRST=26,DSCPLAST=30;

Table 13-2 ED-DSCP-MOD2 Command - Parameter Support

Input Parameters	Description
<AID>	Access identifier.
• Ethernet	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the ETH section.
• Channel Group	Access identifier from the CHGRP section.
<INGRESSCOS>	Identifies the COS value set in the S-VLAN tag.
• 0 to 7	Set a Cos value
• DSCP	The COS is set according to DSCP to COS mapping table.
• TRUST	Use the Customer COS

• VLAN	The COS will be provisioned on CVLAN basis (QinQ selective mode)
<DSCPFIRST>	DSCP range. Indicates a DSCP value used in the ethernet frame to define the QoS in L3 ethernet transport. It is a number in the range 0..64. Default values is 0
<DSCPLAST>	DSCP range. Indicates a DSCP value used in the ethernet frame to define the QoS in L3 ethernet transport. It is a number in the range 0..64. Default values is 0.

ED-EC1

The Edit Electrical Carrier (ED-EC1) command edits the attributes of an EC1 card.

Usage Guidelines

- This command is not allowed if the card is a protecting card.
- You cannot directly transition a facility from IS to OOS-MA,DSBLD service state. You can transition a facility to OOS-MA,DSBLD service state from any state except OOS-MA,MT. To transition a facility from OOS-MA,MT to OOS-MA,DSBLD service state, all the following conditions must be met:
  - The facility is not sourcing a synchronization clock
  - The facility's DCC is disabled
  - The facility is not part of a protection group
  - The facility is not supporting cross-connects
  - The facility is not using overhead connections or overhead terminations (such as express orderwire, local orderwire, or user data channels [UDCs])

Note The conditions stipulated can be overridden by using the CMDMDE=FRCD option. The FRCD option will immediately remove the facility from service (except for IS to OOS-MA,DSBLD transition) with no consideration for orderly interruption.

Category

Ports

Security

Provisioning

Input Format

ED-EC1:[<TID>]:<AID>:<CTAG>:::[PJMON=<PJMON>],[LBO=<LBO>],[SOAK=<SOAK>],
[SFBER=<SFBER>],[SDBER=<SDBER>],[NAME=<NAME>],[EXPTRC=<EXPTRC>],
[TRC=<TRC>],[TRCMODE=<TRCMODE>],[<TRCFORMAT>],[AISONLPBK=<AISONLPBK>],
[CMDMDE=<CMDMDE>]:[<PST>[,<SST>]];

Input Example

ED-EC1:PETALUMA:FAC-1-1:123:::PJMON=0,LBO=0-225,SOAK=10,SFBER=1E-4,SDBER=1E-6,
NAME="EC1 PORT",EXPTRC="AAA",TRC="AAA",TRCMODE=MAN,TRCFORMAT="16-BYTE,
AISONLPBK=AIS_ON_LPBK_ALL,CMDMDE=CMDMDE:IS,AINS;

Input Parameters

<AID>	Access identifier from the FACILITY section.
<PJMON>	A SONET pointer number (0 or 1) of an EC1 port. PJMON is an integer.
<LBO>	Line build-out settings. LBO is an integer. It defaults to 0–225. The parameter type is E_LBO (electrical signal line build-out).
• 0–225	Electrical signal line build-out range is 0–225.
• 226–450	Electrical signal line build-out range is 226–450.
<SOAK>	IS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer. Defaults to 32.
<SFBER>	Signal failure threshold. Defaults to 1E-4. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	Signal degrade threshold. Defaults to 1E-7. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<NAME>	NAME is a string. Default value is NULL. Maximum length is 32 characters.
<EXPTRC>	String

<TRC>	String
<TRCMODE>	The parameter type is TRCMODE (trace mode).
• 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 TIM-P is 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 TIM-P is detected.
• OFF	Turn off path trace capability. Nothing will be reported.
<TRCFORMAT>	Trace message size. The parameter type is TRCFORMAT (trace format).
• 1-BYTE	1 byte trace message.
• 16-BYTE	16 byte trace message.
• 64-BYTE	64 byte trace message.
• Y	Enable an attribute.
<AISONLPBK>	Defaults to AIS_ONLPBK_FACILITY. The parameter type is AIS_ON_LPBK, which indicates whether AIS is sent on a loopback.
• AIS_ONLPBK_FACILITY	AIS is sent on facility loopbacks.
• ALL	AIS is sent on all loopbacks.
• OFF	AIS is not sent on loopbacks.
• TERMINAL	AIS is sent on terminal loopbacks.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.

<PST>	Primary state. Defaults to IS. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. Defaults to AINS. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ED-EFM

The Edit Ethernet in the First Mile (ED-EFM) command edits ethernet OAM parameters on the front end port of the fast (10/100 Mbps) ethernet card.

Usage Guidelines

- The EFMSTATE parameter should be “enabled” for the facility by ED-FSTE to edit the EFM parameters.
- You cannot enable or disable the remote loopback through the local interface on the remote OAM peer entity if any other type of loopback (facility/terminal) is already configured on the local interface.

Category

Ports

Security

Provisioning

Input Format

ED-EFM:[<TID>]:<AID>:<CTAG>:::[STATE=<STATE>],[MODE=<MODE>],[LFACTION=<LFACTION>],[SESSIONTIMER=<SESSIONTIMER>];

Input Example

ED-EFM::ETH-12-1-1:1:::MODE=PASSIVE,LFACTION=ERROR-BLOCK,DGACTION=ERROR-BLOCK,SESSIONTIMER=40;

<AID>	Access identifier from the ETH section.
<STATE>	Indicates whether the EFM is enabled or disabled on the port.
• ENABLE	Indicates the EFM is enabled on the port.
• DISABLE	Indicates the EFM is disabled on the port.
<MODE>	Indicates the mode of the EFM port.
• ACTIVE	The port is in the active state.
• PASSIVE	The port is in the passive state.
<LFACTION>	Action to be taken for the failure of the link on the port.
• RFIACTION-NONE	No action.
• ERROR-BLOCK	Block the port.
<SESSIONTIMER>	Session expire timer for EFM (in seconds).

Input Parameters

ED-ETH

The Edit Ethernet (ED-ETH) command edits the front-end port information of a 10/100/1000 Mbps Ethernet card.

Usage Guidelines

The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

The SELECTIVEAUTO parameter is applicable only when EXPSPEED and EXPDUPLEX are not set to AUTO mode.

Note This command is available in Software Release 8.0.1 and later. It is not available in R8.0 and earlier.

Category

Ethernet

Security
Provisioning

Input Format
ED-
ETH:[<TID>]:<AID>:<CTAG>:::[FLOW=<FLOW>],[EXPDUPLEX=<EXPDUPLEX>],[SELECTIVEAUTO=<SELECTIVEAUTO>],[EXPSPEED=<EXPSPEED>],[VLANCOS=<VLANCOSTHRESHOLD>],[IPTOS=<IPTOSTHRESHOLD>],[NAME=<NAME>],[CMDMDE=<CMDMDE>],[SUPPRESS=<SUPPRESS>],[SOAK=<SOAK>],[LIENABLE=<LIENABLE>],[LITIMER=<LITIMER>][:<PST>[,<SST>]];

Input Example
ED-ETH:CISCO:FAC-1-1:123:::FLOW=Y,EXPDUPLEX=HALF,EXPSPEED=10_MBPS,
SELECTIVEAUTO=Y,VLANCOS=2,IPTOS=4,NAME="ETHPORT",CMDMDE=FRCD,
SOAK=32,LIENABLE=Y,LITIMER=200:IS,AINS;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the ETH section.
<FACILITY>	Access identifier from the FACILITY section.
<FLOW>	(Optional) Flow. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<EXPDUPLEX>	(Optional) Ethernet duplex mode. The parameter type is ETHER_DUPLEX, which is the duplex mode.
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode
<SELECTIVEAUTO>	(Optional) Selective auto-negotiation. The parameter is Y or N (enable or disable auto-negotiation). This indicates selective auto-negotiation of EXPSPEED and EXPDUPLEX only.
• Y	Enable selective auto-negotiation.
• N	Disable selective auto-negotiation.
<EXPSPEED>	(Optional) Ethernet speed. The parameter type is ETHER_SPEED, which is the Ethernet speed.

• 100_MBPS	100 Megabits per second
• 10_GBPS	10 Gigabits per second
• 10_MBPS	10 Megabits per second
• 1_GBPS	1 Gigabit per second
• 40_GBPS	40 Gigabit per second
• AUTO_FDX	Enable auto negotiation with full duplex
• AUTO	Auto
<VLANCOS>	(Optional) Priority queing threshold based on VLAN class of service for incoming Ethernet packets. VLANCOS is an integer.
<IPTOS>	(Optional) Priority queing threshold based on IP type of service for incoming Ethernet packets. IPTOS is an integer.
<NAME>	(Optional) Name. NAME is a string.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
<SUPPRESS>	Pre-service alarm flag for data ports.
• ON	Enable suppress.
• OFF	Disable suppress. Default is Off.
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer.
<LIENABLE>	(Optional) Enable or Disable link integrity timer. Takes either Y or N. Value Y enables the LITIMER and value N disables LITIMER. By default LITIMER is enabled.
<LITIMER>	(Optional) Link integrity timer duration in the range between 200 ms and 10000 ms in multiples on 100 ms.

<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ED-EQPT

The Edit Equipment (ED-EQPT) 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 ED-EQPT command also modifies a shelf role from node controller (NC) to shelf controller (SC) on an NE configured in multishelf mode.

Usage Guidelines

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 the absence of a protection group. For the 1:1 protection type, RVRTV and RVTM parameters can be changed. For the 1:1 protection type, if the PROTID parameter is entered as “NULL”, the protection group is deleted, as shown in the following command:

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

For the 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.

For example, if Slot 1, Slot 2, and Slot 4 were the only working cards in the protection group, the following command would 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 or remove a working card 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). After it is 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 might be:

- Editing the PRTYPE or PROTID (non-NULL value) parameters.
- Editing RVRTV or RVTM when no protection group exists.
- Editing RVRTV for 1:N protection.
- Failed to remove, currently switched to protect.
- CARDMODE provisioning is allowed on the DS3XM-12 cards as follows:
  - DS3XM-12 card provisioning is based on the XCON type and DS3XM-12 card's location. For example, the DS3XM-12 card in the lower speed I/O slot with the XCVT card only allows the DS3XM-12-STS12 CARDMODE. Other cases allow the CARDMODE to be DS3XM-12-STS-48.
  - There is no card reboot if the CARDMODE is changed on the DS3XM-12 card.
  - The DS3XM-12 card can be upgraded or downgraded by changing the CARDMODE with the ED-EQPT command.

CMDMDE provisioning behaves as follows:

- If the command mode (CMDMDE) is set to NORM during the creation of a 1:1 or 1:N protection group, all cards must be physically plugged in and in the service state (IS). If the cards are not physically plugged in and are not in ready state, the command is denied with an appropriate error message. CMDMDE=FRCD will override the default behavior and allow creation of protection group regardless of the physical presence and ready state of cards.
- If the command mode is set to NORM during the removal of a card in a 1:1 or 1:N protection group, there must be no cross-connects (for example, services) present on the card. CMDMDE=FRCD will override the default behavior and allow deletion of protection group regardless of presence of cross-connects on the card.

Note For the FC_MR-4 card, the card mode cannot be changed to FCMR-LINERATE when the payload on any port is 1GFICON or 2GFICON. These payloads are allowed only in distance extension card mode.

Category
Equipment

Security
Provisioning

Input Format

ED-EQPT[:<TID>]:<AID>:<CTAG>[:::PROTID=<PROTID>],[PRTYPE=<PRTYPE>],[RVRTV=<RVRTV>],[RVTM=<RVTM>],[CARDMODE=<CARDMODE>],[PEERID=<PEERID>],[REGENNAME=<REGENNAME>],[PEERNAME=<PEERNAME>],[CMDMDE=<CMDMDE>],[RETIME=<RETIME>],[SHELFROLE=<SHELFROLE>],[NEWSHELFID=<NEWSHELFID>],[FRPROLE=<FRPROLE>],[FRPSTATE=<FRPSTATE>],[FRPHOLDOFFTIME=<FRPHOLDOFFTIME>],[ADMINCVLAN=<ADMINCVLAN>],[ADMINSVLAN=<ADMINSVLAN>],[CFMSTATE=<CFMSTATE>],[CCTIMER=<CCTIMER>],[PROTOPMODE=<PROTOPMODE>],[SWITCHWITHCRCALARM=<SWITCHWITHCRCALARM>],[CRCTHR=<CRCTHR>],[CRCPOLLINTRVL=<CRCPOLLINTRVL>],[CRCSOAKCNT=<CRCSOAKCNT>],[USB=<USB>],[LEDSTATE=<LEDSTATE>],[CLOCKTYPE=<CLOCKTYPE>] ,[ALARMSUPPRESS=<alarmsuppress>],[APCGAINLIMIT=<apcgainlimit>],[ALARMPROFILENAME=<alarmprofilename>],[FAPSPROTN=<fapsprotn>][:<PST>[,<SST>]];

Input Example

ED-EQPT::SLOT-15:a::CARDMODE=GEXP-L2ETH,SWITCHWITHCRCALARM=Y;

ED-EQPT::SLOT-15:a::CARDMODE=GEXP-L2ETH,CRCPOLLINTRVL=4;

ED-EQPT::SLOT-3:12:::LEDSTATE=Y,CLOCKTYPE=TNC;

Input Parameters

<AID>	Access identifier from the EQPT section.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<CARDMODE>	Defines the card mode.
• 10GLANWAN-LINE-SQUELCH	Changes the card mode from LAN to WAN.
• DS1E1-DS1ONLY	DS1 mode on DS1E1 card.
• DS1E1-E1ONLY	E1 mode on DS1E1 card.
• DS1E1-E1MIXED	Hybrid/E1-retimed port usage profile.
• DS1E1-DS1MIXED	Hybrid/DS1-retimed port usage profile.
• DS3XM12-STS12	Indicates the DS3XM-12 card in the STS12 back plane rate mode.

• DS3XM12-STS48	Indicates the DS3XM-12 card in the STS12 back plane rate mode.
• DWDM-LINE	Line terminating mode.
• DWDM-SECTION	Section terminating mode.
• DWDM-TRANS-AIS	Transparent mode AIS.
• DWDM-TRANS-SQUELCH	Transparent mode SQUELCH.
• FCMR-DISTEXTN	FC-MR-4 card with Distance Extension support.
• FCMR-LINERATE	FC-MR-4 card without Distance Extension support.
• ML-GFP	ML1 series card in DOS FPGA using GFP framing type.
• ML-HDLC	ML1 series card in DOS FPGA using HDLC framing type.
• ML-IEEE-RPR	ML1 series card in DOS FPGA which supports Resilient Packet Ring (RPR).
• MXPMR25G-FCGE	Fiber channel or GIGE mode for the MXP-MR-2.5G.
• MXPMR10DME-FCGEISC	Fiber channel, GIGE, or ISC mode for the MXP-MR-10DME, MXP-MR-10DMEX card series.
• MXPMR10DME-FCGEISC-4GFC	1..4 facilities with fiber channel, GIGE, or ISC traffic mode and facility 5 with 4 Gbps fiber channel traffic mode for the MXP-MR-10DME, MXP-MR-10DMEX card series.
• MXPMR10DME-4GFC-FCGEISC	Facility 1 with 4 Gbps fiber channel traffic mode and 5..8 facilities with fiber channel, GIGE, or ISC traffic mode for the MXP-MR-10DME, MXP-MR-10DMEX card series.
• MXPMR10DME-4GFC	4 Gbps fiber channel traffic mode for the MXP-MR-10DME, MXP-MR-10DMEX card series.
• PSM-NORMAL	PSM working in classic configuration.
• PSM-STANDALONE	PSM working in stand-alone mode.
• AMPL-BST	Booster mode for amplifier cards: OPT-AMP-L, OPT-AMP-17-C and OPT-AMP-23-C cards.
• AMPL-PRE	Pre-amplifier mode for amplifier cards: OPT-AMP-L, OPT-AMP-17-C and OPT-AMP-23-C cards.
• 10GEXP-TXP	10GE-XP behaves as two separate transponders, where client 1 is associated to trunk 3 and client 2 is associated to trunk 4.
• 10GEXP-L2ETH	10GE-XP behaves as an L2 Ethernet switch.

• GEXP-10x1Gx2-MXP	GE-XP behaves as a double Muxponder having ten 1 Gbps client facilities with one trunk. The first 10 GIGE clients are associated to the first trunk (21), while GIGE facilities from 11 to 20 are associated to trunk 22.
• GEXP-20x1G-MXP	GE-XP behaves as a single Muxponder having ten 1 Gbps client facilities with one trunk. Only the first 10 GIGE clients are associated to the first trunk (21) while the other facilities are unused.
• GEXP-L2ETH	GE-XP behaves as an L2 Ethernet Switch.
• CEMR-AUTO	Auto allocation of back-end channels for CE-MR-10 cards.
• CEMR-MANUAL	Manual allocation of back-end channels for CE-MR-10 cards.
• UNKNOWN	Unknown.
• WXC80-BIDI	80-WXC-C working in bidirectional mode.
• WXC80-DMX	80-WXC-C working as demultiplexer.
• WXC80-MUX	80-WXC-C working as multiplexer.
• 40G-MXP-MUXPONDER	40G-MXP-MUXPONDER working as multiplexer.
• 40G-MXP-UNIDIR-REGEN	40G-MXP-UNIDIR-REGEN working as regenerator.
<FRPHOLDOFFTIME>	Indicates the hold off timer value. The protection does not start until the hold off time expires.
• 100-MSEC	Indicates the hold off timer value as 100 milliseconds.
• 1-MSEC	Indicates the hold off timer value as 1milisecond.
• 200-MSEC	Indicates the hold off timer value as 200 milliseconds.
• 2-MSEC	Indicates the hold off timer value as 2 milliseconds.
• 500-MSEC	Indicates the hold off timer value as 500 milliseconds.
• 50-MSEC	Indicates the hold off timer value as 50 milliseconds.
• 5-MSEC	Indicates the hold off timer value as 50 milliseconds.
• DISABLED	Indicates that the hold off timer is disabled.
<ADMINCVLAN>	Customer VLAN identifier for REP. ADMINCVLAN is a number between 1 and 4096. The value 0 is reserved to untagged VLAN.

<ADMINSVLAN>	Service provider VLAN identifier for REP. ADMINSVLAN is a number between 1 and 4096. The value 0 is reserved to untagged VLAN.
<CFMSTATE>	Link Integrity status.
• Y	Enabled
• N	Disabled
<CCTIMER>	Indicates continuity check message timer.
• ONE-MIN	1 minute.
• ONE-SEC	1 second.
• TEN-SEC	10 seconds.
<PROTOPMODE>	PROTOPMODE
<FRPROLE>	Indicates the fast ring protection enable mode for GE-XP/10GE-XP units involved in a protection scheme.
• MASTER	Role is of card primary of the ring.
• SLAVE	Role is of card subordinate of the ring.
<FRPSTATE>	Indicates the fast ring protection enable state.
• DISABLED	Disabled protection
• ENABLED	Enabled protection
• FORCED	Forced protection
<NEWSHELFID>	(Optional) New shelf identifier is used to change the value of the shelf identifier for the addressed shelf. The value must be different by one and can be in the range from two to eight. This field can only be changed if (in the same command) the SHELFROLE is equal to SC. Integer.
<PEERID>	The regeneration peer slot from the CHGRP section.
<PROTID>	(Optional) Protection group name. PROTID is a string.
<REGENNAME>	The name of a regeneration group. REGENNAME is a string.
<RETIME>	(Optional) Indicates the RETIME function for all the facilities on this card. The parameter type is ON_OFF (disable or enable an attribute). (Supported on the DS1/E1-56 card).
• N	Disable an attribute.

• Y	Enable an attribute.
<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Defaults to N, non-revertive.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<SWITCHWITHCRCALARM>	Switch the GZ card with CRC Alarms
<CRCTHR>	CRC threshold values beyond which alarms are raised. The available threshold values are 10E-2, 10E-3, and 10E-4.
<CRCPOLLINTRVL>	Interval of time after which the polling starts.
<CRCSOAKCNT>	Number of poll cycles during which defect is integrated. The value ranges from 3 to 10.
<USB>	Identifies the USB port where a passive unit is connected.
<CLOCKTYPE>	The parameter type is CLOCKTYPE. Sets the clock type.
• INTERNAL	Clock type set to INTERNAL.
• TNC	Clock type set to TNC.
<LEDSTATE>	LED state.
<LPBKTYPE>	
• FAC-DROP	
• TER-DROP	
• BACKPLANE-TER-DROP	
• BACKPLANE-FAC-DROP	
<PST>	(Optional) Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• Unlocked	In service

• Locked	Out of service
<SHELFROLE>	The role of the shelf in the context of the node. When it is omitted it defaults to SC. The parameter is SHELF_ROLE.
<SST>	(Optional) Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AutomaticInService	Automatic in service
• Disabled	Disabled
• Loopback	Loopback
• MismatchofEquipmentAlarm	Mismatch of equipment and attributes
• Maintenance	Maintenance mode
• OutOfGroup	Out of group
• SoftwareDownload	Software downloading
• Unassigned	Unassigned
• NotInstalled	Unequipped
<APCGAINLIMIT>	It is an enum which has the following values:
• Y	Enable the Gain limit check
• N	Disable the Gain limit check
<ALARMSUPPRESS>	It is an enum which has the values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress
<ALARMPROFILENAME>	Name of the profile created using the command ENT-ALMPROFILE
<FAPSPROTN>	Vlen range information. If the value is ALL, the range is between 1 to 4093, else the range is between two numeric values separated by "-" (hyphen)

ED-FAC

The Edit Facility (ED-FAC) command provisions the payload (or signal) type of facility. The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

Usage Guidelines

The DS3/EC1 values for the payload parameter are applicable to the following cards:

- DS3/EC1-48

Category

Ports

Security

Provisioning

Input Format

ED-FAC:[<TID>]:<SRC>:<CTAG>:::[PAYLOAD=<PAYLOAD>],
[CMDMDE=<CMDMDE>]:[<PST>[,<SST>]];

Input Example

ED-FAC:PETALUMA:FAC-3-9:2222:::PAYLOAD=E4-FRAMED,CMDMDE=FRCD:IS,AINS;

Input Parameters

<SRC>	Source access identifier from the FACILITY section.
<PAYLOAD>	The payload for the card. The parameter type is PAYLOAD, which identifies the payload type.
• DS3	DS3/T3 facility
• EC1	EC1 facility
• E3	E3 facility
• OC3	OC3 facility
• OC12	OC12 facility
• OC48	OC48 facility
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.

• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. Defaults to IS. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. Defaults to AINS. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• MT	Maintenance mode

ED-FIBERATTR

Description

Edits FiberAttributes on WSON for a WDMSIDE

Usage Guidelines

- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The ALL AID is invalid for this command.

Category

NCS

Security

Maintenance

Input Format

ED-FIBERATTR:[<TID>]:<aid>:<CTAG>:::[FIBERTYPE=<fibertype>],[LENGTH=<fiberlth>],[PMD=<pmd>],[INATTEN=<inatten>],[OUTATTEN=<outatten>],[CHSPACING=<chspacing>],[CHNUM=<chnum>],[DOMAIN=<domain>],[SPANVALIDATION=<spanval>],[OPAQUE=<opaque>] [:];

Input Example

ed-fiberattr::wdmside-a:1:::INATTEN=2000,domain=LOGO;

Input Parameters

Parameter	Description
AID	The AID used to access the WDM side of a Multiservice Transport Platform (MSTP) node.
• WDMSIDE-{UN-KNOWN,A,B,C,D,E,F,G,H}	MSTP side identifier.
FIBERTYPE	FiberType. This parameter is of type FiberType Enum. It can take the values-
• G652-SMF	
• ELEAF	
• True-Wave-RS	
• Dispersion-Shifted	
• Metro-Core	
• True-Wave-Plus	
• True-Wave-Minus	
• True-Wave-Classic	
• OPAQUE=TRUE/FALSE	

ED-FFP-<MOD2DWDMPAYLOAD>

The Edit Facility Protection Group for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 4GFC, 4GFICON, 8GFC, D1VIDEO, DV6000, DVBASI, ETRCLO, FSTE, GIGE, HDTV, ISC1, OTU2, OTU3, OTU4, OTU4C2, OTU1, ISC3STP1G, or ISC3STP2G (ED-FFP-<MOD2DWDMPAYLOAD>) command edits the operating parameters for a dense wavelength division multiplexing (DWDM) client facility.

Usage Guidelines

- Y-cable with bidirectional protection is applicable only for ISC3STP1G and ISC3STP2G payloads on the AR-MXP, AR-XP, and AR-XPE cards.
- Y-cable with unidirectional protection is applicable only for payloads other than ISC3STP1G and ISC3STP2G on the AR-MXP, AR-XP, and AR-XPE cards.
- The command does not support 3GVIDEO, SDSDI, HDSDI, and AUTO payloads on AR-MXP, AR-XP, and AR-XPE cards.

Category
DWDM

Security
Provisioning

Input Format
ED-FFP-<MOD2DWDMPAYLOAD>:[<TID>]:<AID>:<CTAG>:::[PROTID=<PROTID>],
[RVRTV=<RVRTV>],[RVTM=<RVTM>],[PSDIRN=<PSDIRN>][:];

Input Example
ED-FFP-OTU1:CISCO:VFAC-1-1-1:100:::PROTID=DC-METRO,RVRTV=N,RVTM=1.0,PSDIRN=BI;

Input Parameters

<AID>	Access identifier from the FACILITY section. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC AID.
<PROTAID>	The protection group identifier (protection group name). Defaults to the protecting port AID of the protection group. PROTAID can have a maximum length of 32 characters. It is a string.
<RVRTV>	Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. Only applies to path protection configurations. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. RVTM is not allowed to be set while “RVRTV” is N. Only applies to path protection configurations. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	Protection switch operation. Identifies the switching mode. Defaults to UNI. **Note** The MXP_2.5G_10G and TXP_MR_10G cards do not support bidirectional switching. The parameter type is UNI_BI (unidirectional switch operations).
• BI	Bidirectional protection switching

• UNI	Unidirectional protection switching

ED-FFP-<OCN_TYPE>

The Edit Facility Protection Group for OC3, OC12, OC48, OC192, or OC768 (ED-FFP-<OCN_TYPE>) command edits the optical facility protection.

Usage Guidelines

See Table 30-1 on page 30-1 for supported modifiers by platform.

Note • This command can be used on both protecting and working AIDs. Optimized 1+1 and related attributes are only applicable.

- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use a retrieve command obtain the current value.

Category

Protection

Security

Provisioning

Input Format

ED-FFP-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>:::[PROTID=<PROTID>],
[RVRTV=<RVRTV>],[RVTM=<RVTM>],[PSDIRN=<PSDIRN>],[VRGRDTM=<VRGRDTM>],
[DTGRDTM=<DTGRDTM>],[RCGRDTM=<RCGRDTM>][:];

Input Example

ED-FFP-OC3:PETALUMA:FAC-1-1:1:::PROTID=PROT_NAME,RVRTV=Y,RVTM=1.0,
PSDIRN=BI,VRGRDTM=0.5,DTGRDTM=1.0,RCGRDTM=1.0;

Input Parameters

<AID>	Access identifier from the FACILITY section.
<PROTAID>	The protection group identifier (protection group name). PROTAID can have a maximum length of 32 characters. It is a string.

<RVRTV>	Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	Protection switch operation. Indicates the switch mode. Defaults to UNI. The parameter type is UNI_BI (unidirectional and bidirectional switch operations).
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching
<VRGRDTM>	Verification guard timer. Only applicable to optimized 1+1. The parameter type is VERIFICATION_GUARD_TIMER (optimized 1+1 verification guard timer).
• 0.5	500 milliseconds
• 1.0	1 second
<DTGRDTM>	Detection guard timer. Only applicable to optimized 1+1. The parameter type is DETECTION _GUARD_TIMER (optimized 1+1 detection guard timer).
• 0.0	0 seconds
• 0.05	50 milliseconds
• 0.1	100 milliseconds
• 0.5	500 milliseconds
• 1.0 to 5.0	1 second to 5 seconds
<RCGRDTM>	Recovery guard timer. Only applicable to optimized 1+1. The parameter type is RECOVERY_GUARD_TIMER (optimized 1+1 recovery guard timer).
• 0.0	0 seconds
• 0.05	50 milliseconds
• 0.1	100 milliseconds

• 0.5	500 milliseconds
• 1.0 to 10.0	1 second to 10 seconds

ED-FFP-OCH

The Edit Facility Protection Group Optical Channel (ED-FFP-OCH) 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.

Usage Guidelines

None

Category

DWDM

Security

Provisioning

Input Format

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

Input Example

ED-FFP-OCH:VA454-22:CHAN-2-2:100:::PROTID="FIXEDPROTECTION",RVRTV=N,
RVTM=1.0,PSDIRN=BI;

Input Parameters

<AID>	Access identifier from the CHANNEL section.
<PROTAID>	The protection group identifier (protection group name). PROTAID is a string.
<RVRTV>	Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.

<RVTM>	Revertive time. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
<PSDIRN>	Protection switch operation. The parameter type is TRANS_MODE (G1000 transponder mode)
• BI	Bidirectional
• NONE	Not in transponder mode
• UNI	Unidirectional

ED-FFP-OTS

The Edit Facility Protection Group OTS (ED-FFP-OTS) command changes provisioning for the Y-cable or splitter protection group on the OTU2-XP card

Usage Guidelines

The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

Category

DWDM

Security

Provisioning

Input Format

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

Input Example

ED-FFP-OTS:VA454-22:CHAN-2-2:100:::PROTID="FIXED PROTECTION",RVRTV=N, RVTM=1.0,PSDIRN=BI;

Table 13-3 Parameter Support

Parameter	Description
<AID>	Access identifier from the CHANNEL section.

<PROTAID>	The protection group identifier (protection group name). PROTAID is a string.
<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	(Optional) Protection switch operation. The parameter type is TRANS_MODE, which is the G1000 transponder mode.
• BI	Bidirectional
• NONE	Not in transponder mode
• UNI	Unidirectional

ED-FOG

The Edit Fan-Out-Group (ED-FOG) command adds and deletes the members connecting to the CPT 50 panel and applied on the carrier packet transport (CPT) system.

Usage Guidelines

The interfaces that can be attached should be valid for the FOG. At least one interface must be always attached to the FOG.

Category

Equipment

Security

Provisioning

Input Format

ED-FOG[:<TID>]:<AID>:<CTAG>[:::ATTACH=<ATTACH>],[DETACH=<DETACH>],[QUEUEMODE=<QUEUEMODE>],[PBNAME=<PBNAME>];

Input Examples

ED-FOG::FOG-1-36:1:::ATTACH=FAC-2-2-1;

Input Parameters

<AID>	Access identifier from the EQPT section.
<ATTACH>	AID of the fabric and line card ports used as the Fan-out members. This is the AID of the interface to be attached to the FOG.
<DETACH>	AID of the fabric and line card ports used as the Fan-out members. This is the AID of the interface to be detached from the FOG.
<QUEUEMODE>	QUEUEMODE
• NOPRI	NOPRI
• STRICT	STRICT
<PBNAME>	PBNAME

ED-FSTE

The Edit Fast Ethernet (ED-FSTE) command edits the front-end port information of the fast (10/100 Mbps) Ethernet card.

Usage Guidelines

The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

The SELECTIVEAUTO parameter is applicable only when EXPSPEED and EXPDUPLEX are not set to AUTO mode.

Squelch can either be enabled or set to transparent on FE.

Note For the ML-100T-8 card, only the NAME parameter can be set.

Category

Ports

Security

Provisioning

Input Format

ED-FSTE:[<TID>]:<SRC>:<CTAG>:::[FLOW=<FLOW>],[EXPDUPLEX=<EXPDUPLEX>],[EXPSPEED=<EXPSPEED>],[SELECTIVEAUTO=<SELECTIVEAUTO>],[VLANCOS=<VLANCOSTHRESHOLD>],[IPTOS=<IPTOSTHRESHOLD>],[NAME=<NAME>],[CMDMDE=<CMDMDE>],[SUPPRESS=<SUPPRESS>],[SOAK=<SOAK>],[LIENABLE=<LIENABL

E>],[LITIMER=<LITIMER>],[FREQ=<FREQ>],[LOSSB=<LOSSB>],[CIR=<CIR>],[CBS=<CBS>],[EBS=<EBS>],[OSC=<OSC>],[AUTONEG=<AUTONEG>],[MTU=<MTU>],[SQUELCHMODE=<SQUELCH>]
,[ALARMSUPPRESS=<alarmsuppress>],[SYNCMSG=<SYNCMSG>],[ADMSSM=<ADMSSM>],[SENDDUS=<SENDDUS>],[ALARMPROFILENAME=<alarmprofilename>][:<PST>[,<SST>]];

Input Example

ED-FSTE:CISCO:FAC-1-1:123:::FLOW=Y,EXPDUPLEX=HALF,EXPSPEED=10_MBPS,
SELECTIVEAUTO=Y,VLANCOS=2,IPTOS=4,NAME="FSTEPORT",CMDMDE=FRCD,
SUPPRESS=Y,SOAK=32,LIENABLE=Y,LITIMER=200:IS,AINS;

Input Parameters

<AID>	Access identifier from the FACILITY section. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.
<FLOW>	Flow control. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<EXPDUPLEX>	Ethernet duplex mode. The parameter type is ETHER_DUPLEX (duplex mode).
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode
<EXPSPEED>	Ethernet speed. The parameter type is ETHER_SPEED (Ethernet speed).
• 100_MBPS	100 Megabits per second
• 10_GBPS	10 Gigabits per second
• 10_MBPS	10 Megabits per second
• 1_GBPS	1 Gigabits per second
• 40_GBPS	40 Gigabit per second
• AUTO_FDX	Enable auto negotiation with full duplex
• AUTO	Auto
<SELECTIVEAUTO>	(Optional) Selective auto-negotiation. The parameter is Y or N (enable or disable auto-negotiation). This indicates selective auto-negotiation of EXPSPEED and EXPDUPLEX only.

• Y	Enable selective auto-negotiation.
• N	Disable selective auto-negotiation.
<VLANCOS>	Priority queuing threshold based on VLAN class of service of incoming Ethernet packets. Default value is 1175. VLANCOS is an integer.
<IPTOS>	Priority queuing threshold based on IP type of service of incoming Ethernet packets. Default value is 368. IPTOS is an integer.
<NAME>	Name. NAME is a string.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<SUPPRESS>	Pre-service alarm flag for data ports.
• ON	Enable suppress.
• OFF	Disable suppress. Default is Off.
<SOAK>	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 to 192 intervals (maximum of 48 hours). SOAK is an integer.
<LIENABLE>	(Optional) Enable or Disable link integrity timer. Takes either Y or N. Value Y enables the LITIMER and value N disables LITIMER. By default LITIMER is enabled. **Note** The LIENABLE parameter is supported on only CE-1000-4 and CE-1000T-8 cards.
<LITIMER>	(Optional) Link integrity timer duration in the range between 200 ms and 10000 ms in multiples on 100 ms. **Note** The LITIMER parameter is supported on only CE-1000-4 and CE-1000T-8 cards.

<FREQ>	(Optional) The parameter type is OPTICAL_WLEN, which indicates the optical wavelength.
• 1310	Wavelength 1310.
• 1529.16	Wavelength 1529.16
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05
• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27
• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50
• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
<LOSSB>	(Optional) The parameter type is REACH, which indicates the reach values.
• 100GBASE-LR4	100GBASE-LR4
• 100GBASE-SR10	100GBASE-SR10
• 40GBASE-FR	40GBASE-FR
• 40GBASE-LR4	40GBASE-LR4
• 40GBASE-SR4	Reach supported on 40GIGE payload on CFP-LC card.
• 4I1-9D1F	4I1-9D1F
• C4S1-2D1	C4S1-2D1
• FE-BX	FE-BX
• FX	FX
• GE-BX	GE-BX
• GE-EX	GE-EX

• LX-10	LX-10
• TEN-GE-LRM	TEN-GE-LRM
• TEN-GE-ZR	TEN-GE-ZR
• VSR2000-3R2	VSR2000-3R2
• AUTOPROV	Auto provisioning
• CWDM	Coarse wavelength division multiplexing (CWDM)
• CX1	Reach CX1
• LR	Reach LR
• LR-2	Reach LR-2
• LX	Reach LX
• P1I1-2D1	Long haul 10G Ethernet with 1310 nm wavelength
• P1L1-1D2	Longhaul 2.5G Ethernet with 1550 nm wavelength
• P1L1-2D2	Long haul 10G Ethernet with 1550 nm wavelength
• P1S1-1D1	Shorthaul 2.5G Ethernet with 1310 nm wavelength
• P1S1-2D1	Short haul 10G Ethernet in 1310 nm wavelength
• SC	Reach SC
• SR	Reach SR
• TEN-GE-ER	10 GE extended range
• TEN-GE-LR	10 GE long range
• TEN-GE-SR	10 GE short range
<CIR>	Ingress committed information rate. This is a value between 0.0 and 100.0. Default value is 100.0.
<CBS>	Ingress committed burst bucket size.
4K	4 Kbit bucket size
8K	8 Kbit bucket size
16K	16 Kbit bucket size
32K	32 Kbit bucket size
64K	64 Kbit bucket size

128K	128 Kbit bucket size
256K	256 Kbit bucket size
512K	512 Kbit bucket size
1M	1 Mbit bucket size
2M	1 Mbit bucket size
4M	4 Mbit bucket size
8M	8 Mbit bucket size
16M	16 Mbit bucket size
<EBS>	Ingress excess burst bucket size.
<OSC>	To enable or disable the OSC on the port.

<AUTONEG>	Automatic negotiation. Defaults to Y. The parameter type is ON_OFF, which disables or enables an attribute.
<MTU>	(Optional) Maximum transport unit. The parameter type is MTU_TYPE, which indicates the maximum transport unit used by an Ethernet card. Defaults to 9600.
<SQUELCHMODE>	Shuts down the far-end laser in response to certain defects
• NONE	Transparent
• SQUELCH	Squelch is enabled
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<ALARMSUPPRESS>	It is an enum which has values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.

• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped
<SYNCMSG>	Indicates if the BITS facility supports synchronization status message. Default is Y. The parameter type is EXT_RING, which indicates if the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring supports the extended K1/K2/K3 protocol.
<ADMSSM>	(Optional) SSM selectable. Only applicable to BITS-IN when SSM is disabled. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
<SENDDUS>	The facility will send the DUS value as the sync status message for that facility.
• N	Disable an attribute
• Y	Enable an attribute
<ALARMPROFILENAME>	Name of the profile created using the command ENT-ALMPROFILE

ED-FTPSERVER

The Edit FTP Server (ED-FTPSERVER) command edits FTP server entries.

Usage Guidelines

This command is used to edit only the ENABLE and TIMER parameters.

Category

ENE

Security
Superuser

Input Format
ED-FTPSERVER:[<TID>]::<CTAG>:::IPADDR=<IPADDR>,[ENABLE=<ENABLE>], [TIMER=<TIMER>];

Input Examples
1. ED-FTPSERVER:::A:::IPADDR=10.20.30.40,ENABLE=Y,TIMER=30;
2. ED-FTPSERVER:TID::CTAG:::IPADDR="[3ffe:0501:0008:0000:0260:97ff:fe40:efab]",ENABLE=Y, TIMER=45;

Input Parameters

<IPADDR>	Specifies the IP address of the FTP server.
<ENABLE>	Specifies the enable/disable option of the FTP server. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<TIMER>	(Optional) Specifies the timeout value of the FTP server in minutes. Timer is an integer that can be set between 0 and 60 minutes.

ED-G1000

The Edit G1000 (ED-G1000) command edits the attributes related to a G1000 port.

Usage Guidelines
The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

Category
Ports

Security
Provisioning

Input Format
ED-G1000:[<TID>]:<AID>:<CTAG>:::[MFS=<MFS>],[FLOW=<FLOW>], [LOWMRK=<LOWMRK>],[HIWMRK=<HIWMRK>],[AUTONEG=<AUTONEG>],

[NAME=<NAME>],[CMDMDE=<CMDMDE>],[SOAK=<SOAK>],[LIENABLE=<LIENABLE>],
[LITIMER=<LITIMER>]:[<PST>[,<SST>]];

Input Example

ED-G1000:PETALUMA:FAC-1-1:CTAG:::MFS=1548,FLOW=Y,LOWMRK=20,HIWMRK=492,
AUTONEG=Y,NAME="G1000 PORT",CMDMDE=FRCD,SOAK=32,LIENABLE=Y
LITIMER=300:OOS,DSBLD;

Input Parameters

<AID>	Access identifier from the FACILITY section.
<MFS>	Maximum frame size. the parameter type is MFS_TYPE, which is the maximum frame size used by an Ethernet card.
• 1548	Normal frame size
• JUMBO	Jumbo frame size
<FLOW>	Flow control. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<LOWMRK>	Low watermark value. LOWMRK is an integer. Defaults to 25. LOWMRK is available in Software Release 4.0.1 and later.
<HIWMRK>	High watermark value. HIWMRK is an integer. Defaults to 485.
<AUTONEG>	Automatic negotiation. Defaults to Y. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<NAME>	Name. NAME is a string. Default is NULL. Maximum length is 32 characters.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.

• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<SOAK>	OOS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer. Defaults to 32.
<LIENABLE>	(Optional) Enable or Disable link integrity timer. Takes either Y or N. Value Y enables the LITIMER and value N disables LITIMER. By default LITIMER is enabled.
<LITIMER>	(Optional) Link integrity timer duration in the range between 200 ms and 10000 ms in multiples on 100 ms.
<ENCAP>	(Optional) Frame encapsulation type. The parameter type is ENCAP, which is the frame encapsulation type.
• GFP_F	GFP frame mode.
• GFP_T	GFP transparent mode.
• HDLC	HDLC frame mode.
• HDLC_LEX	HDLC LAN extension frame mode.
• HDLC_X86	HDLC X.86 frame mode.
• CBR	CBR mapping mode.
• GFP	GFP mapping mode.
• GMP	GMP mapping mode is supported only on 8GFC on 10x10G-LC card.
• TRP	Transparent mapping mode.
• HO_ODU4_V1	
• HO_ODU4_V2	
<PST>	Primary state. Defaults to OOS. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service

<SST>	Secondary state. Defaults to DSBLD. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ED-GFP

The Edit Generic Framing Protocol (ED-GFP) command edits GFP parameters CE-100T-8 AND FC_MR-4, CE-1000-4 cards.

Usage Guidelines

- For the FC_MR-4 card, the parameters AUTOTHGFPBUF, GFPBUF, and FILTER can be edited only if distance extension is enabled (set to B2B).
- On POS ports of CE-MR-10 card, FCS cannot be set to NONE when the encapsulation is set to GFP.

Category

Ports

Security

Provisioning

Input Format

ED-GFP:[<TID>]:<AID>:<CTAG>:::[FCS=<FCS>],[AUTOTHGFPBUF=<AUTOTHGFPBUF>], [GFPBUF=<GFPBUF>],[FILTER=<FILTER>];

Input Example

ED-GFP:PETALUMA:VFAC-1-0:123:::FCS=N,AUTOTHGFPBUF=Y,GFPBUF=16, FILTER=INGRESS;

Input Parameters

<AID>	Access identifier from the FACILITY section. VFAC AID is used for the CE-100T-8 cards . ML-100T-8 GFP management is done through the Cisco IOS command-line interface (CLI) and not through the TL1 interface.
<FCS>	Payload frame check sequence. The parameter type is FCS (frame check sequence).
• FCS-16	Frame check sequencing using 16 bits
• FCS-32	Frame check sequencing using 32 bits
• NONE	No frame check sequence
<AUTOTHGFPBUF>	The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<FILTER>	The parameter type is GFP_FILTER, which is the filter feature in GFP.
• INGRESS	Activate filter feature on the egress port.
• NONE	Turn off filter feature.

ED-HDLC

The Edit High-Level Data Link Control (ED-HDLC) command edits HDLC-related attributes for HDLC-encapsulated payloads.

Usage Guidelines

None

Category

Ports

Security

Provisioning

Input Format

ED-HDLC:[<TID>]:<SRC>:<CTAG>[:::FCS=<FCS>][CRC=<CRC>];

Input Example

ED-HDLC:PETALUMA:VFAC-1-1-PORT:CTAG:::FCS=FCS-16,CRC=CRC-32;

Input Parameters

<SRC>	Access identifier from the FACILITY section.
<FCS>	Payload frame check sequence. The parameter type is FCS (frame check sequence).
• FCS-16	Frame check sequence using 16 bits
• FCS-32	Frame check sequence using 32 bits
• NONE	No frame check sequence
<CRC>	Cyclic Redundancy Check. **Note** CRC is applicable only to ADM10G card.
• CRC-16	Cyclic Redundancy Check using 16 bits.
• CRC-32	Cyclic Redundancy Check using 32 bits.

ED-L2-ETH

The Edit Layer 2 Ethernet (ED-L2-ETH) command edits the layer 2 port information of GE-XP and 10GE-XP Ethernet cards.

Usage Guidelines

The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

Category

Ethernet

Security

Provisioning

Input Format

ED-L2-ETH[:<TID>]:<AID>:<CTAG>[:::NIMODE=<NIMODE>],[MACLEARNING=<MACLEARNING>],[INGRESSCOS=<INGRESSCOS>],[ETHERCETYPE=<ETHER_CE_TYPE>],[ETHERSTYPE=<ETHER_S_TYPE>],[ALWMACADDR=<ALW_MAC_ADDR>],[INHMACADDR=<INH_MAC_ADDR>],[BPDU=<BPDU>],[BRIDGESTATE=<BRIDGE_STATE>],[QNQMODE=<QNQMODE>],[TRNSPSVLAN=<TRNSP_SVLAN>],[NAME=<NAME>],[IGMPROUTER=<IGMPROUTER>],[AISACTION=<AISACTION>],[PROTACTION=<PROTACTION>],[CMDMDE=<CMDMD>],[IGMPONCVLAN=<IGMPONCVLAN>],[IGMPCVLAN=<IGMPCVLAN>],[DLF=<DLF>],[DLFTHRES=<DLFTHRES>],[MCAST=<MCAST>],[MCASTTHRES=<MCASTTHRES>],[BCAST=<BCAST>],[BCASTTHRES=<BCASTTHRES>],[CLRCRCALM=<CLRCRCALM>][:];

Input Example

"ETH-2-21-1::NIMODE=NNI,MACLEARNING=N,INGRESSCOS=0,ETHERCETYPE=8100,ETHERSTYPE=8100,BPDU=N,BRIDGESTATE=FORWARDING,ACTBRIDGESTATE=UNKNOWN,QNQMODE=SELECTIVE,IGMPROUTER=NONE,AISACTION=AIS-NONE,PROTACTION=PROT-SQUELCH,IGMPONCVLAN=N,DLF=N,DLFTHRES=0,MCAST=N,MCASTTHRES=0,BCAST=N,BCASTTHRES=0,CLRCRCALM=N:"

"ETH-2-22-1::NIMODE=NNI,MACLEARNING=N,INGRESSCOS=0,ETHERCETYPE=8100,ETHERSTYPE=8100,BPDU=N,BRIDGESTATE=FORWARDING,ACTBRIDGESTATE=UNKNOWN,QNQMODE=SELECTIVE,IGMPROUTER=NONE,AISACTION=AIS-NONE,PROTACTION=PROT-SQUELCH,IGMPONCVLAN=N,DLF=N,DLFTHRES=0,MCAST=N,MCASTTHRES=0,BCAST=N,BCASTTHRES=0,CLRCRCALM=Y:"

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the ETH section.
<NIMODE>	Identifies the Ethernet Network Interface Mode.
• NNI	(Default) Network-Network Interface Mode
• UNI	User-Network Interface Mode
<MACLEARNING>	MAC address learning mode. This activates the MAC address learning on the interface to avoid packet broadcasting.
• Y	Enables MAC learning
• N	Disable MAC learning
<INGRESSCOS>	Identifies the COS value set in the S-VLAN tag.
• 0 to 7	Set a Cos value

• TRUST	Use the customer COS
• VLAN	The COS to be provisioned on CVLAN basis (QinQ selective mode).
<ETHERCETYPE>	Identifies a customer foreseen Ethernet type. If the customer uses a non-standard Ethernet type, the incoming packets will be accepted only if the CE-VLAN Ethernet type matches this parameter.
<ETHERSTYPE>	Identifies a customer foreseen Ethernet type. If the customer uses a non-standard Ethernet type, the incoming packets will be accepted only if the CE-VLAN Ethernet type matches this parameter.
<ALWMACADDR>	Identifies the allowed MAC addresses filtered out by the L2 Ethernet port. Every single MAC address is in the format of aa-bb-cc-dd-ee-ff, where every digit is in a hexadecimal form.
<INHMACADDR>	Identifies the inhibited MAC addresses filtered out by the L2 Ethernet port. Every single MAC address is in the format of aa-bb-cc-dd-ee-ff, where every digit is in a hexadecimal form.
<BPDU>	BPDU (Bridge Protocol Data Unit) management mode; Drop/Passthrough BPDU tagged packets.
• Y	Enables the BPDU tag.
• N	Disables the BPDU tag.
<BRIDGESTATE>	Defines if the traffic is blocked on the port.
• Unknown	Unknown state
• Disabled	Disabled state
• Blocking	Blocking state
• Listening	Listening state
• Learning	Learning state
• Forwarding	Forwarding state
• Broken	Broken state
<QNQMODE>	This is used to represent the QinQ mode operations.
• Selective	The S-VLAN tag is added only on specified CE-VLANs. The other packets are dropped.

• Transparent	The S-VLAN tag is always performed where all packets having the S-VLAN-ID identified by TRNSPSVLAN parameter are allowed.
<TRNSPSVLAN>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<NAME>	(Optional) Name. NAME is a string.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped
<IGMPROUTE>	IGMP M Router port. Indicates the type of connection between this port and the IGMP M Router.
• STATIC	A static connection is present between this port and the IGMP M Router
• NONE	No connection is present

<AISACTION>	VLAN-AIS Action. Indicates what action take place on port when VLAN-AIS alarm is raisedValues
• AIS-SQUELCH	The port is squelched
• AIS-NONE	No action after VLAN-AIS
<PROTACTION>	Indicates the action that takes place on the standby port in the protection unit when a ONEPLUSONEL2 protection is activated.
• SQUELCH	The port is squelched.
• NONE	Ethernet traffic is blocked.
<IGMPCVLAN>	Indicates the customer VLAN value for IGMP on CVLAN.
<DLF>	To enable or disable storm control on DLFPC packet.
<DLFTHRES>	Indicates the DLFPC packet threshold value for storm control.
<MCAST>	To enable or disable the storm control on multicast packet.
<MCASTTHRES>	Indicates the multicast packet threshold value for storm control.
<BCAST>	To enable or disable the storm control on broadcast packet.
<BCASTTHRES>	Indicates the broadcast packet threshold value for storm control.
<CLRCRCALM>	Clears the DATA-CRC alarm.

ED-LM-EFM

The Edit Link Monitoring Ethernet in the First Mile (ED-LM-EFM) command edits the Ethernet in the First Mile (EFM) link monitoring parameters and the action associated with each of the parameters.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Ports

Security

Provisioning

Input Format

ED-LM-EFM:[<TID>]:<AID>:<CTAG>:::LMPARAM=<LMPARAM>,[LOWTH=<LOWTH>],[HIGHTH=<HIGHTH>],[ACTION=<ACTION>],[WINDOW=<WINDOW>];

Input Example

ED-LM-EFM::ETH-12-1-1:1:::LMPARAM=ERR-FRAME,LOWTH=20,HIGHTH=30,ACTION=DISABLE-PORT,WINDOW=40;

Input Parameters

<AID>	Access identifier from the ETH section.
<LMPARAM>	Name of the link monitoring parameter.
• ERR-FRAME	Error frames.
• ERR-FRAME-PRD	Error frame period.
• ERR-FRAME-SEC	Error frames second.
<LOWTH>	The lowest value of the link monitoring parameter. It is an integer.
<HIGHTH>	The highest value of the link monitoring parameter. It is an integer.
<ACTION>	Action to be taken when the link monitoring parameter crosses the HIGH value, which is set by the user. The value can be NONE or DISABLED.
<WINDOW>	This indicates the window associated with each of the link monitoring parameter (number of packets, number of frames or the timer). It is an integer.

ED-LMP

The Edit Link Management Protocol (ED-LMP) command edits the global LMP protocol attributes.

Usage Guidelines

This command is only available on platforms that support the LMP protocol.

Category

LMP

Security
Provisioning

Input Format
ED-LMP:[<TID>]::<CTAG>:::[ENABLED=<ENABLED>],[WDMEXT=<WDM>], [ROLE=<ROLE>], [LMPNODEID-<NODEID>][:];

Input Example
ED-LMP:PETALUMA::704:::ENABLED=Y,WDMEXT=Y,ROLE=PEER,LMPNODEID=198.133.219.25;

Input Parameters

<ENABLED>	LMP protocol status.
• Y	The protocol is enabled.
• N	The protocol is disabled.
• <WDM>	Determines if the LMP wave division multiplexing (WDM) extensions are in effect.
• Y	The LMP WDM extensions are in effect.
• N	The LMP WDM extensions are not in effect.
• <ROLE>	The role the LMP protocol is configured to play.
• OLS	The LMP protocol is configured to respond as an optical line system (OLS).
• PEER	The LMP protocol is configured to respond as a peer node.
• <NODEID>	LMP node ID. NODEID is a stable IP address that is always reachable if there is any connectivity to it. The default LMP node ID value is the IP address of the node.

ED-LMP-CTRL

The Edit Link Management Protocol Control Channel (ED-LMP-CTRL) command edits the LMP control channels.

Usage Guidelines
This command is only available on nodes where the LMP protocol is available and has been enabled.

Category
LMP

Security
Provisioning

Input Format
ED-LMP-CTRL:[<TID>]:<SRC>:<CTAG>:::[LOCALPORT=<LOCALPORT>],
[REMOTENE=<REMOTENE>],[REMOTEIP=<REMOTEIP>],[HELLO=<HELLO>],
[HELLOMIN=<HELLOMIN>],[HELLOMAX=<HELLOMAX>],[DEAD=<DEAD>],
[DEADMIN=<DEADMIN>], [DEADMAX=<DEADMAX>]:[<PST>][,<SST>];

Input Example
ED-LMP-CTRL:PETALUMA:CTRL-123:704:::LOCALPORT=FAC-1-1-1
,REMOTENE=15.15.15.115,REMOTEIP=126.0.0.1,HELLO=500,HELLOMIN=300,
HELLOMAX=5000,DEAD=12000,DEADMIN=2000,DEADMAX=20000:OOS,DSBLD;

Input Parameters

<SRC>	The LMP control channel AID values.
• CTRL-ALL	Specifies all the control channels.
• CTRL-{1-4}	Specifies an individual control channel.
<LOCALPORT>	The pathway that the LMP control channel will use to send and receive messages.
<REMOTENE>	Remote IP address used by the far-end LMP control channel.
<REMOTEIP>	Remote IP address used by the LMP control channel to send and receive messages.
<HELLO>	The time interval in which the LMP protocol sends HELLO messages.
<HELLOMIN>	The minimum amount of time within which the LMP control channels can send out HELLO messages to the remote node.
<HELLOMAX>	The maximum amount of time that the LMP control channel can wait between HELLO messages.
<DEAD>	Time interval an LMP control channel will wait for a HELLO message from the remote side before listing the control channel as down.
<DEADMIN>	The minimum amount of time that an LMP control channel can wait before listing the control channel status as down.
<DEADMAX>	The maximum amount of time that the LMP control channel can wait before listing the control channel as down.
<PST>	Primary state. This parameter indicates the current overall service condition of an entity.

• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ED-LMP-TLINK

The Edit Link Management Protocol Traffic Engineering (TE) Link (ED-LMP-TLINK) command edits the LMP TE link.

Usage Guidelines

This command can only be used on nodes that have the LMP protocol available and enabled.

Category

LMP

Security

Provisioning

Input Format

ED-LMP-TLINK:[<TID>]:<SRC>:<CTAG>:::REMOTEID=<REMOTE_ID>, REMOTETE=<REMOTE_TELINK>, [MUXCAP=<MUXCAP>]:[<PST>[,<SST>]];

Input Example

ED-LMP-TLINK:PETALUMA:TLINK-123:704:::REMOTEID=15.15.15.115,REMOTETE=123, MUXCAP=LAMBDA:OOS,DSBLD;

Input Parameters

<SRC>	LMP TE link AID values.
• TLINK-ALL	Specifies all the TE links.
• TLINK-{1-256}	Specifies an individual TE link.
<REMOTEID>	Remote node ID associated with the LMP TE link.
<REMOTETE>	Remote ID used by the far end LMP TE link.
<MUXCAP>	The muxponder capability of the LMP TE link.
• PKTSWITCH1	Packet Switching 1
• PKTSWITCH2	Packet Switching 2
• PKTSWITCH3	Packet Switching 3
• PKTSWITCH4	Packet Switching 4
• LAYER2	Layer 2 switching
• TDM	Time-division multiplexing (TDM) switching
• LAMBDA	Lambda switching
• FIBER	Fiber switching
<PST>	Primary state. This parameter indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ED-LMP-DLINK

The Edit Link Management Protocol Data Link (ED-LMP-DLINK) command edits the LMP data link.

Usage Guidelines

This command can only be used on nodes that have the LMP protocol available and enabled.

Category

LMP

Security

Provisioning

Input Format

ED-LMP-DLINK:[<TID>]:<SRC>:<CTAG>:::[LINKTYPE=<LINKTYPE>],TELINK=<TELINK>, REMOTEID=<REMOTEID>;

Input Example

ED-LMP-DLINK:PETALUMA:FAC-14-1-1:704:::LINKTYPE=PORT,TELINK=TLNK-45, REMOTEID=646631;

Input Parameters

<SRC>	Access identifier from the FACILITY section.
<LINKTYPE>	The type of LMP data link.
• PORT	Port data link
• COMPONENT	Component data link
<TELINK>	Used to map LMP data links to LMP TE links.
<REMOTEID>	The remote LMP data link ID.

ED-LNK

The Edit Link (ED-LNK) command edits an optical link state.

Usage Guidelines

The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

Categories
DWDM

Security
Provisioning

Input Format
ED-LNK:[<TID>]:<FROM>,<TO>:<CTAG>:::[CMDMDE=<CMDMDE>]:
[<PST>[,<SST>]];

Input Example
ED-LNK:PENNGROVE:BAND-6-1-TX,BAND-13-1-RX:114:::CMDMDE=CMDMDE:
IS,AINS;

Input Parameters

<FROM>	Identifier at one end of the optical link from the BAND section.
<TO>	Identifier at the other end of the optical link from the BAND section.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. **Note** PST is not supported for optical channel (OCH) provisioning. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service

<SST>	Secondary state. **Note** SST is not supported for OCH provisioning. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ED-LNKTERM

The Edit Provisionable Patchcord Termination (ED-LNKTERM) command edits the attributes of a provisionable patchcord that has already been created. Only the remote end attributes (REMOTENODE and REMOTELNKTERMID) can be edited.

Usage Guidelines

- No two provisionable patchcord terminations on a node can have the same remote end link termination information. An attempt to modify an existing provisionable patchcord termination while not following this restriction will lead to an error message being responsed.
- If the provisionable patchcord termination does not exist, an error message will be responsed.
- This command does not accept multiple and ALL AIDs.
- REMOTENODE is a string with a maximum length of 20 characters.

Category

Provisionable Patchcords

Security

Provisioning

Input Format

ED-LNKTERM:[<TID>]:<AID>:<CTAG>:::[REMOTENODE=<REMOTENODE>], [REMOTELNKTERMID=<REMOTELNKTERMID>];

Input Example

ED-LNKTERM::LNKTERM-1:CTAG:::REMOTENODE=172.20.208.226, REMOTELNKTERMID=25;

Input Parameters

<AID>	Access identifier from the LINKTERM section. Indicates a link (provisionable patchcord) termination on the local node.
<REMOTENODE>	The node where the other end of the provisionable patchcord resides. This can be an IP address or a valid TID. Defaults to the IP address of the local node/existing value. REMOTENODE is a string.
<REMOTELNKTERMID>	The corresponding provisionable patchcord termination on the remote node (as specified by the REMOTENODE parameter). Integer value within the range of 1 to 65535. Defaults to the existing value.

ED-MA-CFM

The Edit Maintenance Association Connectivity Fault Management (ED-MA-CFM) command edits the maintenance association present on the card.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.
- The ALL AID is invalid for this command.

Category

Equipment

Security

Provision

Input Format

ED-MA-CFM:[<TID>]:<AID>:<CTAG>:::MANAME=<MANAME>,SVLANID=<SVLANID>,[NEWMANAME=<NEWMANAME>],[NEWSVLANID=<NEWSVLNAID>],[CCENABLE=<CCENABLE>];

Input Example

ED-MA-CFM:454-156:SLOT-1:1:::MANAME=MANAME,SVLANID=4,NEWMANAME=NEWMA,NEWSVLANID=5;

Input Parameters

<AID>	Access identifier from the EQPT section.
<MANAME>	Maintenance Association Name. It is a string. The MA name length should not exceed more than 43 characters.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<CCENABLE>	Enable or disable Continuos Check messaging
• Y	Enable
• N	Disable
<NEWMANAME>	New name for Maintenance Association. It is a string.
<NEWSVLANID>	New service Vlan ID. It is an integer.

ED-MCAST

Edit Multicast attributes command is used to modify the Multicast VLAN Registration attributes.

Usage Guidelines

The default values for all optional parameters are NE default values. These values may not be the current value for a parameter. In order to obtain the current value use RTRV-XX command to retrieve them.

Error conditions:

- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The “ALL” AID is invalid for this command.

Category

ETHERNET

Security
Provisioning

Input Format
ED-MCAST[:<TID>]:<AID>:<CTAG>[:::MVRSTATE=<MVRSTATE>],[MVRSVLAN=<MVRSVLAN>],[MVRSTARTIP=<MVRSTARTIP>],[MVRIPRANGE=<MVRIPRANGE>],[IGMPONCVLAN=<IGMPONCVLAN>][:];

Input Example
ED-MCAST::SLOT-1-4:321:::MVRSTATE=Y,MVRSVLAN=46,MVRSTARTIP=230.64.72.57
,MVRIPRANGE=20:;

Input Parameters

<AID>	Equipment aids are used to access specific cards.
• ALL	It is only used for RTRV-INV, RTRV-EQPT, RTRV-ALM/COND-EQPT commands.
• SLOT-ALL	The NE equipment AIDs.
• SLOT[-{1-50}]-{1-6,12-17}	Individual equipment AID of the I/O card units or slots.
<MVRSTATE>	Multicast VLAN Registration status. Default values is - N
• Y	Enabled
• N	Disabled
<MVRSVLAN>	Define the SVLAN used to distribute the Multicast stream inside the Network. Default values is 0
<MVRSTARTIP>	Define the first IP Address of the Multicast IP Group.
<MVRIPRANGE>	MVR IP Range. Indicates the number of IP address starting from mvrStartIp used to identified the multicast IP group. It is a number in the range 0..255. Default values is 0
<IGMPONCVLAN>	To Enable IGMP on Customer VLAN.

ED-MCH

The Edit command edits the Media Channel.

Usage Guidelines

- . If the AID is invalid, an IIAC (invalid AID) error message is returned. The following AIDs are supported:
  - CLIENT cps type support FAC and VFAC AID type.
  - TRUNK cps type support CHAN AID type.
  - ADD cps type support CHAN, PCHAN and LINEWL AID type.
- The ALL AID is invalid for this command
- In case of 1WAY, unidirectional connection, SRC and DST are single AIDs. In case of 2WAY, bidirectional connection, SRC and DST are double AIDs. However, in case of CLIENT or TRUNK cpstype, src and dst are single AID and the connection is of type 2WAY because of bidirectional ports hence this rule is not applicable.
- If the RESTTYPE is REVERT, it is required to set the REVERTMODE and SOAK parameters.
- If the RESTTYPE is REVERT, it is mandatory to set the REVERTMODE parameter as MANUAL

Category

Ports

Security

Provisioning

Input Format

ED-MCH:[<TID>]:<src>:<CTAG>:::[CMDMDE=<cmdmde>][NAME=<name>],[CKTLABEL=<cktlabel>],[RESTTYPE=<resttype>],[REVERTMODE=<revertmode>],[SOAK=<HH-MM-SS>],[CKTPRIORITY=<cktpriority>],[PATHPOLICY=<pathpolicy>],[VALMODE=<valmode>],[VALZONE=<valzone>],[RESTVALMODE=<restvalmode>],[RESTVALZONE=<restvalzone>],[SRLGSTRICTCONSTRAINT=<srlgstrictconstraint>],[SRLGLOOSECONSTRAINT=<srlglooseconstraint>],[DIVERSITY=<diversity>],[RESTSRLGSTRICT=<restsrlgstrict>],[RESTSRLGLOOSE=<restsrlgloose>]:[<pst>[,<sst>]];

Input Example

Input Parameters

<AID>	Access identifier from the ETH section.
<NAME>	Circuit name
<CKTLABEL>	Circuit label
<DIVERSITY>	This parameter is a combination of three values, which are Service ID, Diversity type and ISLOOSE (Example: 1531/SRLG/Y&1533/NODE/N) In the above example, there are two entries where

- The first value is the serviceID, which is unique at the node level.
- The second value is the Diversity type, which is one of the following values:

  LINK

  NODE

  SRLG
- The third value is ISLOOSE flag. The flag value is Y for LOOSE and N for not LOOSE (STRICT).

ED-MCHG

The Edit command edits the Media Channel Group.

Usage Guidelines

- . If the AID is invalid, an IIAC (invalid AID) error message is returned. The following AIDs are supported:
  - CLIENT cps type support FAC and VFAC AID type.
  - TRUNK cps type support CHAN AID type.
  - ADD MCHG type support CHAN, PCHAN and LINEWL AID type.
- The ALL AID is invalid for this command
- In case of 1WAY, unidirectional connection, SRC and DST are single AIDs. In case of 2WAY, bidirectional connection, SRC and DST are double AIDs. However, in case of CLIENT or TRUNK MCHGtype, src and dst are single AID and the connection is of type 2WAY because of bidirectional ports hence this rule is not applicable.
- If the RESTTYPE is REVERT, it is required to set the REVERTMODE and SOAK parameters.
- If the RESTTYPE is REVERT, it is mandatory to set the REVERTMODE parameter as MANUAL
- SPECTRUMPOLICY parameter is supported.

Category

Ports

Security

Provisioning

Input Format

ED-MCHG::<AID>:<CTAG>:::[NAME=<name>],[CKTLABEL=<cktlabel>],[FREQ=<freq>],[WIDTH=<width>],[ISMANDATORYFREQ=<ismandatoryfreq>],[CONTAINEDSERVICES=<containedservices>],[SRLGSTRICTCONSTRAINT=<srlgconstraint>],[SRLGLOOSECONSTRAINT=<srlglooseconstraint>],[DIVERSITY=<diversity>]

Input Example

ED-mchg::mchg-1:1:::DIVERSITY=10/LINK/y;

tcc29 2021-02-17 12:32:50

M 1 COMPLD

;

Input Parameters

<AID>	Access identifier from the ETH section.
<NAME>	Circuit name
<CKTLABEL>	Circuit label
<FREQ>	Optical Frequency
<WIDTH>	Width
<ISMANDATORYFREQ>	This value can be True or False.
<CONTAINED SERVICES>	Contained Media Channels. Format- ServiceId1&serviceId2 etc. Node Id which is part of the contained services will be added internally by TL1 as the node id of the MCHG
<SRLGSTRICTCONSTRAINT>	SRLG Strict Constraint, Optional. Each SRLG Long value separated by &
<SRLGLOOSECONSTRAINT>	SRLG LOOSE Constraint, Optional. Each SRLG Long value separated by &
<DIVERSITY>	This parameter is a combination of three values, which are Service ID, Diversity type and ISLOOSE (Example: 1531/SRLG/Y&1533/NODE/N) In the above example, there are two entries where • The first value is the serviceID, which is unique at the node level. • The second value is the Diversity type, which is one of the following values: LINK NODE

	SRLG • The third value is ISLOOSE flag. The flag value is Y for LOOSE and N for not LOOSE (STRICT).

ED-MIP-CFM

The Edit Maintenance Intermediate Point Connectivity Fault Management (ED-MIP-CFM) command edits the maintenance intermediate points on the port.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Ports

Security

Provisioning

Input Format

ED-MIP-CFM:[<TID>]:<AID>:<CTAG>:::VLANID=<VLANID>,LEVEL=<LEVEL>;

Input Example

ED-MIP-CFM::ETH-1-1-1:1:::VLANID=2,LEVEL=3;

Input Parameters

<AID>	Access identifier from the ETH section.
<VLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<LEVEL>	This indicates the level of the maintenance domain. The value ranges from 0 to 7.

ED-NE-GEN

The Edit Network Element General (ED-NE-GEN) command edits the node attributes of the NE.

Usage Guidelines

- 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.
- An existing NTP timing source can be removed by setting the address to 0.0.0.0.
- The maximum length of IPADDR and DEFRTR is 20 characters. The default value is the local IP address and default router.
- The maximum length of IPMASK is 18 characters. The default is the mask of the local IP address.
- ETHIPADDR and ETHIPMASK are disabled in this command. ETHIPADDR and ETHIPMASK are used to show the Ethernet interface address and mask. Both default to the nodes' IP address and masks.
- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

  - The Sock Proxy is disabled by default. Use ED-NE-GEM command to enable the Sock Proxy on a node.
  - Use SHOWPROXYDETAILS debug CORBA command to find the proxy details of node. It provides three parameters that include Proxy, Firewall and Crafts Access.

- When proxy type is ENE:
  - PROXY = ON
  - FIREWALL = ON
  - CRAFT ACCESS = ON
- When proxy type is GNE:
  - PROXY = ON
  - FIREWALL = ON
  - CRAFT ACCESS = OFF
- When proxy type is SOCK-PROXY:
  - PROXY = ON
  - FIREWALL = OFF
  - CRAFT ACCESS = OFF

    - When ENABLESOCKSPROXY is FALSE:

  - PROXY = OFF
  - FIREWALL = OFF
  - CRAFT ACCESS = OFF
- An existing NTP and Backup NTP timing source can be removed by setting the address to 0.0.0.0.

Caution Changing the IPADDR, IPMASK, or IIOPPORT will cause a reset of the control card.

Note OSI parameters are not supported in Release 9.0 and 9.1.
TL1 does not support deleting of NODE ALIAS.

Category
Node Level

Security
Provisioning

Input Format
ED-NE-GEN[:<TID>]::<CTAG>[:::NAME=<name>],[IPADDR=<ipaddr>],[IPMASK=<ipmask>],[DEFRTR=<defrtr>],[IPV6ADDR=<ipv6addr>],[IPV6PREFLEN=<ipv6preflen>],[IPV6DEFRTR=<ipv6defrtr>],[IPV6ENABLE=<ipv6enable>],[IIOPPORT=<iiopport>],[NTP=<ntp>],[SUPPRESSIP=<suppressip>],[MODE=<mode>],[MSPUBVLANID=<mspubvlanid>],[MSINTLVLANID=<msintlvlanid>],[SERIALPORTECHO=<serialportecho>],[OSIROUTINGMODE=<osiroutingmode>],[OSIL1BUFSIZE=<osil1bufsize>],[OSIL2BUFSIZE=<osil2bufsize>],[BKUPNTP=<bkupntp>],[SYSTEMMODE=<systemmode>],[FORCEENABLE=<forceenable>],[ALARMSUPPRESS=<alarmsuppress>],
[NODEALIAS=<nodealias>],[LATITUDE=<latitude>],[LONGITUDE=<longitude>],[LCDSETTING=<lcdsetting>],[ENABLESOCKSPROXY=<enablesocksproxy>],[PROXYTYPE=<proxytype>],[POSITIONDESC=<positiondesc>],[ALARMPROFILENAME=<alarmprofilename>],[COOLINGPROFILECTRL=<coolingprofilectrl>],[FORWARDDHCPENABLE=<forwarddhcpenable>],[FORWARDDHCPIP=<forwarddhcpip>],[CONTACT=<contact>];

Input Example
ED-NE-GEN:CISCO::123:::NAME=NODENAME,IPADDR=192.168.100.52,
IPMASK=255.255.255.0,DEFRTR=192.168.100.1,IPV6ADDR="[3ffe:0501:0008:0000:0260:97ff:efab]",IPV6PREFLEN=112,IPV6DEFRTR="[3ffe:0501:0008:0000:0260:97ff:fe40:efab]",
IPV6ENABLE=Y,IIOPPORT=57790, NTP=192.168.100.52, SUPPRESSIP=NO,
MODE=SINGLESHELF,MSPUBVLANID=1,MSINTLVLANID=5,SERIALPORTECHO=Y,OSIROUTINGMODE=ES,OSIL1BUFSIZE=512,OSIL2BUFSIZE=512,BKUPNTP=10.1.1.2,FORCEENABLE=YES;;

Input Example for Connection Verification
ed-ne-gen:::1:::FAILILTHR=8.2,DEGILTHR=3.2;
ed-ne-gen:::1:::NODECVSTATUS=FALSE;

Input Parameters

<NAME>	Node name. NAME is a string. Defaults to NULL.
<IPADDR>	Node IP address. IPADDR is a string.
<IPMASK>	Node IP mask. IPMASK is a string.
<DEFRTR>	Node default router. DEFRTR is a string.
<IPV6ADDR>	Specifies the IPv6 address of the NE. IPV6ADDR is a string. **Note** IPV6ADDR parameter can be set only if IPV6ENABLE parameter is set to Y

<IPV6PREFLEN>	Specifies the prefix length for the IPv6 address of the NE. IPV6PREFLEN is an integer
<IPV6DEFRTR>	Specifies the IPv6 default router address for the NE. IPV6DEFRTR is a string
<IPV6ENABLE>	Specifies if the IPv6 enable mode for the NE is enabled or disabled.
• Y	Indicates that IPV6 mode is enabled.
• N	Indicates that IPV6 mode is disabled.
<IIOPPORT>	Node IIOP port. IIOPPORT is an integer. Defaults to 57790.
<NTP>	Node NTP timing origin address. NTP is a string. Defaults to 0.0.0.0.
<SUPPRESSIP>	Suppress the IP display.
• NO	No
• YES	Yes
<MODE>	(Optional) Indicates the AID mode to access shelf identifier objects. Defaults to SINGLESHELF. This field is always set to MULTISHELF in the case of DWDM nodes with more than one shelf managed. Parameter type is SHELF_MODE which is the NE mode.
• SINGLESHELF	The NE contains only one shelf and the AID representation does not consider the shelf identifier for command requests/response and autonomous reports.
• MULTISHELF	The AID representation considers the shelf identifier for command requests/response and autonomous reports. This means the NE has more than one shelf configured or the user wants to use the new AID style.
• MULTISHELFETH	The AID representation considers the shelf identifier for command requests/response and autonomous reports. This means the NE has more than one shelf configured or the user wants to use the new AID style. The shelves are connected by means of an external Ethernet switch.
<MSPUBVLANID>	Public VLAN ID used by the node controller to communicate with the external network. The VLAN ID can be in the range of 1 to 4094. But for M6 shelf, you cannot modify the MSPUBVLANID value. The MSPUBVLANID value is 1.
<MSINTLVLANID>	Internal VLAN ID used by the node controller to communicate with the Subtending shelves. The VLAN ID can be in the range of

	1 to 4094. But for M6 shelf, you cannot modify the MSINTLVLANID value. The MSINTLVLANID value is 2.
<SERIALPORTECHO>	Indicates if echo is turned on for the TL1 serial port sessions.
• Y	Echo is turned on.
• N	Echo is turned off.
<OSIROUTINGMODE>	Indicates the routing mode of the node.
• ES	Provisions the node as an OSI ES. The ONS node performs all ES functions and relies upon an IS for communication with other IS nodes inside and outside the ES OSI area.
• IS1	Provisions the node as an OSI IS. The ONS node performs all IS functions including routing data between ISs and ESs, between networks, and between parts of a network.
• IS2	The ONS node performs all IS functions. It communicates with other IS and ES nodes within an OSI area. It also broadcasts ISHs to IS nodes in other areas to which it is connected.
<OSIL1BUFSIZE>	Level 1 Link State Protocol Data Unit (LSP) buffer size. The default is 512.
<OSIL2BUFSIZE>	Level 2 Link State Protocol Data Unit (LSP) buffer size. The default is 512.
<BKUPNTP>	Indicates that the Secondary NTP server is used as backup for primary.
<SYSTEMMODE>	Indicates the system mode that can be one of the following: • SONET • SDH
<FORCEENABLE>	(Optional) Indicates whether the command should proceed even if there are Database Out of Sync alarms. The available options are: • YES • NO
<ENABLESOCKSPROXY>	Boolean Parameter to set Socks Proxy as True/False. It allows user to enable or disable Sock Proxy settings on a node.
<PROXYTYPE>	Enum for Proxy type values. It allows user to choose the type of proxy. By default, the proxy is set to GNE. The available options are: • ENE (External Network Element) • GNE (Gateway Network Element)

	• SOCKS-PROXY
<DEGILTHR>	Configure the degrade Insertion Loss (IL) threshold value. If there is at least one patch cord that has an IL higher than this threshold, the IPC-VERIFICATION-DEGRADE alarm is raised.
<FAILILTHR>	Configure the fail IL threshold value. If there is at least one patch cord that has an IL higher than this threshold, the IPC-VERIFICATION-FAIL alarm is raised.
<NODECVSTATUS>	Enable or disable connection verification (CV) on the node. The available options are: • TRUE—Enable CV • FALSE—Disable CV
<ALARMSUPPRESS>	It is an enum which has the values: • Y— Active alarm suppress • N—Deactivate alarm suppress
<ALARMPROFILENAME>	Name of the profile created using the command ENT-ALMPROFILE
<POSITIONDESC>	The description of position like latitude & Longitude
<COOLINGPROFILECTRL>	This is an enum whose values are : • AUTO—By setting this value, TL1 will not allow to modify cooling profile using SET-COOLINGPROFILE • MANUAL—Allow to modify cooling profile using SETCOOLINGPROFILE
<FORWARDDHCPENABLE>	This is an enum whose values are: • Y—Enable to modify the FORWARDDHCPIP • N—Not allowed to modify FORWARDDHCPIP
<FORWARDDHCPIP>	DHCP IP Address

ED-NE-PATH

The Edit Network Element Path (ED-NE-PATH) command edits the path attributes of the NE.

Usage Guidelines

The default value for an optional parameter is the NE default value.

Category

System

Security
Provisioning

Input Format
ED-NE-PATH:[<TID
>]::<CTAG>:::[PDIP=<PDIP>],[XCMODE=<XCMODE>];

Input Example
ED-NE-PATH:::CTAG:::PDIP=Y,XCMODE=MIXED;

Input Parameters

<PDIP>	Flag used to indicate whether PDI-P should be generated on the outgoing VT structured STSs. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<XCMODE>	Cross-connect mode. The parameter type is XCMODE, which is applicable only to a node with cross-connect cards (XC-VXC-10G or XC-VXC-2.5G, for example) that support cross-connect mode change.
• MIXED	Both VT1 and VT2 cross-connects can be provisioned on the node.
• VT1	Only VT1 cross-connects can be provisioned on the node.
• VT2	Only VT2 cross-connects can be provisioned on the node.

ED-NE-SYNCN

The Edit Network Element Synchronization (ED-NE-SYNCN) command edits the synchronization attributes of the NE.

Usage Guidelines
The existing external and line modes have the same functionality:

- 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.

Note Although mixed mode timing is supported in this release, it is not recommended. Refer to the *Cisco ONS SDH and Cisco ONS 15600 SONET TL1 Reference Guide* for more information.

Category
Synchronization

Security
Provisioning

Input Format
ED-NE-SYNCN:[<TID>]:[<AID>]:<CTAG>:::[TMMD=<TMMD>],[SSMGEN=<SSMGEN>],
[QRES=<QRES>],[RVRTV=<RVRTV>],[RVTM=<RVTM>];

ED-NE-SYNCN:[<TID>]:[<AID>]:<CTAG>:::[TMMD=<TMMD>],[RVRTV=<RVRTV>],
[RVTM=<RVTM>],[SYSTMN=<SYSTMN>];

Input Example
ED-NE-SYNCN:PETALUMA::123:::TMMD=LINE,SSMGEN=GEN1,QRES=ABOVE-PRS,
RVRTV=Y,RVTM=8.0,SYSTMN=SONET;

ED-NE-SYNCN:PETALUMA::123:::TMMD=LINE,RVRTV=Y,RVTM=8.0,SYSTMN=SONET;

Input Parameters

<AID>	The node or shelf access identifier from the SHELF section. If omitted it addresses the node or first shelf of the node. Must not be null.
<TMMD>	Timing mode. A null value is equivalent to ALL. Defaults to EXTERNAL. The parameter type is TIMING_MODE, which is the timing mode for the current node.
• 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.
<SSMGEN>	Synchronization status message set. Defaults to GEN1. A null value is equivalent to ALL. The default is ABOVE-STU. The parameter type is SYNC_GENERATION (synchronization status message set generation).
• GEN1	First generation SSM set
• GEN2	Second generation SSM set
<QRES>	Quality of the RES. A null value is equivalent to ALL. Defaults to DUS. The parameter type is SYNC_QUALITY_LEVEL, which is the network synchronization quality level.
• 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.
• 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. This is default setting.
• ABOVE-TNC	Between TNC and ST2. Valid setting only for 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.
<RVRTV>	Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. A null value is equivalent to ALL. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. A null value is equivalent to ALL. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<SYSTMN>	(ONS 15454 only) Identifies the system timing standard used by the node.
• SONET	SONET timing standard
• SDH	SDH timing standard

ED-OCH

The Edit Optical Channel (ED-OCH) command edits the attributes (service parameters) and state of an OCH facility. Refer to the *Cisco ONS SDH and Cisco ONS 15600 SONET TL1 Reference Guide* for specific card provisioning rules.

Usage Guidelines

- Primary=OOS and secondary=AINS states do not apply to Ethernet mode.
- Disable all the ports, before you change the card mode from LAN to WAN mode.
- The SQUELCHMODE parameter is added to OCH interfaces of 100G-LC-C, 10x10G-LC, and CFP-LC cards.
- CDLOW and CDHIGH parameters are interdependant. You must set both the parameters to edit either of them.
- CDLOW is always less than or equal CDHIGH in the range of -70000 to + 70000.

Category

DWDM

Security

Provisioning

Input Format

ED-OCH[:<TID>]:<aid>:<CTAG>[:::EXPWLEN=<expwlen>],[VOAATTN=<voaattn>],[VOAPWR=<voapwr>],[CALOPWR=<calopwr>],[NAME=<portname>],[OSDBER=<sdber>],[GCC=<gcc>],[GCCRATE=<gccrate>],[DWRAP=<drwap>],[FEC=<fec>],[PAYLOADMAP=<payloadmap>],[SOAK=<soak>],[LOSSB=<lossb>],[CMDMDE=<cmdmde>],[PEERID=<peerid>],[REGENNAME=<regenname>],[PORTMODE=<portmode>],[ODUTRANSMODE=<odutransmode>],[ERRORDECORRELATOR=<errordecorrelator>],[FCS=<fcs>],[PPR=<ppr>],[TRIGTH=<trigth>],[RVRTTH=<rvrtth>],[TRIGWINDOW=<trigwindow>],[RVRTWINDOW=<rvrtwindow>],[OVRCLK=<ovrclk>],[RXWLEN=<rxwlen>],[SQUELCHMODE=<squelchmode>],[FECALMSUPRESS=<fecalmsupress>],[SYNCMSG=<syncmsg>],[SENDDUS=<senddus>],[ADMSSM=<admssm>],[CDLOW=<cdlow>],[CDHIGH=<cdhigh>],[VOATXPOWER=<voatxpower>],[TXLASERSHUTDN=<txlasershutdn>],[PSM=<psm>],[ALARMSUPPRESS=<alarmsuppress>],[SQUELCHHOLDOFFTIMER=<squelchtimer>],[ALARMPROFILENAME=<alarmprofilename>],[<interopmode>][:<pst>[,<sst>]];

Syntax changes only for FLEX

ED-OCH[:<TID>]:<AID>:<CTAG>[:::EXPWLEN=<EXPWLEN>],[VOAATTN=<VOAATTN>],[VOAPWR=<VOAPWR>],[CALOPWR=<CALOPWR>],[NAME=<PORTNAME>],[OSDBER=<SDBER>],[GCC=<GCC>],[GCCRATE=<GCCRATE>],[DWRAP=<DRWAP>],[FEC=<FEC>],[PAYLOADMAP=<PAYLOADMAP>],[SOAK=<SOAK>],[LOSSB=<LOSSB>],[CMDMDE=<CMDMDE>],[PEERID=<PEERID>],[REGENNAME=<REGENNAME>],[PORTMODE=<PORTMODE>],[ODUTRANSMODE=<ODUTRANSMODE>],[ERROR-

DECORRELATOR=<ERRORDECORRELA-
TOR>],[FCS=<FCS>],[PPR=<PPR>],[TRIGTH=<TRIGTH>],[RVRTTH=<RVRTTH>],[TRIGWINDOW=<TRIGWIN-
DOW>],[RVRTWINDOW=<RVRTWINDOW>],[OVRCLK=<OV-
RCLK>],[RXWLEN=<RXWLEN>],[SQUELCHMODE=<SQUELCHMODE>],[FECALMSUPRESS=<FECALMSUPRESS
>],[SYNCMSG=<SYNCMSG>],[SENDDUS=<SENDDUS>],[ADMSSM=<AD-
MSSM>],[CDLOW=<CDLOW>],[CDHIGH=<CDHIGH>],[VOATXPOWER=<VOATXPOWER>],[TXLA-
SERSHUTDN=<TXLASERSHUTDN>],[GRIDLESS=<GRIDLESS>],[FREQ=<FREQ>],[PSM=<psm>,][ALARMSUP-
PRESS=<alarmsuppress>,][SQUELCHHOLDOFFTIMER=<squelchtimer>][ALARMPROFILENAME=<alarmprofile-
name>][<interopmode>] [:<PST>[,<SST>]]

Input Example

ED-OCH:CISCO:CHAN-6-2:114:::EXPWLEN=1530.32,NAME="NYLINE",GCC=Y,
GCCRATE=192K,OSDBER=1E-6,DWRAP=Y,FEC=STD,PAYLOADMAP=ASYNCH,
SOAK=10,CMDMDE=FRCD:IS,AINS;

ED-OCH::CHAN-2-2:1:::CDLOW=-6000,CDHIGH=8000,VOATXPOWER=-9.08,TXLASERSHUTDN=Y;

Input Parameters

<AID>	Access identifier from the CHANNEL section.
<EXPWLEN>	(Optional) Optical wavelength for this port. Applicable only to the following types of cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexer and demultiplexer cards, and optical add/drop multiplexing (OADM) cards. The parameter type is OPTICAL_WLEN, which is the optical wavelength.
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1528.77	Wavelength 1528.77
• 1529.16	Wavelength 1529.16
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33

• 1530.72	Wavelength 1530.72
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35

• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.11	Wavelength 1548.11
• 1548.51	Wavelength 1548.51
• 1548.91	Wavelength 1548.91
• 1549.32	Wavelength 1549.32
• 1549.72	Wavelength 1549.72
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72

• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05

• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27
• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50
• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86

• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57

• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88

• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<VOAATTN>	(Optional) The value of calibrated attenuation for the VOA expressed in dBm. The range is 0.0 to +30.0. VOAATTN is a float.
<FCS>	(Optional) First Circuit Startup. An automatic channel startup that operates the VOA when the light is detected on the ingress port.
• Y	Automatic Channel startup enabled.
• N	Automatic Channel startup disabled.
<VOAPWR>	(Optional) The value of calibrated output power that the VOA is going to set as a result of its attenuation. VOAPWR is a float.
<CALOPWR>	(Optional) The value of the calibrated optical power expected for the line added to the calculated value, which equals the total expected output power. Expressed in dBm. Defaults to 0 dBm. CALOPWR is a float.
<NAME>	(Optional) Port name. PORTNAME is a string.
<OSDBER>	OTN SDBER. Can only be provisioned on the working port. Defaults to 1E-7 Parameter type is SD_BER—the threshold for declaring signal degrade on a facility or path
• 1E-5	SDBER is 1E-5
• 1E-6	SDBER is 1E-6
• 1E-7	SDBER is 1E-7
• 1E-8	SDBER is 1E-8
• 1E-9	SDBER is 1E-9

<GCC>	Identifies the Generic communication channel (GCC) connection of the port.
• Y	GCC can be utilized
• N	GCC cannot be utilized
<GCCRATE>	(Optional) The data rate of the GCC traffic. The default is 192 Kbps. For MXP_2.5G_10G and TXP_MR_10G cards, this applies only to the DWDM port. The parameter type is GCCRATE, which is the data rate of the GCC traffic.
• 192K	192 Kbps
• 400K	400 Kbps
• 576K	576 Kbps
• 1200K	1200 Kbps
<DWRAP>	(Optional) The ITU-T G.709 monitoring digital wrapper. It is either on or off. The system default is ON. For MXP_2.5G_10G and TXP_MR_10G cards, this applies only to the DWDM port. The parameter type is ON_OFF (disable or enable an attribute). To enable ITU-T G.709 monitoring, there should be no GCC on the DWDM port and the payload (in which the card is configured) should not be UNFRAMED. To disable ITU-T G.709 monitoring, there should be no GCC on the DWDM port, the FEC should be turned to off, there should be no overhead circuit created on the DWDM port, and none of the client ports on the card should be part of a Y-cable protection group (muxponder only).
• N	Disable an attribute.
• Y	Enable an attribute.
<FEC>	(Optional) Forward error correction. It can be enabled only if ITU-T G.709 monitoring is turned ON. It is either off or enabled in standard or enhanced mode. The system default is standard FEC enabled. The FEC level PM and thresholds apply if the FEC is turned ON. The parameter type is FEC_MODE, which specifies the type of forward error correction.
• ENH	Enhanced FEC is enabled.
• ENH-I4	Enhanced FEC 1.4 is enabled.
• ENH-I7	Enhanced FEC 1.7 is enabled.

• ENH-20	20 % Enhanced FEC supported on fixed trunk port of 100G-LC-C card.
• HG-7	High Gain 7% FEC.
• OFF	FEC is disabled.
• STD	Standard FEC is enabled.
• SD-20	
• SD-7	
<PRE-FEC-PSM>	The parameter type is PROACTIVE_PROT.
• N	Proactive protection is disabled.
• Y	Proactive protection is enabled.
<PAYLOADMAP>	(Optional) The type of payload mapping. It can be enabled only if ITU-T G.709 monitoring is turned ON and FEC is enabled. The parameter type is PAYLOAD_MAPPING, which is the payload mapping mode.
• ASYNCH	Asynchronous mapping mode
• ODU	ODU multiplex structure mode
• SYNCH	Synchronous mapping mode
• N	Disable an attribute.
• Y	Enable an attribute.
• NOOPU2FIXEDSTUFF	Mapping with no FIXEDSTUFF
<SOAK>	(Optional) Locked-AutomaticInService to Unlocked transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer.
<LOSSB>	The parameter type is REACH which indicates the reach values.
• 100GBASE-LR4	100GBASE-LR4
• 100GBASE-SR10	100GBASE-SR10
• 40GBASE-FR	40GBASE-FR
• 40GBASE-LR4	40GBASE-LR4
• 40GBASE-SR4	Reach supported on 40GIGE payload on CFP-LC card.

• 4I1-9D1F	4I1-9D1F
• AUTOPROV	Autoprovisioning
• C4S1-2D1	C4S1-2D1
• CWDM-40KM	CWDM 40 kilometers.
• CX	Reach CX
• CX1	Reach CX1
• DX	Reach DX
• FE-BX	FE-BX
• FX	FX
• GE-BX	GE-BX
• GE-EX	GE-EX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• LX-10	LX-10
• P1I1-2D1LX-10	Long haul 10G Ethernet with 1310 nm wavelength
• P1L1-1D2	Longhaul 2.5G Ethernet with 1550 nm wavelength
• P1L1-2D2	Long haul 10G Ethernet with 1550 nm wavelength
• P1S1-1D1	Shorthaul 2.5G Ethernet with 1310 nm wavelength
• P1S1-2D1	Short haul 10G Ethernet in 1310 nm wavelength

• SC	Reach SC
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• TEN-GE-ER	10 GE extended range
• TEN-GE-LR	10 GE long range
• TEN-GE-LRM	
• TEN-GE-SR	10 GE short range
• TEN-GE-ZR	
• ULH	Reach ULH
• VSR	Reach VSR
• VSR2000-3R2	
• VX	Reach VX
• ZX	Reach ZX
<CMDMDE>	(Optional) Command mode. Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in Unlocked-Enabled or Locked-Disabled, AutomaticInService service states.
• 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 could make the command fail.
<PEERID>	Indicates the peer trunk facility of the regeneration group on the OTU2-XP card. Accessed using the CHAN AID.

<REGENNAME>	Indicates the name of a regeneration group. Applicable only to DWDM flavored cards, which support regeneration group. Regenname is a string. The default value is "NULL".
<PORTMODE>	Describes the termination mode of each interface on the OTU2-XP card.
• DWDM-LINE	Line terminating mode.
• DWDM-SECTION	Section terminating mode.
• DWDM-TRANS-AIS	Transparent mode AIS.
• DWDM-TRANS-SQUELCH	Transparent mode squelch.
• 10GLANWAN-SQUELCH	10G LAN to WAN Squelch.
<ODUTRANSMODE>	To configure the "ODUk OH" transparency on the OTU2-XP card.
• CISCO-EXT	Cisco Extended. When the Cisco Extended configuration is selected, two bytes of the ODU layer is terminated to guarantee the interoperability with the older Transponder/Muxponder cards.
• TRANS-STD	Transparent Standard Use. The transponder, behaving as a regenerator, terminates the OUT layer and is transparent to the ODU layer. Also in this case the FEC-MISM (FEC Mismatch) alarm is not generated.
<ERRORDECORRELATOR>	To enable or disable the MLSE module on the card. This applies only to TXP_MR_10EX_C, MXP_2.5G_10EX_C, and MXP_MR_10DMEX_C cards
• Y	To enable the MLSE module on the card.
• N	To disable the MLSE module on the card.
<PPR>	(Optional) To enable or disable the Proactive Protection Regen (PPR) in the OTU2 Card in Regen Mode.
• Y	PPR enabled.
• N	PPR disabled.
<TRIGTH>	Specifies the trigger threshold value for Proactive Protection Regen. The parameter type is TRIGGER_THRESHOLD.
• 1E-2	Trigger threshold is 1E-2.
• 1E-3	Trigger threshold is 1E-3.

• 1E-4	Trigger threshold is 1E-4.
• 1E-5	Trigger threshold is 1E-5
• 1E-6	Trigger threshold is 1E-6.
• 1E-7	Trigger threshold is 1E-7.
• 2E-2	Trigger threshold is 2E-2.
• 2E-3	Trigger threshold is 2E-3.
• 2E-4	Trigger threshold is 2E-4
• 2E-5	Trigger threshold is 2E-5
• 2E-6	Trigger threshold is 2E-6.
• 2E-7	Trigger threshold is 2E-7.
• 3E-2	Trigger threshold is 3E-2.
• 3E-3	Trigger threshold is 3E-3.
• 3E-4	Trigger threshold is 3E-4.
• 3E-5	Trigger threshold is 3E-5.
• 3E-6	Trigger threshold is 3E-6.
• 3E-7	Trigger threshold is 4E-7.
• 4E-2	Trigger threshold is 4E-2.
• 4E-3	Trigger threshold is 4E-3.
• 4E-4	Trigger threshold is 4E-4.
• 4E-5	Trigger threshold is 4E-5.
• 4E-6	Trigger threshold is 4E-6.
• 4E-7	Trigger threshold is 4E-7.
• 5E-2	Trigger threshold is 5E-2.
• 5E-3	Trigger threshold is 5E-3.
• 5E-4	Trigger threshold is 5E-4.
• 5E-5	Trigger threshold is 5E-5.
• 5E-6	Trigger threshold is 5E-6.
• 5E-7	Trigger threshold is 5E-7.

• 6E-2	Trigger threshold is 6E-2.
• 6E-3	Trigger threshold is 6E-3.
• 6E-4	Trigger threshold is 6E-4.
• 6E-5	Trigger threshold is 6E-5
• 6E-6	Trigger threshold is 6E-6.
• 6E-7	Trigger threshold is 6E-7.
• 7E-2	Trigger threshold is 7E-2.
• 7E-3	Trigger threshold is 7E-3.
• 7E-4	Trigger threshold is 7E-4.
• 7E-5	Trigger threshold is 7E-5
• 7E-6	Trigger threshold is 7E-6.
• 7E-7	Trigger threshold is 7E-7.
• 8E-2	Trigger threshold is 8E-2.
• 8E-3	Trigger threshold is 8E-3.
• 8E-4	Trigger threshold is 8E-4.
• 8E-5	Trigger threshold is 8E-5
• 8E-6	Trigger threshold is 8E-6.
• 8E-7	Trigger threshold is 8E-7.
• 9E-2	Trigger threshold is 9E-2.
• 9E-3	Trigger threshold is 9E-3.
• 9E-4	Trigger threshold is 9E-4.
• 9E-5	Trigger threshold is 9E-5
• 9E-6	Trigger threshold is 9E-6.
• 9E-7	Trigger threshold is 9E-7.
<RVRTTH>	Specifies the revert threshold for Proactive Protection Regen. The parameter type is RVRTTH.
• 1E-3	Revert threshold is 1E-3.
• 1E-4	Revert threshold is 1E-4.

• 1E-5	Revert threshold is 1E-5
• 1E-6	Revert threshold is 1E-6.
• 1E-7	Revert threshold is 1E-7.
• 2E-3	Revert threshold is 2E-3.
• 2E-4	Revert threshold is 2E-4.
• 2E-5	Revert threshold is 2E-5
• 2E-6	Revert threshold is 2E-6.
• 2E-7	Revert threshold is 2E-7.
• 3E-3	Revert threshold is 3E-3.
• 3E-4	Revert threshold is 3E-4.
• 3E-6	Revert threshold is 3E-6
• 3E-7	Revert threshold is 4E-7.
• 4E-3	Revert threshold is 4E-4.
• 4E-4	Revert threshold is 4E-4.
• 4E-5	Revert threshold is 4E-5
• 4E-6	Revert threshold is 4E-6.
• 4E-7	Revert threshold is 4E-7.
• 5E-3	Revert threshold is 5E-3.
• 5E-4	Revert threshold is 5E-4.
• 5E-5	Revert threshold is 5E-5
• 5E-6	Revert threshold is 5E-6.
• 5E-7	Revert threshold is 5E-7.
• 5E-8	Revert threshold is 5E-8.
• 6E-3	Revert threshold is 6E-3.
• 6E-4	Revert threshold is 6E-4.
• 6E-5	Revert threshold is 6E-5
• 6E-6	Revert threshold is 6E-6.
• 6E-7	Revert threshold is 6E-7.

• 6E-8	Revert threshold is 6E-8.
• 7E-3	Revert threshold is 7E-3.
• 7E-4	Revert threshold is 7E-4.
• 7E-5	Revert threshold is 7E-5
• 7E-6	Revert threshold is 7E-6.
• 7E-7	Revert threshold is 7E-7.
• 7E-8	Revert threshold is 7E-8.
• 8E-3	Revert threshold is 8E-3.
• 8E-4	Revert threshold is 8E-4.
• 8E-5	Revert threshold is 8E-5
• 8E-6	Revert threshold is 8E-6.
• 8E-7	Revert threshold is 8E-7.
• 8E-8	Revert threshold is 8E-8.
• 9E-3	Revert threshold is 9E-3.
• 9E-4	Revert threshold is 9E-4.
• 9E-5	Revert threshold is 9E-5
• 9E-6	Revert threshold is 9E-6.
• 9E-7	Revert threshold is 9E-7.
• 9E-8	Revert threshold is 9E-8.
<TRIGWINDOW>	Specifies the trigger window value for Proactive Protection Regen in milli seconds. It should always be a multiple of the sample slot value, derived from the trigger threshold value. The maximum TRIGWINDOW value is 10000.
<RVRTWINDOW>	Specifies the revert window value for Proactive Protection Regen in milli seconds. It should always be a multiple of the sample slot value, derived from the revert threshold value. The maximum RVRTWINDOW value is 10000 and minimum value is 2000.
<OVRCLK>	Indicates whether the optical trunk is over-clocked or not. It can be Y or N. The default is N.
• Y	Yes

• N	No
OTU1F	
OTU2F	
OTU3E1	
OTU3E2	
<RXWLEN>	The RX wavelength. It is applicable in unidirectional regeneration mode of a muxponder card. In this case the RX wavelength can be different from the nominal TX wavelength (EXPWLEN). It can be any valid DWDM wavelength value. The default value is USE-TWL1.
<CDLOW>	(Optional) Lower limit of CD working range.
<CDHIGH>	(Optional) Upper limit of CD working range.
<VOATXPOWER>	(Optional) VOA Transmit Power. The parameter type is VOATXPOWER, indicates the VOA transmit power on a fixed trunk.
<TXLASERSHUTDN>	(Optional) Transmit Laser Shut down. The parameter type is TXLASERSHUTDN indicates the transmit laser shut down status as Y or N.
<LPBKTYPE>	
• FAC-DROP	
• TER-DROP	
• BACKPLANE-TER-DROP	
• BACKPLANE-FAC-DROP	
<PST>	(Optional) Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• Unlocked	In service
• Locked	Out of service
<SST>	(Optional) Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AutomaticInService	Automatic in service
• Disabled	Disabled

• Loopback	Loopback
• MismatchofEquipmentAlarm	Mismatch of equipment and attributes
• Maintenance	Maintenance mode
• OutOfGroup	Out of group
• SoftwareDownload	Software downloading
• Unassigned	Unassigned
• NotInstalled	Unequipped
• <PSM>	
• ENABLE	Enable PSM Value
• DISABLE	Disable PSM Value
• NA	Not Applicable
• <SQUELCHMODE>	Shuts down the far-end laser in response to certain defects.
• NONE	Transparent
• SQUELCH	Squelch is enabled
• LF	
<ALARMSUPPRESS>	It is an enum which has values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress
<ALARMPRFILENAME>	Name of the profile created using the command ENT-ALMPROFILE
<SQUELCHHOLDOFFTIMER>	Laser will be turned off, once this timer expire
FEC-MODE	

ED-OCHCC

The Edit Optical Channel Client Connection (ED-OCHCC) command edits the OCH client connection.

Usage Guidelines

- The fields after CTAG (trailing colons) are optional.
- This command does not support multiple editing of OCH client connection provisioning.

- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

Category
DWDM

Security
Provisioning

Input Format
ED-OCHCC:[<TID>]:<AID>:<CTAG>[:::CKTID=<CKTID>],
[CMDMDE=<CMDMDE>]:[<PST>[,<SST>]];

Input Example
ED-OCHCC:VA454-22:FAC-2-1-1:116:::CKTID=OCHCC,CMDMDE=FRCD:OOS,DSBLD;

Input Parameters

<AID>	Access identifier from the FACILITY section.
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null the CKTID field will not be displayed.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• 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 might make the command fail.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity. The default is IS.
• IS	In service
• OOS	Out of service

<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ. The default is AINS.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ED-OCHNC

The Edit Optical Channel Network Connection (ED-OCHNC) command edits the OCH network connection.

Usage Guidelines

- The fields after CTAG (trailing colons) are optional.
- This command does not support multiple editing of wavelength connection provisioning.
- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

Category

DWDM

Security

Provisioning

Input Format

(For legacy package)

ED-OCHNC:[<TID>]:<SRC>,<DST>:<CTAG>:::[CKTID=<CKTID>],[CMDMDE=<CMDMDE>],[WLOPWR=<WLOPWR>],[VOAATTN=<VOAATTN>]:[<PST>[,<SST>]];

(For flex package)

ED-
OCHNC:[<TID>]:<SRC>,<DST>:<CTAG>:::[CKTID=<CKTID>],[CMDMDE=<CMDMDE>],[WLOPWR=<WLOPWR>],[VOAATTN=<VOAATTN>],[FREQ=<FREQ>],[WIDTH=<WIDTH>],[DSPWROFS=<DSPWROFS>],[USPWROFS=<USPWROFS>]:[<PST>][,<SST>];

Input Example

ED-OCHNC:VA454-22:CHANWL-1-3-TX-1530.33,
LINEWL-4-1-RX-1530.33:116:::CKTID=CIRCUIT,CMDMDE=FRCD:LOCKED,DISABLED;

Input Parameters

<SRC>	Source access identifier from the CHANNEL section. In two-way wavelength connection sources, both directions need to be indicated.
<DST>	Destination access identifier from the LINEWL section. In two-way wavelength connection sources, both directions need to be indicated.
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null the CKTID field will not be displayed.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• 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 might make the command fail.
<WLOPWR>	The value of calibrated output power that the VOA is going to set as a result of its attenuation. WLOPWR is a float.
<VOAATTN>	The value of calibrated attenuation for the VOA expressed in dBm. The range is 0.0 to +30.0. VOAATTN is a float.
<FREQ>	Optical wavelength
<WIDTH>	Width
<DSPWROFS>	Down stream power offset.
<USPWROFS>	Up stream power offset.

<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity. The default is IS.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ. The default is AINS.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ED-ODU

This command edit the ODU level.

Usage Guidelines

The AID is mandatory.

Category

DWDM

Security

Provisioning

Input Format

ED-ODU:[<TID>]:<aid>:<CTAG>:::BANDWIDTH=<bandwidth>,[SFBER=<sfber>],[SDBER=<sdber>];

Input Example

Input Parameters

<AID>	ODU AID. Example: ODU-1-5-7-1-1-1
<BANDWIDTH>	ENUM type. It is mandatory. ODU Level (ODU2E)
SFBER	Sfber, Default is Null. ENUM type (optional).
SDBER	Sfber, Default is Null. ENUM type (optional).

ED-OMS

The Edit Optical Multiplex Section (ED-OMS) command edits the attributes (service parameters) and state of an OMS facility.

Usage Guidelines

None

Category

DWDM

Security

Provisioning

Input Format

ED-OMS[:<TID>]:<AID>:<CTAG>[:::EXPBAND=<EXPBAND>],[VOAATTN=<VOAATTN>],[VOAPWR=<VOAPWR>],[CALOPWR=<CALOPWR>],[NAME=<NAME>],[SOAK=<SOAK>],[CMDMDE=<CMDMDE>][:<PST>[,<SST>]];

Input Example

ED-OMS:PENNGROVE:BAND-6-1:114:::,EXPBAND=1530.32-1532.68,
VOAATTN=2.5,VOAPWR=7.5,CALOPWR=0.0,NAME="OMSPORT",
SOAK=8,CMDMDE=NORM:UNLOCKED,AUTOMATICINSERVICE;

Input Parameters

<AID>	Access identifier from the BAND section.

<RDIRN>	Ring directionality of the optical line. The parameter type is RDIRN_MODE, which is the optical ring directionality.
• E-W	The direction of the signal is from east to west (clockwise).
• W-E	The direction of the signal is from west to east (counterclockwise).
<EXPBAND>	The expected value of the optical band for this port. The parameter type is OPTICAL_BAND (optical band).
• 1530.33 to 1532.68	Band 1
• 1534.25 to 1536.61	Band 2
• 1538.19 to 1540.56	Band 3
• 1542.14 to 1544.53	Band 4
• 1546.12 to 1548.51	Band 5
• 1550.12 to 1552.52	Band 6
• 1554.13 to 1556.55	Band 7
• 1558.17 to 1560.61	Band 8
• USE-DEFAULT	This band is not yet configured/retrieved from unit.
<VOAATTN>	The value of calibrated attenuation for the VOA expressed in dBm. The range is 0.0 to +30.0. VOAATTN is a float.
<VOAPWR>	The value of calibrated output power that the VOA is going to set as a result of its attenuation. VOAPWR is a float.
<CALOPWR>	The value of the calibrated optical power expected for the line added to the calculated value which equals the total expected output power. Expressed in dBm. Defaults to 0 dBm. CALOPWR is a float.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<NAME>	Port name. NAME is a string.
<SOAK>	SOAK is an integer. Defaults to 8.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.

• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ED-OPMODE

The Edit Operating Mode (ED-OPMODE) command adds or deletes the client ports from MXP-MR and MXPP-MR modes on the AR_MXP or AR_XP card, and adds or deletes a client-peer pair from the CFP-TXP mode on the CFP-LC card.

Usage Guidelines

- CLIENTPORTS, PEERSLOTS, ACTION, and OPMODE are the mandatory parameters for the ED-OPMODE on the CFP-LC card.
- ED-OPMODE command can be executed only on the CFP-LC card, which is part of the CFP-TXP mode.
- ED-OPMODE command adds or deletes a client-peer pair from the CFP-TXP mode.
- On an existing client1-peer1 pair mode, if a client2-peer2 pair is added using the ED-OPMODE command, either client1-peer1 or client2-peer2 can be deleted using the ED-OPMODE command. However, the same does not work for client1-peer2 or client2-peer1 pair.
- ACTION, CLIENTPORTS, and TRUNKPORT are mandatory parameters for the AR-MXP, AR-XP, and AR-XPE cards.

- OPMODE, CLIENTPORTS, PEERSLOTS, and ACTION are mandatory parameters for the 100G-LC-C, 10x10G-LC, and CFP-LC cards.
- The TRUNKPORT parameter is not used in the ED-OPMODE command on the CFP-LC card.

Category
DWDM

Security
Provisioning

Input Format

ED-OPMODE[:<TID>]:<AID>:<CTAG>[:::TRUNKPORT=<TRUNKPORT>],[CLIENTPORTS=<CLIENTPORTS>],[PEERSLOTS=<PEERSLOTS>],[PEERTRUNKS=<PEERTRUNKPORTS>],[PEERCLIENTS=<PEERCLIENTS>],ACTION=<ACTION>,[OPMODE=<OPMODE>],[SUBOPMODE=<SUBOPMODE>];

Input Example
ED-OPMODE::SLOT-1-3:21:::OPMODE=CFP-TXP,CLIENTPORTS=2,PEERSLOTS=SLOT-1-2,ACTION=ADD.

Input Parameters

<AID>	SLOT Access Identifier
<OPMODE>	Existing operating mode which is being edited
• CFP-TXP	Transponder mode between one CFP-LC and one or two 100G-LC-C cards.
• TXPP-10G	
• MXP-1S-HIGH	
• FANOUT-100G	
• MXP-100G	
• MXP-10x10G-100G	
• MXP-200G	

• MXP-2x50G	
• MXP-CK-100G	
• RGN-200G	
• TXP-2x50G-CK	
• AR-XP-MXP	
<ACTION>	The ADD or DELETE action required while editing the operating mode.
• ADD	Add client ports to the existing MXP-MR mode or add client-peer pair on 100G-LC-C, 10x10G-LC, and CFP-LC cards.
• DELETE	Delete client ports from the existing MXP-MR mode or Delete client-peer pair on 100G-LC-C, 10x10G-LC, and CFP-LC cards.
• LOW-LATENCY	Low latency opmode is supported only on 10x10G-LC card.
• MXPP-MR-S	Operating mode on AR-MXP, AR-XP, or AR-XPE card.
• MXP-MR-S	Operating mode on AR-MXP, AR-XP, or AR-XPE card.
• MXP-2x40G	Operating mode on AR-MXP, AR-XP, or AR-XPE card.
<TRUNKPORT>	The trunk port number in MXP-MR mode on which the edit operation is being performed
<CLIENTPORTS>	The client port numbers that are being added or deleted to the operating mode.
<PEERSLOTS>	The slot number of the peer card (100G-LC-C) of the CFP-LC card, which is part of the CFP-TXP and CFP-MXP modes, specified by the SLOT<SLOTNO>.
<SUBOPMODE>	
OPM-100G	
OPM-10x10G	

OPM-1x40G-6x10G

OPM-2x40G

OPM-2x40G-2x10G

OPM-NO-SUBMODE

ED-OTS

The Edit Optical Transport Section (ED-OTS) command edits the attributes (service parameters) and state of an OTS facility.

Usage Guidelines

None

Category

DWDM

Security

Provisioning

Input Format

ED-OTS[:<TID>]:<AID>:<CTAG>[:::VOAATTN=<VOAATTN>],[VOAPWR=<VOAPWR>],[OFFSET=<OFFSET>],[CALTILT=<CALTILT>],[OSRI=<OSRI>],[NAME=<NAME>],[SOAK=<SOAK>],[FG=<FG>],[CG=<CG>],[CMDMDE=<CMDMDE>],[SWSTATE=<SWSTATE>],[ATTENUATION=<ATTENUATION>],[RPDURATION=<rpduration>][ALARMSUPPRESS=<alarmsuppress>][ALARMPROFILENAME=<alarmprofilename>][:<PST>[,<SST>]];

Input Example

ED-OTS:PENNGROVE:LINE-6-1:114:::RDIRN=W-E,VOAATTN=5.0,VOAPWR=10.0,OFFSET=0.0,CALTILT=0.0,OSRI=N,NAME="OTSPORT",SOAK=8,CMDMDE=NORM,SWSTATE=AUTO:UNLOCKED,AUTOMATICINSERVICE;

Input Parameters	
<AID>	Access identifier from the LINE section.
<RDIRN>	Ring directionality of the optical line. The parameter type is RDIRN_MODE, which is the optical ring directionality.
• E-W	The direction of the signal is from east to west (clockwise).
• W-E	The direction of the signal is from west to east (counterclockwise).
<VOAATTN>	The value of calibrated attenuation for the VOA expressed in dBm. The range is 0.0 to +30.0. VOAATTN is a float.
<VOAPWR>	The value of calibrated output power that the VOA is going to set as a result of its attenuation. VOAPWR is a float.
<OFFSET>	The calibration value of the optical power added to the calculated reference value. Defaults to 0 dBm. OFFSET is a float.
<CALTILT>	(Optional) The amplifier calibration tilt offset to be added to the calculated reference value. Defaults to 0 dBm. CALTILT is a float.
<OSRI>	(Optional) Optical safety remote interlock (OSRI) is enabled or disabled. Present only on a port where the OSRI is supported. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<NAME>	The name of the port. NAME is a string.
<SOAK>	SOAK is an integer. It defaults to 8.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<CG>	TDCU coarse grain value
• 0	TDCU coarse grain value

• -110	TDCU coarse grain value
• -1100	TDCU coarse grain value
• -1210	TDCU coarse grain value
• -1320	TDCU coarse grain value
• -1430	TDCU coarse grain value
• -1540	TDCU coarse grain value
• -1650	TDCU coarse grain value
• -220	TDCU coarse grain value
• -330	TDCU coarse grain value
• -440	TDCU coarse grain value
• -550	TDCU coarse grain value
• -660	TDCU coarse grain value
• -770	TDCU coarse grain value
• -880	TDCU coarse grain value
• -990	TDCU coarse grain value
<FG>	TDCU fine grain value
• 0	TDCU fine grain value
• -45	TDCU fine grain value
• -450	TDCU fine grain value
• -495	TDCU fine grain value
• -540	TDCU fine grain value
• -585	TDCU fine grain value
• -630	TDCU fine grain value
• -675	TDCU fine grain value
• -90	TDCU fine grain value
• -135	TDCU fine grain value
• -180	TDCU fine grain value
• -225	TDCU fine grain value

• -270	TDCU fine grain value
• -315	TDCU fine grain value
• -360	TDCU fine grain value
• -405	TDCU fine grain value
<SWSTATE>	Software switch state.
• AUTO	Auto
• LOGO	Logo
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<ALARMPROFILENAME>	Name of the profile created using the command ENT-ALMPROFILE
<ALARMSUPPRESS>	It is an enum which has the values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ED-OTU

The Edit Optical Transport Unit Level 1/2/3 command edits the attributes (service parameters) and state of an OTU1, OTU2, OTU3, and OTU4 facilities respectively. The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

Usage Guidelines

- Squelchmode is applicable for OTU1, OTU2, OTU3, and OTU4 modifiers.
- Squelchmode for OTU1 clients are NONE or ODU-AIS.
- Squelchmode for OTU1/OTU2 trunk in RGN and TXP modes is ODU-AIS.
- Squelchmode for OTU1/OTU2 trunk in non-TXP mode is NONE.
- OVRCLK parameter is supported on OTU2 on SFP+ ports on 10x10G-LC.
- In the CFP-TXP mode, the ED-OTU is applicable for FREQ, LOSSB, SOAK, and SQUELCHMODE paramters on the CFP-LC card on the VFAC AID.
- In the CFP-TXP mode, the ED-OTU is applicable for FEC, OSFBER, and OSDBER parameters on the 100G-LC-C virtual ports on the VCFAC AID.

Category

DWDM

Security

Provisioning

Input Format

ED-<OTU>[:<TID>]:<AID>:<CTAG>[:::OSDBER=<SDBER>],[GCC=<GCC>],[DWRAP=<DRWAP>],[FEC=<FEC>],[PAYLOADMAP=<PAYLOADMAP>],[PMMODE=<PMMODE>],[FREQ=<FREQ>],[LOSSB=<LOSSB>],[NAME=<PORTNAME>],[SOAK=<SOAK>],[GCCRATE=<GCCRATE>],[SQUELCHMODE=<SQUELCHMODE>],[OTNTRMAP=<OTNTRMAP>],[SYNCMSG=<SYNCMSG>],[SENDDUS=<SENDDUS>],[ADMSSM=<ADMSSM>],[ODUTRANSMODE=<ODUTRANSMODE>],[PORTMODE=<PORTMODE>],[CMDMDE=<CMDMDE>],[PPR=<PPR>],[TRIGTH=<TRIGTH>],[RVRTTH=<RVRTTH>],[TRIGWINDOW=<TRIGWINDOW>],[RVRTWINDOW=<RVRTWINDOW>],[OVRCLK=<OVRCLK>],[EGRESSFRR=<EGRESSFRR>][ALARMSUPPRESS=<ALARMSUPPRESS>][:<PST>[,<SST>]];

Input Example

ED-OTU1::VFAC-3-5-1:1:::GCC=Y,GCCRATE=400K,SENDDUS=N;

ED-OTU2::VFAC-6-9-1:1:::PPR=Y,TRIGTH=6E-4,TRIGWINDOW=1000,RVRTTH=1E-5,RVRTWINDOW=2000;

ED-OTU2::VFAC-6-9-1:1:::PPR=Y,TRIGTH=6E-4,TRIGWINDOW=1000,RVRTTH=1E-5,RVRTWINDOW=2000,EGRESSFRR=Y;

Input Parameters	
AID>	The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier. OTU2 uses VFAC and VLINE AID on 10x10G-LC card. OTU3 and OTU4 use VFAC on CFP-LC cards.
<OSDBER>	OTN SDBER. Can only be provisioned on the working port. Defaults to 1E-7 Parameter type is SD_BER—the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5
• 1E-6	SDBER is 1E-6
• 1E-7	SDBER is 1E-7
• 1E-8	SDBER is 1E-8
• 1E-9	SDBER is 1E-9
<GCC>	Identifies the Generic communication channel (GCC) con-nection of the port.
• Y	GCC can be utilized
• N	GCC cannot be utilized
<DWRAP>	(Optional) The ITU-T G.709 monitoring digital wrapper. It is either on or off. The system default is ON. For MXP_2.5G_10G and TXP_MR_10G cards, this applies only to the DWDM port. The parameter type is ON_OFF (disable or enable an attribute). To enable ITU-T G.709 monitoring, there should be no GCC on the DWDM port and the payload (in which the card is configured) should not be UNFRAMED. To disable ITU-T G.709 monitoring, there should be no GCC on the DWDM port, the FEC should be turned to off, there should be no overhead circuit created on the DWDM port, and none of the client ports on the card should be part of a Y-cable protection group (muxponder only).
• N	Disable an attribute.
• Y	Enable an attribute.
<FEC>	(Optional) Forward error correction. It can be enabled only if ITU-T G.709 monitoring is turned ON. It is either off or enabled in standard or enhanced mode. The system default is standard FEC enabled. The FEC level PM and thresholds apply if the FEC is turned ON. The parameter type is FEC_MODE, which specifies the type of forward error correction.
• ENH	Enhanced FEC is enabled.
• ENH-I4	Enhanced FEC 1.4 is enabled.

• ENH-I7	Enhanced FEC 1.7 is enabled.
• HG-20	20% High Gain FEC.
• HG-7	High Gain 7% FEC.
• OFF	FEC is disabled.
• STD	Standard FEC is enabled.
• SD-20	
• SD-7	
<GCCRATE>	(Optional) The data rate of the GCC traffic. The default is 192 Kbps. For MXP_2.5G_10G and TXP_MR_10G cards, this applies only to the DWDM port. The parameter type is GCCRATE, which is the data rate of the GCC traffic.
• 192K	192 Kbps
• 400K	400 Kbps
• 1200K	1200 Kbps
< PAYLOADMAP>	(Optional) The type of payload mapping. It can be enabled only if ITU-T G.709 monitoring is turned ON and FEC is enabled. The parameter type is PAYLOAD_MAPPING, which is the payload mapping mode.
• ASYNCH	Asynchronous mapping mode
• ODU	ODU multiplex structure mode
• SYNCH	Synchronous mapping mode
• N	Disable an attribute.
• Y	Enable an attribute.
• NOOPU2FIXEDSTUFF	Mapping with no FIXEDSTUFF
<FREQ>	The parameter type is OPTICAL_WLEN (optical wavelength).
• 850 nm	Wavelength 850 nm
• 1310 nm	Wavelength 1310 nm
• 1550 nm	Wavelength 1550 nm
• 1470 nm	Wavelength 1470 nm
• 1490 nm	Wavelength 1490 nm
• 1510 nm	Wavelength 1510 nm

• 1530 nm	Wavelength 1530 nm
• 1570 nm	Wavelength 1570 nm
• 1590 nm	Wavelength 1590 nm
• 1610 nm	Wavelength 1610 nm
• 1528.77 nm	Wavelength 1528.77 nm
• 1529.16	Wavelength 1529.16
• 1529.55 nm	Wavelength 1529.55 nm
• 1529.94 nm	Wavelength 1529.94 nm
• 1530.33 nm	Wavelength 1530.33 nm
• 1530.72 nm	Wavelength 1530.72 nm
• 1531.12 nm	Wavelength 1531.12 nm
• 1531.51 nm	Wavelength 1531.51 nm
• 1531.90 nm	Wavelength 1531.90 nm
• 1532.29 nm	Wavelength 1532.29 nm
• 1532.68 nm	Wavelength 1532.68 nm
• 1533.07 nm	Wavelength 1533.07 nm
• 1533.47 nm	Wavelength 1533.47 nm
• 1533.86 nm	Wavelength 1533.86 nm
• 1534.25 nm	Wavelength 1534.25 nm
• 1534.64 nm	Wavelength 1534.64 nm
• 1535.04 nm	Wavelength 1535.04 nm
• 1535.43 nm	Wavelength 1535.43 nm
• 1535.82 nm	Wavelength 1535.82 nm
• 1536.22 nm	Wavelength 1536.22 nm
• 1536.61 nm	Wavelength 1536.61 nm
• 1537.00 nm	Wavelength 1537.00 nm
• 1537.40 nm	Wavelength 1537.40 nm

• 1537.79 nm	Wavelength 1537.79 nm
• 1538.19 nm	Wavelength 1538.19 nm
• 1538.58 nm	Wavelength 1538.58 nm
• 1538.98 nm	Wavelength 1538.98 nm
• 1539.37 nm	Wavelength 1539.37 nm
• 1539.77 nm	Wavelength 1539.77 nm
• 1540.16 nm	Wavelength 1540.16 nm
• 1540.56 nm	Wavelength 1540.56 nm
• 1540.95 nm	Wavelength 1540.95 nm
• 1541.35 nm	Wavelength 1541.35 nm
• 1541.75 nm	Wavelength 1541.75 nm
• 1542.14 nm	Wavelength 1542.14 nm
• 1542.54 nm	Wavelength 1542.54 nm
• 1542.94 nm	Wavelength 1542.94 nm
• 1543.33 nm	Wavelength 1543.33 nm
• 1543.73 nm	Wavelength 1543.73 nm
• 1544.13 nm	Wavelength 1544.13 nm
• 1544.53 nm	Wavelength 1544.53 nm
• 1544.92 nm	Wavelength 1544.92 nm
• 1545.32 nm	Wavelength 1545.32 nm
• 1545.72 nm	Wavelength 1545.72 nm
• 1546.12 nm	Wavelength 1546.12 nm
• 1546.52 nm	Wavelength 1546.52 nm
• 1546.92 nm	Wavelength 1546.92 nm
• 1547.32 nm	Wavelength 1547.32 nm
• 1547.72 nm	Wavelength 1547.72 nm
• 1548.11 nm	Wavelength 1548.11 nm

• 1548.51 nm	Wavelength 1548.51 nm
• 1548.91 nm	Wavelength 1548.91 nm
• 1549.32 nm	Wavelength 1549.32 nm
• 1549.72 nm	Wavelength 1549.72 nm
• 1550.12 nm	Wavelength 1550.12 nm
• 1550.52 nm	Wavelength 1550.52 nm
• 1550.92 nm	Wavelength 1550.92 nm
• 1551.32 nm	Wavelength 1551.32 nm
• 1551.72 nm	Wavelength 1551.72 nm
• 1552.12 nm	Wavelength 1552.12 nm
• 1552.52 nm	Wavelength 1552.52 nm
• 1552.92 nm	Wavelength 1552.92 nm
• 1553.33 nm	Wavelength 1553.33 nm
• 1553.73 nm	Wavelength 1553.73 nm
• 1554.13 nm	Wavelength 1554.13 nm
• 1554.54 nm	Wavelength 1554.54 nm
• 1554.94 nm	Wavelength 1554.94 nm
• 1555.34 nm	Wavelength 1555.34 nm
• 1555.75 nm	Wavelength 1555.75 nm
• 1556.15 nm	Wavelength 1556.15 nm
• 1556.55 nm	Wavelength 1556.55 nm
• 1556.96 nm	Wavelength 1556.96 nm
• 1557.36 nm	Wavelength 1557.36 nm
• 1557.77 nm	Wavelength 1557.77 nm
• 1558.17 nm	Wavelength 1558.17 nm
• 1558.58 nm	Wavelength 1558.58 nm
• 1558.98 nm	Wavelength 1558.98 nm

• 1559.39 nm	Wavelength 1559.39 nm
• 1559.79 nm	Wavelength 1559.79 nm
• 1560.20 nm	Wavelength 1560.20 nm
• 1560.61 nm	Wavelength 1560.61 nm
• 1561.01 nm	Wavelength 1561.01 nm
• 1561.42 nm	Wavelength 1561.42 nm
• 1561.83 nm	Wavelength 1561.83 nm
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05
• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27
• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50
• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71

• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36

• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19

• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	(Optional) The parameter type is REACH, which indicates the reach values.
• 100GBASE-LR4	100GBASE-LR4
• 100GBASE-SR10	100GBASE-SR10
• 40GBASE-FR	40GBASE-FR
• 40GBASE-LR4	40GBASE-LR4
• 40GBASE-SR4	Reach supported on 40GIGE payload on CFP-LC card.
• 4I1-9D1F	4I1-9D1F
• AUTOPROV	Autoprovisioning
• C4S1-2D1	C4S1-2D1
• CX	Reach CX

• CX1	Reach CX1
• DX	Reach DX
• FE-BX	FE-BX
• FX	FX
• GE-BX	GE-BX
• GE-EX	GE-EX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• LX-10	LX-10
• P1L1-2D1	10G Ethernet with 850 nm wavelength
• P1S1-2D1	Short haul 10G Ethernet in 1310 nm wavelength
• P1L1-2D2	Long haul 10G Ethernet with 1550 nm wavelength
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• TEN-GE-ER	10 GE extended range

• TEN-GE-LR	10 GE long range
• TEN-GE-LRM	TEN-GE-LRM
• TEN-GE-SR	10 GE short range
• TEN-GE-ZR	TEN-GE-ZR
• VSR2000-3R2	VSR2000-3R2
• VX	Reach VX
• ZX	Reach ZX
• P1S1-1D1	Shorthaul 2.5G Ethernet with 1310 nm wavelength
• P1L1-1D2	Longhaul 2.5G Ethernet with 1550 nm wavelength
• CWDM	Coarse Wavelength Division Multiplexing with
• DWDM	Dense Wavelength Division Multiplexing with wavelength between 1525–1565 nm
<PORTNAME>	(Optional) Port name. PORTNAME is a string.
<SOAK>	(Optional) Locked-AutomaticInService to Unlocked transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer.
<OTNTRMAP>	OTN Traffic Mapping
• TRMAP-NONE	No traffic mapping
• CBR10G	Constant Bit Rate 10G
• ODU2E	10. 399 Gbit/s
• ODU1MUX	ODU1 Multiplexer
• ODU1	2.498 Gbits/s
<NAME>	(Optional) Port name. NAME is a string. Defaults to NULL. Maximum length is 32 characters.
<SYNCMSG>	Synchronization status messaging is enabled or disabled on the facility.
• N	Disable an attribute.
• Y	Enable an attribute.
<PPR>	(Optional) To enable or disable the Proactive Protection Regen (PPR) in the OTU2 Card in Regen Mode.

• Y	PPR enabled.
• N	PPR disabled.
<TRIGTH>	Specifies the trigger threshold value for Proactive Protection Regen. The parameter type is TRIGGER_THRESHOLD.
• 1E-2	Trigger threshold is 1E-2.
• 1E-3	Trigger threshold is 1E-3.
• 1E-4	Trigger threshold is 1E-4.
• 1E-5	Trigger threshold is 1E-5
• 1E-6	Trigger threshold is 1E-6.
• 1E-7	Trigger threshold is 1E-7.
• 2E-2	Trigger threshold is 2E-2.
• 2E-3	Trigger threshold is 2E-3.
• 2E-4	Trigger threshold is 2E-4
• 2E-5	Trigger threshold is 2E-5
• 2E-6	Trigger threshold is 2E-6.
• 2E-7	Trigger threshold is 2E-7.
• 3E-2	Trigger threshold is 3E-2.
• 3E-3	Trigger threshold is 3E-3.
• 3E-4	Trigger threshold is 3E-4.
• 3E-5	Trigger threshold is 3E-5.
• 3E-6	Trigger threshold is 3E-6.
• 3E-7	Trigger threshold is 4E-7.
• 4E-2	Trigger threshold is 4E-2.
• 4E-3	Trigger threshold is 4E-3.
• 4E-4	Trigger threshold is 4E-4.
• 4E-5	Trigger threshold is 4E-5.
• 4E-6	Trigger threshold is 4E-6.
• 4E-7	Trigger threshold is 4E-7.

• 5E-2	Trigger threshold is 5E-2.
• 5E-3	Trigger threshold is 5E-3.
• 5E-4	Trigger threshold is 5E-4.
• 5E-5	Trigger threshold is 5E-5.
• 5E-6	Trigger threshold is 5E-6.
• 5E-7	Trigger threshold is 5E-7.
• 6E-2	Trigger threshold is 6E-2.
• 6E-3	Trigger threshold is 6E-3.
• 6E-4	Trigger threshold is 6E-4.
• 6E-5	Trigger threshold is 6E-5
• 6E-6	Trigger threshold is 6E-6.
• 6E-7	Trigger threshold is 6E-7.
• 7E-2	Trigger threshold is 7E-2.
• 7E-3	Trigger threshold is 7E-3.
• 7E-4	Trigger threshold is 7E-4.
• 7E-5	Trigger threshold is 7E-5
• 7E-6	Trigger threshold is 7E-6.
• 7E-7	Trigger threshold is 7E-7.
• 8E-2	Trigger threshold is 8E-2.
• 8E-3	Trigger threshold is 8E-3.
• 8E-4	Trigger threshold is 8E-4.
• 8E-5	Trigger threshold is 8E-5
• 8E-6	Trigger threshold is 8E-6.
• 8E-7	Trigger threshold is 8E-7.
• 9E-2	Trigger threshold is 9E-2.
• 9E-3	Trigger threshold is 9E-3.
• 9E-4	Trigger threshold is 9E-4.
• 9E-5	Trigger threshold is 9E-5

• 9E-6	Trigger threshold is 9E-6.
• 9E-7	Trigger threshold is 9E-7.
<RVRTTH>	Specifies the revert threshold for Proactive Protection Regen. The parameter type is RVRTTH.
• 1E-3	Revert threshold is 1E-3.
• 1E-4	Revert threshold is 1E-4.
• 1E-5	Revert threshold is 1E-5
• 1E-6	Revert threshold is 1E-6.
• 1E-7	Revert threshold is 1E-7.
• 2E-3	Revert threshold is 2E-3.
• 2E-4	Revert threshold is 2E-4.
• 2E-5	Revert threshold is 2E-5
• 2E-6	Revert threshold is 2E-6.
• 2E-7	Revert threshold is 2E-7.
• 3E-3	Revert threshold is 3E-3.
• 3E-4	Revert threshold is 3E-4.
• 3E-6	Revert threshold is 3E-6
• 3E-7	Revert threshold is 4E-7.
• 4E-3	Revert threshold is 4E-4.
• 4E-4	Revert threshold is 4E-4.
• 4E-5	Revert threshold is 4E-5
• 4E-6	Revert threshold is 4E-6.
• 4E-7	Revert threshold is 4E-7.
• 5E-3	Revert threshold is 5E-3.
• 5E-4	Revert threshold is 5E-4.
• 5E-5	Revert threshold is 5E-5
• 5E-6	Revert threshold is 5E-6.
• 5E-7	Revert threshold is 5E-7.

• 5E-8	Revert threshold is 5E-8.
• 6E-3	Revert threshold is 6E-3.
• 6E-4	Revert threshold is 6E-4.
• 6E-5	Revert threshold is 6E-5
• 6E-6	Revert threshold is 6E-6.
• 6E-7	Revert threshold is 6E-7.
• 6E-8	Revert threshold is 6E-8.
• 7E-3	Revert threshold is 7E-3.
• 7E-4	Revert threshold is 7E-4.
• 7E-5	Revert threshold is 7E-5
• 7E-6	Revert threshold is 7E-6.
• 7E-7	Revert threshold is 7E-7.
• 7E-8	Revert threshold is 7E-8.
• 8E-3	Revert threshold is 8E-3.
• 8E-4	Revert threshold is 8E-4.
• 8E-5	Revert threshold is 8E-5
• 8E-6	Revert threshold is 8E-6.
• 8E-7	Revert threshold is 8E-7.
• 8E-8	Revert threshold is 8E-8.
• 9E-3	Revert threshold is 9E-3.
• 9E-4	Revert threshold is 9E-4.
• 9E-5	Revert threshold is 9E-5
• 9E-6	Revert threshold is 9E-6.
• 9E-7	Revert threshold is 9E-7.
• 9E-8	Revert threshold is 9E-8.
<TRIGWINDOW>	Specifies the trigger window value for Proactive Protection Regen in milli seconds. It should always be a multiple of the sample slot value, derived from the trigger threshold value. The maximum TRIGWINDOW value is 10000.

<RVRTWINDOW>	Specifies the revert window value for Proactive Protection Regen in milli seconds. It should always be a multiple of the sample slot value, derived from the revert threshold value. The maximum RVRTWINDOW value is 10000 and minimum value is 2000.
<SENDDUS>	The facility will send the DUS value as the SSM for that facility.
• N	Disable an attribute.
• Y	Enable an attribute.
<ADMSSM>	The administrative synchronization status message. Only supported . Defaults to STU. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level.
• DUS	DoNot Use
• 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
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<CMDMDE>	(Optional) Command mode. Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in Unlocked-Enabled or Locked-Disabled, AutomaticInService service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PORTMODE>	Describes the termination mode of each interface on the card.
• DWDM-LINE	Line terminating mode.
• DWDM-SECTION	Section terminating mode.

• DWDM-TRANS-AIS	Transparent mode AIS.
• DWDM-TRANS-SQUELCH	Transparent mode Squelch
• 10GLANWAN-SQUELCH	10G LAN to WAN Squelch.
<ODUTRANSMODE>	To configure the "ODUk OH" transparency on the OTU2-XP card.
• CISCO-EXT	Cisco Extended. When the Cisco Extended configuration is selected, two bytes of the ODU layer is terminated to guarantee the interoperability with the older Transponder/Muxponder cards.
• TRANS-STD	Transparent Standard Use. The transponder, behaving as a regenerator, terminates the OUT layer and is transparent to the ODU layer. Also in this case the FEC-MISM (FEC Mismatch) alarm is not generated.
<SQUELCHMODE>	Shuts down the far-end laser in response to certain defects.
• ODU-AIS	ODU AIS
• AIS	Generis AIS
• NONE	Transparent
• SQUELCH	Squelch is enabled
• DISABLE	Squelch is disabled
• LF	
<OVRCLK>	Indicates whether the optical trunk is over-clocked or not. It can be Y or N. The default is N.
• Y	Yes
• N	No
•	
• OTU1F	
• OTU2F	
• OTU3E1	
• OTU3E2	
<PRE-FEC-PSM>	The parameter type is PROACTIVE_PROT.
• N	Proactive protection is disabled.
• Y	Proactive protection is enabled.

<EGRESSFRR>	Egress FRR protection.
• Y	Egress FRR protection is enabled.
• N	Egress FRR protection is disabled.
<LPBKTYPE>	
• FAC-DROP	
• TER-DROP	
• BACKPLANE-TER-DROP	
• BACKPLANE-FAC-DROP	
<PST>	(Optional) Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In Service
• OOS	Out Of Service
• Unlocked	In service
• Locked	Out of service
<ALARMSUPPRESS>	It is an enum which has values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress
<SST>	(Optional) Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• DSBLD	Disabled
• MT	Maintenance mode
• AINS	Automatically IN Service

ED-PID

The Edit Password (ED-PID) command allows a user to change his or her own password.

Usage Guidelines

- Passwords are masked for the following security commands: ACT-USER, ED-PID, ENT-USER-SECU, and ED-USER-SECU. Access to a TL1 session by any means will have the password masked. The Cisco Transport Controller (CTC)

Request History and Message Log will also show the masked commands. When a password-masked command is reissued 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 reissuing it.

- The password will not appear in the TL1 log on the NE.
- For the ED-PID command:

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

  The syntax of OLDPID is not checked. The NEWPID should follow Telcordia standards set by SET-ATTR-SECUDFLT command for minimum password length, maximum password length, and password character rule.
- You must use the ED-USER-SECU command to change the default password for the CISCO15 superuser.
- The ED-PID command cannot be used to change the empty password to a valid password.

Category
Security

Security
Retrieve

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

Input Example
ED-PID:PETALUMA:UID:123::OLDPWD,NEWPWD;

Input Parameters

<UID>	User Identifier. Any combination of up to 20 alphanumeric characters. The minimum UID size is 2. UID is a string.
<OLDPID>	The user's old password. Minimum length of the PID depends on the PWDMINLEN, the type of characters to be entered depends on the PWDCHRULE, and maximum length depends on PWDMAXLEN set by SET-ATTR-SECUDFLT command. Passwords are encrypted and appear as asterisks (*). OLDPID is a string.
<NEWPID>	The user's new password. Minimum length of the PID depends on the PWDMINLEN, the type of characters to be entered depends on the PWDCHRULE, and maximum length depends on PWDMAXLEN set by SET-ATTR-SECUDFLT command. Passwords are encrypted and appear as asterisks (*). NEWPID is a string.

ED-POS

The Edit Packet-Over-SONET (ED-POS) command edits the back-end port information for the Ethernet card when the back-end port is working in POS mode. The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use the retrieve command to obtain the current value. ED-POS cannot set ENCAP and PST/SST.

Usage Guidelines

This command is supported for the ONS 15454 CE-100T-8 and CE-1000-4 cards.

Category

Ports

Security

Provisioning

Input Format

ED-POS:[<TID>]:<AID>:<CTAG>:::[ENCAP=<ENCAP>],[NAME=<NAME>],
[CMDMDE=<CMDMDE>],[SOAK=<SOAK>]:[<PST>[,<SST>]];

Input Example

ED-POS:PETALUMA:VFAC-2-0:123:::ENCAP=HDLC,NAME=NAME,CMDMDE=CMDMDE,
SOAK=32:IS,AINS;

Input Parameters

<AID>	Access identifier from the FACILITY section.
<ENCAP>	Encapsulation. The parameter type is ENCAP, which is the frame encapsulation type.
• GFP_F	GFP frame mode
• GFP_T	GFP transparent mode
• HDLC	HDLC frame mode
• HDLC_LEX	HDLC LAN extension frame mode
• HDLC_X86	HDLC X.86 frame mode
• CBR	CBR mapping mode.
• GFP	GFP mapping mode.

• GMP	GMP mapping mode is supported only on 8GFC on 10x10G-LC card.
• TRP	Transparent mapping mode.
• HO_ODU4_V1	
• HO_ODU4_V2	
<NAME>	Port name. NAME is a string.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<SOAK>	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 to 192 intervals (maximum of 48 hours). SOAK is an integer.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned

• UEQ	Unequipped

ED-PROTOCOL

The Edit Protocol (ED-PROTOCOL) command is used to enable/disable a protocol/service that is supported in the NE. Valid protocols include shell/file system access (SHELL), EMS, TL1, and Simple Network Management Protocol (SNMP).

Usage Guidelines

- If the AID is TL1, the command will be denied because TL1 users are not allowed to change the setting for TL1 protocol.
- If the PROTOCOLAID is SNMP, the SECURE PROTOCOLSTAT is supported. To enable SNMP, set PROTOCOLSTAT to either SECURE or UNSECURE.

Category

Security

Security

Superuser

Input Format

ED-PROTOCOL:[<TID>]:<AID>:<CTAG>::<PROTSTAT>;

Input Example

ED-PROTOCOL:CISCONODE:EMS:123::SECURE;

Input Parameters

<AID>	The protocol/service to which the command pertains. The parameter type is PROTOCOLAID, which is the AID for the protocol/service.
• EMS	CTC/CTM protocol/service
• SHELL	Shell/file system access protocol
• SNMP	SNMP protocol/service
• TL1	TL1 protocol service
<PROTSTAT>	Identifies the status of the protocol/service. The parameter type is PROTOCOLSTAT, which is the status of the protocol.
• DISABLED	The protocol cannot be used.

• SECURE	The protocol is enabled and communication using the protocol are sure, for example, through Secure Shell Protocol (SSH).
• UNSECURE	The protocol is enabled but communication is not secure, for example, through Telnet.

ED-PRBS

(Cisco ONS 15454, Cisco ONS 15454 M2, and Cisco ONS 15454 M6) The Edit PseudoRandom Binary Sequence (ED-PRBS) is used to edit the PRBS Generator sequence.

Usage Guidelines

- 100G-LC-C and 100G-CK-C trunk supports the PRBS generation.
- PRBS can be configured at the port level.
- PRBS is not dependent on the card operating mode.
- Enabling or disabling PRBS is possible when the port is in OOS-DSBLD state.
- After the PRBS is set to ON or OFF, the port states can be moved to other states without any issues.

Category

Ports

Security

Maintenance

Input Format

ED-PRBS:[<TID>]:<aid>:<CTAG>:::[PRBSGENPATTERN=<prbsgenpattern>],[:];

Input Example

ED-PRBS::CHAN-7-2-1:1:::PRBSGENPATTERN=PRBS-31;

Table 13-4 ED-PRBS Command - Parameter Support

Input Parameters	Description

<AID>	PRBSGENPATTERN. The PRBS generator pattern. It can be any of the following: • NONE • PRBS-11 • PRBS-23 • PRBS-31

ED-QNQ-CHGRP

The Edit Channel Group QinQ (ED-QNQ-CHGRP) command edits the IEEE 802.1Q tunneling (QinQ) relationship between the CE-VLAN and the S-VLAN for Gigabit Ethernet uniport provisioning associated to a channel group.

Usage Guidelines

- The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use the RTRV-ETH command to obtain the current value.
- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The ALL AID is invalid for this command.

Category

Channel Group

Security

Provisioning

Input Format

ED-QNQ-CHGRP:[<TID>]:<AID>:<CTAG>::<FIRST_CE_VLAN_ID>,<LAST_CE_VLAN_ID>,<S_VLAN_ID>:[RULE=<RULE>],[INTERNALVLAN=<INTERNAL_VLAN_ID>],[INGRESSCOS=<INGRESSCOS>][:];

Input Example

ED-QNQ-CHGRP:CISCO:CHGRP-1-1:1::10,11,100:RULE=ADD;

<AID>	Access identifier from the CHGRP section.
<FIRSTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<LASTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<RULE>	Used to represent the rules allowed for the VLAN tagging operations. The default value is ADD.
• ADD	The S-VLAN tag is added to the CE-VLAN tag.
• XLTE	The S-VLAN tag replaces the CE-VLAN tag (single Q).
• XLTE-ADD	XLTE and ADD rule applied together. This rule request to supply an internal S-VLAN. First the Internal VLAN substitutes the Customer VLAN, then Service Provider VLAN TAG (S-VLAN) is added
• DOUBLE-ADD	ADD rule applied two times. This rule request to supply an internal S-VLAN. First the Internal VLAN is added, then Service Provider VLAN TAG (S-VLAN) is added to have a double tag
<INTERNAL_VLAN_ID>	Internal VLAN ID.
<INGRESSCOS>	Identifies the COS value set in the S-VLAN tag.
• 0 to 7	Set a Cos value
• DSCP	The COS is set according to DSCP to COS mapping table.
• TRUST	Use the Customer COS
• VLAN	The COS provisioned on CVLAN basis (QinQ selective mode)

Input Parameters

ED-QNQ-ETH

The Edit ETH QinQ Table (ED-QNQ-ETH) command modifies the IEEE 802.1Q tunneling (QinQ) relationship between the customer VLAN (CE-VLAN) and the service provider VLAN (S-VLAN) for Gigabit Ethernet uniport provisioning associated to an L2 Ethernet port.

Usage Guidelines

- The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use a retrieve command to obtain the current value.
- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The ALL AID is invalid for this command.

Category
Ethernet

Security
Provisioning

Input Format
ED-QNQ-ETH:[<TID>]:<AID>:<CTAG>::<FIRSTCEVLANID>,<LASTCEVLANID>,<S_VLAN_ID>[:RULE=<RULE>],[INTERNALVLAN=<INTERNAL_VLAN_ID>],[INGRESSCOS=<INGRESSCOS>][:];

Input Example
ED-QNQ-ETH:PETALUMA:ETH-1-1-1:1::10,11,100:RULE=ADD;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the ETH section.
<FIRSTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<LASTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<RULE>	Used to represent the rules allowed for VLAN tagging operations.
• ADD	The service provider VLAN tag is added to the customer VLAN tag.
• XLTE	The service provider VLAN tag replaces the CE-VLAN tag (single Q).
• XLTE-ADD	XLTE and ADD rule applied together. This rule request to supply an internal S-VLAN. First the Internal VLAN substitutes the Customer VLAN, then Service Provider VLAN TAG (S-VLAN) is added

• DOUBLE-ADD	ADD rule applied two times. This rule request to supply an internal S-VLAN. First the Internal VLAN is added, then Service Provider VLAN TAG (S-VLAN) is added to have a double tag
<INTERNAL_VLAN_ID>	Internal VLAN ID
<INGRESSCOS>	Identifies the COS value set in the S-VLAN tag.
• 0 to 7	Set a Cos value
• DSCP	The COS is set according to DSCP to COS mapping table.
• TRUST	Use the Customer COS.
• VLAN	The COS provisioned on CVLAN basis (QinQ selective mode)

ED-RADIUSSERVER

This command is used to edit the configuration of a RADIUS server.

Usage Guidelines

- The user can edit IP address, authentication port, accounting port and shared secret of the RADIUS server.

Category

System

Security

Provisioning

Input Format

ED-RADIUSSERVER:[<TID>]:<aid>:<CTAG>:::[NODEADDRESS=<nodeaddress>],[SHAREDSECRET=<sharedsecret>],[AUTHPORT=<authport>],[ACCNTPORT=<accntport>];

Input Example

ED-RADIUSSERVER::2:a:::NODEADDRESS=12.3.4.65;

Input Parameters

<AID>	AID is Position field given by RTRV-RADIUSSERVER.

<NODEADDRESS>	Radius server IP addresses.
<SHAREDSECRET>	Shares secret.
<AUTHPORT>	Authentication Port in the range from 0 to 65535.
<ACCNTPORT>	Account Port in the range from 0 to 65535.

ED-REP

The Edit Resilient Ethernet Protocol (ED-REP) command edits the Resilient Ethernet Protocol (REP) configuration on the ethernet port.

Usage Guidelines

- The PREEMPTDELAY parameter value “0” indicates the automatic VLB is disabled on the Edge Ports.
- The NE generates a REPT-DBCHG notification when the preempt delay timer is changed.
- This command is applicable only to GE_XP and 10GE_XP cards.

Category

Ethernet

Security

Provisioning

Input Format

ED-REP:[<TID>]:<AID>:<CTAG>::<PREEMPTDELAY>;

Input Example

ED-REP:CISCO:ETH-12-1-1:1::20;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the ETH section.
<PREEMPTDELAY>	Specifies the time in minutes after which the VLAN load balancing is triggered automatically. The valid range is from 15 to 300 minutes. The default value is 0.

ED-ROLL-<MOD_PATH>

The Edit Roll for STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS96C, STS6C, STS9C, VT1, or VT2 (ED-ROLL-<MOD_PATH>) command forces a rolling operation, which attempts to force a valid signal to complete the rolling operation.

Usage Guidelines

See Table 30-1 on page 30-1 for supported modifiers by platform.

Note STS18C and STS36C are not supported for this command in this release.

Category

Bridge and Roll

Security

Provisioning

Input Format

ED-ROLL-<MOD_PATH>:[<TID>]:<FROM>,<TO>:<CTAG>:::[CMDMDE=<CMDMDE>];

Input Example

ED-ROLL-STS1:PETALUMA:STS-1-1-1,STS-2-1-1:1:::CMDMDE=FRCD;

Input Parameters

<FROM>	Source access identifier from the CrossConnectId1 section. It is one of the termination points (legs) of the existing cross-connection. If the existing cross-connection is one-way, then this termination point (leg) should be the FROM-AID termination point. Otherwise, FROM is not significant. FROM and TO should be entered as they are entered in the ENT-CRS command. You can issue RTRV-CRS command, and use the response for FROM and TO parameters.
<TO>	Destination access identifier from the CrossConnectId1 section. It is one of the termination points (legs) of the existing cross-connection. If the existing cross-connection is one-way, then this termination point (leg) should be the TO-AID termination point. Otherwise, the TO is not significant. FROM and TO should be entered as they are entered in the ENT-CRS command. You can issue RTRV-CRS command, and use the response for FROM and TO parameters.

<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states. **Note** CMDMDE can only go from NORM to FRCD (cannot go from FRCD to NORM). CMDMDE cannot be set to NORM using this command.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.

ED-SLV-WDMANS

The Edit Span Loss Verification Wavelength Division Multiplexing Automatic Node Set-Up (ED-SLV-WMANS) command edits the expected span loss verification.

Usage Guidelines

None

Category

DWDM

Security

Maintenance

Input Format

ED-SLV-WDMANS:[<TID>]:<AID>:<CTAG>[::<ROLE>][:];

Input Example

ED-SLV-WDMANS:VA454-22:WDMANS-E:116;

Input Parameters

<AID>	Access identifier from the WDMANS section.
<ROLE>	The role the unit is playing in the protection group.

• PROT	The entity is the protection unit in the protection group.
• WORK	The entity is the working unit in the protection group.

ED-STCN-REP

The Edit Segment Topology Change Notification Resilient Ethernet Protocol (ED-STCN-REP) command edits the Segment Topology Change Notification (STCN) for REP Segment on the ethernet ports.

Usage Guidelines

- STCN can be enabled only on the EDGE ports of the REP Segment.
- If the STCN is not enabled, you cannot edit any other parameters related to STCN.
- Only one Segment range can be added or removed at a time
- A maximum of 2 Segment range can be configured on the ethernet edge port.
- This command is applicable only to GE_XP and 10GE_XP cards.

Category

Ethernet

Security

Provisioning

Input Format

ED-STCN-REP:[<TID>]:<AID>:<CTAG>:::[STCNENABLED=<STCNENABLED>],[STCNOPERATION=<STCNOPERATION>],[SEGRANGESTART=<SEGRANGESTART>],[SEGRANGEEND=<SEGRANGEEND>],[STCNPORT=<STCNPORT>];

Input Example

ED-STCN-REP::ETH-16-1-1:1:::STCNENABLED=Y,STCNOPERATION=ADD,SEGRANGESTART=1000,SEGRANGEEND=1004,STCNPORT=ETH-16-2-1;

<AID>	Access identifier from the FACILITY section.
<STCNENABLED>	To enable or disable the Segment Topology Notification on ethernet entity for REP.
• Y	Enables STCN on the ethernet port.
• N	Disables STCN on the ethernet port.
<STCNOPERATION>	Adds or removes the range for STCN notification.

• ADD	Adds the range to a list of segment ranges for STCN notification.
• REMOVE	Removes the range from the list of ranges for STCN notification.
<SEGRANGESTART>	Indicates the segment range start value for the STCN. The valid range is from 0 to 1024.
<SEGRANGEEND>	Indicates the segment range end value for the STCN. The valid range is from 0 to 1024.
<STCNPORT>	Determines on which ethernet port the STCN should be sent. STCNPORT is an AID, it takes ETH AID value. The default is NULL.

Input Parameters

ED-SYNCN

The Edit Synchronization (ED-SYNCN) 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 might be specified (for example, PRIMARY, SECOND, THIRD).To view or edit the system timing mode, use the RTRV-NE-SYNCN or ED-NE-SYNCN commands.

Usage Guidelines

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

Category

Synchronization

Security

Provisioning

Input Format

ED-SYNCN:[<TID>]:<AID>:<CTAG>:::[PRI=<PRI>],[SEC=<SEC>],[THIRD=<THIRD>][:];

Input Example

ED-SYNCN:BOYES:SYNC-NE:112:::PRI=INTERNAL,SEC=INTERNAL,THIRD=INTERNAL;

Input Parameters

<AID>	Access identifier from the SYNC_REF section.

<PRI>	Primary reference of the synchronization from the SYNC_REF section.
<SEC>	Secondary reference of the synchronization from the SYNC_REF section.
<THIRD>	Third reference of the synchronization from the SYNC_REF section.

ED-T1

The Edit Digital Signal Facility (ED-T1) command edits the attributes related to a DS1/T1 port.

Usage Guidelines

- This command is not allowed if the card is a protect card.
- 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.
- Editing the TACC using 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 TAP or TACC number. Otherwise, an error message (for example, VT in Use) will be returned.
- TACC creation will be denied on protect ports/cards.
- AUTO-PROV is not supported.
- The AISONLPBK and RETIME options are applicable to the DS1/E1-56 card .
- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use a retrieve command to retrieve the current value.
- The parameters SYNCMAP, and VTMAP are only supported on the DS1/E1-56 card .
- The parameters ADMSSM and INHFELPBK are only supported on the DS1/E1-56 card .
- You cannot directly transition a facility from IS to OOS-MA,DSBLD service state. You can transition a facility to OOS-MA,DSBLD service state from any state except OOS-MA,MT. To transition a facility from OOS-MA,MT to OOS-MA,DSBLD service state, all the following conditions must be met:
  - The facility is not sourcing a synchronization clock
  - The facility's DCC is disabled
  - The facility is not part of a protection group
  - The facility is not supporting cross-connects
  - The facility is not using overhead connections or overhead terminations (such as express orderwire, local orderwire, or user data channels [UDCs])

Note The conditions stipulated can be overridden by using the CMDMDE=FRCD option. The FRCD option will immediately remove the facility from service (except for IS to OOS-MA,DSBLD transition) with no consideration for orderly interruption.

- The parameters BERTMODE, BERTPATTERN, and BERTERRCOUNT apply to DS1/E1-56 and DS3XM-12 cards.
- BERT is implemented on a single port.

Category
Ports

Security
Provisioning

Input Format
ED-T1[:<TID>]:<AID>:<CTAG>[:::CLKSRC=<CLKSRC>],[LINECDE=<LINECDE>],[FMT=<FMT>],[LBO=<LBO>],[TACC=<TACC>],[TAPTYPE=<TAPTYPE>],[SOAK=<SOAK>],[SFBER=<SFBER>],[SDBER=<SDBER>],[SYNCMSG=<SYNCMSG>],[SENDDUS=<SENDDUS>],[NAME=<NAME>],[CMDMDE=<CMDMDE>],[AISONLPBK=<AISONLPBK>],[MODE=<MODE>],[SYNCMAP=<SYNCMAP>],[ADMSSM=<ADMSSM>],[VTMAP=<VTMAP>],[AISVONAIS=<AISVONAIS>],[AISONLOF=<AISONLOF>],[INHFELPBK=<INHFELPBK>],[INHFEBPLPBK=<INHFEBPLPBK>],[BERTMODE=<BERTMODE>],[BERTPATTERN=<BERTPATTERN>],[BERTERRCOUNT=<BERTERRCOUNT>][:<PST>[,<SST>]];

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,SYNCMSG=Y,SENDDUS=Y,
NAME="T1 PORT",CMDMDE=FRCD,AISONLPBK=AIS_ON_LPBK_ALL,
MODE=FDL,SYNCMAP=ASYNC,ADMSSM=STU,VTMAP=GR253,AISVONAIS=Y,
AISONLOF=Y,INHFELPBK=N, BERTMODE=NONE,BERTPATTERN=NONE,
BERTERRCOUNT=0:IS,AINS;

Input Parameters

<AID>	Access identifier from the FACILITY section.
<CLKSRC>	<CLKSRC>
• INTERNAL	INTERNAL
• LOOPBACK TIMING	LOOPBACK TIMING
• SYNCE	SYNCE
• ADAPTIVE	ADAPTIVE
<LINECDE>	Line code. The parameter type is LINE_CODE.
• AMI	Line code value is AMI.
• B3ZS	Bipolar with three-zero substitution
• B6ZS	Line code value is B6ZS.
• B8ZS	Line code value is B8ZS.
• JBZS	JBZS

• ZBTSI	ZBTSI
<FMT>	Digital signal frame format. The parameter type is FRAME_FORMAT, which is the frame format for a T1 port.
• AUTOPROV	AUTOPROV
• CBIT	C-BIT line type applies to the DS3XM and DS3E cards.
• D4	Frame format is D4.
• DS2 FRAMED	DS2 FRAMED
• E2 FRAMED	E2 FRAMED
• E3-FRAME	E3-FRAME
• E3-PLCP	E3-PLCP
• ESF	Frame format is ESF.
• FRAMENA	FRAMENA
• G-751	G-751
• G-832	G-832
• M13	M13 line type applies to the DS3XM and DS3E cards.
• M23	M23
• SYNTRAN	SYNTRAN
• UNFRAMED	Frame format is unframed.
<LBO>	Line build-out settings. The parameter type is LINE_BUILDOUT.
• 0-133	Line build-out range is 0–133
• 133-266	Line build-out range is 133-266
• 266-399	Line build-out range is 266-399
• 399-533	Line build-out range is 399-533
• 533-655	Line build-out range is 533-655
<TACC>	TAP number within a range of 0 to 999. Indicates whether the digroup being provisioned is to be used as a test access digroup. When TACC is 0 (zero), the TAP is deleted. Default is N. TACC is an integer.
<TAPTYPE>	TAP type. Defaults to DUAL. The parameter type is TAPTYPE (test access point type).
• DUAL	Dual FAD

• SINGLE	Single FAD
<SOAK>	OOS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer.
<SFBER>	The port signal failure threshold. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	Port signal degrade threshold. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<SYNCMSG>	Synchronization status messaging is enabled or disabled on the T1 facility.
• N	Disable an attribute.
• Y	Enable an attribute.
<SENDDUS>	The facility will send the DUS value as the SSM for that facility.
• N	Disable an attribute.
• Y	Enable an attribute.
<NAME>	Name. NAME is a string.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.

• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<AISONLPBK>	Defaults to AIS_ON_LPBK_ALL. The parameter type is AIS_ON_LPBK, which indicates if AIS is sent on a loopback.
• FACILITY	AIS is sent on facility loopbacks.
• ALL	AIS is sent on all loopbacks.
• OFF	AIS is not sent on loopbacks.
• TERMINAL	AIS is sent on terminal loopbacks.
<MODE>	Mode. Default value is FDL. The parameter type is DS1MODE, which is the DS1 path mode of the DS3XM-12 card.
• ATT	Indicates that the DS1 path of the DS3XM-12 is in AT&T 54016 mode.
• FDL	Indicates that the DS1 path of the DS3XM-12 is in FDL T1-403 mode.
<SYNCMAP>	The synchronous mapping for the DS1 facility. Defaults to ASYNC. Only supported on ONS 15454. The parameter type is SYNCMAP (synchronous mapping type).
• ASYNC	Asynchronous
• BYTE	Mapping in byte
• JBYTE	Mapping in jbyte
<ADMSSM>	The administrative synchronization status message. Only supported . Defaults to STU. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level.
• DUS	Do Not 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

• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<VTMAP>	The port to VT mapping type for that particular STS. Only supported on ONS 15454. Defaults to GR253. The parameter type is VTMAP (VT mapping).
• GR253	Mapping based on Telcordia GR-253.
• INDUSTRY	Mapping based on industry standard.
<AISVONAIS>	Defaults to N. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<AISVONLOF>	(Optional) The parameter type is ON_OFF (disable or enable an attribute).
<INHFELPBK>	Indicates whether far-end loopbacks are inhibited on the facility. Defaults to N. The parameter type is ON_OFF.
• N	Disable an attribute.
• Y	Enable an attribute.
<INHFEBPLPBK>	Indicates whether far-end backplane loopbacks are inhibited on the facility.
• N	Disable an attribute.
• Y	Enable an attribute.
<BERTMODE>	Specifies the mode TPG or TPM of the port for BERT.
• NONE	BERT mode not enabled.
• TPGM-L	Test pattern generator and monitor on line side.
• TPGM-B	Test pattern generator and monitor on backplane.
• TPG-L	Test pattern generator on line side.
• TPM-L	Test pattern monitor on line side.
• TPG-B	Test pattern generator on backplane.
• TPM-B	Test pattern monitor on backplane.
<BERTPATTERN>	Specifies the error pattern to be injected for BERT.

• NONE	BERT pattern not enabled.
• PRBS15	PRBS15 test pattern.
• PRBS20	PRBS20 test pattern.
• PRBS23	PRBS23 test pattern.
• QRSS	QRSS test pattern.
• ALT-ONE-ALT-ZERO	Alternate one and zero pattern.
<BERTERRCOUNT>	Integer value. Value –1 indicates that BERT is disabled/not supported.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ED-T3

The Edit Digital Signal Facility (ED-T3) command edits the attributes related to a DS3/T3 port and the DS3i-N-12 card.

Usage Guidelines

- This command is not allowed if the card is a protect card.
- Neither FMT nor Line code are 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.

- If you send this command to edit TACC and any other attribute(s), and the port having the cross-connection or the port/VT has a TAP or TACC number, the Parameters Not Compatible error message is returned.
- Editing TACC using 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 TAP or TACC number. Otherwise, an error message (VT in Use) will be returned.
- TACC creation will be denied on the protect ports/cards.
- Automatic application of loopbacks originating from the far end can be initiated on the T3 ports of a DS3E, DS3NE, or DS3XM card.
- CTC can set the FMT attribute of a DS3(N)E line to AUTOPROVISION to set the framing based on the framing that is coming in. The result is the FMT field being blanked out for a few seconds or blanked out indefinitely for a preprovisioned DS3(N)E card in CTC. AUTOPROVISION is not considered a valid DS3 framing type. It is only used to trigger an autosense and subsequent autoprovisioning of a valid DS3 framing type (unframed, M13, C-BIT). TL1 does not have the AUTOPROVISION mode. TL1 maps/returns the AUTOPROVISION mode to the unframed framing type.
- For the DS3XM-12 card, the DS3/T3 configurable attributes (PM, TH, alarm, etc.) only apply on the ported ports (1 to 12) and the DS3-mapped (even) portless ports in xxx-xxx-T3 commands. If you attempt to provision or retrieve DS3/T3 attributes on the VT-mapped (odd) portless port in xxx-xxx-T3 commands, an error message is returned.
- For the DS3XM-12 card, if the administrative state is already set for a portless port, the state setting operation over its associated ported port is an invalid operation.
- The test set physical connection set up through ED-T3/DS1/STS1/VT1 of the DS3XM-12 card is only allowed on the physical front ports (PORTED ports, Ports 1 to 12), which are the monitoring ports.
  - The monitoring test access ports follow the common rules for the other cards. For example, ED-T3 on Port 2 (FAC-6-2) with a TACC number (8), the next port, Port 3 (FAC-6-3) is used as the monitoring point also. The RTRV-T3 on both Port 2 and Port 3 return the same TACC number (8) being used to monitor the cross-connection end (A-B). The last port (Port 12) is not allowed to set up a physical connection with the test set because there is no next available port to be the monitoring port.
  - The DISC-TACC and CHG-TACC commands follow the same requirements as in the previous bullet, but applied on the ported ports of the DS3XM-12 card.
  - The CONN-TACC command has monitored points that can be portless ports. This command is applied on both ported and portless ports of the DS3XM-12 card.
- If the entity has a TACC connection, the entity is not allowed to have ported or portless STS/VT cross-connection (or circuit) provisioning on the DS3XM-12 card.
- ED-T3 cannot be used to create TAPs on the DS3i-N-12 card on the SONET platform because the DS3I card only supports STS3C TAPs.
- You cannot use this command to change the default provisioning on Slots 3 and 15 for the DS3/EC1-48 card.
- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use a retrieve command to retrieve the current default values.
- You cannot directly transition a facility from IS to OOS-MA,DSBLD service state. You can transition a facility to OOS-MA,DSBLD service state from any state except OOS-MA,MT. To transition a facility from OOS-MA,MT to OOS-MA,DSBLD service state, all the following conditions must be met:
  - The facility is not sourcing a synchronization clock.
  - The facility's DCC is disabled.
  - The facility is not part of a protection group.
  - The facility is not supporting cross-connects.
  - The facility is not using overhead connections or overhead terminations (such as express orderwire, local orderwire, or user data channels [UDCs]).

Note The conditions stipulated can be overridden by using the CMDMDE=FRCD option. The FRCD option will immediately remove the facility from service (except for IS to OOS-MA,DSBLD transition) with no consideration for orderly interruption.

- The parameters BERTMODE, BERTPATTERN, and BERTERRCOUNT apply to DS1/E1-56 and DS3XM-12 cards.
- BERT is implemented on a single port.

Category
Ports

Security
Provisioning

Input Format
ED-T3[:<TID>]:<AID>:<CTAG>[:::CLKSRC=<CLKSRC>],[FMT=<FMT>],[LINECDE=<LINECDE>],[LBO=<LBO>],[INHFELPBK=<INHFELPBK>],[TACC=<TACC>],[TAPTYPE=<TAPTYPE>],[SOAK=<SOAK>],[SFBER=<SFBER>],[SDBER=<SDBER>],[NAME=<NAME>],[AISONLPBK=<AISONLPBK>],[CMDMDE=<CMDMDE>],[BERTMODE=<BERTMODE>],[BERTPATTERN=<BERTPATTERN>],[BERTERRCOUNT=<BERTERRCOUNT>][:<PST>[,<SST>]];

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,NAME="T3
PORT",AISONLPBK=ALL,CMDMDE=FRCD,BERTMODE=NONE,BERTPATTERN=NONE,
BERTERRCOUNT=0:IS,AINS;

Input Parameters

<AID>	Access identifier from the FACILITY section.
<CLKSRC>	<CLKSRC>
• INTERNAL	INTERNAL
• LOOPBACK TIMING	LOOPBACK TIMING
• SYNCE	SYNCE
• ADAPTIVE	ADAPTIVE
<FMT>	Digital signal frame format. The parameter type is FRAME_FORMAT, which is the frame format for a T1 port.
• AUTOPROV	AUTOPROV
• CBIT	C-BIT line type applies to the DS3XM and DS3E cards.

• DS2 FRAMED	DS2 FRAMED
• E2 FRAMED	E2 FRAMED
• E3-FRAME	E3-FRAME
• E3-PLCP	E3-PLCP
• FRAMENA	FRAMENA
• G-751	G-751
• G-832	G-832
• M13	M13 line type applies to the DS3XM and DS3E cards.
• M23	M23
• SYNTRAN	SYNTRAN
• UNFRAMED	Line type is unframed. The old DS3 (L3M) and DS3CR cards can only run in unframed mode.
<LINECDE>	Line code. The parameter type is DS_LINE_CODE, which is the DS123 line code.
• B3ZS	Bipolar with three-zero substitution
• B6ZS	B6ZS
• JBZS	JBZS
• ZBTSI	ZBTSI
<LBO>	Line build-out settings. LBO is an integer. The parameter type is E_LBO, which is the electrical signal line build-out.
• 0–225	Electrical signal line build-out range is 1–225.
• 226–450	Electrical signal line build-out range is 226–450.
<INHFELPBK>	(Optional) 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 N. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<TACC>	TAP number within a range of 0 to 999. Indicates whether the digroup being provisioned is to be used as a test access digroup. When TACC is 0 (zero), the TAP is deleted. Default is N. TACC is an integer.

<TAPTYPE>	TAP type. Defaults to DUAL. The parameter type is TAPTYPE, which is the test access point type.
• DUAL	Dual FAD
• SINGLE	Single FAD
<SOAK>	OOS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer.
<SFBER>	The port signal failure threshold. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	Port signal degrade threshold. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<NAME>	Name. NAME is a string.
<AISONLPBK>	The parameter type is AIS_ON_LPBK, which indicates whether. AIS is sent on a loopback. Defaults to AIS_ON_LPBK_ALL.
• FACILITY	AIS is sent on facility loopbacks.
• ALL	AIS is sent on all loopbacks.
• OFF	AIS is not sent on loopbacks.
• TERMINAL	AIS is sent on terminal loopbacks.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated

	(VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<BERTMODE>	Specifies the mode TPG and TPM of the port for BERT.
• NONE	BERT mode not enabled.
• TPGM-L	Test pattern generator and monitor on line side.
• TPGM-B	Test pattern generator and monitor on backplane.
• TPG-L	Test pattern generator on line side.
• TPM-L	Test pattern monitor on line side.
• TPG-B	Test pattern generator on backplane.
• TPM-B	Test pattern monitor on backplane.
<BERTPATTERN>	Specifies the error pattern to be injected for BERT.
• NONE	BERT pattern not enabled.
• PRBS15	PRBS15 test pattern.
• PRBS20	PRBS20 test pattern.
• PRBS23	PRBS23 test pattern.
• QRSS	QRSS test pattern.
• ALT-ONE-ALT-ZERO	Alternate one and zero pattern.
<BERTERRCOUNT>	Integer value. Value –1 indicates that BERT is disabled/not supported.
PST	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
SST	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.

• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ED-TRAPTABLE

The Edit Trap Table (ED-TRAPTABLE) command edits a trap destination entry identified by a specific trap destination address.

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

ED-TRAPTABLE:[<TID>]:<AID>:<CTAG>:::COMMUNITY=<COMMUNITY>,[TRAPPORT=<TRAPPORT>],[TRAPVER=<TRAPVER>];

Input Examples

1. ED-TRAPTABLE::1.2.3.4:1:::COMMUNITY=“PUBLIC”,TRAPPORT=162,TRAPVER=SNMPV1;
2. ED-TRAPTABLE:“[3ffe:0501:0008:0000:0260:97ff:fe40:efab]”:1:::COMMUNITY="PUBLIC",TRAPPORT=162,TRAPVER=SNMPV1;

Input Parameters	
<AID>	Access identifier from the IPADDR section. IP address identifying the trap destination.
<COMMUNITY>	Community name associated to the trap destination. Maximum of 32 characters. COMMUNITY is a string.
<TRAPPORT>	User datagram protocol (UDP) port number associated with the trap destination. Default to 162. TRAPPORT is an integer.
<TRAPVER>	SNMP version number. Defaults to SNMPv1. The parameter type is SNMP_VERSION (SNMP version).
• SNMPV1	SNMP version 1 (default)
• SNMPV2	SNMP version 2

ED-TRC-OCH

The Edit Trace Optical Channel Facility (ED-TRC-OCH) command edits trace-related optical channel facilities. Refer to the *Cisco ONS SDH and Cisco ONS 15600 SONET TL1 Reference Guide* for specific card provisioning rules.

Usage Guidelines

None

Category

DWDM

Security

Provisioning

Input Format

ED-TRC-OCH[:<TID>]:<SRC>:<CTAG>[:::EXPTRC=<EXPTRC>],[TRC=<TRC>], [TRCMODE=<TRCMODE>],[TRCLEVEL=<TRCLEVEL>],[TRCFORMAT= <TRCFOR-MAT>],[SAPIEXPTRC=<SAPIEXPTRC>],[DAPIEXPTRC=<DAPIEXPTRC>], [USEREXPTRC=<USEREX-PTRC>],[SAPITRC=<SAPITRC>],[DAPITRC=<DAPITRC>], [USERTRC=<USERTRC>][:];

Input Example

ED-TRC-OCH:PETALUMA:CHAN-6-2:10:::EXPTRC="AAA",TRC="AAA",TRCMODE=MAN, TRCLEVEL=TTI-PM,TRCFORMAT=64-BYTE;

Input Parameters

<SRC>	Source access identifier from the CHANNEL section.
<EXPTRC>	Expected path trace content. Indicates the expected path trace message (J1) contents. EXPTRC is any 64-character ASCII string, including the terminating CR (carriage return) and LF (line feed). A null value is equivalent to ALL. EXPTRC is a string.
<TRC>	The path trace message to be transmitted. The trace byte continuously transmits a 64-byte, fixed-length, ASCII string, one byte at a time. A null value defaults to the NE transmitting 62 null characters (Hex 00) and CR and LF. A null value is equivalent to ALL.
<TRCMODE>	Trace mode. Defaults to the OFF mode. The parameter type is TRCMODE (trace mode).
• 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 TIM-P is 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 TIM-P is detected.
• OFF	Turn off path trace capability. Nothing will be reported.
<TRCLEVEL>	The trace level to be managed. TRCLEVEL is a string. **Note** This command is mandatory when edting the TRC parameters.
• J0	Identifies the SDH J0 section trace level.
• TTI-PM	Identifies the TTI path monitoring point.
• TTI-SM	Identifies the TTI section monitoring point.
<TRCFORMAT>	Trace message size. The parameter type is TRCFORMAT (trace format).
• 1-BYTE	1 byte trace message
• 16-BYTE	16 byte trace message

• 64-BYTE	64 yte trace message

ED-TRC-ODU

The command sets ODU TTI.

Usage Guidelines

- The AIDS are Mandatory

Category

DWDM

Security

Provisioning

Input Format

ED-TRC-ODU:[<TID>]:<src>:<CTAG>:::[BANDWIDTH=<bandwidth>],[TRCMODE=<trcmode>],[TRCLEVEL=<trclevel>],[TRCFORMAT=<trcformat>],[SAPIEXPTRC=<sapiexptrc>],[DAPIEXPTRC=<dapiexptrc>],[USEREXPTRC=<userexptrc>],[SAPITRC=<sapitrc>],[DAPITRC=<dapitrc>],[USERTRC=<usertrc>][:];

Input Example

Input Parameters

Src	ODU AID. Example ODU-1-5-7-1-1-1.
BANDWIDTH	ENUM (Optional). ODU Level (ODU2E). Bandwidth parameter is only applicable for ODU. As it's the same command syntax for other MODs as well, this is made optional.
TRCMODE	AUTO, AUTO-NO-AIS, MAN, MAN-NO-AIS. OFF, Default is OFF. ENUM, Optional.
TRCFORMAT	64-BYTE, 16-BYTE, 1-BYTE, Default is 64-BYTE. ENUM, Optional.
TRCLEVEL	TRCLEVEL_TL_TTI_SECTION:TTI-SM, TRCLEVEL_TL_TTI_PATH:TTI-PM,

	TRCLEVEL_TL_J0_SECTION:J0. It is a mandatory field. ENUM (Optional)
• SAPIEXPTRC	Sapi expected trc. Default is empty string.
• DAPIEXPTRC	Dapi expected trc. Default is empty string.
• USEREXPTRC	User expected trc. Default is empty string
• SAPITRC	Sapi trc. Default is empty string.
• DAPITRC	Dapi trc. Default is empty string.
• USERTRC	User trc. Default is empty string.

ED-TRC-OTU

The Edit Trace Optical Transport Unit Level 1, Level 2, Level 3, and Level 4 (ED-TRC-OTU1, ED-TRC-OTU2, ED-TRC-OTU3, ED-TRC-OTU4 and ED-TRC-OTU4C2) command edits trace-related attributes of an OTU1, OTU2, OTU3, and OTU4 facility respectively.

Usage Guidelines

- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use a retrieve command to obtain the current value.
- In the CFP-TXP mode, trace is supported on the 100G-LC-C virtual ports (VCFAC) and not on the CFP-LC card.

Category

DWDM

Security

Provisioning

Input Format

ED-TRC-OTU1[:<TID>]:<SRC>:<CTAG>[:::EXPTRC=<EXPTRC>],[TRC=<TRC>], [TRCMODE=<TRCMODE>],[TRCLEVEL=<TRCLEVEL>],[TRCFORMAT= <TRCFOR-MAT>],[SAPIEXPTRC=<SAPIEXPTRC>],[DAPIEXPTRC=<DAPIEXPTRC>], [USEREXPTRC=<USEREX-PTRC>],[SAPITRC=<SAPITRC>],[DAPITRC=<DAPITRC>], [USERTRC=<USERTRC>][:];

ED-TRC-OTU2[:<TID>]:<SRC>:<CTAG>[:::EXPTRC=<EXPTRC>],[TRC=<TRC>], [TRCMODE=<TRCMODE>],[TRCLEVEL=<TRCLEVEL>],[TRCFORMAT= <TRCFORMAT>],[SAPIEXPTRC=<SAPIEXPTRC>],[DAPIEXPTRC=<DAPIEXPTRC>], [USEREXPTRC=<USEREXPTRC>],[SAPITRC=<SAPITRC>],[DAPITRC=<DAPITRC>], [USERTRC=<USERTRC>][:];

ED-TRC-OTU3[:<TID>]:<SRC>:<CTAG>[:::EXPTRC=<EXPTRC>],[TRC=<TRC>], [TRCMODE=<TRCMODE>],[TRCLEVEL=<TRCLEVEL>],[TRCFORMAT= <TRCFORMAT>],[SAPIEXPTRC=<SAPIEXPTRC>],[DAPIEXPTRC=<DAPIEXPTRC>], [USEREXPTRC=<USEREXPTRC>],[SAPITRC=<SAPITRC>],[DAPITRC=<DAPITRC>], [USERTRC=<USERTRC>][:];

ED-TRC-OTU4[:<TID>]:<SRC>:<CTAG>[:::EXPTRC=<EXPTRC>],[TRC=<TRC>], [TRCMODE=<TRCMODE>],[TRCLEVEL=<TRCLEVEL>],[TRCFORMAT= <TRCFORMAT>],[SAPIEXPTRC=<SAPIEXPTRC>],[DAPIEXPTRC=<DAPIEXPTRC>], [USEREXPTRC=<USEREXPTRC>],[SAPITRC=<SAPITRC>],[DAPITRC=<DAPITRC>], [USERTRC=<USERTRC>][:];

Input Example

ED-TRC-OTU1:CISCO:VFAC-1-6-1:10:::EXPTRC="AAA",TRC="AAA",TRCMODE=MAN,TRCLEVEL=TTI-PM,TRCFORMAT=64-BYTE;

Input Parameters

<SRC>	Source access identifier from the FACILITY section.
<EXPTRC>	(Optional) Expected path trace content. Indicates the expected path trace message (J1) contents. EXPTRC is any 64-character ASCII string, including the terminating CR (carriage return) and LF (line feed). A null value is equivalent to ALL. EXPTRC is a string.
<TRC>	(Optional) The path trace message to be transmitted. The trace byte continuously transmits a 64 byte, fixed length ASCII string, one byte at a time. A null value defaults to the NE transmitting 62 null characters (Hex 00) and CR and LF. A null value is equivalent to ALL.
<TRCMODE>	(Optional) Trace mode. Defaults to the OFF mode. A null value is equivalent to ALL. The parameter type is TRCMODE (trace mode).
• 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 TIM-P is 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 TIM-P is detected.
• OFF	Turn off path trace capability. Nothing will be reported.

<TRCLEVEL>	The trace level to be managed. TRCLEVEL is a string. **Note** This command is mandatory when edting the TRC parameters.
• J0	Identifies the SDH J0 section trace level.
• TTI-PM	Identifies the TTI path monitoring point.
• TTI-SM	Identifies the TTI section monitoring point.

<TRCFORMAT>	(Optional) Trace message size. A null value is equivalent to ALL. The parameter type is TRCFORMAT (trace format).
• 1-BYTE	1-byte trace message
• 16-BYTE	16-byte trace message
• 64-BYTE	64-byte trace message

ED-UNICFG

(Cisco ONS 15454, Cisco ONS 15454 M2, Cisco ONS 15454 M6) The Edit User Network Interface Configuration command edits the attributes and service parameters of UNI configuration created.

Usage Guidelines

- With the VALMODE parameter value as NONE, the VALZONE parameter is not applicable.
- RESTTYPE as REVERT is not applicable for UNICFG.

Category

Retrieve

Security

Provisioning

Input Format

ED-UNICFG[:<TID>]:<SRC>:<CTAG>[:::VALMODE=<OPTVAL>],[VALZONE=<OPRZONE>],[DESCR=<DESCR>],[ADMINSTATE=<ADMINSTATE>],[RESTTYPE=<RESTTYPE>],[CKTLABEL=<CKTLABEL>],[USPWROFS=<UPSTRMPWR>],[DSPWROFS=<DNSTRMPWR>],[ALLOWREGEN=<ALLOWREGEN>],[UNICTRLMODE=<unictrlmode>],[REVERTMODE=<revertmode>],[SOAK=<HH-MM-

SS>],[RESTVALMODE=<restvalmode>,[RESTVALZONE=<restvalzone>,][DIVERSITY=<diversity>],[DIVERSITYTYPE=<diversitytype>],[ISLOOSE=<isloose>],[MSTPIP=<mstpip>],[RSYSIP=<rsysip>],[TERMINTFDX=<termintfdx>],[REMOTEIFINFO=<remoteifinfo>],[REMOTIFINFOLIST=<remoteifinfolist>],[ALIENID=<alienid>],[FECMODE=<fecmode>],[TRUNKMODE=<trunmode>],[RIFCIP=<rifcip>],[TXPCONTROLMODE=<txpcontrolmode>];;

List of Supported ALIENIDs

- ALIEN_NOT_PROV
- MCH Custom
- 100G-CK-C
- 100G-CK-ME-C
- 100G-ME-C
- 100GS-CK-LC
- 10-Gbps Aggregation (W/Splitter)
- 10GE-ITU
- 2.5G DWDM ITU-T SFP
- 2.5-Gbps Aggregation (W/Splitter)
- 2.5-Gbps Aggregation
- 200G-CK-LC
- 400G-XP-LC-CFP2
- 40E-MXP-C
- 40E-TXP-C
- 40G DWDM ITU-T MXP
- 40G DWDM ITU-T TXP
- 40G-MXP-C
- 40G-TXP-C
- 4-10GE-ITU
- 40C192-ITU
- CRS-1 40G ITU-T LC
- CRS-1 40G-DPSK-ITU-T LC
- Data Muxponder (W/Splitter)
- Data Muxponder
- DCO_CFP2_8QAM_200G
- DCO_CF2_QPSK_100G
- DWDM ITU-T SFP
- DWDM-X2
- DWDM-XENPAK
- DWDM-XFP

- GE DWDM GBIC
- MR MM TXP (W/Splitter)
- MR MM TXP
- MXP_2.5G_10E
- MXP 2.5G 10G
- MXP_MR_10DME
- MXP_MR_2.5G
- MXPP_MR_2.5G
- NCS1k
- NCS1004
- OC192LR
- OC48ELR
- ONS-CFP2D-400G-C_FOIC
- ONS-CFP2D-400G-C
- ONS-SC-2G
- ONS-SC-4G
- ONS-XC-10G-C
- ONS-XC-10G
- QSFP-DD-ZR
- QSFP-DD-ZR^{+}
- TXP_MR_10E
- TXP_MR_10E_Y
- TXP_MR_10G
- TXP_MR_2.5G
- TXPP_MR_2.5G

Input Example

ED-UNICFG::LINE-2-3:1:::DESCR="CISCO",ADMINSTATE=DOWN;

ED-UNICFG::LINE-1-6-4-RX:1:::CKTLABEL="THGD",USPWROFS=10.1,ALLOWREGEN=YES;

Table 13-5 Parameter Support

Parameter	Description
<SRC>	Source AID from the ALL section.
<VALMODE>	Identifies the validation mode.

• NONE	No optical validation is performed.
• FULL	The optical validation is performed as indicated in VALZONE parameter.
• INHERITED	
<VALZONE>	Identifies the validation operate zone.
• UNKNOWN	Not evaluated.
• GREEN	Margin > 3 sigma.
• YELLOW	1 < margin < 3 sigma.
• ORANGE	0 < margin < 1 sigma.
• RED	-3 < margin < 0 sigma.
• OUT	Margin < -3 sigma.
<DESC>	Description parameter. DECSR is a STRING.
<ADMINSTATE>	Identifies the adminstate is UP or DOWN.
• UP	Indicates Adminstate is UP and UNI Services can be activated.
• DOWN	Indicates Adminstate is DOWN and UNI Services cannot be activated.
<RESTTYPE>	Indentifies the restoration type on UNI configuration.
• NONE	None restoration type for UNICFG.
• RESTORE	Restore restoration type for UNICFG.
<CKTLABEL>	Circuit label.
<CKTPRIORITY>	Circuit Priority.
<DSPWROFS>	Down stream power offset.
<USPWROFS>	Up stream power offset.
<ALLOWREGEN>	Allow Regeneration (ALLOWREGEN)—Allows the control plane to find a regenerator in the network. The regenerators are used when an optical LSP between two endpoints is not optical or lambda feasible with a single DWDM channel.
• YES	Allows the control plane to find a regenerator in the network.
• NO	Denies not find a regenerator in the network.
<ALIENID>	List of Supported ALIENIDs

Input Parameters

<REGENPEER>	REGENPEER will be used to set either ADD/DROP Aid or 0 If AID the set AID in REGENPEER If 0 then unset the REGENPEER

TXPCONTROLMODE:

Values = NONE/GMPLS/LOCAL

Output Format

M 1 COMPLD

Output Example

Output Parameters

ED-USER-SECU

The Edit User Security (ED-USER-SECU) command edits a user's privileges, password, or ID. Only a Superuser can perform this operation. Privilege levels are described in the ENT-USER-SECU command.

Usage Guidelines

- Passwords are masked for the following security commands: ACT-USER, ED-PID, ENT-USER-SECU, and ED-USER-SECU. Access to a TL1 session by 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 reissued 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 reissuing it.
- <NEWUID> can be set to a minimum length of 2 characters up to 20 characters long.
- <NEWPID> depends on the minimum password length, maximum password length, and password character rule that is set by SET-ATTR-SECUDFLT command.
- For the ED-USER-SECU command:

  ED-USER-SECU:[TID]:<UID>:[CTAG]::[<NEWUID>],[<NEWPID>],,[<UAP>]:;

  - If the <NEWPID> is specified, the syntax is checked.
  - The syntax of <UID> is not checked.
  - Old users can change their password without changing their user ID, but the new password must meet the new requirements.
  - The <NEWPID> is required when changing the <UID>.
- When <NEWUID> is specified, <NEWPID> (and the <UAP>) become mandatory.
- The ED-USER-SECU command should be used to change the default password for the CISCO15 default Superuser.
- The ED-PID command cannot be used to change the empty password to a valid password.

Category

Security

Security

Superuser

Input Format

ED-USER-SECU:[<TID>]:<UID>:<CTAG>::[<NEWUID>],[<NEWPID>],,[<UAP>][:];

Input Example

ED-USER-SECU:PETALUMA:CISCO15:123::NEWUID,NEWPID,,MAINT;

Input Parameters	
<UID>	User identifier. Minimum UID is 6 characters. Maximum UID is 10 characters. UID is a string.
<NEWUID>	(Optional) User's new Indentifier. Minimum UID is 2 characters . Maximum UID is 20 characters. NEWUID is a string.
<NEWPID>	(Optional) User's new password. Minimum length depends on PWDMINLEN, maximum length depends on PWDMAXLEN, and password character rule depends on PWDCHRULE set by command SET-ATTR-SECUDFLT.
<UAP>	User's access privilege. The parameter type is PRIVILEGE, which is the security level.
• MAINT	Maintenance security level. 60 minutes of idle time.
• PROV	Provisioning security level. 30 minutes of idle time.
• RTRV	Retrieve security level. Unlimited idle time.
• SUPER	Superuser security level. 15 minutes of idle time.
• ROOT_USER	Root user.
• SEC_SUPER	Security super user.
• SEC_USER	Security user.

ED-VCG

The Edit Virtual Concatenated Group (ED-VCG) command edits the attributes of a VCG.

Usage Guidelines

None

Category

VCAT

Security

Provisioning

Input Format

ED-VCG:[<TID>]:<SRC>:<CTAG>:::[TXCOUNT=<TXCOUNT>],[NAME=<NAME>];

Input Example

ED-VCG:NODE1:FAC-1-1:1234:::TXCOUNT=7,NAME="VCG2";

Input Parameters

<SRC>	Source access identifier from the FACILITY section.
<TXCOUNT>	Number of members in the transmit (Tx) direction. For ML1000-2 and ML100T-12 cards, the only valid value is 2. For the FC_MR-4 card, the only valid value is 8. TXCOUNT is an integer.
<NAME>	Name of the VCAT group. Maximum length is 64 characters. NAME is a string.

ED-VLAN

The Edit VLAN (ED-VLAN) command modifies a VLAN entry in the VLAN database. The VLAN database is a collection of VLANs used in an NE.

Usage Guidelines

A VLAN having the specified AID should be present in the node.

Category

Ethernet

Security

Provisioning

Input Format

ED-VLAN:[<TID>]:<AID>:<CTAG>[:::NAME=<NAME>],[PROTN=<PROTN>],[MACLEARNING=<MACLEARNING>],[IGMPENABLE=<IGMPENABLE>],[IGMPFASTLEAVE=<IGMPFASTLEAVE>],[IGMPSUPP=<IGMPSUPP>][:];

Input Example

ED-VLAN:PETALUMA:VLAN-4096:1:::NAME="MYVLAN",PROTN=N,MACLEARNING=Y,
IGMPENABLE=Y,IGMPFASTLEAVE=Y,IGMPSUPP=Y;

Input Parameters

<AID>	AID is used to access the VLAN.
VLAN-ALL	All AIDs for the VLAN.

VLAN-{0-4096}	Single AID for the VLAN. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<NAME>	Indicates the name of the VLAN.
<PROTN>	Indicates the VLAN protection, enable or disable feature
<MACLEARNING>	MAC Address Learning Mode. This activates the MAC address learning on interface to avoid packet broadcasting. Default value is - “N”
• Y	Activate the MAC learning.
• N	Disable MAC learning.
<IGMPENABLE>	Internet Group Management Protocol status.
• Y	Enabled
• N	Disabled
<IGMPFASTLEAVE>	Internet Group Management Protocol FastLeave status. When enabled, decreases the delay between receiving a Leave Group packet and disabling forwarding of multicast
• Y	Enabled
• N	Disabled
<IGMPSUPP>	IGMP Report suppression. Indicates multicast registered client hiding. When enabled (default) it prevents duplicate reports from being sent to the multicast devices.
• Y	Enabled
• N	Disabled

ED-VLAN-ETH

(Cisco 15454)

Edit VLAN ETH attributes command is used to modify the VLAN Profile associated to the L2 Ethernet ports - VLAN.

Usage Guidelines

The default values for all optional parameters are NE default values. These values may not be the current value for a parameter. In order to obtain the current value, a user needs to use RTRV-XX command to retrieve them.

If the AID is invalid, an IIAC (Invalid AID) error message is returned.

The "ALL" AID is invalid for this command.

The L2 ethernet port must be present when this command is sent. The S-VLAN-ID must not be absent otherwise this command will fail.

If BWP is omitted the first time this command is performed, the default BWP-0 is assumed

Use BWP=0 to restore the Default VLAN Profile

Category
ETHERNET

Security
Provisioning

Input Format
ED-VLAN-
ETH[:<TID>]:<AID>:<CTAG>::[VLAN_ID=<VLAN_ID>],[VLAN_TYPE=<VLAN_TYPE>],[:BWP=<BWP>][:];

Input Example
ED-VLAN-ETH::ETH-1-1-1:1::1010:BWP=34;

Input Parameters

Input Parameters	Description
<AID>	Ethernet aids are used to access L2 Ethernet ports.
• ALL	The ALL aid is applicable for RTRV-only commands, basically the RTRV-rr type of commands.
• ETH[-{1-50}]-{1-5,12-16}-{1-22}-1	Facility aid for GE-XP card.
• ETH[-{1-50}]-{1-6,12-17}-{1-4}-1	Facility aid for 10GE-XP card.
<VLAN_ID>	The VLAN identifier. A VLAN ID is a number in the range 1..4096. The value of 0 is reserved to UNTAGged VLAN.
VLAN_TYPE	Specifies the type of VLAN.
• SVLAN	Service provider VLAN.
• CVLAN	Customer VLAN.
<BWP>	The BWP identifier. A BWP ID is a number in the range 0..10000. The value of 0 is reserved for the default profile that cannot be edited or delete. Default value is 0.

ED-VLB-REP

The Edit VLAN Load Balancing Resilient Ethernet Protocol (ED-VLB-REP) command edits the VLAN Load Balancing (VLB) for REP Segment on the ethernet ports.

Usage Guidelines

- VLB can be enabled only on the EDGE Primary ports of the REP Segment.
- If the VLB is not enabled, you cannot edit any other parameters related to STCN.
- Only one VLAN range can be added or removed at a time
- A maximum of 10 VLAN range can be configured on the ethernet edge port.
- This command is applicable only to GE_XP and 10GE_XP cards.

Category

Ethernet

Security

Provisioning

Input Format

ED-VLB-REP:[<TID>]:<AID>:<CTAG>:::[VLBENABLED=<VLBENABLED>],[VLBOPERATION=<VLBOPERATION>],[VLANRANGESTART=<VLANRANGESTART>],[VLANRANGEEND=<VLANRANGEEND>],[PREFERRED=<PREFERRED>],[REPPORTID=<REPPORTID>];

Input Example

ED-VLB-REP::ETH-16-2-1:1:::VLBENABLED=Y,VLBOPERATION=ADD,VLANRANGESTART=1000,VLANRANGEEND=1001,PREFERRED=N,REPPORTID=0X0134454345678598;

Input Parameters	Description
<AID>	Access identifier from the FACILITY section.
<VLBENABLED>	Enables or disables the segment topology notification on ethernet entity for REP.
• Y	Enables STCN on the ethernet port.
• N	Disables STCN on the ethernet port.
<VLBOPERATION>	Adds or removes the range for STCN notification.
• ADD	Adds the range to a list of segment ranges for STCN notification.

• REMOVE	Removes the range from a list of segment ranges for STCN notification.
<VLANRANGESTART>	Indicates the VLAN range start value for VLB on REP. The valid range is 0 to 1024.
<VLANRANGEEND>	Indicates the VLAN range end value for VLB on REP. The valid range is from 0 to 1024.
<PREFERRED>	Indicates that the port is the preferred alternate port. Or the preferred port for VLAN load balancing.
• Y	Yes
• N	No
<REPPORTID>	Determines the REP port to trigger VLB.

Input Parameters

ED-WDMANS

The Edit Wavelength Division Multiplexing Automatic Node Set Up (ED-WDMANS) command edits the optical node set-up application (AONS) attributes.

Usage Guidelines

None

Category

DWDM

Security

Maintenance

Input Format

(For legacy package)

ED-WDMANS:[<TID>]:<AID>:<CTAG>::[<WLEN>]:[VOAATTN=<VOAATTN>],[POWEROSC=<POWEROSC>],[NTWTYPE=<NTWTYPE>],[CHLOSS=<CHLOSS>],[GAIN=<GAIN>],[TILT=<TILT>],[CHPWR=<CHPWR>],[AMPLMODE=<AMPLMODE>],[RATIO=<RATIO>],[OSCLOSS=<OSCLOSS>],[DITHER=<DITHER>],[TOTALPWR=<TOTALPWR>],>],[TOTALPWRMILLIW=<TOTALPWRMILLIW>],[HIGHSLVEXP=<HIGHSLVEXP>],[LOWSLVEXP=<LOWSLVEXP],>],[TOTALPWRDBM=<TOTALPWRDBM>][:];

(For flex package)

ED-WDMANS:[<TID>]:<AID>:<CTAG>::[<WLEN>]:[VOAATTN=<VOAATTN>],[POWEROSC=<POWEROSC>],[NTWTY

PE=<NTWTYPE>],[CHLOSS=<CHLOSS>],[GAIN=<GAIN>],[TILT=<TILT>],[CHPWR=<CHPWR>],[AMPLMODE=<AMPLMODE>],[RATIO=<RATIO>],[OSCLOSS=<OSCLOSS>],[DITHER=<DITHER>],[TOTALPWRMILLIW=<TOTALPWRMILLIW>],[HIGHSLVEXP=<HIGHSLVEXP>],[LOWSLVEXP=<LOWSLVEXP>],[TOTALPWRDBM=<TOTALPWRDBM>],[ENABLELOGO=<ENABLELOGO>][:];

Input Example

ED-WDMANS:PENNGROVE:WDMSIDE-A:114:::POWERIN=10.0,POWEROUT=10.0, POWEREXP=10.0;

ED-WDMANS:PENNGROVE:WDMSIDE-A:114:::POWERIN=10.0,POWEROUT=10.0, POWEREXP=10.0,POWEROSC=5.0;

ED-WDMANS::LINE-1-3-1-RX:77:::CHLOSS=-11.00;

ED-WDMANS::LINE-1-6-5-TX:5:::TOTALPWRMILLIW=100,TOTALPWRDBM=450.1;

Input Parameters

<AID>	The AID is used to access the WDM node or a single port of the DWDM node.
• WDMNODE	Indicates the WDM node of an MSTP and accesses the NTWTYPE and DITHER WDMANS node parameters.
• LINE	The optical transport section port.
• BAND	The optical multiplex section port.
• CHAN	The optical channel port.
<WLEN>	(Optional) The parameter type is OPTICAL_WLEN, which indicates the optical wavelength.
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1528.77	Wavelength 1528.77
• 1529.16	Wavelength 1529.16
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33

• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35

• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72

• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05

• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27
• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50
• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86

• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57

• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88

• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
<VOAATTN>	The value of calibrated attenuation for the VOA expressed in dBm. The range is 0.0 to +30.0. VOAATTN is a float.
<POWEROSC>	WDM-ANS OSC power parameter.
<NTWTYPE>	WDM-ANS network type parameter.
<CHLOSS>	WDM-ANS channel loss parameter.
<GAIN>	WDM-ANS amplifier gain parameter.
<TILT>	WDM-ANS amplifier tilt parameter.
<CHPWR>	WDM-ANS channel power parameter.
<AMPLMODE	WDM-ANS amplifier mode parameter.
<RATIO>	WDM-ANS Raman amplifier pump ratio parameter.
<OSCLOSS>	WDM-ANS OSC channel loss parameter.
<DITHER>	WDM-ANS WXC dithering parameter.
<TOTALPWR>	WDM-ANS Raman amplifier total power in mW.
<TOTALPWRMILLIW>	Optical power setting in mW.
<HIGHSLVEXP>	Span loss verification—high value.
<LOWSLVEXP>	Span loss verification—low value.
<TOTALPWRDBM>	Optical power setting in dBm.
<ENABLELOGO>	Enable logo.

ED-WDMSIDE

The Edit Wavelength Division Multiplexing Side (ED-WDMSIDE) command modifies the WDM node side attribute.

Usage Guidelines

- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The ALL AID is invalid for this command.

Category

DWDM

Security

Maintenance

Input Format

ED-WDMSIDE:[<TID>]:<AID>:<CTAG>:::[NEWSIDE=<NEWSIDE>][:];

Input Example

ED-WDMSIDE[:<TID>]:<AID>:<CTAG>[:::NEWSIDE=<NEWSIDE>],[SIDEDESC=<SIDEDESC>][:];

Input Parameters

<AID>	The AID is used to access the WDM side of an MSTP node.
• WDMSIDE-{A,B,C,D,E,F,G,H}	MSTP side identifier.
<NEWSIDE>	The AID is used to access the WDM side of an MSTP node.
• WDMSIDE-{A,B,C,D,E,F,G,H}	MSTP side identifier.

ED-OTDRCFGSCHED

The ED-OTDRCFGSCHED schedules a DELTA or PERIODIC scan in a PPM port.

Usage Guidelines

Two types of schedule scans are: DELTA and PERIODIC scan. DELTA scan can be configured when SCANTYPE is set to DELTA and DELTADAY value is configured. PERIODIC scan can be configured when SCANTYPE is set to PERIODIC and DAY value is configured.

Category

Equipment

Security
Provisioning

Input Format

ED-OTDRCFGSCHED::PPM-<Shelf>-<Slot>-<PPM Port>:CTAG:::[SECTOR=<>],[SCANTYPE=<>],[DAY=<>],[DELTADAY=<>],[HH=<>],[MM=<>],[DIRECTION=<DIRECTION],[CONFIG=<CONFIG>];

Input Example

ED-OTDRCFGSCHED::ppm-1-8-1:a:::SECTOR=EXPERT,SCANTYPE=DELTA,DELTADAY=1,HH=20,MM=10,DIRECTION=RX,CONFIG=ENABLE;

ED-OTDRCFGSCHED::ppm-1-8-2:a:::SECTOR=EXPERT,SCANTYPE=PERIODIC,DAY=MON,HH=20,MM=10,DIRECTION=RX,CONFIG=ENABLE;

Input Parameters

<AID>	Specific PPM port on TNC.
<SECTOR> • EXPERT • ZONE #1 (0 to 1km) • ZONE #2 (0 to 25km) • ZONE #3 (0 to 80km) • ZONE #4 (0 to 100km)	Sector parameter of enum type that takes the following values
<SCANTYPE> • PERIODIC • DELTA	Defines the type of scan. Enum type parameter that takes the following values
<DAY> • MON to SUN	Defines the day value and applicable only when <SCANTYPE>=PERIODIC. Enum type parameter that takes the following values
<DELTADAY> • 0 to 365	Defines the day value and applicable only when <SCANTYPE>=DELTA. Enum type parameter that takes the following values

<HH> • 0 to 24	Defines the hour value that takes the following values
<MM> • 0 to 60	Defines the minute value that takes the following values
<DIRECTION> • TX • RX • TX-RX	Defines the scan direction. Enum type parameter that takes the following values
<CONFIG> • DISABLE • ENABLE	Enum type parameter that takes the following values

ED-OTDRCFGSECT

The ED-OTDRCFGSECT command modifies the configuration parameters for an OTDR scan. Loss Sensitivity and Reflection Sensitivity can be modified for all sectors while the rest of the parameters can be modified for expert sector only.

Usage Guidelines

SECTOR is a unique identifier to modify the configuration parameters for a specific PPM. A TNCS-O card has two PPM-FE ports. Loss and Reflection Sensitivity can be modified for all sectors while the rest of the parameters can be modified for expert sector only.

Category

Equipment

Security

Provisioning

Input Format

ED-OTDRCFGSECT::PPM-<Shelf>-<Slot>-<PPM Port>:CTAG:::SECTOR=<SECTOR>,[CAPTUREENDPOINT=<CAPTUREENDPOINT>],[PULSEWIDTH=<PULSEWIDTH>],[MEASURETIME=<MEASURETIME>],[CAPTURESTARTPOINT=<CAPTURESTARTPOINT>],[RESOLUTION=<RESOLUTION>],[LOSSSENSITIVITY=<LOSSSENSITIVITY>], [REFLECTIONSENSITIVITY=< REFLECTIONSENSITIVITY>];

Input Example

ED-OTDRCFGSECT::PPM-1-1-1:a:::SECTOR=EXPERTMODE,CAPTUREENDPOINT=80.0000,PULSEWIDTH=2.00,MEASURETIME=180.00,CAPTURESTARTPOINT=0.0000,RESOLUTION=25.0000,LOSSSENSITIVITY=1.50,REFLECTIONSENSITIVITY=-30.00;

ED-OTDRCFGSECT::PPM-1-1-1:a:::SECTOR=ZONE#2,LOSSSENSITIVITY=0.60,REFLECTIONSENSITIVITY=-30.00;

Input Parameters

<AID>	Specific PPM port on TNC
<SECTOR> • EXPERT • ZONE #1 (0 to 1km) • ZONE #2 (0 to 25km) • ZONE #3 (0 to 80km) • ZONE #4 (0 to 100km)	Sector parameter of enum type that takes the following values
<CAPTUREENDPOINT>	Expert mode parameter – Capture Length
<PULSEWIDTH>	Expert mode parameter – Pulse Width
<MEASURETIME>	Expert mode parameter – Measure Time
<CAPTURESTARTPOINT>	Expert mode parameter – Capture Offset
<RESOLUTION>	Expert mode parameter – Resolution
<LOSSSENSITIVITY>	Defines loss sensitivity for all sectors
<REFLECTIONSENSITIVITY>	Defines reflection sensitivity for all sectors

ED-OTDRCFGTH

The ED-OTDRCFGTH command sets thresholds for a PPM port.

Usage Guidelines

Threshold values are set for PERIODIC or DELTA scans. An event is generated if the loss exceeds the threshold value.

Category

Equipment

Security

Provisioning

Input Format

ED-OTDRCFGTH::PPM-<Shelf>-<Slot>-<PPM Port>:CTAG::: LOSALMTH=<LOSSALARMTHRESHOLD>,REFLECTION-ALMTH=<REFLECTIONALARMTHRESHOLD>;

Input Example

ED-OTDRCFGTH::PPM-1-1-1:1:::LOSSALMTH=0.80,REFLECTIONALMTH=2.00 ;

Input Parameters

<AID>	Specific PPM port on TNC
<LOSSALARMTHRESHOLD>	Defines loss threshold
<REFLECTIONALMTH>	Defines reflection threshold

ED-EQPT

ED-EQPT command configures the card mode on a TNC card.

Usage Guidelines

TNCO card mode is configured for a TNCS-O card.

Category
Equipment

Security
Provisioning

Input Format

ED-EQPT:[<TID>]:<AID>:<CTAG>:::CARDMODE=<CARDMODE>;

Input Example

ED-EQPT:SLOT-1-8:1:::CARDMODE=TNCO;

Input Parameters

<AID>	Specific PPM port on TNC
<CARDMODE> • TNCO • TNC	Configures the card mode. Enum type parameter that takes the following values

ED-OTDRAUTOSCAN

The ED-OTDRAUTOSCAN command is used to configure OTDR NE attributed for an AUTO scan configuration.

Usage Guidelines

The command lets you configure AUTOSCANLOS, AUTOBASELINE, DISABLECIRCUITS, ENABLEPFCRITERIA , and AUTOSCANSPANLOSSINCREASE as Enabled or Disabled. The other parameters are numeric and have to be in a given range.

Category
System

Security
Superuser

Input Format

ED-OTDRAUTOSCAN:[<TID>]::<CTAG>:::[AUTOSCANLOS=<autoscanlos>],[SCANDELAYMINS=<scandelaymins>],[AUTOBASELINE=<autobaseline>],[DISABLECIRCUITS=<disablecircuits>],[ENABLEPFCRITERIA=<enablepfcriteria>] ,[MAXTOTALFIBERBR=<maxtotalfiberbr>],[MAXEVENTBR=<maxeventbr>],[MAXEVENTLOSS=<maxeventloss>],[AUTOSCANSPANLOSSINCREASE=<autoscanspanlossincrease>],[SPANLOSSINCREASETH=<spanlossincreaseth>] ;

Input Example

ED-OTDRAUTOSCAN:::1:::AUTOSCANLOS=N,SCANDELAYMINS=19,AUTOBASELINE=N,DISABLECIRCUITS=N,ENABLEPFCRITERIA=N,MAXTOTALFIBERBR=-1,MAXEVENTBR=-1,MAXEVENTLOSS=1,AUTOSCANSPANLOSSINCREASE=N,SPANLOSSINCREASETH=1;

ED-OTDRAUTOSCAN:::1:::AUTOSCANLOS=N;

ED-OTDRAUTOSCAN:::1:::SCANDELAYMINS=12;

Input Parameters

<AUTOSCANLOS> • Y • N	Enum type parameter that takes the following values:
<SCANDELAYMINS>	Configures OTDR Scan Delay in minutes
<AUTOBASELINE> • Y • N	Configures scan as baseline after a OTDR auto scan. Enum type parameter that takes the following values:
<DISABLECIRCUITS> • Y • N	Enum type parameter that takes the following values:
<ENABLEPFCRITERIA> • Y	Enables the Pass-Fail Criteria and is an enum type parameter that takes the following values:

• N	
<MAXTOTALFIBERBR>	Maximum total fiber break.
<MAXEVENTBR>	Maximum back reflection.
<MAXEVENTLOSS>	Maximum event loss.
<AUTOSCANSPANLOSSINCREASE> • Y • N	Starts auto scan on span loss increase. Enum type parameter that takes the following values:
<SPANLOSSINCREASETH>	Configures span loss increase threshold.

ED-ALMPROFILE

ED-ALMPROFILE is used to edit existing alarmprofile.

Usage Guidelines

Cannot edit inherited & default profile. Only user-defined alarmprofile can be edited. PROFILENAME and ALMTYCONDSEV are mandatory parameters.

Category

System

Security

Provisioning

Input Format

ED-ALMPROFILE:[<TID>]::<CTAG>:::PROFILENAME=<profilename>,ALMTYCONDSEV=<almtycondsev>

Input Example

ED-EQPT:SLOT-1-8:1:::CARDMODE=TNCO;

Input Parameters

<PROFILENAME>	Profile name need to be edited.
< ALMTYPECONDSEV >	Alarm Type condition & severity pair[TYPE/CONDITION/SEV]. Syntax of ALMTYPECONDSEV= NE/HITEMP/CR&EQPT/EQPT-FAIL/MJ Multiple values can be given for edit separated by "&". Values of SEV- • CR- Critical - SET_CR- C • MJ- Major - SET_MA- M • MI-Minor - SET_MI - I • NA- Not Applicable- SET_NA - A • NR- Not Reported- SET_NR - N • DF-Default - SET_UN - U • INH-Inherited- SET_TR – T

Output Format

NA

Output Example

> ED-ALMPROFILE:::1:::PROFILENAME=aaa,ALMTYCONDSEV=2R/FAILTOSW/DF&2R/FORCED-REQ-SPAN/NA&2r/lo-txpower/cr;

node113 2016-05-18 11:40:25

M 1 COMPLD

>ED-ALMPROFILE:::1:::PROFILENAME=aaa,ALMTYCONDSEV=CHANN-GROUP/CFM-XCON-SERVICE/CR&CHANN-GROUP/EFM-PEER-MISSING/MJ&CHANN-GROUP/prt-pw-loc-ac-rx-flt/mi&CHANN-GROUP/prt-pw-loc-ac-tx-flt/nr&CHANN-GROUP/prt-pw-rem-ac-tx-flt/df;

node113 2016-05-18 11:40:25

M 1 COMPLD

Output Parameters

NA

Chapter 14: ENT Commands

This chapter provides enter (ENT) commands for the Cisco NCS 2000 Series.

ENT-<MOD1PAYLOAD>

The Enter 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 4GFC, 2GFICON, 5GIB, 8GFC, CHGRP, D1VIDEO, DV6000, DVBASI, EC1, ESCON, ETRCLO, FSTE, GIGE, HDTV, ISC1, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OC-12, OC-192, OC-3, OC-48, OC768, OTU1, OTU2, OTU3, OTU4, OTU4C2, or T3 (ENT-<MOD1PAYLOAD> command creates a specified port.

Usage Guidelines

- Supports 3GVIDEO, SDSDI , HDSDI, ISC3STP1G, ISC3STP2G modifiers.
- When 1GFICON and 2GFICON payloads are provisioned, distance extension=B2B is the default and only valid setting. Setting distance extension (using ED-1GFICON or ED-2GFICON) to any other setting will be denied with the error message "Provisioning Rules Failed."
- Support is limited to ports with pluggable port modules (PPMs) and any operating mode.
- When creating an operating mode for payloads, the trunk ports are auto provisioned.
- NUMOFLANES is the new parameter added for ENT-<MOD1PAYLOAD> command. This parameter is applicable for payload provisioning on CFP-LC card only. The possible values are 1 and 4. Depending on the values mentioned, the card provisions 1 or 4 number of sublanes for CFP ports.
- No payloads can be provisioned in RGN-100G opmode between two 100G-LC-C Cards.

Category

Ports

Security

Provisioning

Input Format

ENT-<MOD1PAYLOAD>:[<TID>]:<AID>:<CTAG>[:::NUMOFLANES=<NUMOFLANES>:];

Input Example

ENT-GIGE:TID:FAC-5-1:1;

ENT-HDSDI:ROCCIANERA:VFAC-1-3-2-1:1;

ENT-100GIGE::VFAC-5-1-1:1:::NUMOFLANES=4;

Input Parameters

<AID>	Access identifier. AR-MXP, AR-XP, and AR-XPE cards use the VFAC AID.
<NUMOFLANES>	Identifies the type of pluggable provisioned on the CFP-LC card based on number of lanes provisioned. The value can be 1 or 4.

ENT-ACL

The Enter ACL command helps in adding the IP address of any host to the ACL list. It helps by restricting node access by allowing only a limited number of hosts across any given network. It allows initiating client sessions based on requests from an identified hosts list only.

Usage Guidelines

Use this command to add IP address of any host to the ACL list for creating client sessions.

Category

System

Security

Provisioning

Input Format

ENT-ACL:[<TID>]::<CTAG>:::IPADDR=<ipaddr>;

Input Example

ENT-ACL::1:::IPADDR=10.64.105.1;
N-6 2023-01-08 16:39:00
M 1 COMPLD
;

Input Parameters

<IPADDR>	Specifies the IP address of the ACL server entry to be deleted. IPADDR=ALL specifies that all entries are deleted from the list. IPADDR is a string.

ENT-ALMTYPE

The Enter Alarm Type (ENT-ALMTYPE) command enters user-defined alarm types on the fly for environmental inputs. In addition to the system-defined alarm types, this command supports up to 50 new user-defined alarm types.

Usage Guidelines

ALMTYPE must not contain blank spaces or special characters other than the hyphen (-). The maximum ALMTYPE length allowed is 20 characters.

Entering of duplicate alarm types is not allowed. System-defined alarm types cannot be replicated as user-defined alarm type.

Category

System

Security

Provisioning

Input Format

ENT-ALMTYPE:[<TID>]::<CTAG>::<ALMTYPE>;

Input Example

ENT-ALMTYPE:::1::USERDEFINEDALARM;

Input Parameters

<ALMTYPE>	Specifies user-defined alarm types associated with virtual wires in environmental alarm inputs.

ENT-AUTO

This command creates an AUTO port.

Usage Guidelines

Requires ports with PPMs and any operating mode on that port.

Supports OC3, OC12, OC48, and 1GE line rates based on incoming traffic when auto sense is enabled. Default line rate is OC48.

Category

Ports

Security

Provisioning

Input Format
ENT-AUTO:[<TID>]:<AID>:<CTAG>;

Input Example
ENT-AUTO::VFAC-1-3-2-1:1;

Input Parameters

<AID>	AR-MXP, AR-XP, and AR-XPE cards use the VFAC AID.

ENT-AWCFG

The Enter Alien Wavelength Configuration (ENT-AWCFG) creates alien wavelength configuration.

Usage Guidelines
None

Category
DWDM

Security
Provisioning

Input Format
ENT-AWCFG:[<TID>]:<SRC>:<CTAG>:::<ALIENID=ALIENID>,[FECMODE=<FECMOD>],[:];

Input Example
ENT-AWCFG::PCHAN-1-35-TX:1:::ALIENID=CRS-1 40G-DPSK-ITU-T LC,FECMODE=OFF;

Table 14-1 Parameter Support

Parameter	Description
<AID>	Access Identifier.
<ALIENID>	Indicates the operating mode for alien wavelength. ALIENID is a STRING.
<FECMODE>	Specifies the FEC mode for alien wavelength.
• ENH	Enhanced FEC is enabled.
• ENH-I4	Enhanced FEC 1.4 is enabled.

• ENH-I7	Enhanced FEC 1.7 is enabled.
• HG-7	7% High Gain FEC is enabled.
• HG-20	20% High Gain FEC is enabled.
• OFF	FEC is disabled.
• STD	Standard FEC is enabled.

• SD-20
• SD-7
• TRUNK-MODE

ENT-BULKROLL-<OCN_TYPE

The Enter Bulk Roll for OC-12, OC-192, OC-3, OC-48, or OC768 (ENT-BULKROLL-<OCN_TYPE>) command enters information about rolling traffic from one end point to another without interrupting service. This command can be used for line-level rolling and bulk rolling and cannot be used for single-path-level rolling.

Usage Guidelines

None

Category

Bridge and Roll

Security

Provisioning

Input Format

ENT-BULKROLL-<MOD_PATH>:[<TID>]:<FROM>:<CTAG>:::RTOSTART=<RTOSTART>,
[RFROMSTART=<RFROMSTART>],[RFROMEND=<RFROMEND>],[RMODE=<RMODE>],
[CMDMDE=<CMDMDE>];

Input Example

ENT-BULKROLL-OC-48:CISCO:FAC-5-1:123:::RTOSTART=STS-6-1-1,
RFROMSTART=STS-5-1-1,RFROMEND=STS-5-1-4,RMODE=AUTO,CMDMDE=FRCD;

Input Parameters

<FROM>	One of the endpoints. Access identifier from the for line-level rolling and bulk rolling.

<RTOSTART>	The starting time slot in the destination roll port. Access identifier (synchronous transport signal [STS] or Virtual Tributary [VT]). **Note** For bulk rolling only
<RFROMSTART>	The starting time slot in the source roll port. Access identifier (STS or VT). Defaults to STS-<FROMSLOT>-<FROMPORT>-1, where <FROMSLOT> and <FROMPORT> are the slot and port of the <FROM> AID. **Note** For bulk rolling only
<RFROMEND>	The ending time slot in the source roll port. Access identifier (STS and VT). Defaults to STS-<FROMSLOT>-<FROMPORT>-N, where <FROMSLOT> and <FROMPORT> are the slot and port of the <FROM> AID and N is the value of OCn (for example, with OC-48, n=48). **Note** For bulk rolling only
<RMODE>	Indicates the mode of the rolling operation. The parameter type is RMODE (roll mode).
• AUTO	Automatic. When a valid signal is available, the roll with an AUTO mode will automatically delete the previous end-point.
• MAN	Manual. Enter the corresponding delete roll/bulkroll command to delete the previous end-point.
<CMDMDE>	Command execution mode. Defaults to NORM. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that could make the command fail.

ENT-BWP-ETH

Enter Bandwidth Profile for ETH command is used to enter a new Bandwidth Profile entry in BWP DB. The BWP DB is a collection of Bandwidth Profiles used in a Network Element.

Usage Guidelines

Error conditions are:

- If the AID is invalid, an IIAC (Invalid AID) error message is returned
- The “ALL” AID is invalid for this command.
- The BWP having the specified AID should not be present in the node, otherwise the command is denied.

Category

ETHERNET

Security

Provisioning

Input Format

ENT-BWP-ETH:[<TID>]:<AID>:<CTAG>:::[NAME=<NAME>],[CIR=<CIR>],[CBS=<CBS>],[PBS=<PBS>],[PIR=<PIR>],[CFMSTATE=<CFM_STATE>][:];

Input Example

ENT-BWP-ETH:ROCKS:BWP-10000:1:::NAME="MyBWP",CIR=10,CBS=1M,PBS=1M,PIR=20,CFMSTATE=Y;

Input Parameters

<AID>	This AID is used to access BWP.BWP AID Format is: BWP-[bwpid]Values
• BWP-ALL	All aid for BWP.
• BWP-{1-10000}	Single AID for BWP. The valid identifiers ranges from 1 to 10000.
<NAME>	indicates the BWP name. bwp name is a String. - Default value is -
<CIR>	Ingress committed information rate. This is a value between 0.0 and 100.0. Default value is 100.0.
<CBS>	Ingress committed burst bucket size.
• 4K	4 Kbit bucket size
• 8K	16 Kbit bucket size
• 16K	32 Kbit bucket size
• 32K	64 Kbit bucket size
• 64K	128 Kbit bucket size

• 128K	256 Kbit bucket size
• 256K	512 Kbit bucket size
• 512K	1 Mbit bucket size
• 1M	2 Mbit bucket size
• 2M	4 Mbit bucket size
• 4M	8 Mbit bucket size
• 8M	16 Mbit bucket size
• 16M	16 Kbit bucket size
<PBS>	Ingress peak burst bucket size
• 4K	4 Kbit bucket size
• 8K	8 Kbit bucket size
• 16K	16 Kbit bucket size
• 32K	32 Kbit bucket size
• 64K	64 Kbit bucket size
• 128K	128 Kbit bucket size
• 256K	256 Kbit bucket size
• 512K	512 Kbit bucket size
• 1M	1 Mbit bucket size
• 2M	2 Mbit bucket size
• 4M	4 Mbit bucket size
• 8M	8 Mbit bucket size
• 16M	16 Mbit bucket size
<PIR>	Peak information rate. This is a value between 0.0 and 100.0. Default value is 100.0.
<CFMSTATE>	Link Integrity status. Default value is -
• Y	Enabled
• N	Disabled

ENT-CPS

The Enter Control Plane Service (CPS) command creates a control plane service. Specify the source port, destination ports, and the IP address of the destination node.

Usage Guidelines

- If the AID is invalid, an IIAC (invalid AID) error message is returned. The following AIDs are supported:
  - CLIENT cps type support FAC and VFAC AID type.
  - TRUNK cps type support CHAN AID type.
  - ADD cps type support CHAN, PCHAN, and LINEWL AID type.
- The ALL AID is invalid for this command
- No check is performed on destination AIDs. The check is made during the CPS activation by OPR-CPS.
- In case of 1WAY, unidirectional connection, SRC and DST are single AIDs. In case of 2WAY, bidirectional connection, SRC and DST are double AIDs. However, in case of CLIENT or TRUNK cpstype, src and dst are single AID and the connection is of type 2WAY because of bidirectional ports hence this rule is not applicable.
- If the RESTTYPE is REVERT, it is required to set the REVERTMODE and SOAK parameters.
- If the RESTTYPE is REVERT, it is mandatory to set the REVERTMODE parameter as MANUAL or AUTO.
- SOAK time is mandatory if the REVERTMODE parameter is set to MANUAL or AUTO.

Category

DWDM

Security

Provisioning

Input Format

ENT-
CPS[:<TID>]:<SRC>:<CTAG>::<DSTADDR>,<DST>,[<WCT>],<CPSTYPE>[:CKTID=<CKTID>],[VALMODE=<VALMODE>],[VALZONE=<VALZONE>],[VALMODESEC=<VALMODESEC>],[VALZONESEC=<VALZONESEC>],[RESTTYPE=<RESTTYPE>],[REVERTMODE=<REVERTMODE>],[SOAK=<HH-MM-SS>],>],[CKTLABEL=<CKTLABEL>],[FREQ=<FREQ>],[WIDTH=<WIDTH>],[CKTPRIORITY=<CKTPRIORITY>],[ALLOWRGN=<ALLOWRGN>],[PATHPOLICY=<PATHPOLICY>],[DSPWROFS=<DSPWROFS>],[USPWROFS=<USPWROFS>>],[RESTVALMODE=<restvalmode>],[RESTVALZONE=<restvalzone>],
[ISMANDATORYFREQ=<ismandatoryfreq>] [:];

Syntax changes only for FLEX

ENT-
CPS:[<TID>]:<SRC>:<CTAG>::<DSTADDR>,<DST>,[<WCT>],<CPSTYPE>:[CKTID=<CKTID>],[VALMODE=<VALMODE>],[VALZONE=<VALZONE>],[VALMODESEC=<VALMODESEC>],[VALZONESEC=<VALZONESEC>],[RESTTYPE=<RESTTYPE>],[REVERTMODE=<REVERTMODE>],[SOAK=<HH-MM-SS>],[CKTLABEL=<CKTLABEL>],[FREQ=<FREQ>],[WIDTH=<WIDTH>],[CKTPRIORITY=<CKTPRIORITY>],[ALLOWRGN=<ALLOWRGN>],[PATHPOLICY=<PATHPOLICY>],[DSPWROFS=<DSPWROFS>],[USPWROFS=<USPWROFS>],[DIVERSITYVAL=<diversityval>],[LSPDIVERSITY=<LSPDIVERSITY>][:]

Input Example

ENT-CPS::CHAN-1-15-10-RX&CHAN-1-14-10-TX:8::10.20.30.40,CHAN-10-1-10-TX&CHAN-10-1-10-RX,2WAY,ADD::;

ENT-CPS::FAC-1-5-1:888::10.58.40.33,FAC-1-2-1-1,2WAY,CLIENT:CKTID=OCHCC_Rock,VALMODE=FULL,VALZONE=RED:;

ENT-CPS::CHAN-1-2-2:1::10.64.107.36,CHAN-1-3-2,1WAY,ADD:RESTTYPE=REVERT,REVERTMODE=MANUAL,SOAK=00-00-15;

ENT-CPS::CHAN-1-2-2:1::10.64.107.36,CHAN-1-3-2,1WAY,ADD:RESTTYPE=REVERT,REVERTMODE=MANUAL,SOAK=00-00-15,CKTLABEL=LABEL__6,FREQ=195900.00,WIDTH=50.00,CKTPRIORITY=0,ALLOWRGN=N,PATHPOLICY=ANY,USPWROFS=0.0,DSPWROFS=0.0;

Input Parameters

<SRC>	Source access identifier.
<DSTADDR>	Identifies the destination node IP address.
<DST>	Destination AID.
<WCT>	Identifies the wavelength connection type.
• 1WAY	A unidirectional connection from a source to a destination port.
• 2WAY	A bidirectional connection between the two ports. Default is 2WAY.
<CPSTYPE>	Identifies the type of CPS.
• CLIENT	CPS End Point are client ports
• TRUNK	CPS End Point are trunk ports
• ADD	CPS Source End Point is an ADD port
• DROP	Not applicable
• TNA	Not applicable
<CKTID>	(Optional) Circuit identification parameter contains the Common Language Circuit ID or other alias of the circuit being provisioned. Does not contain blank spaces. CKTID is a string of ASCII characters. The maximum length of CKTID can be 48.
<VALMODE>	Identifies the validation mode.
• NONE	No Optical validation is performed
• FULL	The optical validation is performed as indicated in VALZONE parameter

- INHERITED

<VALZONE>	Identifies the validation operate zone.
• UNKNOWN	Not evaluated
• GREEN	Margin > 3 sigma
• YELLOW	1 < margin < 3 sigma
• ORANGE	0 < margin < 1 sigma
• RED	-3 < margin < 0 sigma
• OUT	Margin < -3 sigma
<VALMODESEC>	Identifies the validation mode for secondary circuit
<VALZONESEC>	Identifies the validation operate zone for secondary circuit
<RESTTYPE>	Specifies the restoration type on CPS circuit or UNI configuration. Parameter type is RESTTYPE.
• NONE	Restore type is not specified.
• RESTORE	Only restoration is allowed. The circuit is not revertible.
• REVERT	The circuit is revertible, manually or automatically.
<REVERTMODE>	Specifies the revertive mode type. Paraneter type is REVERTMODE.
• AUTO	Circuit is automatically revertible after the soak time expires.
• MANUAL	Manually revert the circuit.
• NONE	Not revertible.
<SOAK>	This is the soak time specified in HH-MM-SS format. After the soak time expires, if the revertive mode is AUTO, the circuit reverts automatically. If revertive mode is MANUAL, the soak time is ignored.
<CKTLABEL>	Circuit label.
<FREQ>	Optical wavelength
<WIDTH>	Width
<CKTPRIORITY>	Circuit priority
<ALLOWRGN>	Allow RGN. It can be ON/OFF.
<PATHPOLICY>	Path selection policy.

• ANY	No path selection policy selected.
• LOGO	Path selection policy restricted to LOGO domain.
<DSPWROFS>	Down stream power offset.
<USPWROFS>	Up stream power offset.
<DIVERSITYVAL>	This parameter is a combination of three values, which are Service ID, Diversity type and ISLOOSE (Example: 1531/SRLG/Y&1533/NODE/N) In the above example, there are two entries where • The first value is the serviceID, which is unique at the node level. • The second value is the Diversity type, which is one of the following values: LINK NODE SRLG • The third value is ISLOOSE flag. The flag value is **Y** for LOOSE and **N** for not LOOSE (STRICT).
• ISLOOSE	Indicates if the required diversity is LOOSE (TRUE) or STRICT (FALSE).
• DIVERSITYTYPE	The parameter takes one of the following values: NONE LINK NODE SRLG
• LSPDIVERSITY	The source identifier of the diversified circuit, Example (CHAN-1-2-2)

ENT-CRS-<PATH>

The Enter STS Cross-Connection for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, VT1, or VT2 (ENT-CRS-<PATH>) command creates a synchronous transport signal (STS) cross-connection with a cross-connection type (CCT). Refer to the *Cisco ONS SDH and Cisco ONS 15600 SONET TL1 Reference Guide* for specific ring provisioning procedures.

Usage Guidelines

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.

The following guidelines also apply:

- The default cross-connection type is two-way.
- If a path is already in a connection, it cannot be in another connection even if the existing connection is one-way and the new one will be one-way in the other direction.
- This command does not support creating multiple STS cross-connections.
- The path protection STS cross-connection can be created by using "&" in the AID fields of this command.
  - The following command is used to create a one-way selector or two-way selector and bridge with F1, F2 as from points and T1 as the to point:

    ENT-CRS-{STS_PATH}:[<TID>]:F1&F2,T1:<CTAG>::[<CCT>];
  - The following command is used to create a one-way bridge or two-way selector and bridge with F1 as the from point and T1, T2 as the to points:

    ENT-CRS-{STS_PATH}:[<TID>]:F1,T1&T2:<CTAG>::[<CCT>];
  - The following command is used to create a one-way subtending path protection connection or two-way subtending path protection connection with F1, F2 as the from points and T1, T2 as the to points:

    ENT-CRS-{STS_PATH}:[<TID>]:F1&F2,T1&T2:<CTAG>::[<CCT>];
  - The following command is used to create a two-way selector and bridge with F1,F2 (F1 is the working side, F2 is the protect side) as the from points and S1, S2 (S1 is the working side, S2 is the protect side) as the selector points:

    ENT-CRS-{STS_PATH}:[<TID>]:F1&F2,S1&S2:<CTAG>::2WAY;
  - The following command is used to create a path protection integrated dual-ring interconnect (IDRI) cross-connection:

    ENT-CRS-{STS_PATH}:[<TID>]:A&B,C&D:<CTAG>::2WAYDC;

    where:

    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.
  - The following command is used to create a path protection dual-ring interconnect (DRI) cross-connection:

    ENT-CRS-{STS_PATH}:[<TID>]:A&B,C:<CTAG>::2WAYDC;

    where:

    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.
- All A&B AIDs in the TL1 cross-connection command are in the WorkingAID&ProtectAID format.
- To establish a cross-connection on a two-fiber protection path or on a four-fiber protection channel, the protection channel access (PCA) connection type (1WAYPCA or 2WAYPCA) is required.
- If you send a PCA cross-connection type on the non-PCA AIDs, the IIAC error message is returned.

- If you send a non-PCA cross-connection type on the PCA AIDs, the IIAC error message is returned.
- The facility AID is only valid on slots with a G1K-4 card installed.
- The virtual facility AID (VFAC) is only valid on slots holding an ML-Series card.
- Both DRITYPE and DRINODE have been optional fields since Release 5.0 to support the BLSR-DRI feature. DRITYPE is applied only if the CCT is drop-and-continue (1WAYDC or 2WAYDC), and defaults to path protection for the DRI. DRINODE must be specified only if at least one end of the connection is on the BLSR, and defaults to NA.
- The DS3XM-12 card allows portless STS1/VT1.5 cross-connection provisioning on the DS3XM-12 PORTLESS ports (port number > = 12).
- CKTID is a string of ASCII characters. The maximum length of CKTID is 48. If the CKTID is EMPTY or NULL the field will not appear.
- STS18c and STS36c cross-connects are only supported on the FC_MR-4 card and optical cards.
- LO CCAT is not applicable for ML-100T-8 and CE-100T-8 cards.

Category
Cross Connections

Security
Provisioning

Input Format
ENT-CRS-<PATH>:[<TID>]:<SRC>,<DST>:<CTAG>::[<CCT>]:[DRITYPE=<DRITYPE>],
[DRINODE=<DRINODE>],[CKTID=<CKTID>],[CMDMDE=<CMDMDE>]:[<PST>[,<SST>]];

Input Example
ENT-CRS-STS3C:BODEGA:STS-5-1-1&STS-6-1-1,STS-12-1-1&STS-13-1-1:116::1WAYDC:
DRITYPE=BLSR,DRINODE=PRI,CKTID=CKTID,CMDMDE=FRCD:IS,AINS;

Input Parameters

<SRC>	Source access identifier.
<DST>	Destination AID.
<CCT>	Type of connection. Used for specifying one or two-way connections. Default is 2-way. The parameter type is CCT, which is the type of cross-connect that will be created.
• 1WAY	A unidirectional connection from a source tributary to a destination tributary.
• 1WAYDC	Path Protection multicast drop with one-way continue.
• 1WAYEN	Path Protection multicast end node with one-way continue.

• 1WAYMON	A bidirectional connection between the two tributaries. **Note** 1WAYMON is not supported with TL1. However, it is still supported from the Cisco Transport Controller (CTC). Using CTC, you can create 1WAYMON cross-connects that can be retrieved through 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 DRIs.
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber.
• DIAG	Diagnostic cross-connect. Supports BERT (BLSR PCA diagnostic cross-connect).
<DRITYPE>	DRI connection type. Applied only if the CCT is a drop-and-continue connection type (1WAYDC or 2WAYDC). Defaults to path protection. The parameter type is DRITYPE (DRI type).
• BLSR	BLSR DRI type
• Path Protection	Path Protection DRI type
• Path Protection-BLSR	Path Protection-BLSR type
<DRINODE>	Dual ring interconnect node. The parameter type is DRINODE (DRI node).
• INT	Intermediate DRI node
• NA	The node is not a DRI node.
• PRI	Primary DRI node
• SEC	Secondary DRI node
<CKTID>	Cross-connect ID. Defaults to blank or none. CKTID is a string.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.

• NORM	Execute the command normally. Do not override any conditions that could make the command fail.
<PST>	Primary state. Defaults to IS. The parameter type is primary state (PST), which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. Defaults to AINS. The parameter type is SST, which provides additional information pertaining to PST and primary state qualifier (PSTQ).
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ENT-CRS-ETH

Enter Cross-Connect Ethernet (ENT-CRS-ETH) command allocates an Ethernet Connection. The user need to specify two or more ethernet connection end points inside ethernet facilities in order to allocate the connection inside the node. According to the specified ethernet facilities, the connection allocated can be a pass-through, add or drop or multi-drop.

Usage Guidelines

The ethernet connection end point identifier must be the same for all the ethernet ports inside the connection and must be kept the same for all the ethernet circuit.

The client and trunk facilities involved in cross-connection is set in UNI and NNI network mode respectively.

The ethernet connection can be allocated in 2WAY (bidirectional) mode.

AID rule to be used for different cases:

- only one source AID can be specified
- one or more destination (drops) AID can be specified

- In both cases the AID specifies a valid ethernet facility and a connection end point identifier within the valid range.
- CKTID is a string of ASCII characters. The maximum length of CKTID can be 48. If the CKTID is EMPTY or NULL this field is not displayed.

Category
DWDM

Security
Provisioning

Input Format
ENT-CRS-ETH:[<TID>]:<SRC>,<DST>:<CTAG>::[<ECT>]:[CKTID=<CKTID>][:];

Input Example
ENT-CRS-ETH:VA454-22:ETH-1-3-1-1-13,ETH-1-3-21-1-13:116::2WAY:CKTID=ETHCIRCUIT:;

Input Parameters

<SRC>	Ethernet connection identifier AID used to access L2 ethernet connection end point.
• ALL	The ALL aid is applicable for RTRV-only commands, basically the RTRV-rr type of commands.
• ETHID[-{1-12}]-{1-5,12-16}-{1-22}-1-{1-20}	Ethernet connection end point aid for GE-XP card.
• ETHID[-{1-12}]-{1-6,12-17}-{1-4}-1-{1-20}	Facility aid for 10GE-XP card.
<DST>	Ethernet connection identifier AIDs used to access L2 ethernet connection end point.
• ALL	The ALL aid is applicable for RTRV-only commands, basically the RTRV-rr type of commands.
• ETHID[-{1-12}]-{1-5,12-16}-{1-22}-1-{1-20}	Ethernet connection end point aid for GE-XP card.
• ETHID[-{1-12}]-{1-6,12-17}-{1-4}-1-{1-20}	Facility aid for 10GE-XP card.

<ECT>	Defines the type of cross-connect to be created. It is a subset of the CCT. Default value is - 2way default for cross-connection creation.
• 2WAY	A bidirectional connection between the two tributaries.
<CKTID>	(optional) Circuit identification parameter contains the Common Language Circuit ID or other alias of the circuit being provisioned. CKTID is a string of ASCII characters. The maximum length of CKTID can be 48. cktid is a String. Default value is - "NULL"

ENT-EQPT

The Enter Equipment (ENT-EQPT) 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 and assigns default values to all facility and path attributes. The ENT-EQPT command is also used to preprovision an NE configured in multishelf mode. This command can also be used to create PPM.

Usage Guidelines

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 or 1:N. These parameters can only be entered for a working AID. The protect card must already be provisioned before creating the protection group.

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. 1:1 protection involves the odd slot protecting the even slot. The work-protect pair is 2-1, 4-3, 6-5, 16-17, 14-15, 12-13. The DS1, DS3, DS3XM, DS3N, DS3E, EC1 and other electrical cards support 1:1 protection. The value of PROTID is the protecting slot and has a “Slot-x” format.

The PROTID slot must be provisioned first.

To create 1:1 with the ENT-EQPT command, do not provision a working card first.

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;

The ENT-EQPT 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. 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. 1:1 protection cannot be upgraded to 1:N protection.

The following is an example to provision PPM on 10x10G-LC card in slot 6:

ent-eqpt::PPM-1-6-2:1::PPM-1;

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;

Note 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.

If the provisioning fails for some AIDs, PRTL responses will indicate failed AIDs. If the provisioning fails for all the AIDs, a DENY response occurs. CMPLD and PRTL responses for protection group queries indicate that the protection group has been successfully created for the 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 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 a card successfully in 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.

The following is an example of provisioning a 1:1 protection group:

Step 1	ENT-EQPT::SLOT-1:12::DS3;	Provisions the protect card.
Step 2	ENT-EQPT::SLOT-2:12::DS3:PROTID=SLOT-1, RVRTV=Y,RVTM=8.0;	Provisions a card and adds it to the protection group.

The following is an example of provisioning a 1:N protection group:

Step 1	ENT-EQPT::SLOT-3:12::DS3N;	Provisions the protect card.
Step 2	ENT-EQPT::SLOT-1:12::DS3:PROTID=SLOT-3, RVTM=7.5,PRTYPE=1-N;	Provisions a card and adds it to protection group.

Note • If you send this command to provision a DS3NE card on Slot 1, 2, 4, 5, 6, 12, 13, 14,1 6, or 17, the DS3E card type is presented.

- If you send this command to provision a DS3N card on Slot 1, 2, 4, 5, 6, 12, 13, 14,1 6, or 17, the DS3 card type is presented.
- If you send this command to provision a DS1N card on Slot 1, 2, 4, 5, 6, 12, 13, 14,1 6, or 17, the DS1 card type is presented.
- For the MRC-12 card, there are hardware limitations for which Small Form-Factor Pluggable (SFP) ports can be used.
- The OC192-XFP card must be installed in Slots 5 and 6 or 12 and 13 and requires an XC10G or XC-VXC-10G cross-connect card.

Error conditions for creating 1:1 or 1:N protection groups are:

- AID sent to a non-working slot; the working cards must be in even slots for 1:1 protection, and working cards must be in the same bank and not in Slot 3 or Slot 15 for 1:N protection.
- An invalid AID was chosen for the protection slot.
- The working AID is already in a protection group.
- The AID is a protect AID.
- The protect card has a circuit.
- The equipment type does not match the allowed AID.
- The slot is already provisioned.
- The protect slot is not provisioned.
- Multiple working AIDs were sent for 1:1 protection.
- The CARDMODE provisioning is allowed on the DS3XM-12 and ML-Series cards. Provisioning for the DS3XM-12 is based on the cross-connect type and DS3XM-12 location. The following error conditions apply:
  - The DS3XM-12 card in the lower speed input/output (I/O) slot with the XCVT card only allows the DS3XM-12-STS12 CARDMODE. Other cases allow the CARDMODE to be DS3XM-12-STS48.
  - The NE defaults to the highest available backplane rate/mode for the DS3XM-12 card if you do not specify the CARDMODE in the ENT-EQPT command.
  - The ML100T-8 card will be provisioned to MAPPER mode by default.
- The 1:N (1 <= N <= 7) protection group is allowed on the DS3XM-12 card across two sides (A and B). All the cards in the 1:N protection group must be on the same backplane rate (or CARDMODE). The following error conditions apply:
  - For 1:N protection, the protect card must be allocated on either Slot 3 or Slot 15. For 1:1 protection, the protect card must be allocated on the odd slots.
  - The working DS3XM-12 cards on the opposite side of the shelf from the protection card (either Slot 3 or Slot 15) in a 1:N group can only have portless connections. The other working cards of the 1:N group on the same side of the shelf as the protection card do not have this limitation.

    For example, suppose that there is a DS3XM-12 card 1:N group on Slot 2, Slot 3, Slot 4, Slot 12, and Slot 16, where Slot 3 is the protect card. Slot 2, Slot 4, Slot 12, and Slot 16 are the working cards in the 1:N (1:5) protection group. According to the above limitation rule, the Slot 12 and Slot 16 cards need to have the portless provisioning only, while the Slot 2 and Slot 4 cards can be either portless or ported provisioning.

CMDMDE provisioning behaves as follows:

- If the command mode (CMDMDE) is set to NORM during the creation of a 1:1 or 1:N protection group, all cards must be physically plugged in and in the service state (IS). If the cards are not physically plugged in and are not in ready state, the command is denied with an appropriate error message. CMDMDE=FRCD will override the default behavior and allow creation of protection group regardless of the physical presence and ready state of cards.
- If the command mode is set to NORM during the removal of a card in a 1:1 or 1:N protection group, there must be no cross-connects (for example, services) present on the card. CMDMDE=FRCD will override the default behavior and allow deletion of protection group regardless of presence of cross-connects on the card.

- RETIME provisioning is allowed only on the DS1/E1-56 card.
- The protection group is automatically created when both the working and protect cards are provisioned; therefore, protection groups cannot be created using the ENT-EQPT or ED-EQPT commands. A protection group can be deleted by deleting the protect card (DLT-EQPT). Trying to delete the working card will result in the Equipment In Use (SPLD) error.

Category
Equipment

Security
Provisioning

Input Format
ENT-EQPT:[<TID>]:<AID>:<CTAG>::<AIDTYPE>:[PROTID=<PROTID>],[PRTYPE=<PRTYPE>],[RVRTV=<RVRTV>],[RVTM=<RVTM>],[CARDMODE=<CARDMODE>],[PEERID=<PROTID>],[REGENNAME=<REGENNAME>],[CMDMDE=<CMDMDE>],[TRANSMODE=<TRANSMODE>],[RETIME=<RETIME>],[SHELFROLE=<SHELFROLE>],[FRPROLE=<FRPROLE>],[FRPSTATE=<FRPSTATE>],[FRPHOLDOFFTIME=<FRPHOLDOFFTIME>],[CFMSTATE=<CFMSTATE>],[CCTIMER=<CCTIMER>],[SWITCHWITHCRCALARM=<SWITCHWITHCRCALARM>],[CRCTHR=<CRCTHR>],[CRCPOLLINTRVL=<CRCPOLLINTRVL>],[CRCSOAKCNT=<CRCSOAKCNT>],[USB=<USB>][:];

Input Example
ENT-EQPT::SLOT-15:a::GE-XP:CARDMODE=GEXP-L2ETH,SWITCHWITHCRCALARM=Y;

ENT-EQPT::SLOT-15:a::GE-XP:CARDMODE=GEXP-L2ETH,CRCPOLLINTRVL=4;

ENT-EQPT:ROCCIANERA:SLOT-4-1:1::AR-XP;

Input Parameters

Parameter	Description
<AID>	Access identifier. AR-MXP, AR-XP, and AR-XPE cards use the VFAC AID.
<AIDTYPE>	(Optional) The type of facility, link or other addressable entity targeted by the message. The parameter type is EQUIPMENT_TYPE (equipment type). It is the type of equipment being provisioned.
• 10GE-XP	2 x 10 Gbps. muxponder/L2 ethernet switch card
• 100G-LC-C	100G-LC-C card
• 100G-CK-C	100G-CK-C card
• 10X10G-LC	10X10G-LC card
• CFP-LC	CFP-LC card
• AR-MXP	Any rate muxponder
• AR-XP	Any rate xponder

• AR-XPE	Any rate enhanced xponder.
• 16-WXC-FS	16-WXC-FS card.
• 15216-MD-40-EVEN	Thermal Multiplex/Demultiplex Passive Unit, spaced at 50 GHz on even grid
• 15216-MD-40-ODD	Thermal Multiplex/Demultiplex Passive Unit, spaced at 50 GHz on odd grid
• 15216-MD-ID-50	Thermal Interleaver Passive Unit, spaced at 50 GHz grid
• 15216-FLD4-30-3	Edge 4-Ch Bi-Directional OADM Module 1530.33 to 1532.68.
• 15216-FLD4-33-4	Edge 4-Ch Bi-Directional OADM Module 1533.47 to 1535.82.
• 15216-FLD4-36-6	Edge 4-Ch Bi-Directional OADM Module 1536.61 to 1538.98.
• 15216-FLD4-39-7	Edge 4-Ch Bi-Directional OADM Module 1539.77 to 1542.14.
• 15216-FLD4-42-9	Edge 4-Ch Bi-Directional OADM Module 1542.94 to 1545.32.
• 15216-FLD4-46-1	Edge 4-Ch Bi-Directional OADM Module 1546.12 to 1548.51.
• 15216-FLD4-49-3	Edge 4-Ch Bi-Directional OADM Module 1549.32 to 1551.72.
• 15216-FLD4-52-5	Edge 4-Ch Bi-Directional OADM Module 1552.52 to 1554.94.
• 15216-FLD4-55-7	Edge 4-Ch Bi-Directional OADM Module 1555.75 to 1558.17.
• 15216-FLD4-58-9	Edge 4-Ch Bi-Directional OADM Module 1558.98 to 1561.42.
• 32DMX-L	3- channel demultiplexer for L-band
• 32WSS-L	32-channel wavelength switch selector for L-band
• 40-MXP-C	40 Gbit/Sec Multirate Muxponder
• 40-SMR1-C	The single module 40-channel ROADM on C-band
• 40-SMR2-C	The single module 40-channel ROADM with EDFA on C-band
• 40-TXP-C	40 Gigabits per second Multirate Transponder
• 80-WXC-C	80-channel wavelength cross-connect spaced at 100 GHz grid
• AD-1B	OADM 1-Band Filter
• AD-1C	OADM 1-Channel Filter
• AD-2C	OADM 2-Channel Filter
• AD-4B	OADM 4-Band Filter
• AD-4C	OADM 4-Channel Filter

• AICI	AIC-I card
• AIP	Alarm Indication Panel
• ALM-PWR	Alarm Power
• ASAP-4	ASAP carrier card with four PIM slots
• BP	The backplane of the NE
• CE-100T-8	8-port 100T card
• CE-1000-4	4-port GIGE mapper card
• CRFT-TMG	Craft Timing
• DCC	Data Communications Channel
• DCU	Dispersion Compensation Unit
• DMX-32	Optical DMX 32 Channels
• DS3i-N-12	DS3i-N-12 card
• E1	E1 card
• E1-42	42-port E1 card
• E1000T-2	2-port interface card supporting 1000BaseT Ethernet facilities
• E100T-12	12-port interface card supporting 100BaseT Ethernet facilities
• E100T-4	Four-port interface card supporting 100BaseT Ethernet facilities
• E1N	E1N card
• E3	E3 card
• EDRA-1-26	EDRA-1-26 amplifier
• EDRA-1-35	EDRA-1-35 amplifier
• EDRA-2-26	EDRA-2-26 amplifier
• EDRA-2-35	EDRA-2-35 amplifier
• FBGDCU-1157	
• FBGDCU-1322	
• FBGDCU-165	
• FBGDCU-1653	
• FBGDCU-1983	

• FBGDCU-331	
• FBGDCU-496	
• FBGDCU-661	
• FBGDCU-826	
• FBGDCU-992	
• FMEC-155E-1TO1	The equipment type for FMEC STM1E12 card
• FMEC-155E-1TO3	The equipment type for FMEC STM1E12 card with 1:3 protection
• FMEC-155E-UNPROT	The equipment type for FMEC STM1E12 card without protection
• FMEC-SMZ-E1	FMEC card corresponding to E1 card
• FMEC-SMZ-E3	FMEC card corresponding to E3 card
• FTA	Fan Tray of the NE
• FTA1	Fan Tray 1 of the NE
• FTA2	Fan Tray 2 of the NE
• G1K-4	G1K-4 card
• MD-4	Optical Multiplexer/Demultiplexer with 4 Channels
• MD-48-CM	
• MD-48-EVEN	
• MD-48-ODD	
• MESH-PP-SMR	The passive unit Patch Panel device used to connect upto four 40-SMR2-C cards
• MF-16AD-CFS	16-channels - 1 direction, colorless, omnidirectional add/drop unit.
• MF-4x4-COFS	4-channels, 4-directions, colorless, omnidirectional add/drop unit.
• MF-AST-EDFA	MF-AST-EDFA unit
• MF-DEG-5	5-degrees mesh patch panel
• MF-MPO-8LC	MPO to 8-LC adapter
• MF-UPG-4	4-degrees upgrade module
• ML100X-8	8-port 100X card with optical interface
• ML-100T-8	8-port 100T card with optical interface

• MMU	Multiring mesh upgrade unit
• MS-ISC-100T	Fast Ethernet switch card used for internal shelf connection
• MUX-32	Optical MUX 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder card
• MXP-MR-10DME	10 Gbps datamux with enhanced FEC
• OPT-AMP-L	Optical preamplifier for L-band
• OPT-BST	Optical booster amplifier
• OPT-BST-L	Optical booster for L-band
• OPT-EDFA-17	MAL-less EDFA Optical Amplifier - C-band - 17dB Gain
• OPT-EDFA-24	MAL-less EDFA Optical Amplifier - C-band - 24dB Gain
• OPT-PRE	Optical Preamplifier
• OPT-RAMP-C	Raman pump amplifier C-band
• OPT-RAMP-CE	An extended version of Raman pump amplifier
• OPT-RAMP-COP	Raman COP card.
• OPT-RAMP-CTP	Raman CTP card.
• OPT-RAMP-E	Raman pump amplifier E-band
• OSC-CSM	Optical Service Channel with Combiner/Separator Module
• OSCM	Optical Service Channel Module
• OTU2-XP	A 4x10G transponder that is capable to operate with multiple bit rates - 10G FC, 10GE, and OC192/STM64
• PIM-4	Pluggable interface module with 4 PPM slots
• PP-4-SMR	Patch-Panel, 4 degrees, for SMR cards
• PP-MESH-4	Patch-Panel, 4 degrees
• PP-MESH-8	Patch-Panel, 8 degrees
• PPM-1	Pluggable port module with 1-port SFP module
• PSM	Protection Service Module card
• PTF-4	Fabric card.
• PTM-4	Line card.

• PTSA	CPT 50 panel.
• PTSYS- Fan-Out-Group	PTSYS Fan-Out-Group.
• SHELF	To Provision the node as SSC
• STM4	An interface card that supports one or more STM4 (622 Mbps) optical facilities
• STM4-4	A four port STM4 card
• STM4-IR-1	An interface card that supports one intermediate range STM4 (622 Mbps) optical facilities
• STM4-LR-1	An interface card that supports one long range STM4 (622 Mbps) optical facilities
• STM4-SR-1	An interface card that supports one short range STM4 (622 Mbps) optical facilities
• STM64-4	A four port STM64 card
• STM64-LR-1	An interface card that supports one or more STM64 optical facilities
• STM1	An interface card that supports multiple STM1 (155 Mbps) optical facilities
• STM1-IR-4	An interface card that supports four intermediate range STM1 (155 Mbps) optical facilities
• STM1-SR-4	An interface card that supports four short range STM1 (155 Mbps) optical facilities
• STM1ATM-IR-6	An interface card that supports six intermediate range STM1 (155 Mbps) ATM optical fibers
• STM1IR-STM1SH-1310-8	An STM1 card which has 8 ports over the lower speed slot with XC-VXL-10G/XC-VXL-2.5G
• STM1POS-SR-4	An interface card that supports four short range STM1 (155 Mbps) POS optical facilities
• STM16	An interface card that supports one or more STM16 (10 Gbps) optical facilities
• STM16-AS-1	An interface card that supports one short range OC-48 (10 Gbps) optical facilities that can be provisioned in any I/O slot
• STM16-ELR-1	An interface card that supports one short range STM16 (2.5 Gbps) optical facility
• STM16-IR-1	An interface card that supports one intermediate range STM16 (10 Gbps) optical facility

• STM16-LR-1	An interface card that supports one long range STM16 (10 Gbps) optical facility
• STM16-SR-1	An interface card that supports one short range STM16 (10 Gbps) optical facilities
• TCC	Timing, Communications, and Control card
• TDC-CC	Coarse tunable dispersion compensation unit
• TDC-FC	Fine tunable dispersion compensation unit
• TXP-MR-10G	10G Multirate Transponder card
• TXP-MR-2.5G	Multirate 2.5G Unprotected
• TXPP-MR-2.5G	Multirate 2.5G Protected
• UNKNOWN	Unknown equipment type
• UNPROVISIONED	Unprovisioned equipment type
• WSE	Wire Speed Encryption (WSE) card
• XC-VXC-10G	XC-VXC-10G cross-connect card
• XCVXL-10G	XC-VXL-10G cross-connect card
• XCVXL-2.5G	XC-VXL-2.5G cross-connect card
• FLD-OSC	
• VPP-MESH-4-1	
• VPP-MESH-4-2	
• VPP-MESH-4-3	
• VPP-MESH-4-4	
• VPP-MESH-8-1	
• VPP-MESH-8-2	
• VPP-MESH-8-3	
• VPP-MESH-8-4	
• VPP-MESH-8-5	
• VPP-MESH-8-6	
• VPP-MESH-8-7	
• VPP-MESH-8-8	

• AD-12-FS	Line Card
• AD-16-FS	Line Card
• ECU	
• MF-10AD-CFS	
• MF-16AE-CFS	
• MF-2MPO-ADP	
• MF-MPO-16LC	
• MF-PPMESH8-5AD	
• SMR20-FS	Line Card
• SMR9-17-FS	Line Card
• SMR9-24-FS	Line Card
• SMR9-34-FS	Line Card
• MR-MXP	
<PROTID>	Identifies valid protection slots for the electrical cards.
• 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-2	The No.2 slot of an NE
• SLOT-3	The No.3 slot of an NE.
• SLOT-5	The No.5 slot of an NE.
• Slot-6	The No.6 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.
<PRTYPE>	Identifies the protection group type values.
• 1-1	1 to 1 protection
• 1-N	1 to N protection

<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. Only applies to SNCP. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. RVTM is not allowed to be set while RVRTV is N. Only applies to SNCP. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
<FRCD>	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<RETIME>	(Optional) Indicates the RETIME function for all the facilities on this card. Applies only to the DS1/E1-56 card. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<PEERID>	Indicates the peer trunk facility of the regeneration group on the OTU2-XP card. Accessed using the CHAN AID.
<REGENNAME>	Indicates the name of a regeneration group. Applicable only to DWDM flavored cards, which support regeneration group. Regenname is a string. The default value is "NULL".
<TRANSMODE>	Transition Mode.
• AU3	Au3 mode.
• AU4	Au4 mode.

• SONET	Sonnet mode.
<SHELFROLE>	The role of the shelf in the context of the node. When it is omitted it defaults to SC. The parameter is SHELF_ROLE. Note: ONS 15454 M6, ONS 15454 12, and NCS 2015 will be part of <SHELFROLE>.
<FRPHOLDOFFTIME>	Indicates the hold off timer value. The protection do not start until the hold off expire.
• 100-MSEC	Indicates the hold off timer value as 100 milliseconds.
• 1-MSEC	Indicates the hold off timer value as 1milisecond.
• 200-MSEC	Indicates the hold off timer value as 200 milliseconds.
• 2-MSEC	Indicates the hold off timer value as 2 milliseconds.
• 500-MSEC	Indicates the hold off timer value as 500 milliseconds.
• 50-MSEC	Indicates the hold off timer value as 50 milliseconds.
• 5-MSEC	Indicates the hold off timer value as 50 milliseconds.
• DISABLED	Indicates that the hold off timer is disabled.
<FRPROLE>	Indicates the fast ring protection enable mode for GE-XP/10GE-XP units involved in a protection scheme.
• MASTER	Role is of card primary of the ring.
• SLAVE	Role is of card subordinate of the ring.
<FRPSTATE>	Indicates the fast ring protection enable state.
• DISABLED	Disabled protection
• ENABLED	Enabled protection
• FORCED	Forced protection
<CFMSTATE>	Link Integrity status.
• Y	Enabled
• N	Disabled
<CCTIMER>	Indicates continuity check message timer.
• ONE-MIN	1 minute.
• ONE-SEC	1 second.
• TEN-SEC	10 seconds.

<PROTOPMODE>	PROTOPMODE
<SWITCHWITHCRCALARM>	Switch the GZ card with CRC Alarms
<CRCTHR>	CRC threshold values beyond which alarms are raised. The available threshold values are 10E-2, 10E-3, and 10E-4.
<CRCPOLLINTRVL>	Interval of time after which the polling starts.
<CRCSOAKCNT>	Number of poll cycles during which defect is integrated. The value ranges from 3 to 10.
<USB>	Identifies the USB Port where a passive unit is connected.

ENT-FIBERATTR

Description

Enters FiberAttributes on WSON for a WDMSIDE

Usage Guidelines

- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The ALL AID is invalid for this command.

Category

NCS

Security

Provisioning

Input Format

ENT-FIBERATTR:[<TID>]:<aid>:<CTAG>:::[FIBERTYPE=<fibertype>],[LENGTH=<fiberlth>],[PMD=<pmd>],[INATTEN=<in-atten>],[OUTATTEN=<outatten>],[CHSPACING=<chspacing>],[CHNUM=<chnum>],[DOMAIN=<domain>],[SPANVALI-DATION=<spanval>], [OPAQUE=<opaque>] [:];

Input Example

ent-fiberattr::WDMSIDE-c:1:::FIBERTYPE=True-Wave-Minus,LENGTH=100,PMD=0,INATTEN=1,OUTATTEN=2,CHSPACING=50,CHNUM=80,DOMAIN=LOGO;

Input Parameter

Parameter	Description
AID	The AID used to access the WDM side of a Multiservice Transport Platform (MSTP) node.
• WDMSIDE-{UNKNOWN,A,B,C,D,E,F,G,H}	MSTP side identifier.
FIBERTYPE	FiberType. This parameter is of type FiberType Enum. It can take the values-
• G652-SMF	
• ELEAF	
• True-Wave-RS	
• Dispersion-Shifted	
• Metro-Core	
• True-Wave-Plus	
• True-Wave-Minus	
• True-Wave-Classic	
• Free-Light	
• LS	
• Tera-Light	
• True-Wave-Reach	
• G652-SMF-28E	
LENGTH	Fiber Length(Kms)- Float Type parameter. Range of the parameter is 0 to 998
PMD	PMD Coeff of the Fiber(ps/sqrt(km)). Float Type parameter. Range of the parameter is 0 to 100
INATTEN	Input Attentuation(dB). Float Type parameter. Range of the parameter is 0 to 100
OUTATTEN	Output Attentuation(dB). Float Type parameter. Range of the parameter is 0 to 100
CHSPACING	Channel Spacing(GHz). Float Type parameter. Can take values as 50 and 100 only

CHNUM	Channel Number. Float Type parameter. Range from 0 to 96
DOMAIN	Domain. This parameter is of DOMAIN ENUM type which can take the values-
• LEGACY	
• LOGO	
SPANVALIDATION	SpanValidation. Is of type TRU_FALSE. Can take the value –
• TRUE	
• FALSE	
OPAQUE	Opaque. Is of type TRU_FALSE. Can take the value-
• TRUE	
• FALSE	

ENT-FFP-<MOD2DWDMPAYLOAD>

The Enter Facility Protection Group for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 4GFC, 2GFICON, 8GFC, D1VIDEO, DV6000, DVBASI, ETRCLO, FSTE, GIGE, HDTV, ISC1, ISC3, ISC3STP1G, ISC3STP2G, OTU1, OTU2, OTU3, OTU4, OTU4C2, PASSTHRU, or OCH (ENT-FFP-<MOD2DWDMPAYLOAD>) command creates Y-cable protection on client facilities. Refer to the *Cisco ONS SDH and Cisco ONS 15600 SONET TL1 Reference Guide* for specific card provisioning rules.

Usage Guidelines

- Y-cable with bidirectional protection is applicable only for ISC3STP1G and ISC3STP2G payloads on the AR-MXP, AR-XP, and AR-XPE cards.
- Y-cable with unidirectional protection is applicable only for payloads other than ISC3STP1G and ISC3STP2G on the AR-MXP, AR-XP, and AR-XPE cards.
- In CFP-TXP and CFP-MXP operating modes, Y-cable is provisioned on the CHAN AID of the CFP-LC card and not on the 100G-LC-C virtual ports.
- Y-cable protection is supported on the following operational modes for 10x10G-LC, 100G-LC-C, and CFP-LC cards:
  - MXP-10x10G (using 10x10G-LC and 100G-LC-C cards) operational mode with client payloads as 10GIGE and 8GFC only.
  - TXP-10G (using 10x10G-LC card) operational mode with client payloads as 10GIGE and 8GFC only.
  - CFP-MXP (using CFP-LC and 100G-LC-C cards) operational mode with client payload as 40GIGE.
  - CFP-TXP (using CFP-LC and 100G-LC-C cards) operational mode with client payload as 100GIGE.
- The command does not support 3GVIDEO, SDSDI, HDSDI, and AUTO payloads on AR-MXP, AR-XP, and AR-XPE cards.

Category
DWDM

Security
Provisioning

Input Format
ENT-FFP-<MOD2DWDMPAYLOAD>:[<TID>]:<SRC>,
<DST>:<CTAG>:::[PROTTYPE=<PROTTYPE>],[PROTID=<PROTID>],[RVRTV=<RVRTV>],
[RVTM=<RVTM>],[PSDIRN=<PSDIRN>][:];

Input Example
ENT-FFP-HDTV:CISCO:FAC-1-1-1,FAC-2-1-1:100:::PROTTYPE=Y-CABLE,
PROTID=DC-METRO-1,RVRTV=Y,RVTM=1.0,PSDIRN=BI;

Input Parameters

<SRC>	Source access identifier. The working facility uses VFAC AID.
<DST>	Destination access identifier. The protecting facility uses VFAC AID.
<PROTTYPE>	The type of facility protection. The parameter type is PROTTYPE (protection type for dense wavelength division multiplexing [DWDM] client facilities).
• Y-CABLE	Y-cable protection for the client ports on TXP_MR_10G, MXP_2.5G_10G, TXP_MR_2.5G, TXPP_MR_2.5G, AR_MXP, and AR_XP cards.
• SPLITTER	Splitter Protection is applicable only on OTU2-XP card.
• ONEPLUSONEL2	1 + 1 L2 Protection for the client ports on 10GE XP and GE XP
<PROTID>	Protection group identifier. Defaults to the protect port AID of the protection group. The identifier is a string that can have a maximum length of 32 characters.
<RVRTV>	Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.

• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. Defaults to 5.0 minutes. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	Protection switch operation. Identifies the switching mode. Defaults to UNI. **Note** TXP_MR_10G and MXP_2.5G_10G cards do not support bidirectional switching. Parameter type is UNI_BI (unidirectional and bidirectional switch operations).
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching

ENT-FFP-<OCN_TYPE>

The Enter Facility Protection Group for OC-3, OC-12, OC-48, OC-192, or OC768 (ENT-FFP-<OCN_TYPE>) command creates optical 1+1 protection.

Usage Guidelines

Note • The protect AID must not be provisioned with traffic.

- The working AID can be provisioned with traffic.
- PROTID is a string and can have a maximum length of 32 characters.
- Optimized 1+1 protection and related attributes are only applicable to the NCS 2000 Series.
- The following parameters are supported in Software Release 6.0 and later: OPOTYPE, VRGRDTM, DTGRDTM, and RCGRDTM.
- The following 1+1 protection group rules apply to the MRC-12 card:
  - A 1+1 protection group can only be created between MRC-12 cards. You cannot create a 1+1 protection group between an MRC-12 card and an OC-48 card, for example.
  - A 1+1 protection group can be created only using the same port number. For example, a protection group cannot be created between Port 1 of Slot 5 and Port 4 of Slot 12 (assuming that Slot 5 and Slot 12 both contain MRC-12 cards).
  - A 1+1 protection group cannot be created between ports on the same card. For example, protection groups cannot be created between Port 1 of Slot 5 and Port 4 of Slot 5 (assuming that Slot 5 contains a MRC-12 card).
  - Both the cards in the protection group must be placed in the same type of slot. Both MRC-12 cards must be in drop slots (Slots 1 to 4, 14 to 17) or both cards must be in trunk slots (Slots 5 to 6, 12 to 13). You cannot create a protection group between an MRC-12 card in a drop slot and another MRC-12 card in a trunk slot.
- The following 1+1 protection group rules apply to the OC192-XFP cards:
  - A 1+1 protection group can be created between two OC192-XFP cards in trunk slots (Slots 5 to 6, 12 to 13).

  - A 1+1 protection group can be created between an OC192-XFP card and an OC192LR/STM64LH card in trunk slots (Slots 5 to 6, 12 to 13).
- The PROTTYPE parameter is only applicable to optical DWDM cards.

Category
Protection

Security
Provisioning

Input Format
ENT-FFP-<OCN_TYPE>:[<TID>]:<WORK>,
<PROTECT>:<CTAG>:::[PROTTYPE=<PROTTYPE>],[PROTID=<PROTID>],
[RVRTV=<RVRTV>],[RVTM=<RVTM>],[PSDIRN=<PSDIRN>],[OPOTYPE=<OPOTYPE>],
[VRGRDTM=<VRGRDTM>],[DTGRDTM=<DTGRDTM>],[RCGRDTM=<RCGRDTM>][:];

Input Example
ENT-FFP-OC-3:PETALUMA:OC3-3-1-1,OC3-3-2-1:1:::PROTTYPE=Y-CABLE,
PROTID=PROT_NAME,RVRTV=Y,RVTM=1.0,PSDIRN=BI,OPOTYPE=STANDARD,
VRGRDTM=0.5,DTGRDTM=1.0,RCGRDTM=1.0;

Input Parameters

<PROTID>	Protection group identifier. Defaults to the protect port AID of the protection group. If the name has an embedded double quote character, that double quote character has to be escaped with a backslash \". The double quotes are special characters that delimit the protection group name and they must be balanced (paired). PROTID is a string that has a maximum length of 32 characters.
<RVRTV>	Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. Defaults to 5.0 minutes. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.

<PSDIRN>	Protection switch operation. Identifies the switch mode. The parameter type is UNI_BI (unidirectional and bidirectional switch operations)
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching
<OPOTYPE>	1+1 protection type. Can be either standard or optimized 1+1 protection. The parameter type is ONE_PLUS_ONE (1+1 protection type).
• Optimized	Optimized 1+1.
• Standard	Standard 1+1
<VRGRDTM>	Verification guard timer. Only applicable to optimized 1+1. The parameter type is VERIFICATION_GUARD_TIMER (optimized 1+1 verification guard timer).
• 0.5	500 ms
• 1.0	1 second
<DTGRDTM>	Detection guard timer. Only applicable to optimized 1+1. The parameter type is DETECTION_GUARD_TIMER (optimized 1+1 detection guard timer).
• 0.0	0 seconds
• 0.05	50 ms
• 0.1	100 ms
• 0.5	500 ms
• 1.0	1 second
• 2.0	2 second
• 3.0	3 seconds
• 4.0	4 seconds
• 5.0	5 seconds
<RCGRDTM>	Recovery guard timer. Only applicable to optimized 1+1. The parameter type is RECOVERY_GUARD_TIMER (optimized 1+1 detection guard timer).
• 0.0	0 seconds
• 0.05	50 ms

• 0.1	100 ms
• 0.5	500 ms
• 1.0	1 second
• 2.0	2 second
• 3.0	3 seconds
• 4.0	4 seconds
• 5.0	5 seconds
• 6.0	6 seconds
• 7.0	7 seconds
• 8.0	8 seconds
• 9.0	9 seconds
• 10.0	10 seconds

ENT-FOG

The Enter Fan-Out-Group (ENT-FOG) command creates the Fan-Out-Group.

Usage Guidelines

- This command is used to provision the CPT 50 panel and applied on the carrier packet transport (CPT) system.
- The FOG can be created on a PTSYS AID.
- A 10 GIGE interface provisioned on the CPT 50 panel must be attached when you create the FOG.
- Interfaces that are valid for a particular FOG can be attached.
- Interface attached to one of the FOG cannot be attached to any other FOG.

Category

Equipment

Security

Provisioning

Input Format

ENT-FOG[:<TID>]:<AID>:<CTAG>:::FOGID=<FOGID>,ATTACH=<ATTACH>,QUEUEMODE=<QUEUEMODE>,[PBNAME=<PBNAME>];

Input Examples

ENT-FOG::PTSYS-1:1:::FOGID=37,ATTACH=FAC-3-2-1;

Input Parameters

<AID>	AID of the PTSYS on which the FOG is being created. Access identifier.
<FOGID>	This is the FOGID. FOG AID is created using the FOGID. The valid range is from 36 to 55.
<ATTACH>	AID of the fabric and line card ports used as the Fan-out members. This is the AID of the interface to be attached to the FOG.
<QUEUEMODE>	QUEUEMODE
• NOPRI	NOPRI
• STRICT	STRICT
<PBNAME>	PBNAME

ENT-FTPSERVER

The Enter FTP Server (ENT-FTPSERVER) command creates FTP server entries.

Usage Guidelines

- The default value of the TIMER, 0, denotes infinite timeout. The TIMER cannot be set with ENABLE=N.
- The FTP server entries are created on the gateway node only.

Category

ENE

Security

Superuser

Input Format

ENT-FTPSERVER:[<TID>]::<CTAG>:::IPADDR=<IPADDR>,IPMASK=<IPMASK>,ENABLE=<ENABLE>,[TIMER=<TIMER>];

Input Examples

1. ENT-FTPSERVER:::A:::IPADDR=10.20.30.40,IPMASK=255.0.0.0,ENABLE=Y,TIMER=30;

2. ENT-FTPSERVER:TID::CTAG:::IPADDR="[3ffe:0501:0008:0000:0260:97ff:fe40:efab/64]",ENABLE=Y,TIMER=45;

Input Parameters

<IPADDR>	Specifies the IP address of the FTP server.
<IPMASK>	Specifies the subnet mask of the FTP server.
<ENABLE>	Specifies the enable/disable option of the FTP server. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<TIMER>	(Optional) Specifies the timeout value of the FTP server in minutes. Timer is an integer that can be set between 0 and 60 minutes.

ENT-LMP-CTRL

The Enter Link Management Protocol Control Channel (ENT-LMP-CTRL) command creates an LMP control channel.

Usage Guidelines

This command is only available on nodes where the LMP is available and has been enabled.

Category

LMP

Security

Provisioning

Input Format

ENT-LMP-CTRL:[<TID>]:<SRC>:<CTAG>:::[LOCALPORT=<LOCALPORT>],
[REMOTENE=<REMOTENE>],REMOTEIP=<REMOTEIP>,[HELLO=<HELLO>],
[HELLOMIN=<HELLOMIN>],[HELLOMAX=<HELLOMAX>],[DEAD=<DEAD>],
[DEADMIN=<DEADMIN>], [DEADMAX=<DEADMAX>]:[<PST>][,<SST>];

Input Example

ENT-LMP-CTRL:PETALUMA:CTRL-123:704:::LOCALPORT=FAC-1-1-1,
REMOTENE=15.15.15.115,REMOTEIP=126.0.0.1,HELLO=500,
HELLOMIN=300,HELLOMAX=5000,DEAD=12000,DEADMIN=2000,
DEADMAX=20000:OOS,DSBLD;

Input Parameters	
<SRC>	The LMP control channel AID value
• CTRL-ALL	Specifies all the control channels
• CTRL-{1-4}	Specifies an individual control channel
<LOCALPORT>	LOCALPORT is the pathway that the LMP control channel will use to send and receive messages.
<REMOTENE>	Remote IP address used by the far-end LMP control channel
<REMOTEIP>	Remote IP address with which the LMP control channel sends and receives messages
<HELLO>	The time interval in which the LMP protocol sends HELLO messages
<HELLOMIN>	Minimum hello time within which the LMP control channels can send out HELLO messages to the remote node
<HELLOMAX>	The maximum amount of time that the LMP control channel can wait between HELLO messages
<DEAD>	Time interval an LMP control channel will wait for a HELLO message from the remote side before listing the control channel as down
<DEADMIN>	The minimum amount of time that an LMP control channel can wait before listing the control channel status as down
<DEADMAX>	The maximum amount of time that the LMP control channel can wait before listing the control channel as down
<PST>	Primary state. This parameter indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. This parameter provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group

• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ENT-LMP-DLINK

The Enter Link Management Protocol Data Link (ENT-LMP-DLINK) command creates an LMP data link.

Usage Guidelines

This command can only be used on nodes where the LMP protocol is available and enabled.

Category

LMP

Security

Provisioning

Input Format

ENT-LMP-DLINK:[<TID>]:<SRC>:<CTAG>:::[LINKTYPE=<LINKTYPE>],TELINK=<TELINK>, REMOTEID=<REMOTEID>;

Input Example

ENT-LMP-DLINK:PETALUMA:FAC-14-1-1:704:::LINKTYPE=PORT,TELINK=TLNK-45, REMOTEID=646631;

Input Parameters

<SRC>	Access identifier.
<LINKTYPE>	The type of LMP data link
• PORT	Port data link
• COMPONENT	Component data link
<TELINK>	Maps LMP data links to LMP TE links
<REMOTEID>	The remote LMP data link ID

ENT-LMP-TLINK

The Enter Link Management Protocol Traffic Engineering Link (ENT-LMP-TLINK) command creates an LMP Traffic Engineering (TE) link.

Usage Guidelines

This command can only be used on nodes where LMP is available and enabled.

Category

LMP

Security

Provisioning

Input Format

ENT-LMP-TLINK:[<TID>]:<SRC>:<CTAG>:::REMOTEID=<REMOTEID>, REMOTETE=<REMOTETELINK>, [MUXCAP=<MUXCAP>]:[<PST>[,<SST>]];

Input Example

ENT-LMP-TLINK:PETALUMA:TLINK-123:704:::REMOTEID=15.15.15.115,REMOTETE=123, MUXCAP=LAMBDA:OOS,DSBLD;

Input Parameters

<SRC>	LMP TE link AID values
• TLINK-ALL	Specifies all the TE links.
• TLINK-{1-256}	Specifies an individual TE link.
<REMOTEID>	Remote node ID associated with the LMP TE link
<REMOTETE>	Remote ID used by the far-end LMP TE Link
<MUXCAP>	The muxponder capability of the LMP TE link
• PKTSWITCH1	Packet Switching 1
• PKTSWITCH2	Packet Switching 2
• PKTSWITCH3	Packet Switching 3
• PKTSWITCH4	Packet Switching 4
• LAYER2	Layer 2 switching
• TDM	Time-division multiplexing (TDM) switching

• LAMBDA	Lambda switching
• FIBER	Fiber switching
<PST>	Primary state. This parameter indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. This parameter provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ENT-LNK

The Enter Optical Link (ENT-LNK) command creates an optical link between two optical connection points.

The optical links can be established between:

- Two optical transport sections (OTSs)
- Two optical multiplexing sections (OMSs) with the same band
- Two optical channels (OCHs) with the same wavelength

Usage Guidelines

The created optical link must be between points belonging to the same ring direction. An optical link between two OMSs or between two OCHs can be HITLESS if the connection is between two points from one drop point to a consecutive add point in the logical link. When this command is used to create an optical link between two OCH ports, where the first port belongs to an OCH filter and the second port is an OCH trunk, the second port should be tuned to the same wavelength of the OCH filter if it has not been set yet.

Category
DWDM

Security
Provisioning or highly privileged users can use the command on the node. RTRV/MAINT users cannot use the command.

Input Format
ENT-LNK:[<TID>]:<FROM>,<TO>:<CTAG>::::[<PST>[,<SST>]];

Input Example
ENT-LNK:PENNGROVE:CHAN-6-2,CHAN-13-1-RX:114::::OOS,AINS;

ENT-LNK:PENNGROVE:CHAN-6-3-1,CHAN-13-1-RX:114::::OOS,AINS;

ENT-LNK:PENNGROVE:CHAN-6-19-1,CHAN-13-1-RX:114::::OOS,AINS;

ENT-LNK:PENNGROVE:BAND-6-1-TX,BAND-13-1-RX:114::::OOS,AINS;

ENT-LNK:PENNGROVE:LINE-6-1-TX,LINE-13-1-RX:114::::OOS,AINS;

Input Parameters

<FROM>	Identifier at one end of the optical link.
<TO>	Identifier at the other end of the optical link.
<PST>	Primary state of the entity. The parameter type is PST (primary state). Indicates the current overall service condition of an entity.
• IS	In Service
• OOS	Out of Service
<SST>	Secondary state of the entity. The parameter type is SST (secondary state). Provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode

• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ENT-LNKTERM

The ENT-LNKTERM command creates a provisionable patchcord (PP) termination (virtual link) on a physical interface. A user-provisioned link is needed when the data communications channel/generic communications channel (DCC/GCC) is transparently carried over several physical links, and the physical link cannot be automatically discovered by Open Shortest Path First (OSPF) due to lack of control-channel termination or non-support of SONET by the link.

Usage Guidelines

The error message “Provisioning Rules Failed” is returned if the provisioning rules are not satisfied. The following rules must be satisfied while creating a provisionable patchcord termination on a physical interface:

- For a SONET port:
  - A Section DCC (SDCC) termination must be provisioned. If it is the protect facility in a 1+1 protection group, the corresponding working facility must have an SDCC termination provisioned.
  - If the port is part of a BLSR, the SDCC must be provisioned on all of the working ports of the BLSR.
- For a TXP/MXP trunk port, either ITU-T G.709 must be enabled or the payload type must be non-SONET/SDH.
- For a TXP/MXP client port, a card must be operating in the transparent termination mode.
- For a DWDM OCH port:
  - If the OC-N interface is part of a 1+1 protection group, a separate PP termination can be provisioned on the other (working/protect) interface also.
  - If the client interface is part of a Y-cable protection group, a separate PP termination can be provisioned on the other (working/protect) interface also.
  - If the MXP/TXP trunk interface is part of a splitter protection group, a separate PP termination can be provisioned on the other (working/protect) interface also.
  - If REMOTENODE is specified as an IP address (or a node name that can be resolved by the gateway network element [GNE]) that is different from the local node’s IP address/name, this termination is intended to be a part of an internode provisionable patchcord.
  - All endpoints of the provisionable patchcord need to be provisioned correctly (on the local and/or remote node) for it to show as UP in OSPF.
  - Misconfigured or partially configured provisionable patchcords will not cause alarms or events to be generated at either end of the link.
  - No two provisionable patchcord terminations on a node can be configured to have the same remote node PP termination information (for example, the combination of values for REMOTENODE and REMOTELNKTERMAID attributes for a PP termination must be unique on a single node).
  - All provisionable patchcord terminations on one physical interface must have their remote terminations on a single remote node.

  - The command does not accept multiple and ALL style AIDs.
- (R9.6.0) The number of PP terminations and the identifier range is limited to 146.
- (R9.6.0.3) The number of PP terminations is limited to 146.

Category
Provisionable Patchcords

Security
Provisioning

Input Format
ENT-LNKTERM:[<TID>]:<AID>:<CTAG>:::PORT=<PORT>,
[REMOTENODE=<REMOTENODE>],REMOTELNKTERMID=<REMOTELNKTERMID>;

Input Example
ENT-LNKTERM::LNKTERM-1:CTAG:::PORT=FAC-5-1,REMOTENODE=172.20.208.225,
REMOTELNKTERMID=20;

Input Parameters

<AID>	Access identifier. Indicates a link (provisionable patchcord) termination on the local node. For R9.6.0, the integer value can be within the range of 1 to 146. For R9.6.0.3, the integer value can be within the range of 1 to 65535.
<PORT>	The local port corresponding to this provisionable patchcord termination.
<REMOTENODE>	The node where the other end of the provisionable patchcord resides. This can be an IP address or a valid TID. Defaults to the IP address of the local node/existing value. REMOTENODE is a string.
<REMOTELNKTERMID>	The corresponding provisionable patchcord termination on the remote node (as specified by the REMOTENODE parameter). Integer value within the range of 1 to 65535. Defaults to existing value. For R9.6.0, the integer value can be within the range of 1 to 146. For R9.6.0.3, the integer value can be within the range of 1 to 65535.

The per-degree separated nodes from a multi-degree ROADM into multiple multi-shelf nodes are interconnected via V-PP-MESH. The ENT-LNKTERM command is used to create links between virtual PP-MESH. In case of 2-Degree SPLIT, actual PPCs are created between Express Tx and Rx. For more than 2 degree SPLIT, virtual PPCs are created.

ENT-MA-CFM

The Enter Maintenance Association Connectivity Fault Management (ENT-MA-CFM) command adds the maintenance association on the card.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.
- The ALL AID is invalid for this command.

Category

Equipment

Security

Provision

Input Format

ENT-MA-CFM:[<TID>]:<AID>:<CTAG>:::MANAME=<MANAME>,SVLANID=<SVLANID>,[<CCENABLE=CCENABLE];

Input Example

ENT-MA-CFM:454-156:SLOT-1:1:::MANAME=MANAME,SVLANID=4,CCENABLE=Y;

Input Parameters

<AID>	Access identifier.
<MANAME>	Maintenance Association Name. It is a string. The MA name length should not exceed more than 43 characters.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<CCENABLE>	Enable or disable Continuos Check messaging
• Y	Enable
• N	Disable

ENT-MCH

This commands creates the Media Channel (ENT-MCH).

Usage Guidelines

- If the AID is invalid, an IIAC (invalid AID) error message is returned. The following AIDs are supported:
  - CLIENT cps type support FAC and VFAC AID type.
  - TRUNK cps type support CHAN AID type.
  - ADD cps type support CHAN, PCHAN, and LINEWL AID type.
- The ALL AID is invalid for this command
- No check is performed on destination AIDs. The check is made during the CPS activation by OPR-CPS.
- In case of 1WAY, unidirectional connection, SRC and DST are single AIDs. In case of 2WAY, bidirectional connection, SRC and DST are double AIDs. However, in case of CLIENT or TRUNK cpstype, src and dst are single AID and the connection is of type 2WAY because of bidirectional ports hence this rule is not applicable.
- If the RESTTYPE is REVERT, it is required to set the REVERTMODE and SOAK parameters.
- If the RESTTYPE is REVERT, it is mandatory to set the REVERTMODE parameter as MANUAL or AUTO.
- SOAK time is mandatory if the REVERTMODE parameter is set to MANUAL or AUTO.

Category

DWDM

Security

Provisioning

Input Format

ENT-MCH:[<TID>]:<src>:<CTAG>::<dstaddr>,<dst>,[<wct>],<mchtype>:[NAME=<name>],[CKTLABEL=<cktlabel>],[CONTAININGMCHG=<containingmchg>],[RESTTYPE=<resttype>],[REVERTMODE=<revertmode>],[CKTPRIORITY=<cktpriority>],[SOAK=<HH-MM-SS>],[ALLOWRGN=<allowrgn>],[PATHPOLICY=<pathpolicy>],[VALMODE=<valmode>],[VALZONE=<valzone>],[RESTVALMODE=<restvalmode>],[RESTVALZONE=<restvalzone>],[SRLGSTRICTCONSTRAINT=<srlgstrictconstraint>],[SRLGLOOSECONSTRAINT=<srlglooseconstraint>],[DIVERSITY=<diversity>],[GUARDBANDFILTERING=<guardbandfiltering>],[GUARDBANDMODULATION=<guardbandmodulation>],[CARRIERFREQ=<carrierfreq>],[ISCARRIERFREQMANDATORY=<iscarrierfreqmandatory>],[FREQ=<freq>],[ISMANDATORYFREQ>][ISMANDATORYFREQ=<ismandatoryfreq>],[REMOTEMCHG=<remotemchg>],[RESTSRLGSTRICT=<restsrlgstrict>],[RESTSRLGLOOSE=<restsrlgloose>],[BANDWIDTH=<bandwidth>][:];

Input Example

Input Parameters

<AID>	Source access identifier.
<DSTADDR>	Identifies the destination node IP address.

<DST>	Destination AID.
<WCT>	Identifies the wavelength connection type.
• 1WAY	A unidirectional connection from a source to a destination port.
• 2WAY	A bidirectional connection between the two ports. Default is 2WAY.
<MCHTYPE>	Identifies the type of MCH.
• CLIENT	MCH End Point are client ports
• TRUNK	MCH End Point are trunk ports
• ADD	MCH Source End Point is an ADD port
• DROP	Not applicable
• TNA	Not applicable
<CKTID>	(Optional) Circuit identification parameter contains the Common Language Circuit ID or other alias of the circuit being provisioned. Does not contain blank spaces. CKTID is a string of ASCII characters. The maximum length of CKTID can be 48.
<VALMODE>	Identifies the validation mode.
• NONE	No Optical validation is performed
• FULL	The optical validation is performed as indicated in VALZONE parameter
• INHERITED	
<VALZONE>	Identifies the validation operate zone.
• UNKNOWN	Not evaluated
• GREEN	Margin > 3 sigma
• YELLOW	1 < margin < 3 sigma
• ORANGE	0 < margin < 1 sigma
• RED	-3 < margin < 0 sigma
• OUT	Margin < -3 sigma
<VALMODESEC>	Identifies the validation mode for secondary circuit
<VALZONESEC>	Identifies the validation operate zone for secondary circuit

<RESTTYPE>	Specifies the restoration type on CPS circuit or UNI configuration. Parameter type is RESTTYPE.
• NONE	Restore type is not specified.
• RESTORE	Only restoration is allowed. The circuit is not revertible.
• REVERT	The circuit is revertible, manually or automatically.
<REVERTMODE>	Specifies the revertive mode type. Paraneter type is REVERTMODE.
• AUTO	Circuit is automatically revertible after the soak time expires.
• MANUAL	Manually revert the circuit.
• NONE	Not revertible.
<SOAK>	This is the soak time specified in HH-MM-SS format. After the soak time expires, if the revertive mode is AUTO, the circuit reverts automatically. If revertive mode is MANUAL, the soak time is ignored.
<NAME>	Circuit name.

<CKTLABEL>	Circuit label.
<FREQ>	Optical wavelength
<WIDTH>	Width
<CKTPRIORITY>	Circuit priority
<ALLOWRGN>	Allow RGN. It can be ON/OFF.
<PATHPOLICY>	Path selection policy.
• ANY	No path selection policy selected.
• LOGO	Path selection policy restricted to LOGO domain.
<DSPWROFS>	Down stream power offset.
<USPWROFS>	Up stream power offset.
<DIVERSITY>	This parameter is a combination of three values, which are Service ID, Diversity type and ISLOOSE (Example: 1531/SRLG/Y&1533/NODE/N) In the above example, there are two entries where

	• The first value is the serviceID, which is unique at the node level. • The second value is the Diversity type, which is one of the following values: LINK NODE SRLG • The third value is ISLOOSE flag. The flag value is Y for LOOSE and N for not LOOSE (STRICT).
<GUARDBANDMODULATION>	This parameter represents the amount of spectrum that needs to be allocated, beside the channel bandwidth. GUARD-BANDMODULATION depends on modulation.
<GUARDBANDFILTERING>	This parameter represents the amount of spectrum that needs to be allocated, beside the channel bandwidth GUARD-BANDFILTERING on the filters traversed by the channel.
<BANDWIDTH>	This parameter represents the channel bandwidth that can be forced in case of MCH circuit creation.

ENT-MCHG

This command creates the Media Channel Group (ENT-MCHG).

Usage Guidelines

- AID Media Channel Group ID, Example: MCHG-1, MCHG-2, MCHG-3 and so on.
- If the RESTTYPE is REVERT, it is required to set the REVERTMODE and SOAK parameters.
- If the RESTTYPE is REVERT, it is mandatory to set the REVERTMODE parameter as MANUAL or AUTO.
- SOAK time is mandatory if the REVERTMODE parameter is set to MANUAL or AUTO.

Category

SSON

Security

Provisioning

Input Format

ENT-MCHG:[<TID>]:<src>:<CTAG>::<dstaddr>:[NAME=<name>],[CKTLABEL=<cktlabel>],[FREQ=<freq>],[WIDTH=<width>],[ISMANDATORYFREQ=<ismandatoryfreq>],[SRLGSTRICTCONSTRAINT=<srlgstrictconstraint>],[SRLGLOOSECONSTRAINT=<srlglooseconstraint>],[DIVERSITY=<diversity>],[CONTAINEDSERVICES=<containedservices>],[RESTTYPE=<resttype>],[REVERTMODE=<revertmode>],[SOAK=<HH-MM-SS>],[SPECTRUMPOLICY=<spectrumpolicy>],[RESTSRLGSTRICT=<restsrlgstrict>],[RESTSRLGLOOSE=<restsrlgloose>][:];

Input Example

ENT-MCHG::MCHG-17:1::10.1.1.2:NAME=asdf,FREQ=191350.00,WIDTH=50,SRLGSTRICTCONSTRAINT=1&27&6,SRLGLOOSECONSTRAINT=3&2&6,ISMANDATORYFREQ=TRUE,DIVERSITY=1531/SRLG/Y&1533/NODE/N;

Input Parameters

<TID>	Terminal Identifier
<src>	Identifies the source node IP address
<CTAG>	CTAG is any non-blank character series that does not have to be unique.
<dstaddr>	Identifies the destination node IP address.
<NAME>	Circuit name
<CKTLABEL>	Circuit label.
<FREQ>	Optical Frequency.
<WIDTH>	Width
<ISMANDATORYFREQ>	This value can be True or False.
<SRLGSTRICTCONSTRAINT>	SRLG Strict Constraint, Optional. Each SRLG Long value separated by &
<SRLGLOOSECONSTRAINT>	SRLG LOOSE Constraint, Optional. Each SRLG Long value separated by &
<DIVERSITY>	This parameter is a combination of three values, which are Service ID, Diversity type and ISLOOSE (Example: 1531/SRLG/Y&1533/NODE/N) In the above example, there are two entries where • The first value is the serviceID, which is unique at the node level. • The second value is the Diversity type, which is one of the following values: LINK NODE SRLG • The third value is ISLOOSE flag. The flag value is **Y** for LOOSE and **N** for not LOOSE (STRICT).
<CONTAINEDSERVICES>	Contained Media Channels.

	Format- ServiceId1&serviceId2 etc. Node Id which is part of the contained services will be added internally by TL1 as the node id of the MCHG
<RESTTYPE>	Specifies the restoration type on MCHG circuit or UNI configuration. Parameter type is RESTTYPE.
• NONE	Restore type is not specified.
• PLAIN-ALTERNATE	Alternate the constraints for restoration.
• RESTORE	Only restoration is allowed. The circuit is not revertible.
• REVERT	The circuit is revertible, manually or automatically.
<REVERTMODE>	Specifies the revertive mode type. Parameter type is REVERTMODE.
• AUTO	Circuit is automatically revertible after the soak time expires.
• MANUAL	Manually revert the circuit.
• NONE	Not revertible.
<SOAK>	This is the soak time specified in HH-MM-SS format. After the soak time expires, if the revertive mode is AUTO, the circuit reverts automatically. If revertive mode is MANUAL, the soak time is ignored.
<SPECTRUMPOLICY>	Spectrum Policy takes the following two values: DEFAULT SHRINK
• DEFAULT	DEFAULT means no change in the MCHG size during restoration.
• SHRINK	SHRINK means to change the MCHG size to actual size required by the contained MCHs.
<RESTSRLGSTRICT>	Restore SRLG Strict constraint
<RESTSRLGLOOSE>	Restore SRLG Loose constraint

Note: There is no concept of PREFERRED FREQ in case of MCHG. The value of –MCGroupSpectrumRequest.position. spectrumAllocationPolicy is set to TRUE when ISMANDATORYFREQ is set to TRUE, else its set SPECTRUM_ALLOC_POLICY_DEFAULT in case it's not given or set to FALSE.

ENT-MD-CFM

The Enter Maintenance Domain Connectivity Fault Management (ENT-MD-CFM) command adds the maintenance domain on the card.

Usage Guidelines

- The "ALL" AID is invalid for this command.

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category
Equipment

Security
Provisioning

Input Format
ENT-MD-CFM:[<TID>]:<AID>:<CTAG>:::MDNAME=<MANAME>,LEVEL=<LEVEL>;

Input Example
ENT-MD-CFM:454-156:SLOT-1:1:::MDNAME=MDNAME,LEVEL=5;

Input Parameters

<AID>	Access identifier.
<MDNAME>	Maintenance Domain Name. It is a string. The MD name length should not exceed more than 43 characters.
<LEVEL>	This indicates the level of the maintenance domain. The value ranges from 0 to 7.

ENT-MDMAMAP-CFM

The Enter Maintenance Domain and Maintenance Association mapping Connectivity Fault Management (ENT-MDMAMAP-CFM) command creates the maintenance domain and maintenance association mapping.

Usage Guidelines
- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category
Equipment

Security
Configuration

Input Format

ENT-MDMAMAP-CFM:[<TID>]:<AID>:<CTAG>:::MDNAME=<MANAME>,SVLANID=<SVLANID>,MANAME=<MANAME>;

Input Example

ENT-MDMAMAP-CFM::SLOT-17:1:::MDNAME=CISCO,SVLANID=6,MANAME=MA_1;

Input Parameters

<AID>	Access identifier.
<MDNAME>	Maintenance Domain Name. It is a string. The MD name length should not exceed more than 43 characters.
<MANAME>	Maintenance Association Name. It is a string. The MA name length should not exceed more than 43 characters.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

ENT-MEP-CFM

The Enter Maintenance End Point Connectivity Fault Management (ENT-MEP-CFM) command creates the maintenance end points on the port.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Ports

Security

Provisioning

Input Format

ENT-MEP-CFM:[<TID>]:<AID>:<CTAG>:::SVLANID=<SVLANID>,MDNAME=<MDNAME>,MPID=<MPID>;

Input Example

ENT-MEP-CFM::ETH-12-3-1:1:::SVLANID=100,MDNAME=MD2,MPID=20;

Input Parameters

<AID>	Access identifier.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<MDNAME>	Maintenance Domain Name. It is a string. The MD name length should not exceed more than 43 characters.
<MPID>	Maintenance Point Identifier. It is an integer.
<LEVEL>	This indicates the level of the maintenance domain. The value ranges from 0 to 7.

ENT-MIP-CFM

The Enter Maintenance Intermediate Point Connectivity Fault Management (ENT-MIP-CFM) command creates the maintenance intermediate points on the port.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Ports

Security

Provisioning

Input Format

ENT-MIP-CFM:[<TID>]:<AID>:<CTAG>:::VLANID=<VLANID>,LEVEL=<LEVEL>;

Input Example

ENT-MIP-CFM::ETH-1-1-1:1:::VLANID=2,LEVEL=5;

Input Parameters

<AID>	Access identifier.
<VLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

<LEVEL>	This indicates the level of the maintenance domain. The value ranges from 0 to 7.

ENT-NNI-ETH

The Enter Network-to-Network Interface Ethernet (ENT-NNI-ETH) command adds a new network-to-network interface service provider VLAN ID to the NNI interface of an L2 Ethernet port.

Usage Guidelines

- The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use a retrieve command to obtain the current value.
- If the AID is invalid, an IIAC error message is returned.
- The ALL AID is invalid for this command.
- The L2 Ethernet port must be present when this command is executed.
- The command will be denied if the service provider VLAN ID is present.

Category

Ethernet

Security

Provisioning

Input Format

ENT-NNI-ETH:[<TID>]:<AID>:<CTAG>::<SVLANID>[::];

Input Example

ENT-NNI-ETH:PETALUMA:ETH-1-1-1:1::1010;

Input Parameters

<AID>	Ethernet AIDs are used to access the L2 Ethernet ports. Access identifier.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

ENT-NNI-CHGRP

The Enter Channel Group Network-to-Network Interface (ENT-NNI-CHGRP) command adds the NNI S-VLAN ID for the NNI of a channel group.

Usage Guidelines

- The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use the RTRV-ETH command to obtain the current value.
- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The ALL AID is invalid for this command.

Category

Channel group

Security

Provisioning

Input Format

ENT-NNI-CHGRP:[<TID>]:<AID>:<CTAG>::<SVLANID>[::];

Input Example

ENT-NNI-CHGRP:CISCO:CHGRP-1-1:1::1010;

Input Parameters

<AID>	Access identifier.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

ENT-OCHCC

The Enter Optical Channel Client Connection (ENT-OCHCC) command allocates an OCH client connection. An OCH client connection is the portion of the circuit that connects the end client ports using trail ports to an OCH network connection circuit. This allocates the portion of the circuit between the OCH filter port to the TXP/MXP or ITU-T client port.

Usage Guidelines

- The client port FAC AID must be specified in order to allocate a client channel inside the node.
- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use a retrieve command to obtain the current value.
- On OTU1 and 4GFC ports, time slots are not applicable.
- ODU0START and ODU0END parameters are applicable only on GIGE and 1GFC payloads on the AR-XPE card only.

Category

DWDM

Security

Provisioning

Input Format

ENT-OCHCC[:<TID>]:<AID>:<CTAG>[:::CKTID=<CKTID>],[CMDMDE=<CMDMDE>],[ODU1START=<ODU1START>],[ODU1END=<ODU1END>],[TSSTART=<TSSTART>],[TSEND=<TSEND>],[ODU0START=<ODU0START>],[ODU0END=<ODU0END>][:<PST>][,<SST>];

Input Example

ENT-OCHCC::VFAC-3-2-1:123:::ODU1START=1,ODU1END=1,TSSTART=1,TSEND=16;

ENT-OCHCC::VFAC-2-1-1:1:::ODU0START=1,ODU0END=1;

Input Parameters

<AID>	Access identifier. AR-MXP, AR-XP, and AR-XPE cards use the VFAC AID.
<CKTID>	Cross-connect ID. The default is Blank or None. It is a string of ASCII characters. The maximum length is 48. If CKTID is empty or null the CKTID field will not appear.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• 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.

<ODU1START>	ODU1 Start
<ODU1END>	ODU1 End
<TSSTART>	Time Slot Start
<TSEND>	Time Slot End
<ODU0START>	ODU0 Start.
<ODU0END>	ODU0 End.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity. The default is IS.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ. The default is AINS.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ENT-OCHNC

The Enter Optical Channel Network Connection (ENT-OCHNC) command allocates an OCH network connection.

Usage Guidelines

- Two CHANWL end points must be specified in order to allocate a wavelength channel inside the node. According to the CHANWL specified, the channel allocated can be a passthrough.
- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

Category
DWDM

Security
Provisioning

Input Format
(For legacy package) ENT-OCHNC:[<TID>]:<SRC>,<DST>:<CTAG>::[<WCT>]:[CKTID=<CKTID>],[CMDMDE=<CMDMDE>],[WLOPWR=<WLOPWR>],[VOAATTN=<VOAATTN>]:[<PST>[,<SST>]];

(For flex package)

ENT-OCHNC:[<TID>]:<SRC>,<DST>:<CTAG>::[<WCT>]:[CKTID=<CKTID>],[CMDMDE=<CMDMDE>],[WLOPWR=<WLOPWR>],[VOAATTN=<VOAATTN>],FREQ=<FREQ>,[WIDTH=<WIDTH>],[DSPWROFS=<DSPWROFS>],[USPWROFS=<USPWROFS>]:[<PST>][,<SST>];

Input Example
ENT-OCHNC:VA454-22:LINEWL-1-3-TX-1530.33,CHAN-4-1-RX:116::1WAY:
CKTID=CIRCUIT,CMDMDE=FRCD:OOS,DSBLD;

ENT-OCHNC:VA454-22:LINEWL-1-3-TX-1530.33&CHAN-4-1-TX,
CHAN-4-1-RX&LINEWL-1-3-RX-1530.33:116::2WAYDCN:
CKTID="DCN CIRCUIT",CMDMDE=FRCD:OOS,DSBLD;

ENT-OCHNC:VA454-22:LINEWL-1-9-TX-1530.33,LINEWL-1-11-RX-1530.33:116::DIAG:
WLOPWR=1.0,VOAATTN=1.0;

Input Parameters

<SRC>	Source access identifier. In 2-way wavelength connection sources both directions need to be indicated.
<DST>	Destination access identifier. In 2-way wavelength connection sources both directions need to be indicated.
<WCT>	Wavelength connection type. The parameter type is WCT. The default is 1WAY.
• 1WAY	A unidirectional wavelength connection for one specified ring direction.
• 2WAY	A bidirectional wavelength connection for both the ring directions.
• DIAG	A unidirectional maintenance wavelength connection inside 40-WXC-C cards.
• 2WAYDCN	A bidirectional wavelength connection for both the ring directions that is also used to carry the data communication channels.

<CKTID>	Cross-connect ID. The default is Blank or None. It is a string of ASCII characters. The maximum length is 48. If CKTID is empty or null the CKTID field will not appear.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• 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.
<WLOPWR>	The value of calibrated output power that the VOA is going to set as a result of its attenuation. WLOPWR is a float.
<VOAATTN>	The value of calibrated attenuation for the VOA expressed in dBm. The range is 0.0 to +30.0. VOAATTN is a float.
<FREQ>	Optical wavelength
<WIDTH>	Width
<DSPWROFS>	Down stream power offset.
<USPWROFS>	Up stream power offset.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity. The default is IS.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ. The default is AINS.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading

• UAS	Unassigned
• UEQ	Unequipped

ENT-OPMODE

The Enter Operating Mode (ENT-OPMODE) command creates operating mode on a given client or trunk or peer card.

Usage Guidelines

- Enter the operating mode that is being created.
- Enter the client and trunk port numbers while creating the operating mode.
- Enter the rate on which the operating mode is created.
- PEERSLOTS parameter is applicable only on 100G-LC-C, 10x10G-LC, and CFP-LC cards. PEERSLOTS parameter values should be specified as SLOT-<SLOTNO>.
- RATE parameter is not applicable on 100G-LC-C, 10x10G-LC, and CFP-LC cards.
- In Low-latency and RGN-10G modes, one of the port is represented as Client and the other as Trunk while both are represented as trunks on CTC.
- The OPMODE parameter is a mandatory parameter for all the operating modes on the AR-MXP, AR-XP, AR-XPE, 10x10G-LC, 100G-LC-C, and CFP-LC cards.
- CLIENTPORTS and TRUNKPORTS are the mandatory parameters for all the operating modes on the AR-MXP, AR-XP, and AR-XPE cards.
- CLIENTPORTS and TRUNKPORTS are optional parameters for few operating modes on the 10x10G-LC, 100G-LC-C, and CFP-LC cards. Both these parameters are used in TXP-10G and RGN-10G modes on the 10x10G-LC Card. The CLIENTPORTS parameter is used in CFP-TXP and CFP-MXP operating modes on the CFP-LC card.
- RATE is a mandatory parameter for HIGH rate operating modes on the AR-MXP, AR-XP, and AR-XPE cards.
- CTMAP is a mandatory parameter only in MXP(P)-DME High rate modes on the AR-MXP, AR-XP, and AR-XPEcards.
- PEERSLOTS is a mandatory parameter only in dual card operating modes on the 10x10G-LC, 100G-LC-C, and CFP-LC cards. PEERSLOTS parameter value is of syntax SLOT[-SH]-<SLOTNO>.
- Following are the mandatory parameters for the operating modes on the 10x10G-LC, 100G-LC-C, and CFP-LC cards:
  - OPMODE, CLIENTPORTS, and TRUNKPORTS for TXP-10G, RGN-10G, and LOW-LATENCY operating modes on the 10x10G-LC card.
  - OPMODE parameter for TXP-100G operating mode on the 100G-LC-C card.
  - OPMODE and PEERSLOTS parameters for RGN-100G dual card operating mode on the 100G-LC-C card along with one peer 100G-LC-C and MXP-10X10G dual card operating mode among with two peer cards 10x10G-LC and 100G-LC-C.
  - OPMODE, CLIENTPORTS, and PEERSLOTS parameters for CFP-TXP dual card operating mode between CFP-LC and 100G-LC-C cards.
  - OPMODE and PEERSLOTS parameters for CFP-MXP dual card operating mode between CFP-LC and 100G-LC-C cards.

Category
DWDM

Security
Provisioning

Input Format
ENT-
OPMODE[:<TID>]:<AID>:<CTAG>:::OPMODE=<OPMODE>,[PEERSLOTS=<PEERSLOTS>],[TRUNKPORTS=<TRUNKPORTS>],[CLIENTPORTS=<CLIENTPORTS>],[RATE=<RATE>],[CTMAP=<CTMAP>];

ENT-OPMODE[:<TID>]:<aid>:<CTAG>:::OPMODE=<op-mode>,[PEERSLOTS=<peerslots>],[TRUNKPORTS=<trunkports>],[CLIENTPORTS=<cli-entports>],[PEERTRUNKS=<peertrunkports>],[PEERCLIENTS=<peercli-entports>],[RATE=<rate>],[CTMAP=<ctmap>];

Input Example
ENT-OPMODE::SLOT-5:1:::OPMODE=CFP-TXP,CLIENTPORTS=1,PEERSLOTS=SLOT-7;

Input Parameters

<AID>	Access Identifier—SLOT
<OPMODE>	Specifies the opmode created on the card provisioned. Parameter type is OPMODE.
• MXP-10x10G	Muxponder mode between 10X10G-LC and 100G-LC-C card.
• RGN-100G	Regenerator mode between two 100G-LC-C cards.
• RGN-10G	Ginsu regenerator mode among SFP+ ports on 10X10G-LC card.
• CFP-MXP	Muxponder mode between one CFP-LC and one 100G-LC-C cards.
• CFP-TXP	Transponder mode between one CFP-LC and one or two 100G-LC-C cards.
• TXP-10G	Transponder mode among SFP+ ports on 10X10G-LC card.
• TXP-MR	Unprotected Multi-rate transponder
• TXPP-MR	Protected Muti-rate Transponder
• MXP-DME	Unprotected Data Muxponder
• MXPP-DME	Protected Data Muxponder
• MXP-MR	Unprotected Multi-Rate Muxponder

• MXPP-MR	Protected Multi-Rate Muxponder
• MXP-4x25-10G	OC48/OTU1 Unprotected Muxponder
• MXPP-4x25-10G	OC48/OTU1 Protected Muxponder
• MXP-VDC-10G	Video Muxponder (without Drop & Continue)
• RGN	Regenerator Mode in AR-XP or AR-MXP cards
• LOW-LATENCY	Low latency opmode is supported only on 10x10G-LC card.
• AR-XP-MXP	
• TXPP-10G	
• MXP-1S-HIGH	
• FANOUT-100G	
• MXP-100G	
• MXP-10x10G-100G	
• MXP-200G	
• MXP-2x50G	
• MXP-CK-100G	
• RGN-200G	
• TXP-2x50G-CK	
<TRUNKPORTS>	The trunk port(s) on which operating mode being entered
<PEERSLOTS>	Peer Card slot number.
<CLIENTPORTS>	The client port(s) on which operating mode is being entered
<RATE>	The rate on which the operating mode is created
• HIGH	High rate (>5G)
• LOW	Low rate (<5G)
<CTMAP>	(Optional) The client to trunk ratio that will be used while creating operating mode
• ONE-ONE	1 Client to 1 Trunk used in TXP-MR-LOW,TXP-MR-HIGH, RGN-LOW and RGN-HIGH modes
• ONE-TWO	1 Client to 2 Trunks used in TXPP-MR-LOW mode
• THREE-ONE	3 Clients to 1 Trunk used in Video Muxponder mode

• FOUR-ONE	4 Clients to 1 Trunk used in MXP-4x2.5-10G, MXP-DME-HIGH modes
• FOUR-TWO	4 Clients to 2 Trunks used in MXPP-4x2.5-10G and MXPP-DME-HIGH modes
• EIGHT-ONE	8 Clients to 1 Trunk used in MXP-DME-HIGH mode
• EIGHT-TWO	8 Clients to 2 Trunks used in MXPP-DME-HIGH mode
• N-ONE	N Clients to 1 Trunk where N=2,3,4,5,6,7,8 used in MXP-MR-LOW and MXP-MR-HIGH modes
• N-TWO	N Clients to 2 Trunks where N=2,3,4,5,6,7,8 used in MXPP-MR-LOW or MXPP-MR-HIGH modes

ENT-QNQ-CHGRP

The Enter Channel Group QinQ (ENT-QNQ-CHGRP) command adds the IEEE 802.1Q tunneling (QinQ) relationship between the CE-VLAN and the S-VLAN for Gigabit Ethernet uniport provisioning associated to a channel group.

Usage Guidelines

- The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use the RTRV-ETH command to obtain the current value.
- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The ALL AID is invalid for this command.

Category

Channel Group

Security

Provisioning

Input Format

ENT-QNQ-CHGRP:[<TID>]:<AID>:<CTAG>::<FIRST_CE_VLAN_ID>,<LAST_CE_VLAN_ID>,<S_VLAN_ID>:[RULE=<RULE>],[INTERNALVLAN=<INTERNAL_VLAN_ID>],[INGRESSCOS=<INGRESSCOS>][:];

Input Example

ENT-QNQ-CHGRP:CISCO:CHGRP-1-1:1::10,11,100:RULE=ADD;

Input Parameters

<AID>	Access identifier.
<FIRSTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<LASTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<RULE>	Used to represent the rules allowed for the VLAN tagging operations. The default value is ADD.
• ADD	The S-VLAN tag is added to the CE-VLAN tag.
• XLTE	The S-VLAN tag replaces the CE-VLAN tag (single Q).
• XLTE-ADD	XLTE and ADD rule applied together. This rule request to supply an internal S-VLAN. First the Internal VLAN substitutes the Customer VLAN, then Service Provider VLAN TAG (S-VLAN) is added
• DOUBLE-ADD	ADD rule applied two times. This rule request to supply an internal S-VLAN. First the Internal VLAN is added, then Service Provider VLAN TAG (S-VLAN) is added to have a double tag
<INTERNAL_VLAN_ID>	Internal VLAN ID.
<INGRESSCOS>	Identifies the COS value set in the S-VLAN tag.
• 0 to 7	Set a Cos value
• DSCP	The COS is set according to DSCP to COS mapping table.
• TRUST	Use the Customer COS
• VLAN	The COS provisioned on CVLAN basis (QinQ selective mode)

ENT-QNQ-ETH

The Enter QinQ Ethernet (ENT-QNQ-ETH) command enters a new IEEE 802.1Q tunneling (QinQ) relationship between the CE-VLAN and S-VLAN for Gigabit Ethernet uniport provisioning associated to an L2 Ethernet port.

Usage Guidelines

- The default values for all optional parameters are NE default values, but these values may not be the current value for a parameter. Use a retrieve command to obtain the current value.
- If the AID is invalid, an IIAC error message is returned.
- The ALL AID is invalid for this command.
- The L2 Ethernet port must be defined before executing this command or the command will be denied.
- The command will be denied if the CE-VLAN-ID and S-VLAN-ID relationship is defined before the L2 Ethernet port is defined.

Category

Ethernet

Security

Provisioning

Input Format

ENT-QNQ-ETH:[<TID>]:<AID>:<CTAG>::<FIRSTCEVLANID>,<LASTCEVLANID>,<S_VLAN_ID>[:RULE=<RULE>],[INTERNALVLAN=<INTERNAL_VLAN_ID>],[INGRESSCOS=<INGRESSCOS>][:];

Input Example

ENT-QNQ-ETH:PETALUMA:ETH-1-1-1:1::10,11,100:RULE=ADD;

Input Parameters

<AID>	Ethernet AIDs are used to access the L2 Ethernet ports. Access identifier.
<FIRSTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<LASTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<RULE>	Used to represent the rules allowed for the VLAN tagging operations. The default value is ADD.
• ADD	The S-VLAN tag is added to the CE-VLAN tag.
• XLTE	The S-VLAN tag replaces the CE-VLAN tag (single Q).
• XLTE-ADD	XLTE and ADD rule applied together. This rule request to supply an internal S-VLAN. First the Internal VLAN substitutes the Customer VLAN, then Service Provider VLAN TAG (S-VLAN) is added
• DOUBLE-ADD	ADD rule applied two times. This rule request to supply an internal S-VLAN. First the Internal VLAN is added, then Service Provider VLAN TAG (S-VLAN) is added to have a double tag
<INTERNAL_VLAN_ID>	Internal VLAN ID
<INGRESSCOS>	Identifies the COS value set in the S-VLAN tag.
• 0 to 7	Set a Cos value
• TRUST	Use the Customer COS
• VLAN	The COS provisioned on CVLAN basis (QinQ selective mode)

ENT-RADIUSSERVER

This command is used to configure a RADIUS server in NE.

Usage Guidelines

- This command is applicable only if the RADIUS server is configured with IP address, authentication port, accounting port and shared secret.
- IP address of the RADIUS server can be used as AID for this command.
- An IP address can be configured multiple times with a unique combination of `IP address, authentication port and accounting port`.

Category

System

Security
Provisioning

Input Format
ENT-RADIUSSERVER:[<TID>]:[<aid>]:<CTAG>:::SHAREDSECRET=<sharedsecret>,[AUTHPORT=<authport>],[ACCNTPORT=<accntport>];

Input Example
ENT-RADIUSSERVER::13.67.87.4:a:::SHAREDSECRET=jhytdjydjy jfjfjfjf,AUTHPORT=91,ACCNTPORT=23;

Input Parameters

<AID>	AID is IP address of the RADIUS server.
<SHAREDSECRET>	Shares secret.
<AUTHPORT>	Authentication port in the range from 0 to 65535.
<ACCNTPORT>	Account port in the range from 0 to 65535.

ENT-REP

The Enter Resilient Ethernet Protocol (ENT-REP) command associates the Resilient Ethernet Protocol (REP) configuration on the ethernet port of GE_XP or 10GE_XP card.

Usage Guidelines

- This command is applicable only if the card is in ETH-L2 card mode.
- This command is applicable only to GE_XP and 10GE_XP cards.
- The PORTROLE parameter can be PRIMARY, NO_NEIGHBOR, or NO_NEIGHBOR_PRIMARY only if the port is an edge port.
- If the Edge is not Enabled, the PORTROLE parameter can only be REGULAR.
- If only the segment ID is specified, by default the edge is disabled and PORTROLE is REGULAR; PREFERRED is disabled.

Category
Ethernet

Security
Provisioning

Input Format

ENT-REP:[TID>]:<AID>:<CTAG>:::<SEGMENTID=<SEGMENTID>,[EDGE=<EDGE>],[PORTROLE=<PROTROLE>],[PREFERRED=<PREFERRED>];

Input Example

ENT-REP::ETH-12-1-1:1:::SEGMENTID=1,EDGE=Y,PORTROLE=PRIMARY,PREFERRED=N;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier.
<SEGMENTID>	Indicates the segment ID for REP segment. The valid range is from 0 to 1024.
<EDGE>	Configures the port as an edge port.
• Y	To configure the port as an edge port.
• N	Not to configure the port as an edge port.
<PORTROLE>	The parameter type is REP_PORT_ROLE, which indicates the port's role in a REP Segment for the ethernet ports.
• PRIMARY	Indicates that the port is a primary port.
• NO_NEIGHBOR	Indicates that the port has no neighbor port in the segment.
• NO_NEIGHBOR_PRIMARY	Indicates that the port is a primary port and has no neighbor port in the segment.
• REGULAR	Indicates that the port is a regular port.
• None	Indicates that the port is an edge port.
<PREFERRED>	Indicates that the port is the preferred alternate port. Or the preferred port for VLAN load balancing.
• Y	Yes
• N	No

ENT-RMONTH-<MOD2_RMON>

The Enter Remote Monitoring Threshold for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 4FGC, 4GFICON, 8GFC, CHGRP, FSTE, G1000, GFP, GIGE, ETH, GFPOS, GIGE, HDLC, ISCCOMPAT, OTU4C2 and POS (ENT-RMONTH-<MOD2_RMON>) command creates an entry in the remote monitoring (RMON) alarm table for the threshold of data statistics (for example, GIGE or FC) managed by the RMON engine. After creating the RMON threshold

(RMONTH), a threshold crossing alert (TCA) event will be generated and reported to the TL1 session when the threshold is crossed. More than one threshold can be created with different parameters for each data statistic type.

Usage Guidelines

See Table 30-1 on page 30-1 for supported modifiers by platform.

Category

Performance

Security

Provisioning

Input Format

ENT-RMONTH-<MOD2_RMON>:[<TID>]:<SRC>:<CTAG>::<MONTYPE>,,,,
<INTVL>:RISE=<RISE>,FALL=<FALL>,[SAMPLE=<SAMPLE>],[STARTUP=<STARTUP>][:];

Input Example

ENT-RMONTH-GIGE:CISCO:FAC-2-1:1234::ETHERSTATSOCTETS,,,,100:RISE=1000,
FALL=100,SAMPLE=DELTA,STARTUP=RISING;

Input Parameters

<SRC>	Source access identifier. AID for the facility that manages the data statistics. AR-MXP, AR-XP, and AR-XPE cards use the VFAC AID.
<MONTYPE>	Monitored type. Type of RMON data statistics. The parameter type is ALL_MONTYPE (monitoring type list).
• 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 one tenth of a percentage
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)

• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including frame check sequence [FCS] octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets

• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds - A
• HP-ESB	High-Order Path Errored Seconds - B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High-Order Path Negative Pointer Justification Count - Path Detected
• HP-NPJC-PGEN	High-Order Path Negative Pointer Justification Count - Path Generated
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count Seconds - Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds - Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count - Path Detected
• HP-PPJC-PGEN	High-Order Path Positive Pointer Justification Count - Path Generated

• HP-SEPI	The number of Severely Errored Period Intensity events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload cyclic redundancy check (CRC) errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in microA
• LBCL-MAX	Maximum Laser Bias current in microA
• LBCL-MIN	Minimum Laser Bias current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current

• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order Positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• mediaIndStatsRxFramesBadCrc	rx frames with bad crc
• mediaIndStatsRxLcvErrors	L1 line code violations for lower rate FC. This equates to invalid 8b10b ordered sets.
• mediaIndStatsTxFramesBadCrc	tx frames with bad crc
• mediaIndStatsTxLcvErrors	L1 line code violations for lower rate FC. This equates to invalid 8b10b ordered sets.
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count- Path Detected
• NPJC-PGEN	Negative Pointer Justification Count- Path Generated

• OPR-AVG	Average Receive Power in tenths of a microW
• OPR-MAX	Maximum Receive Power in tenths of a microW
• OPR-MIN	Minimum Receive Power in tenths of a microW
• OPRN	Normalized Optical Receive Power for OC3-8 card
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in tenths of a microW
• OPT-MAX	Maximum Transmit Power in tenths of a microW
• OPT-MIN	Minimum Transmit Power in tenths of a microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in tenths of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in tenths of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in tenths of a dBm
• PPJC-PDET	Positive Pointer Justification Count - Path Detected
• PPJC-PGEN	Positive Pointer Justification Count - Path Generated
• PRE-FECBER	Enum to hold PRE-FECBER value
• 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
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path

• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<INTVL>	The interval in seconds over which the data is sampled and compared with the rising and falling threshold. A valid value is any integer larger than or equal to 10 (seconds).
<RISE>	The rising threshold for the sampled statistic. A valid value is any integer.
<FALL>	The falling threshold. A valid value is any integer smaller than the rising threshold.

<SAMPLE>	The method of calculating the threshold comparison value. The parameter type is SAMPLE_TYPE, which describes how the data will be calculated during the sampling period.
• ABSOLUTE	Comparing directly
• DELTA	Comparing with the current value of the selected variable subtracted by the last sample
<STARTUP>	Dictates whether an event will generate if the first valid sample is greater than or equal to the rising threshold, less than or equal to the falling threshold, or both. The parameter type is STARTUP_TYPE, which indicates whether an event will be generated when the first valid sample is crossing the rising or falling threshold.
• FALLING	Generates the event when the sample is smaller than or equal to the falling threshold.
• RISING	Generates the event when the sample is greater than or equal to the rising threshold.
• RISING-OR-FALLING	Generates the event when the sample is crossing the rising threshold or the falling threshold.

ENT-ROLL-<MOD_PATH>

The Enter Roll for STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS96C, STS6C, STS9C, VC12, VC3, VT1, or VT2 (ENT-ROLL-<MOD_PATH>) command enters information about rolling of traffic from one end point to another without interrupting service. This command can be used to roll single paths (STS or VT).

Note STS18C and STS36C are not supported in this release.

Usage Guidelines

None

Category

Bridge and Roll

Security

Provisioning

Input Format

ENT-ROLL-<MOD_PATH>:[<TID>]:<FROM>,<TO>:<CTAG>:::RFROM=<RFROM>,RTO=<RTO>,RMODE=<RMODE>,[CMDMDE=<CMDMDE>];

Input Example

ENT-ROLL-STS1:CISCO:STS-1-1-1,STS-2-1-1:1:::RFROM=STS-2-1-1,RTO=STS-3-1-1,
RMODE=MAN,FORCE=Y;

Input Parameters

<FROM>	Source access identifier, which is one of the termination points (legs) of the existing cross-connection. If the existing cross-connection is one-way, then this termination point (leg) should be the FROM-AID termination point. Otherwise, FROM is not significant. FROM and TO should be entered as they are entered in the ENT-CRS command. You can issue the RTRV-CRS command and use the response for FROM and TO parameters.
<TO>	Destination AID, which is one of the termination points (legs) of the existing cross-connection. If the existing cross-connection is one-way, then this termination point (leg) should be the TO-AID termination point. Otherwise, the TO is not significant. FROM and TO should be entered as they are entered in the ENT-CRS command. You can issue the RTRV-CRS command and use the response for FROM and TO parameters.
<RFROM>	The termination point of the existing cross-connect that is to be rolled. The termination point is an AID.
<RTO>	The termination point that will become a leg of the new cross-connection. the termination point is an AID.
<RMODE>	Indicates the mode of the rolling operation. The parameter type is RMODE (roll mode).
• AUTO	Automatic. When a valid signal is available, the roll that has the AUTO mode will automatically delete the previous end-point.
• MAN	Manual. Enter the corresponding delete roll/bulkroll command to delete the previous end-point.
<FORCE>	Forces a valid signal on the path. FORCE can only go from Y to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.

ENT-ROUTE

The Enter Route (ENT-ROUTE) command creates static routes.

Usage Guidelines

There is no Domain Name Server (DNS) service available on the node. Only numeric IP addresses will be accepted.

Category

System

Security

Provisioning

Input Format

ENT-ROUTE:[<TID>]::<CTAG>::<DESTIP>,<IPMASK>,<NXTHOP>,<COST>;

Input Example

ENT-ROUTE:CISCO::123::10.64.72.57,255.255.255.0,10.64.10.12,200;

Input Parameters

<DESTIP>	Destination tip. DESTIP is a string.
<IPMASK>	IP mask. IPMASK is a string.
<NXTHOP>	Next hop. NXTHOP is a string.
<COST>	Unsigned integer. The valid range is from 1 to 32,797.

ENT-ROUTE-GRE

The Enter Route Generic Routing Encapsulation (ENT-ROUTE-GRE) command creates a GRE tunnel. This can be used to transport IP over Open Systems Interconnect (OSI) or OSI over IP.

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

ENT-ROUTE-GRE:[<TID>]::<CTAG>:::IPADDR=<IPADDR>,IPMASK=<IPMASK>,
NSAP=<NSAP>,[COST=<COST>];

Input Example

ENT-ROUTE-GRE:CISCO::123:::IPADDR=10.64.72.57,IPMASK=255.255.255.0,
NSAP="39840F80FFFFFF0000DDDDAA000010CFB4910200",COST=110;

Input Parameters

<IPADDR>	IP address of the tunnel endpoint. IPADDR is a string.
<IPMASK>	Subnet mask for the tunnel endpoint. IPMASK is a string.
<NSAP>	Network service access point (NSAP) address for the tunnel endpoint. NSAP is a string.
<COST>	Routing cost associated with the tunnel. COST is an integer.

ENT-TADRMAP

The Enter Target Identifier Address Mapping (ENT-TADRMAP) command instructs a gateway NE (GNE) to create an entry in the TADRMAP table that maps the target identifiers (TIDs) of the subtending NEs to their addresses. The operating systems (OSs) will address the subtending NEs using the TID in TL1 messages and a GNE will address these NEs by mapping the TID to an IP address or NSAP. The TADRMAP table, which resides in the GNE, correlates a TID and an address. The command requires that at least one IPADDR or NSAP be specified. The PORT and ENCODING parameters are only used with IP address mappings.

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

ENT-TADRMAP:[<TID>]::<CTAG>:::[TIDNAME=<TIDNAME>],[IPADDR=<IPADDR>],
[PORT=<PORT>],[ENCODING=<ENCODING>],[NSAP=<NSAP>];

Input Example

ENT-TADRMAP:TID::CTAG:::TIDNAME=ENENODENAME,IPADDR=192.168.100.52,
PORT=3082,ENCODING=LV,NSAP="39840F80FFFFFF0000DDDDAA01001800";

Input Parameters

<TIDNAME>	TID of the new TID/address mapping. TIDNAME is a string.
<IPADDR>	(Optional) IP address. IPADDR is a string. **Note** If the NSAP parameter is not used, the IPADDR parameter is required.
<PORT>	Port for the TID/IP address mapping. The port default is 3082. PORT is an integer.
<ENCODING>	TL1 encoding for the TID/IP address mapping. The encoding default is LV. The parameter type is ENCODING (modifies information into the required transmission format).
• LV	Length encoding
• RAW-CISCO	Cannot be specified. Used only for display with backward compatible Optical Networking System (ONS) NEs.
• RAW-STD	Noninteractive encoding
<NSAP>	(Optional) NSAP address. NSAP is a string. **Note** If the IPADDR parameter is not used, the NSAP parameter is required.

ENT-TRAPTABLE

The Enter Trap Table (ENT-TRAPTABLE) command provisions a Simple Network Management Protocol (SNMP) trap destination and its associated community, User Datagram Protocol (UDP) port, and SNMP version. The maximum number of trap entries is ten.

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

ENT-TRAPTABLE:[<TID>]:<AID>:<CTAG>::COMMUNITY=<COMMUNITY>,[TRAPPORT=<TRAPPORT>],[TRAPVER=<TRAPVER>];

Input Examples

1. ENT-TRAPTABLE::1.2.3.4:1::COMMUNITY="PRIVATE",TRAPPORT=162,TRAPVER=SNMPV1;
2. ENT-TRAPTABLE::“[3ffe:0501:0008:0000:0260:97ff:fe40:efab]”:1::COMMUNITY="PRIVATE",TRAPPORT=162,TRAPVER=SNMPV1;

Input Parameters

<AID>	IP address identifying the trap destination. Only a numeric IP address is allowed.
<COMMUNITY>	Community associated with the trap destination. Community name is a string with up to 32 characters.
<TRAPPORT>	UDP port number associated with the trap destination. The UDP port number default is 162. TRAPPORT is an integer.
<TRAPVER>	SNMP version number. Defaults to SNMPv1. The parameter type is SNMP_VERSION (SNMP Version).
• SNMPV1	(Default) SNMP Version 1
• SNMPV2	SNMP Version 2

ENT-TUNNEL-FIREWALL

The Enter Tunnel Firewall (ENT-TUNNEL-FIREWALL) command creates a firewall tunnel.

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

ENT-TUNNEL-FIREWALL:[<TID>]::<CTAG>:::[SRCADDR=<SRCADDR>],
[SRCMASK=<SRCMASK>],[DESTADDR=<DESTADDR>],[DESTMASK=<DESTMASK>];

Input Example

ENT-TUNNEL-FIREWALL:TID::CTAG:::SRCADDR=192.168.100.52,
SRCMASK=255.255.255.0,DESTADDR=192.168.101.14,DESTMASK=255.255.255.0;

Input Parameters

<SRCADDR>	Source IP address. SRCADDR is a string.
<SRCMASK>	Source mask. SRCMASK is a string.
<DESTADDR>	Destination IP address. DESTADDR is a string.
<DESTMASK>	Destination mask. DESTMASK is a string.

ENT-TUNNEL-PROXY

The Enter Tunnel Proxy (ENT-TUNNEL-PROXY) command creates a proxy tunnel.

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

ENT-TUNNEL-PROXY:[<TID>]::<CTAG>:::[SRCADDR=<SRCADDR>],
[SRCMASK=<SRCMASK>],[DESTADDR=<DESTADDR>],[DESTMASK=<DESTMASK>];

Input Example

ENT-TUNNEL-PROXY:TID::CTAG:::SRCADDR=192.168.100.52,SRCMASK=255.255.255.0,
DESTADDR=192.168.101.14,DESTMASK=255.255.255.0;

Input Parameters

<SRCADDR>	Source IP address. SRCADDR is a string.

<SRCMASK>	Source mask. SRCMASK is a string.
<DESTADDR>	Destination IP address. DESTADDR is a string.
<DESTMASK>	Destination mask. DESTMASK is a string.

ENT-UNICFG

The Enter User Network Interface Configuration (ENT-UNICFG) command creates UNI configuration which informs the circuit that the two ports specified in the command acts as an entry or exit point of an optical circuit.

Usage Guidelines

- Before executing the ENT-UNICFG command, the node should be configured with an optical side and an internal patchcords between a multiplexer, demultiplexer, and a mesh card.
- The source port should be an ADD port and destination port should be a DROP port.
- By default, the VALMODE parameter value is FULL and the VALZONE parameter value is GREEN.
- With the VALMODE parameter value as NONE, the VALZONE parameter is not applicable.
- RESTTYPE as REVERT is not applicable for UNICFG.

Category

DWDM

Security

Maintenance

Input Format

ENT-UNICFG[:<TID>]:<SRC>:<CTAG>::<RVRSAID>,<RSYSIP>,<RIFCIP>,<MSTPIP>,<COMMIP>[:VALMODE=<OPTVAL>],[VALZONE=<OPRZONE>],[ADMINSTATE=<ADMINSTATE>],[RESTTYPE=<RESTTYPE>],[CKTLABEL=<CKTLABEL>],[USPWROFS=<UPSTRMPWR>],[DSPWROFS=<DNSTRMPWR>],[ALLOWREGEN=<ALLOWREGEN>],[UNICTRLMODE=<unictrlmode>],[REVERTMODE=<revertmode>],[SOAK=<HH-MM-SS>],[RESTVALMODE=<restvalmode>,[RESTVALZONE=<restvalzone>],[TERMINTFDX=<termintfdx>],[DIVERSITY=<diversity>],[DIVERSITYTYPE=<diversitytype>],[ISLOOSE=<isloose>],[UNIMODE=<unimode>],[DESCR=<descr>],[ALIENID=<alienid>],[FECMODE=<fecmode>],[TRUNKMODE=<trunkmode>],[OPTENDPOINT=<optendpoint>],[PAIREDOPTENDPOINT=<pairedoptendpoint>],[REMOTEIFINFOLIST=<remoteifinfolist>],[LMPTYPE=<lmptype>[TXPCONTROLMODE=<txpcontrolmode>]][:];

List of Supported ALIENIDs

- ALIEN_NOT_PROV
- MCH Custom

- 100G-CK-C
- 100G-CK-ME-C
- 100G-ME-C
- 100GS-CK-LC
- 10-Gbps Aggregation (W/Splitter)
- 10GE-ITU
- 2.5G DWDM ITU-T SFP
- 2.5-Gbps Aggregation (W/Splitter)
- 2.5-Gbps Aggregation
- 200G-CK-LC
- 400G-XP-LC-CFP2
- 40E-MXP-C
- 40E-TXP-C
- 40G DWDM ITU-T MXP
- 40G DWDM ITU-T TXP
- 40G-MXP-C
- 40G-TXP-C
- 4-10GE-ITU
- 40C192-ITU
- CRS-1 40G ITU-T LC
- CRS-1 40G-DPSK-ITU-T LC
- Data Muxponder (W/Splitter)
- Data Muxponder
- DCO_CFP2_8QAM_200G
- DCO_CF2_QPSK_100G
- DWDM ITU-T SFP
- DWDM-X2
- DWDM-XENPAK
- DWDM-XFP
- GE DWDM GBIC
- MR MM TXP (W/Splitter)
- MR MM TXP
- MXP_2.5G_10E
- MXP 2.5G 10G
- MXP_MR_10DME
- MXP_MR_2.5G
- MXPP_MR_2.5G

- NCS1k
- NCS1004
- OC192LR
- OC48ELR
- ONS-CFP2D-400G-C_FOIC
- ONS-CFP2D-400G-C
- ONS-SC-2G
- ONS-SC-4G
- ONS-XC-10G-C
- ONS-XC-10G
- QSFP-DD-ZR
- QSFP-DD-ZR+
- TXP_MR_10E
- TXP_MR_10E_Y
- TXP_MR_10G
- TXP_MR_2.5G
- TXPP_MR_2.5G

Input Example

ENT-UNICFG::PLINE-20-5-RX:111::PLINE-20-5-TX,10.58.229.22,22.22.22.5,90.90.90.5,10.58.229.22,"Unnumb":VALMODE=FULL,VALZONE=RED,DESCR=90_Porta5_int27_Rosco22_250_20%,ADMINSTATE=UP,RESTTYPE=NONE,UNICTRLMODE=CLIENT,RESTVALMODE=NONE,UNIMODE=GMPLS,ALIENID=NCS1K,FECMODE=SD-20,TRUNKMODE=250G,LMPTYPE=SIGNALED;

Table 14-2 Parameter Support

Parameter	Description
<SRC>	Source AID.
<RVRSAID>	Destination AID.
<RSYSIP>	Remote system IP.
<RIFCIP>	Remote interface IP.
<MSTPIP>	MSTP interface IP.
<COMMIP>	Communication IP.
<VALMODE>	Identifies the validation mode.

• NONE	No optical validation is performed.
• FULL	The optical validation is performed as indicated in VALZONE parameter.
• INHERITED	
<VALZONE>	Identifies the validation operate zone.
• UNKNOWN	Not evaluated.
• GREEN	Margin > 3 sigma.
• YELLOW	1 < margin < 3 sigma.
• ORANGE	0 < margin < 1 sigma.
• RED	-3 < margin < 0 sigma.
• OUT	Margin < -3 sigma.
<ADMINSTATE>	Identifies the adminstate is UP or DOWN.
• UP	Indicates Adminstate is UP and UNI Services can be activated.
• DOWN	Indicates Adminstate is DOWN and UNI Services cannot be activated.
<RESTTYPE>	Indentifies the restoration type on UNI configuration.
• NONE	None restoration type for UNICFG.
• RESTORE	Restore restoration type for UNICFG.
<CKTLABEL>	Circuit label.
<CKTPRIORITY>	Circuit Priority.
<DSPWROFS>	Down stream power offset.
<USPWROFS>	Up stream power offset.
TRUNK-MODE	
<ALLOWREGEN>	Allow Regeneration (ALLOWREGEN)—Allows the control plane to find a regenerator in the network. The regenerators are used when an optical LSP between two endpoints is not optical or lambda feasible with a single DWDM channel.
• YES	Allows the control plane to find a regenerator in the network.
• NO	Denies to find a regenerator in the network.
<ALIENID>	List of Supported ALIENIDs

Input Parameter

TXPCONTROLMODE :

Values = NONE/GMPLS/LOCAL

Default Value = NONE

Output Parameter

TXPCONTROLMODE

ENT-USER-SECU

The Enter User Security (ENT-USER-SECU) command adds a user account. Only a Superuser can use the ENT-USER-SECU command. Each user created by the Superuser has one of these four privilege levels:

1. Retrieve [RTRV]: Users with this security level can retrieve information from the node, but cannot modify anything. The default idle time for a Retrieve user is unlimited.
2. Maintenance [MAINT]: Users with 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 a Maintenance user is 60 minutes.
3. Provisioning [PROV]: Users with this security level can perform all maintenance actions, and all provisioning actions except those restricted to Superusers. The default idle time for a Provisioning user is 30 minutes.
4. Superuser [SUPER]: Users with this security level can perform all provisioning user actions, plus creating and deleting user security profiles, setting basic system parameters such as time, date, node name, and IP address, and doing database backup and restoration. The default idle time for a Superuser is 15 minutes.

Usage Guidelines

- Passwords are masked for the following security commands: ACT-USER, ED-PID, ENT-USER-SECU, and ED-USER-SECU. Access to a TL1 session by 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 reissued 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 reissuing it.
- n CTC, TL1 accepts the UID length of 2 to 20 characters. The minimum length for PID and the password character rule can be configured using the command SET-ATTR-SECUDFLT. If minimum length for PID is selected as 2, it is mandatory to select ANY_CHAR as the password character rule, but if the password character rule is selected as ANY_CHAR, minimum length for PID can be selected as 2 or 4 or 6 or 8 or 10 or 12.
- Prior execution of SET-ATTR-SECUDFLT command is mandatory to set the minimum password length (PWDMINLEN) and password character rule (PWDCHRULE) for the PID to be entered in ENT-USER-SECU command, else default minimum length and password character rule is applied.
- The TL1 password security is enforced as follows:
  - The PID cannot be the same as or contain the UID. For example, if the userid is CISCO25 the password cannot be CISCO25#.
  - The PID must have one nonalphabetic and one special (+,%, or #) character.

- PID toggling is not permitted; for example, if the current password is CISCO25#, the new password cannot be CISCO25#.

Category
Security

Security
Superuser

Input Format
ENT-USER-SECU:[<TID>]:<UID>:<CTAG>::<PID>,,<UAP>[:];

Input Example
ENT-USER-SECU:PETALUMA:CISCO15:123::PSWD11#,,MAINT;

Input Parameters

<UID>	User Identifier. Any combination of up to 20 alphanumeric characters. The minimum UID size is 2. UID is a string.
<PID>	User's password or Private Identifier. Minimum length of the PID depends on the PWDMINLEN, the type of characters to be entered depends on the PWDCHRULE, and maximum length depends on PWDMAXLEN set by SET-ATTR-SECUDFLT command. **Note** PID cannot be the same as or contain the user ID (UID), for example, if the user ID is CSNL25 the password cannot be CSNL25#. **Note** PID must have one nonalphabetic and one special (+,%, or #) character. **Note** PID toggling is not permitted; for example, if the current password is CSNL25#, the new password cannot be CSNL25#.
<UAP>	User's access privilege. The parameter type is PRIVILEGE (security level).
• MAINT	Maintenance security level
• PROV	Provision security level
• RTRV	Retrieve security level
• SUPER	Superuser security level
• ROOT_USER	Root user.

• SEC_SUPER	Security super user.
• SEC_USER	Security user.

ENT-VCG

The Enter Virtual Concatenated Group (ENT-VCG) command creates a VCG object. VCGs on ML-Series cards support two members. Supported subrates are STS1, STS3C, and STS12C. ML-Series VCG also supports SW-LCAS or NONE. VCG on the FC_MR-4 card supports eight members and the supported subrate is limited to STS3C. The FC_MR-4 card VCG has no link capacity adjustment scheme (LCAS) support (NONE). VCG on the ML-100T-8 card supports up to three members at a subrate of STS1 and 64 members at a subrate of VT1.

Usage Guidelines

None

Category

VCAT

Security

Provisioning

Input Format

ENT-VCG:[<TID>]:<SRC>:<CTAG>:::TYPE=<TYPE>,TXCOUNT=<TXCOUNT>,[CCT=<CCT>],[LCAS=<LCAS>],[BUFFERS=<BUFFERS>],[NAME=<NAME>];

Input Example

ENT-VCG:NODE1:FAC-1-1:1234:::TYPE=STS3C,TXCOUNT=8,CCT=2WAY,LCAS=LCAS,BUFFERS=DEFAULT,NAME="VCG1";

Input Parameters

<SRC>	Source access identifier. ML1000-2 and ML100T-12 cards use the VFAC AID. The FC_MR-4 card uses the FAC AID.
<TYPE>	The type of entity or member cross-connect being provisioned. Null indicates not applicable. TYPE can be a Common Language Equipment Identification (CLEI) code or another value. ML1000-2 and ML100T-12 cards support STS1, STS3c, and STS12c. The FC_MR-4 card supports STS3c only. The parameter type is MOD_PATH (STS/VT path modifier).
• STS1	STS1 path

• STS12C	STS12C path
• STS18C	STS18C path
• STS192	STS192C path
• STS24C	STS24C path
• STS36C	STS36C path
• STS3C	STS3C path
• STS48C	STS48C path
• STS6C	STS6C path
• STS9C	STS9C path
• VT1	VT1 path
• VT2	VT2 path
<TXCOUNT>	Number of members in the transmit (Tx) direction. For ML1000-2 and ML100T-12 cards, the only valid value is 2. For the FC_MR-4 card the only valid value is 8. TXCOUNT is an integer.
<CCT>	Type of connection (one-way or two-way). CCT is the cross-connect type for the VCG member cross-connects. It must be the same for all the member cross-connects of a VCG. The parameter type is CCT, which is the type of cross-connect to be created.
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	Path Protection multicast drop with one-way continue
• 1WAYEN	Path Protection multicast end node with one-way continue
• 1WAYMON	A bidirectional connection between the two tributaries **Note** 1WAYMON is not supported with TL1. However, it is still supported from CTC. Using CTC, you can create 1WAYMON cross-connects that can be retrieved through 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 traditional path protection configurations and integrated DRIs

• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber
• DIAG	Diagnostic cross-connect. Supports BERT (BLSR PCA diagnostic cross-connect).
<LCAS>	Link capacity adjustment scheme. **Note** If SW-LCAS is selected, then the far-end VCG must also be configured as SW-LCAS. The parameter type is LCAS, which is the link capacity adjustment scheme mode for the VCG created.
• LCAS	LCAS is enabled.
• NONE	No LCAS is created
• SW-LCAS	Supports the temporary removal of a VCG member during member failure. Only supported by the ML1000-2 and ML100T-12 cards.
<BUFFERS>	Buffer type. The default value is DEFAULT. The FC_MR-4 and CE1000 cards support DEFAULT and EXPANDED buffers. Other data cards support DEFAULT buffers only. The parameter type is BUFFER_TYPE, which is the buffer type used in the VCAT circuit.
• DEFAULT	Default buffer value
• EXPANDED	Expanded buffer value
<NAME>	Name of the VCAT group. The name defaults to null. Its maximum length is 32 characters. NAME is a string.

ENT-VLAN

The Enter Virtual VLAN (ENT-VLAN) command adds a new VLAN entry to the VLAN database. The VLAN database is a collection of VLANs used in an NE.

Usage Guidelines

- If the AID is invalid, an IIAC error message is returned.
- The ALL AID is invalid for this command.
- The VLAN with the specified AID must be present in the node or the command will be denied.

Category

Ethernet

Security
Provisioning

Input Format
ENT-
VLAN:[<TID>]:<AID>:<CTAG>:::NAME=<NAME>,[PROTN=<PROTN>],[MACLEARNING=<MACLEARNING>],[IGMPENABLE=<IGMPENABLE>],[IGMPFASTLEAVE=<IGMPFASTLEAVE>],[IGMPSUPP=<IGMPSUPP>][:];

Input Example
ENT-VLAN:ROCKS:VLAN-4096:1:::NAME=MYVLAN,PROTN=N,MACLEARNING=Y,
IGMPENABLE=Y,IGMPFASTLEAVE=Y,IGMPSUPP=Y;

Input Parameters

<AID>	The AID is used to access the VLAN.
• VLAN-ALL	All AIDs for the VLAN.
• VLAN-{0-4096}	Single AID for the VLAN. VLAN ID 0 is reserved for untagged VLAN.
<NAME>	(Optional) Indicates the name of the VLAN.
<PROTN>	Indicates the VLAN protection feature. This is an optional parameter indicating if the VLAN being created/modified is protected.
• N	Not protected (Default)
• Y	Protected
<MACLEARNING>	MAC Address Learning Mode. This activates the MAC address learning on interface to avoid packet broadcasting. Default value is - “N”
• Y	Activate the MAC learning.
• N	Disable MAC learning.
<IGMPENABLE>	Internet Group Management Protocol status.
• Y	Enabled
• N	Disabled
<IGMPFASTLEAVE>	Internet Group Management Protocol FastLeave status. When enabled, decreases the delay between receiving a Leave Group packet and disabling forwarding of multicast
• Y	Enabled

• N	Disabled
<IGMPSUPP>	IGMP Report suppression. Indicates multicast registered client hiding. When enabled (default) it prevents duplicate reports from being sent to the multicast devices.
• Y	Enabled
• N	Disabled

ENT-WDMANS

The Enter Wavelength Division Multiplexing Automatic Node Setup (ENT-WDMANS) command adds the automatic optical node setup application attributes.

Usage Guidelines

- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The ALL AID is invalid for this command.

Category

DWDM

Security

Maintenance

Input Format

(For legacy package)

ENT-WDMANS:[<TID>]:<AID>:<CTAG>::[<WLEN>]:[VOAATTN=<VOAATTN>],[POWEROSC=<POWEROSC>],[NTWTYPE=<NTWTYPE>],[CHLOSS=<CHLOSS>],[GAIN=<GAIN>],[TILT=<TILT>],[CHPWR=<CHPWR>],[AMPLMODE=<AMPLMODE>],[RATIO=<RATIO>],[OSCLOSS=<OSCLOSS>],[DITHER=<DITHER>],[TOTALPWR=<TOTALPWR>],[TOTALPWRMILLIW=<TOTALPWRMILLIW>],[HIGHSLVEXP=<HIGHSLVEXP>],[LOWSLVEXP=<LOWSLVEXP>],[TOTALPWRDBM=<TOTALPWRDBM>];

(For flex package)

ENT-WDMANS:[<TID>]:<AID>:<CTAG>::[<WLEN>]:[VOAATTN=<VOAATTN>],[POWEROSC=<POWEROSC>],[NTWTYPE=<NTWTYPE>],[CHLOSS=<CHLOSS>],[GAIN=<GAIN>],[TILT=<TILT>],[CHPWR=<CHPWR>],[AMPLMODE=<AMPLMODE>],[RATIO=<RATIO>],[OSCLOSS=<OSCLOSS>],[DITHER=<DITHER>],[TOTALPWRMILLIW=<TOTALPWRMILLIW>],[HIGHSLVEXP=<HIGHSLVEXP>],[LOWSLVEXP=<LOWSLVEXP>],[TOTALPWRDBM=<TOTALPWRDBM>],[ENABLELOGO=<ENABLELOGO>][:];

Input Example

ENT-WDMANS:PENNGROVE:WDMNODE:114::1530.33:VOAATTN=2.5,POWEROSC=5.0,NTWTYPE=METRO-CORE,CHPWR=2.0,DITHER=10,TOTALPWR=150;

Input Parameters

<AID>	The AID is used to access the WDM node or a single port of the DWDM node.
• WDMNODE	Indicates the WDM node of an MSTP and accesses the NTWTYPE and DITHER WDMANS node parameters.
• LINE	The optical transport section port.
• BAND	The optical multiplex section port.
• CHAN	The optical channel port.
<WLEN>	(Optional) The parameter type is OPTICAL_WLEN, which indicates the optical wavelength.
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1528.77	Wavelength 1528.77
• 1529.16	Wavelength 1529.16
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07

• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73

• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13

• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05
• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27
• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50
• 1565.90	Wavelength 1565.90

• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77

• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10

• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610

<VOAATTN>	The value of calibrated attenuation for the VOA expressed in dBm. The range is 0.0 to +30.0. VOAATTN is a float.
<POWEROSC>	WDM-ANS OSC power parameter.
<NTWTYPE>	WDM-ANS network type parameter.
<CHLOSS>	WDM-ANS channel loss parameter.
<GAIN>	WDM-ANS amplifier gain parameter.
<TILT>	WDM-ANS amplifier tilt parameter.
<CHPWR>	WDM-ANS channel power parameter.
<AMPLMODE	WDM-ANS amplifier mode parameter.
<RATIO>	WDM-ANS Raman amplifier pump ratio parameter.
<OSCLOSS>	WDM-ANS OSC channel loss parameter.
<DITHER>	WDM-ANS WXC dithering parameter.
<TOTALPWR>	WDM-ANS Raman amplifier total power in mW.
<TOTALPWRMILLIW>	Optical power setting in mW.
<HIGHSLVEXP>	Span loss verification—high value.
<LOWSLVEXP>	Span loss verification—low value.
<TOTALPWRDBM>	Optical power setting in dBm.
<ENABLELOGO>	Enable logo.

ENT-WDMSIDE

The Enter Wavelength Division Multiplexing Side (ENT-WDMSIDE) command adds a new WDM Node Side and defines its attributes.

Usage Guidelines

- The LINEIN and LINEOUT attributes are mandatory and they specify the input and output lines of the node.
- If the AID is invalid, an IIAC error message is returned.
- The ALL AID is invalid for this command.

Category

DWDM

Security
Maintenance

Input Format
ENT-WDMSIDE:[<TID>]:<AID>:<CTAG>:::LINEIN=<LINEIN>,LINEOUT=<LINEOUT>[:];

```
ENT-WDMSIDE[:<TID>]:<aid>:<CTAG>:::LINEIN=<linein>,LINEOUT=<lineout>,[SID-
EDESC=<sidedesc>][:];
```

Input Example
ENT-WDMSIDE:TEXAS:WDMSIDE-A:114:::LINEIN=LINE-1-3-RX,LINEOUT=LINE-1-3-TX;

Input Parameters

<AID>	The AID is used to access the WDM side of a DWDM node.
• WDMSIDE-{A,B,C,D,E,F,G,H}	DWDM side identifier
<LINEIN>	Used to access the Optical Transport Section (OTS) layer of the ONS cards.
• LINE[-{1-8}]-{1-6,12-17}-{1-3}-ALL	All the lines (COM=1, OSC=2, LINE=3) in OPT-BST, OPT-BST-E, OPT-BST-L, and OPT-AMP-17-C cards where the format is LINE-[SHELF]-[SLOT]-[PORT]-ALL.
• LINE[-{1-8}]-{1-6,12-17}-{1-3}-{RX,TX}	The receive/transmit lines (COM=1, OSC=2, LINE=3) in OPT-BST, OPT-BST-E, OPT-BST-L, and OPT-AMP-17-C cards where the format is LINE-[SHELF]-[SLOT]-[PORT]-[DIRN].
<LINEOUT>	Used to access Optical Transport Section (OTS) layer of Optical Network units.
• LINE[-{1-8}]-{1-6,12-17}-{1-3}-ALL	All the lines (COM=1, OSC=2, LINE=3) in OPT-BST, OPT-BST-E, OPT-BST-L, and OPT-AMP-17-C cards where the format is LINE-[SHELF]-[SLOT]-[PORT]-ALL.
• LINE[-{1-8}]-{1-6,12-17}-{1-3}-{RX,TX}	The receive/transmit lines (COM=1, OSC=2, LINE=3) in OPT-BST, OPT-BST-E, OPT-BST-L, and OPT-AMP-17-C cards where the format is LINE-[SHELF]-[SLOT]-[PORT]-[DIRN].

ENT-CPSUPGRADE

The ENT-CPSUPGRADE command upgrades a non WSON circuit to a WSON Circuit.

Usage Guidelines

- Missing

Category

Missing

Security

Missing

Input Format

ENT-CPSUPGRADE:[<TID>]:<src>:<CTAG>::<dstaddr>,<dst>,[<wct>],<cpstype>:[CKTID=<cktid>],[VALMODE=<valmode>],[VALZONE=<valzone>],[VALMODESEC=<valmodesec>],[VALZONESEC=<valzonesec>],[CKTLABEL=<cktlabel>][:];

Input Example

> ENT-CPSUPGRADE::VFAC-1-7-1-1:1::10.64.107.234,VFAC-1-7-1-1,2WAY,CLIENT;

"test" 2015-09-18 03:48:36

M 1 COMPLD ;

Input Parameters

<SRC>	Source access identifier
<DSTADDR>	Identifies the destination node IP address
<DST>	Destination AID
<WCT> • 1WAY • 2WAY	Identifies the wavelength connection type Uni-directional connection from a source to a destination port Default value is 1WAY Bi-directional connection between the two ports
<CPSTYPE>	Identifies the type of CPS
<CKTID>	(Optional) Circuit identification parameter. It contains the Common Language Circuit ID or other alias of the circuit being provisioned and does not contain blank spaces. It is a string of ASCII characters with maximum length of 48

<VALMODE>	Identifies the validation mode
<VALZONE>	Identifies the validation operate zone
<VALMODESEC>	Identifies the validation mode for secondary circuit
<VALZONESEC>	Identifies the validation operate zone for secondary circuit
<CKTLABEL>	Identifies the circuit label

ENT-OTDRLOSSREFLSCAN

The ENT-OTDRLOSSREFLSCAN command configures one-time scans or event scans and is used for loss reflection graph.

- Input parameter SCANOPTYPE is mandatory which has the SCAN_ONLY, SCAN_AND_LOSS_REPORT and LOSS_REPORT as values
- Input parameters for a one-time scan are SECTOR and DIRECTION
- Input parameters for an event scan are SECTOR, DIRECTION, and DISTANCE
- The LOCATION parameter from the event results is the input for the DISTANCE parameter.
- One-time scan is bi-directional

Category
Port

Security
Maintenance

Input Format

ENT-OTDRLOSSREFLSCAN:[<TID>]:<AID>:<CTAG>::
DIRECTION=<DIRECTION>,SECTOR=<SECTOR>,[DISTANCE=<DISTANCE>];
SCANMODE=<SCANMODE>,SCANOPTYPE=<SCANOPTYPE>;

Input Example

ENT-OTDRLOSSREFLSCAN::PPM-1-8-1:a::DIRECTION=TX,SECTOR=ZONE#1;
ENT-OTDRLOSSREFLSCAN::PPM-1-8-1:a::DIRECTION=TX,SECTOR=ZONE#1,DISTANCE=0.004,
SCANOPTYPE=LOSS_REPORT;

Input Parameters

<AID>	Specific PPM port on the TNC
< DIRECTION > • TX • RX	Defines the direction for the scan. Enum type parameter that takes the following values
<SECTOR> • EXPERT • ZONE #1 (0 to 1km) • ZONE #2 (0 to 25km) • ZONE #3 (0 to 80km) • ZONE #4 (0 to 100km)	Sector parameter of enum type that takes the following values
<DISTANCE>	Location return from RTRV-OTDRSCANEVENT
< SCANOPTYPE >	Scan operation type

ENT-OTDRSCAN

The ENT-OTDRSCAN command configures one-time scans or event scans.

Usage Guidelines

- Input parameters for a one-time scan are SECTOR and DIRECTION
- Input parameters for an event scan are SECTOR, DIRECTION, and DISTANCE
- The LOCATION parameter from the event results is the input for the DISTANCE parameter.
- One-time scan is bi-directional

Category
Equipment

Security
Provisioning

Input Format

ENT-OTDRSCAN:[<TID>]:<AID>:<CTAG>::
DIRECTION=<DIRECTION>,SECTOR=<SECTOR>,[DISTANCE=<DISTANCE>];

Input Example

ENT-OTDRSCAN::PPM-1-8-1:a::DIRECTION=TX,SECTOR=ZONE#1;
ENT-OTDRSCAN::PPM-1-8-1:a::DIRECTION=TX,SECTOR=ZONE#1,DISTANCE=0.004;

Input Parameters

<AID>	Specific PPM port on the TNC
< DIRECTION > • TX • RX	Defines the direction for the scan. Enum type parameter that takes the following values
<SECTOR> • EXPERT • ZONE #1 (0 to 1km) • ZONE #2 (0 to 25km) • ZONE #3 (0 to 80km) • ZONE #4 (0 to 100km)	Sector parameter of enum type that takes the following values
<DISTANCE>	Location return from RTRV-OTDRSCANEVENT

ENT-ALMPROFILE

This command is used to create an alarmprofile.

Usage Guidelines
It should not take any special character as a part of profile name. PROFILENAME is mandatory parameter.

Category
System

Security
Provisioning

Input Format
ENT-ALMPROFILE:[<TID>]::<CTAG>:::<PROFILENAME=<profilename>

Input Parameters

<PROFILENAME>	Profile name need to be created.

Output Format
NA

Output Example
> ENT-ALMPROFILE:::1:::PROFILENAME=abc;

node113 2016-05-18 10:40:40

M 1 COMPLD Category

System

Output Parameters
NA

ENT-CKTINFOCC

This command is used to create OCHCC Circuits without using Node Id and Ckt Id. Circuit info is created with this.

Usage Guidelines
None

Category
System

Security
Provisioning

Input Format

ENT-CKTINFOCC:[<TID>]:<aid>:<CTAG>:::SOURCETP=<sourcetp>,DROPTP=<droptp>,[CKTSIZE=<cktsize>],[CKTTYPE=<cktype>],[CKTDIR=<cktdir>],[ISGMPLS=<isgmpls>],[SERVICEID=<serviceid>];

Input Parameters

<AID>	The AID of Link where CC Circuit Info needs to be created.

Output Format

SOURCETP: String Value
DROPTP: String Value
CKTSIZE: It is an ENUM value which depicts the circuit size. For example: SIZE_STS_1, SIZE_VC_4.
CKTTYPE; An ENUM value which tells the type of the circuit being created. For example: OCHCC_CIRCUIT,LSP CICUIT, etc.
CKTDIR: An ENUM value telling the Direction of the circuit like UNIDIRECTIONAL or BIDIRECTIONAL CIRCUIT.
ISGMPLS: An ENUM Value which tells if GMPLS is ON or OFF.
SERVICEID: Integer value depicting the Service Id.

Output Example

> ent-cktinfocc::AGGR-2-3-1-1:116:::SOURCETP=9b2e0400/0x1003002,DROPTP=9b3104a0/0x1003002/PATH-UNPROTECTED,ISGMPLS=N;

454-234 2016-07-20 06:39:05
M 116 COMPLD
;

Output Parameters

NA

ENT-CKTINFONC

This command is used to create OCHNC Circuits without using Node Id and Ckt Id. Circuit info is created with this.

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

ENT-CKTINFONC:[<TID>]:<src>,<dst>:<CTAG>:::SOURCETP=<sourcetp>,DROPTP=<droptp>,[CKTSIZE=<cktsize>],[CKTTYPE=<ckttype>],[CKTDIR=<cktdir>],[ISGMPLS=<isgmpls>],[TRAILINDEX=<trailindex>],[SERVICEID=<serviceid>];

Input Parameters

<SRC>	Source AID.
<DST>	Destination AID

Output Format

SOURCETP: String Value
DROPTP: String Value
CKTSIZE: It is an ENUM value which depicts the circuit size. For example: SIZE_STS_1, SIZE_VC_4.
CKTTYPE: An ENUM value which tells the type of the circuit being created. For example: OCHCC_CIRCUIT,LSP CICUIT, etc.
CKTDIR: An ENUM value telling the Direction of the circuit like UNIDIRECTIONAL or BIDIRECTIONAL CIRCUIT.
ISGMPLS: An ENUM Value which tells if GMPLS is ON or OFF.
TRAILINDEX: An integer value for Trail Index.
SERVICEID: Integer value for Service Id.

Output Example

ENT-CKTINFONC::LINEWL-4-7-3-RX-2WL&FPLINE-1-5-RX-2WL,FPLINE-1-5-TX-2WL&LINEWL-4-7-3-TX-2WL:1:::SOURCETP=9b2e0400/0x0,DROPTP=9b3104a0/0x0/PATH-UNPROTECTED,ISGMPLS=N,TRAILINDEX=32;

454-234 2016-07-20 06:44:07

M 1 COMPLD

;

Output Parameters

NA

ENT-CKTINFO-ODU

This command is used to create ODU circuit information.

Usage Guidelines

None

Category

System

Security
Provisioning

Input Format
ENT-CKTINFO-ODU::<FROM>,<TO>:<CTAG>:::BANDWIDTH=<bandwidth>,SOURCETP=<sourcetp>,DROPTP=<droptp>,SERVICEID=<serviceid>;

Input Example
> ENT-CKTINFO-ODU::ODU-1-4-1-1-1-1,ODU-1-4-11-1-1-1&ODU-1-4-12-1-1-1:87:::BANDWIDTH=ODU2E,SOURCETP=10/20/3&40/50/4,DROPTP=60/70/5/PATH-PROTECTED&80/90/6/PATH-PROTECTION-NOT-USED,SERVICEID=10;

vxTarget 2017-04-21 07:41:56

M 87 COMPLD

;

Input Parameters

< FROM >	AID is Mandatory. ODU AID of From End Point. Example: ODU-1-5-7-1-1-1. In case of Protected- ODU-1-5-7-1-1-1& ODU-1-5-11-1-1-1.
<TO>	AID is Mandatory. ODU AID of To End Point- In case of Protected- ODU-1-5-7-1-1-1&ODU-1-5-11-1-1-1.
BANDWIDTH	ENUM (Mandatory). ODU Level (ODU2E).
SOURCETP	Mandatory. NodeId/Portindex/ODU Num&NodeId/Portindex/ODU Num. Example: 9b2e0400/ 0x2029/1/&9b2e0400/ 0x2029/3
DROPTP	Mandatory. NodeId/Portindex/ODU Num/PathProtect&NodeId/Portindex/ODU Num/PathProtect. Example-9b2e0400/ 0x2029/1/PATH-PROTECTED
SERVICEID	(Optional). Service Id of the Circuit.

Output Format

Output Example

Output Parameters
NA

ENT-CRS-ODU

This command is used to create ODU circuit.

Usage Guidelines
None

Category
System

Security
Provisioning

Input Format
ENT-CRS-ODU::<FROM>,<TO>:<CTAG>::: BANDWIDTH=<bandwidth>
,[CMDMDE=<cmdmde>],[CKTNAME=<cktname>],
,[PROTTYPE=<prottype>],[RVRTV=<rvrtv>],[RVTM=<rvtm>],[HOLDOFFTIMER=<holdofftimer>]:[<pst>],[<sst>]

Input Example
ENT-CRS-ODU::ODU-1-4-1-1-1-1,ODU-1-4-11-1-1-1&ODU-1-4-12-1-1-1:a:::BANDWIDTH=ODU2E,CMDMDE=NORM,CKTNAME=CKT_15,PROTTYPE=SNC-N,RVRTV=Y,RVTM=6.5,HOLDOFFTIMER=100:OOS,MT;

vxTarget 2017-04-21 05:03:41

M a COMPLD

Input Parameters

< FROM >	AID is Mandatory. ODU AID of From End Point. Example: ODU-1-5-7-1-1-1. In case of Protected- ODU-1-5-7-1-1-1& ODU-1-5-7-1-2-1
<TO>	AID is Mandatory. ODU AID of To End Point- In case of Protected- ODU-1-5-7-1-1-1& ODU-1-5-7-1-2-1.
BANDWIDTH	ENUM (Mandatory). ODU Level (ODU2E).
CKTNAME	Circuit Name (Optional). CircuitName. Default is empty .

CMDMDE	ENUM. NORM,FRCD- Used to set the Admin State.
RVRTV	Revertive Mode. Y or N, Default is N.
RVTM	Revertive Time in secs. Range is 5 min to 12 min. Increment is 0.5. Default is 5 min
HOLDOFFTIMER	Hold off timer in millisecs. The range is 0 to 10 sec. Increment steps 100 ms. Default value is 0.
PROTTYPE	ENUM (Optional). Protection type. The enum value is { SNC-N}.
PST	ENUM (Optional). Primary State. Default is IS.
SST	ENUM (Optional). Secondary State. Default is AINS

Output Format

Output Example

Output Parameters

NA

Chapter 15: EX Commands

This chapter provides exercise (EX) commands for the Cisco NCS 2000 Series.

EX-SW-<STM_MSSPR>

The Exercise Protection Switch for STM4, STM16, STM64, and STM256 (EX-SW-<STM_MSSPR>) 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 card. The exercise switching success or failure result will be indicated by an automatic alarm.

Usage Guidelines

- Exercise switch for the NCS protection line is not supported in this release. If you send this command to the protection card, an error message will be returned. In addition to all normal INPUT, EQUIPAGE, and PRIVILEGE error codes, the following error codes are also included in this command:
  - Status, Not in Valid State (SNVS)
  - Status, Requested Operation Failed (SROF)
  - Status, Switch Request Denied (SSRD)
- If you send the EX-SW-<STM_MSSPR> command to both east and west sides/spans of a two-fiber or four-fiber ring within a short time period (less than 30 to 45 seconds) the system will only execute one (WEST) side EXER-RING query, and preempt the other (EAST) side query. No event messages is reported for the preempted side, and it will be in APS-CLEAR switching state. This is applicable in the following situations:
  - A single command with both side/span AIDs (in the list AID format) of the same two-fiber or four-fiber ring
  - Separate queries (through Transaction Language One [TL1], Cisco Transport Controller [CTC], or TL1 and CTC) on both sides/spans of the same two-fiber or four-fiber ring
- DIRN is an optional parameter. A NULL value of this parameter defaults to BTH for a two-fiber or four-fiber MS-SPRing protection group. DIRN follows these rules:
  - TRMT will always fail for any kind of protection group.
  - For two-fiber and four-fiber MS-SPRing protection groups, both the RCV and TRMT direction will fail.
  - Only BTH is a valid parameter. EX-SW-<STM_TYPE> can be operated only on MS-SPRing protection groups.

Category

MS-SPRing

Security

Maintenance

Input Format

EX-SW-<STM_MSSPR>:[<TID>]:<AID>:<CTAG>::,[<SWITCHTYPE>],[<DIRECTION>];

Input Example

EX-SW-STM16:CISCO:FAC-12-1:123::,SPAN,BTH;

Table 15-1 Parameter Support

Parameter	Description
<AID>	Access identifier. Identifies the facility in the NE to which the switch request is directed.
<SWITCHTYPE>	(Optional) Switch type. Must not be null. The parameter type is SWITCH_TYPE, which is the MS-SPRing switch type. MANWKSWBK, MANWKSWPR, FRCDWKSWBK, FRCDWKSWPR, LOCKOUTOFPR, and LOCKOUTOFWK are retrieve-only values for RTRV-PROTNSW-STM commands. They are not applicable for the OPR-PROTNSW-STM commands. RING and SPAN are the only allowed values for MS-SPRing protection.
• FRCDWKSWBK	Working card is forced to switch back to working.
• FRCDWKSWPR	Working card is forced to switch to the protection card.
• LOCKOUTOFPR	Lockout of protection.
• LOCKOUTOFWK	Lockout of working.
• MANWKSWBK	Manual switch of working card back to working.
• MANWKSWPR	Manual switch of working card back to the protection card.
• RING	MS-SPRing ring switch type.
• SPAN	MS-SPRing span switch type.
<DIRECTION>	(Optional) Direction. A null value defaults to RCV. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
• TRMT	Transmit direction only

Chapter 16: INH Commands

This chapter provides inhibit (INH) commands for the Cisco NCS 2000 Series.

INH-CONSOLE-PORT

The Inhibit Console Port (INH-CONSOLE-PORT) command is used to turn off the console port for an ML-Series card.

Usage Guidelines

None

Category

Security

Security

Superuser

Input Format

INH-CONSOLE-PORT:[<TID>]:<AID>:<CTAG>;

Input Example

INH-CONSOLE-PORT:CISCONODE:SLOT-2:123;

Input Parameters

<AID>	Access identifier.

INH-MSG-ALL

The Inhibit Message All (INH-MSG-ALL) command inhibits all REPT ALM and REPT EVT autonomous messages from being transmitted.

Usage Guidelines

- See the ALW-MSG-ALL command to resume these autonomous messages. When a TL1 session starts, the REPT ALM and REPT EVT messages are allowed by default.
- If this command is used twice in the same session, the Already Inhibited (SAIN) error message is reported.

Category

System

Security
Retrieve

Input Format
INH-MSG-ALL:[<TID>]:[<AID>]:<CTAG>[::,,];

Input Example
INH-MSG-ALL:PETALUMA:ALL:550;

Input Parameters

<AID>	(Optional) Access identifier.

INH-MSG-DBCHG

The Inhibit Database Change Message (INH-MSG-DBCHG) command disables the REPT DBCHG message.

Usage Guidelines
None

Category
Log

Security
Retrieve

Input Format
INH-MSG-DBCHG:[<TID>]::<CTAG>[::,,];

Input Example
INH-MSG-DBCHG:CISCO::123;

Input Parameters
None

INH-MSG-SECU

The Inhibit Message Security (INH-MSG-SECU) command inhibits the REPT EVT SECU and REPT ALM SECU messages.

Usage Guidelines
None

Category
Security

Security
Superuser

Input Format
INH-MSG-SECU:[<TID>]::<CTAG>[::,,];

Input Example
INH-MSG-SECU:PETALUMA::123;

Input Parameters
None

INH-PMREPT-ALL

The Inhibit Performance Report All (INH-PMREPT-ALL) command inhibits all scheduled performance monitoring (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. A TL1 session for which PM reports are inhibited will include an INHMSG-PMREPT condition when issuing TL1 command RTRV-COND-ALL.

Usage Guidelines
None

Category
Performance

Security
Retrieve

Input Format
INH-PMREPT-ALL:[<TID>]::<CTAG>;

Input Example
INH-PMREPT-ALL:NE-NAME::123;

Input Parameters

None

INH-SWDX-EQPT

The Inhibit Switch Duplex Equipment (INH-SWDX-EQPT) command inhibits automatic or manual switching on a system containing duplex equipment.

Usage Guidelines

- Use the ALW-SWDX command to release the inhibit.
- This command is not used for NCS line protection switching. For NCS 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 instead.
- In this release, this command applies only to the XC-VXC-10G, XC-VXL-10G, and XC-VXL-2.5G cards.
- If you send this command to a TCC2/TCC2P/TCC3 card, an error message will occur because the network element (NE) treats the TCC2/TCC2P/TCC3 as a nonrevertive protection group without user control.

Category

Equipment

Security

Maintenance

Input Format

INH-SWDX-EQPT:[<TID>]:<AID>:<CTAG>[::];

Input Example

INH-SWDX-EQPT:CISCO:SLOT-1:1234;

Input Parameters

<AID>	Access Identifier.

INH-SWTOPROTN-EQPT

The Inhibit Switch to Protection Equipment (INH-SWTOPROTN-EQPT) command inhibits automatic or manual switching of an equipment card to protection. Use the ALW-SWTOPROTN-EQPT command to release the inhibit.

Usage Guidelines

Use the INH-SWTOPROTN-EQPT command for electrical cards (such as, E1, E3, E4, and DS3i-N-12 cards) that can participate in an electrical protection group.

When performing a lockout with this command, traffic will be switched from the card specified by the AID, unless the working card being protected has failed or is missing. When performing a lock-on with this command and the working card specified in the AID is in standby, sending this command will also initiate a traffic switch. When traffic is locked on the working card or locked out of the protection card with this command, the protection card will not carry traffic, even if the working card is pulled from the system.

Sending this command to a working card in a 1:N protection group does not prevent a protection switch from another working card in the same protection group. All the working cards must be sent this command to prevent a protection switch. If the command is sent only to a subset of the working cards, only those working cards will have traffic locked on.

The inhibit state is persistent over TCC2/TCC2P/TCC3 side switches and removal/reboot of all the cards in the protection group. The inhibit state can be, but does not have to be, persistent over a complete power cycle of the NE.

The card specified by the AID will raise the condition of INHSWPR when this command is sent.

The following actions will return error messages:

- This command only supports the BTH value of the DIRN parameter. A command with any other value is considered an incorrect use of the command and will return an Input, Data Not Valid (IDNV) error message.
- This command is not used for the common control (TCC2, TCC2P, TCC3, XC-VXL-10G, XC-VXL-2.5G, or XC-VXC-10G) cards. A command on a common control card will return an Input, Invalid Access Identifier (IIAC) error message. To switch the common control cards, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
- This command is not used for optical (STM) cards. A command on an optical card will return an IIAC error message. To switch an optical card, use the OPR-PROTNSW and RLS-PROTNSW commands.
- If this command is used on a card that is not in a protection group, the Status, Not in Valid State (SNVS) error message is returned.
- If this command is used on a card that is already in the inhibit state, the SAIN error message is returned.
- Sending this command to a working card when the protect card in the same protection group has already raised the condition of INHSWWKG will return the Status, Protection Unit Locked (SPLD) error message.
- Sending this command to the protect card when a working card in the same protection group has already raised the condition of INHSWWKG will return the Status, Working Unit Locked (SWLD) error message.
- Sending this command to an active protect card when the peer working card is failed or missing will return the Status, Working Unit Failed (SWFA) error message.

As long as none of the previous error conditions apply, sending this command to missing cards will not generate any error response.

Category

Equipment

Security

Maintenance

Input Format

INH-SWTOPROTN-EQPT:[<TID>]:<AID>:<CTAG>[::<DIRN>];

Input Example

INH-SWTOPROTN-EQPT:CISCO:SLOT-2:123::BTH;

Input Parameters

<AID>	Access identifier. This AID can either be the working card for which switching to protection is inhibited (lock-on) or the protection card for which carrying traffic is to be inhibited (lockout).
<DIRN>	(Optional) The direction relative to the entity defined in the AID field. The direction of the switching. This command only supports the BTH value of this parameter. DIRN defaults to BTH. The parameter type is DIRECTION (transmit and receive directions).
• BTH	Both transmit and receive directions

INH-SWTOWKG-EQPT

The Inhibit Switch to Working Equipment (INH-SWTOWKG-EQPT) command inhibits automatic or manual switching of an equipment card back to the working card. Use the ALW-SWTOWKG-EQPT command to release the inhibit.

Usage Guidelines

INH-SWTOWKG-EQPT is used for electrical cards (such as, E1, E3, E4, and DS3i-N-12 cards) that can participate in an electrical protection group.

When performing a lockout with this command, the traffic will be switched from the card specified by the AID, unless the protection card has failed or is missing. When performing a lock-on with this command and the protection card 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 the error conditions that follow). When traffic is locked on the protection card or locked out of a working card with this command, the working card will not carry traffic, even if the protection card is pulled from the system.

The inhibit state is persistent over TCC2/TCC2P/TCC3 side switches and removal/reboot of all the cards in the protection group. The inhibit state can but does not have to be persistent over a complete power cycle of the NE.

The card specified by the AID will raise the condition of INHSWWKG when this command is sent.

The following actions will return error messages:

- The command only supports the BTH value of the DIRN parameter. A command with any other value is considered an incorrect use of the command and will return an IDNV error message.
- This command is not used for the common control (TCC2, TCC2P, TCC3, XC-VXL-10G, XC-VXL-2.5G, or XC-VXC-10G) cards. A command on a common control card will return an IIAC error message. To switch the common control cards, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
- This command is not used for optical (STM) cards. A command on an optical card will return an IIAC error message. To switch an optical card, use the OPR-PROTNSW and RLS-PROTNSW commands.
- If this command is used on a card that is not in a protection group, the SNVS error message is returned.
- If this command is used on a card that is already in the inhibit state, the SAIN error message is returned.
- Sending this command to a working card when the protect card in the same protection group has already raised the condition of INHSWPR will return the SPLD error message.
- Sending this command to a protect card when a working card in the same protection group has already raised the condition of INHSWPR will return the SWLD error message.

- Sending this command to an active working card when the protect card has failed or is missing will return the SPFA error message.
- 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) will return the Status, Protection Unit Active (SPAC) error message.

As long as none of the previous error conditions apply, sending this command to missing cards is allowed and will not generate any error response.

Category
Equipment

Security
Maintenance

Input Format
INH-SWTOWKG-EQPT:[<TID>]:<AID>:<CTAG>[::<DIRN>];

Input Example
INH-SWTOWKG-EQPT:CISCO:SLOT-2:123::BTH;

Input Parameters

<AID>	Access Identifier. This AID can either be the working card for which switching to protection is inhibited (lock-on) or the protection card for which carrying traffic is to be inhibited (lockout).
<DIRN>	(Optional) The direction relative to the entity defined in the AID field. The direction of the switching. This command only supports the BTH value of this parameter. DIRN defaults to BTH. The parameter type is DIRECTION (transmit and receive directions)
• BTH	Both transmit and receive directions

INH-USER-SECU

The Inhibit User Security (INH-USER-SECU) command disables (without deleting) a user account, so the user is denied access to the NE. The user is disabled until reenabled through the ALW-USER-SECU command.

Usage Guidelines
- 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.
- The user is disabled until enabled through the corresponding ALW command.

Category
Security

Security
Superuser

Input Format
INH-USER-SECU:[<TID>]::<CTAG>::<UID>;

Input Example
INH-USER-SECU:PETALUMA::123::CISCO100;

Input Parameters

<UID>	User identifier. UID is a string.

Chapter 17: INIT Commands

This chapter provides initialize (INIT) commands for the Cisco NCS 2000 Series.

INIT-REG-<MOD2>

The Initialize Register for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 4GFC, 2GFICON, 5GIB, 8GFC, CHGRP, CLNT, D1VIDEO, DS3I, DV6000, DVBASI, E1, E3, E4, ESCON, ETH, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDLC, HDTV, ISC1, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OTU3, OTU4, STM4, STM64, STM1, STM16, OCH, OMS, OTS, POS, STM1E, T3, VC3, VC44C, VC38C, VC464C, VC48C, VC4, VC416C, VC42C, VC43C, VC12, 3GVIDEO, SDSDI , HDSDI, AUTO, OTU1, OTU2, OTU4C2, ISC3STP1G, or ISC3STP2G (INIT-REG-<MOD2>) command initializes the performance monitoring (PM) registers.

Usage Guidelines

The command supports the modifier 3GVIDEO, SDSDI , HDSDI, AUTO, OTU1, ISC3STP1G, and ISC3STP2G.

- 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.
- All cards support only the receive (RCV) direction. BTH is not supported for this command.
- INIT-REG-<MOD2> can also be used to initialize the remote monitoring (RMON) managed raw data.

Category

Performance

Security

Provisioning

Input Format

INIT-REG-<MOD2>:[<TID>]:<AID>:<CTAG>::<MONTYPE>,,[<LOCN>],[<DIRN>],[<TMPER>]
[,,];

Input Example

INIT-REG-OTU1:CISCO:VFAC-1-2-1:1234::CVL,,NEND,BTH,15-MIN;

Table 17-1 Parameter Support

Parameter	Description
<AID>	Access identifier. All of the STS, VT1, Facility, and DS1 AIDs are supported. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC AID.
<MONTYPE>	Monitored type. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values

• BBEP	NCS Background Block Errors Path
• BBE-PM	OTN—Background Block Errors—Path Monitor Point
• BBER	NCS Background Block Error Ratio
• BBER-PM	OTN—Background Block Error Ratio—Path Monitor Point expressed as one tenth of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage.
• BBE-SM	OTN—Background Block Errors—Section Monitor Point
• BIEC	FEC—Bit Errors Corrected
• BIT-EC	The number of bit errors corrected by the FEC algorithm
• CGV	8B10B—Code Group Violations
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as tenths of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as tenths of a percentage
• ESS	Errored Seconds—Section
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESV	Errored Seconds—VC Path

• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including frame check sequence [FCS] octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds–A
• HP-ESB	High-Order Path Errored Seconds–B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High Order Path Negative Pointer Justification Count

• HP-NPJC-PGEN	High Order Path Pointer Justification Count Seconds
• HP-OI	Outage Intensity
• HP-PJCDIFF	High Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High Order Path Pointer Justification Count
• HP-PPJC-PDET	High Order Path Positive Pointer Justification Count
• HP-PPJC-PGEN	High Order Path, Positive Pointer Justification Count
• HP-SEPI	The number of Severely Errored Period Intensity events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload cyclic redundancy check (CRC) errors
• ifOutUcastPkts	Number of unicast packets transmitted

• IOS	8B10B–Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in micro A
• LBCL-MAX	Maximum Laser Bias current in micro A
• LBCL-MIN	Minimum Laser Bias current in micro A
• LBCN	Normalized Laser Bias Current for STM1-8
• LBCN-HWT	Laser Bias current
• LBCN-LWT	Laser Bias current
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds–A
• LP-ESB	Low-Order Path Errored Seconds–B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low Order Positive Pointer Justification Count, Generated
• LP-SEP	A sequence of between 3 to 9 consecutive severely errored seconds (SES)
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored Seconds
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Multiplex Section-Protection switch count

• MS-PSD	Multiplex Section-Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in tenths of a micro W
• OPR-MAX	Maximum Receive Power in tenths of a micro W
• OPR-MIN	Minimum Receive Power in tenths of a micro W
• OPRN	Normalized Optical Receive Power for STM1-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in tenths of a micro W
• OPT-MAX	Maximum Transmit Power in tenths of a micro W
• OPT-MIN	Minimum Transmit Power in tenths of a micro W
• OPTN	Normalized value for Optical Power Transmitted for STM1-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in tenths of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in tenths of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in tenths of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• PRE-FECBER	Enum to hold PRE-FECBER value
• 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
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR	Severely Errored Second—Ratio
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as tenths of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as tenths of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VC Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VC Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count

<LOCN>	(Optional) Location associated with a particular command in reference to the entity identified by the AID. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the Far End of the facility.
• NEND	Action occurs on the Near End of the facility.
<DIRN>	(Optional) Direction relative to the entity identified by the AID. Defaults to ALL, which means that the command initializes all of the registers irrespective of the PM direction. The parameter type is DIRECTION (transmit and receive directions).
• RCV	Receive direction only
<TMPER>	(Optional) Accumulation time period for performance counters. A null value defaults to 15-MIN. Defaults to 15-MIN. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24-hours. For NCS PM data only one day of history data is available. For RMON managed PM data seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.

INIT-REG-ODU

This command initializes the PM registers.

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Category

System

Security

Maintenance

Input Format

INIT-REG-10GIGE:[<TID>]:<aid>:<CTAG>::<montype>,,[<locn>],[<dirn>],[<tmper>][,,]:BANDWIDTH=<bandwidth>;

Input Example

> INIT-REG-ODU::ODU-1-5-12-1-1-20:a::BBE-PM,,FEND,,15-MIN,,:BANDWIDTH=ODU2E;

node60 2016-12-10 22:46:29

M a COMPLD

;

Input Parameters

Table 17-2 Parameter Support

Parameter	Description
<AID>	AID is Mandatory. AID of the ODU2. ALL AID is also supported.
BANDWIDTH	ENUM (Mandatory). ODU Level (ODU2E).
< montype >	ENUM, Mandatory. ES-SM, ES-PM, SES-SM, SES-PM, UAS-SM, UAS-PM, BBE-SM, BBE-PM, FC-SM and FC-PM.
• Locn	ENUM (optional). Location associated with a particular command. The parameter type is LOCATION, which is the location where the action is to take place. FEND or NEND.
• tmper	ENUM (optional). Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center. 15 min or 1 day.
• Dirn	ENUM (optional).RCV receives direction. TRMT transmits direction.

INIT-SYS

The Initialize System (INIT-SYS) command initializes the specified card and its associated subsystem(s).

Usage Guidelines

- This command cannot be executed if the network is in a Multiplex-Section Shared Protection Ring (MS-SPRing)
- The SLOT-ALL AID and the list AID are not allowed in this command.
- Only one level of reset is supported in this command.

- It is important that the standby TCC2/TCC2P/TCC3, TNC, TSC, and CTX cards should be up and running fully standby before this command is sent on the active TCC2/TCC2P/TCC3, TNC, TSC, and CTX cards for a period of time. During this time, the system is vulnerable to traffic outages caused by timing disruptions or other causes.
- Before a card is hard reset, it must be in one of the following state:ADMIN STATE - LOCKED,MAINTENANCE & SERVICE STATE - LOCKED-ENABLED, MAINTENANCE.

Category
System

Security
Maintenance

Input Format
INIT-SYS:[<TID>]:<AID>:<CTAG>::<PH>[,<CMDMDE=CMDMDE>];

Input Example
INIT-SYS:HOTWATER:SLOT-1:201::1,CMDMDE=FRCD;

Table 17-2 Parameter Support

Parameter	Description
<AID>	Access Identifier.
<PH>	The phase. 1=soft reset; 2=hard reset. PH is an integer.
<CMDMDE>	(Optional) Command mode. Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in Unlocked-Enabled or Locked-Disabled, AutomaticInService service states.
• 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 could make the command fail.

Chapter 18: OPR Commands

This chapter provides operate (OPR) commands for the Cisco NCS 2000 Series.

OPR-ACO-ALL

The Operate Alarm Cutoff All (OPR-ACO-ALL) command cuts off the office audible alarm indication without changing the local alarm indications.

Usage Guidelines

This command does not have any effect on future alarms at the network element (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 that the trouble still exists. There is no need for a RLS-ACO command.

Category

Environment

Security

Maintenance

Input Format

OPR-ACO-ALL:[<TID>]:[<AID>]:<CTAG>;

Input Example

OPR-ACO-ALL:CISCO:SHELF-1:123;

OPR-ACO-ALL:CISCO::123;

Input Parameters

<AID>	The node or shelf access identifier. If this parameter is omitted, the node or the first shelf of the node becomes the AID.

OPR-ALS

The Operate Automatic Laser Shutdown (OPR-ALS) command is used to restart the laser of an OC-N facility and for all of the facilities that support the ALS feature.

Usage Guidelines

None

Category
Ports

Security
Maintenance

Input Format
OPR-ALS:[<TID>]:<AID>:<CTAG>[::::];

Input Example
OPR-ALS:CISCO:FAC-1-1:100;

Input Parameters

<AID>	Access identifier.

OPR-APC

The Operate Amplification Power Control (OPR-APC) command permits the APC application inside the NE to force regulation of the optical power to the entire dense wavelength division multiplexing (DWDM) ring.

Usage Guidelines
None

Category
DWDM

Security
Maintenance

Input Format
OPR-APC[:<TID>]:<AID>:<CTAG>[::<ROLE>];

Input Example
OPR-APC:15454:WDMSIDE-A:123::;

Input Parameters

Table 18-1 Input Parameter Support

<AID>	Access identifier.
<ROLE>	The role the unit is playing in the protection group.
• PROT	The entity is the protection unit in the protection group.
• WORK	The entity is the working unit in the protection group.

OPR-CPS

The Operate Control Plane Service (OPR-CPS) command activates a Control Plane Service parameter.

Usage Guidelines

- Specify only the source port to identify the CPS.
- Specify both the source AIDs, if the CPS is of type ADD 2WAY.
- If the AID is invalid, an IIAC (invalid AID) error message is returned.
- The ALL AID is invalid for this command.
- CMPLD response to this command means that CPS Activation is Started.
- Since this operation can take more than a minute, use RTRV-CPS to check when is ended positively.
- If the CPSSTATUS remain in ACTIVATING for more than 10 min the operation is automatically cancelled and status return to INACTIVE.
- CLIENT cps type support FAC and VFAC AID type.
- TRUNK cps type support CHAN AID type.
- ADD cps type support CHAN, PCHAN, and LINEWL AID type.

Category

DWDM

Security

Provisioning

Input Format

OPR-CPS[:<TID>]:<SRC>:<CTAG>[:::CKTID=<CKTID>],[IGNPATHALM=<IGNPTHALM>],[ACTION=<ACTION>][:];

Input Example

OPR-CPS::CHAN-1-15-10-RX&CHAN-1-14-10-TX:8:::;

OPR-CPS::FAC-1-4-1-1:1:::ACTION=UPGRADE;

Input Parameters

<SRC>	Source AID.
<CKTID>	Circuit identification parameter can be used to filter this command.
<IGNPTHALM>	(Optional) Ignore Path Alarms. Parameter type is IGNPATHALM.
<ACTION>	Specifies the action to be performed after the WSON Circuit is established. Parameter Type is ACTION.
• MANRVRT	Manual Revert. Switches the circuit manually to revert state.
• NONE	None.
• FRCD	Forced.
• UPGRADE	Upgrades the circuit to the restored path.

OPR-EXT-CONT

The Operate External Control (OPR-EXT-CONT) command operates an external control and closes the external control contact. The control can be operated momentarily or continuously.

Usage Guidelines

- The duration has two values:
  - MNTRY: Momentary duration
  - CONTS: Continuous duration
- In an automatic state, the contact could be opened or closed depending on the provisioned trigger.
- 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 command will not revert the state back to Manual Open.
- A NULL value for the duration parameter defaults to MNTRY in this release.
- RLS-EXT-CONT is not allowed during the MNTRY duration. It is allowed for the CONTS duration. The length of the MNTRY duration is 2 seconds.
- 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.

Category
Environment

Security
Maintenance

Input Format

OPR-EXT-CONT:[<TID>]:<AID>:<CTAG>::[<CONTTYPE>],[<DURATION>];

Input Example

OPR-EXT-CONT:CISCO:ENV-OUT-2:123::AIRCOND,CONTS;

Input Parameters

<AID>	Access identifier. The AID must not be null.
<CONTTYPE>	Environmental control type. A null value is equivalent to ALL. The parameter type is CONTTYPE (the environmental control types).
• AIRCOND	Air conditioning
• ENGINE	Engine
• FAN	Fan
• GEN	Generator
• HEAT	Heat
• LIGHT	Light
• MISC	Miscellaneous
• SPKLR	Sprinkler
• SIGNALUPGRADE	Signal Upgrade
<DURATION>	Identifies the duration. A NULL value for the duration parameter defaults to CONTS (Continuous).
• CONTS	Continuous duration

OPR-LPBK-<MOD2>

The Operate Loopback for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 4GFC, 2GFICON, 5GIB, 8GFC, CLNT, D1VIDEO, DS1, DS3I, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, ETH, EQPT, FSTE, G1000, GFPOS, GIGE, HDTV, OC12, OC192, OC3, OC48, OC768, OCH, OMS, OTS, OTU2, OTU3, OTU4, OTU4C2, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, VT2, AUTO, OTU1, ISC3STP1G, or ISC3STP2G (OPR-LPBK-MMOD2>) command operates a signal loopback on an input/output (I/O) card or on a cross-connect.

Usage Guidelines

- The command supports the modifier AUTO, OTU1, ISC3STP1G, and ISC3STP2G.

- The optional <LPBKTYPE> defaults to FACILITY in this command if it is given to a port entity. It defaults to CRS if given to a VC entity.
- The value CRS for the LPBKTYPE parameter is applicable only for the VC modifier. The FACILITY and TERMINAL values are applicable to the ports.
- Loopbacks are only allowed to be set up if the port/interface/VC_PATH is in Locked-Maintenance or in Locked-AutomaticInService state.
- Cross-connect loopbacks cannot be applied to the destination end of any 1WAY cross-connect.
- A cross-connect loopback can be applied only on one VC path of a cross-connect.
- Far end access control (FEAC) loopbacks can be applied only if the DS-3 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 the FEAC loopback is also applied, then the facility loopback is released first and then the far-end loopback is applied.
- A Lockout of Protection command is required before putting the span of either a two-fiber or four-fiber multiplex section-shared protection ring (MS-SPRing) line in loopback.
  - A span lockout on one side (for example, the east side) of the two-fiber MS-SPRing is required before operating a Facility (or Terminal) line loopback on the same side of the ring.
  - A span lockout on one Protection side (for example, the east side) of the four-fiber MS-SPRing is required before operating a Facility (or Terminal) line loopback on the same side working line of the ring.
- FEAC loopbacks on the DS-1 interface of a DS3XM card can be applied only if a Virtual Tributary (VT) connection has been created on the DS-1. An attempt to operate or release FEAC loopbacks in the absence of a VT connection will cause an error message.
- The FEAC line is supported only with the FEND value of the LOCN parameter on DS-1/ T3 of the DS3XM-12 card.
- Only the following MOD2 fields are supported in this release: DS1 EC1, G1000, FSTE, OC12, OC192, OC3, OC48, OCH, T1, T3, STS1, STS12C, STS192C, STS24C, STS3C, STS36C, STS48C, STS6C, STS9C, E1, 1GFC, 2GFC, 4GFC, 10GFC, 1GFICON, 2GFICON, 4GFICON, GIGE, 10GIGE, ESCON, STS18C, DV6000, ETRCLO, ISCCOMPAT, ISC3PEER1G, ISC3PEER2R, PASSTHRU, ISC3PEER2G.
- This command supports a new Modifier, EQPT, which operates backplane loopback at card level.
- OPR-LPBK-EQPT command is applicable to 100g cards only. The supported backplane loopback types for this modifier are : BACKPLANE-FACILITY and BACKPLANE-TERMINAL.
- Move the card to OOS,MT state to operate backplane loopback. All the ports provisioned on the card will be moved to loopback state once the crad is in Backplane loopback.
- Ports cannot be provisioned/unprovisioned when the card is in backplane loopback state.
- NEND is the only location supported for Backplane loopback.

  Note LINE and PAYLOAD values are applicable only with the FEND location value. PAYLOAD loopback can be applied by specifying the loopback type as PAYLOAD and the location as FEND.

- CFP-TXP and CFP-MXP modes loopback is provisioned on the 100G-LC-C virtual ports on VCFAC(OTU3/OTU4) or VCHAN(40GIGE/100GIGE) AIDs and not on the CFP-LC card.

Category

Troubleshooting and Test Access

Security
Maintenance

Input Format
OPR-LPBK-<MOD2>:[<TID>]:<AID>:<CTAG>::[<LOCATION>],,,[<LPBKTYPE>];

Input Example
OPR-LPBK-OTU1:PTREYES:VFAC-4-1-1-13:203::NEND,,,FACILITY;

OPR-LPBK-EQPT::SLOT-2:1::NEND,,,BACKPLANE-FACILITY;

Input Parameters

<AID>	Access identifier from the "28.1 ALL" section on page 28-1. The valid values for AID are BAND, CHANNEL, DS1, FACILITY, LINE, STS, and VT. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC AID.
<LOCATION>	The location where the operation is to be carried out. LOCATION defaults to NEND. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<LPBKTYPE>	Type of loopback signal. The parameter type is LPBK_TYPE, which indicates the type of loopback that is to be operated or released.
• LINE	LINE
• PAYLOAD	PAYLOAD
• FE-CMD-ESF-PAYLOAD	FE-CMD-ESF-PAYLOAD
• BACKPLANE-FACILITY	Puts the 100G-LC-C, 10x10G-LC, and CFP-LC cards in facility loopback.
• BACKPLANE-TERMINAL	Puts the 100G-LC-C, 10x10G-LC, and CFP-LC cards in Terminal loopback.
• CRS	Path-level loopback that is established at the cross-connect matrix level. A VC level cross-connect loopback causes an AIS-P to be sent on the outgoing direction of transmission.
• FACILITY	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.

• TERMINAL	A loopback that connects the signal that is about to be transmitted (after scrambling but before the electrical-to-optical conversion) and is connected to the associated, incoming receiver.

OPR-LPBK-EFM

The Operate Loopback Edit Ethernet in the First Mile (OPR-LPBK-EFM) command enables loopback on the Edit Ethernet in the First Mile (EFM) enabled port.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Ports

Security

Provisioning

Input Format

OPR-LPBK-EFM:[<TID>]:<AID>:<CTAG>;

Input Example

OPR-LPBK-EFM::ETH-12-1-1:1;

Input Parameters

<AID>	Access identifier.

OPR-MCH

The Operate Media Channel (OPR-MCH) command activates a Media Channel parameter.

Usage Guidelines

- Specify only the source port to identify the MCH.
- Specify both the source AIDs, if the MCH is of type ADD 2WAY.
- If the AID is invalid, an IIAC (invalid AID) error message is returned.
- The ALL AID is invalid for this command.

- CMPLD response to this command means that MCH Activation is started.
- Since this operation can take more than a minute, use RTRV-MCH to check when is ended positively.
- If the MCHSTATUS remain in ACTIVATING for more than 10 min the operation is automatically cancelled and status return to INACTIVE.
- CLIENT MCH type support FAC and VFAC AID type.
- TRUNK MCH type support CHAN AID type.
- ADD MCH type support CHAN, PCHAN, and LINEWL AID type.

Category
DWDM

Security
Provisioning

Input Format
OPR-MCH:[<TID>]:<src>:<CTAG>::[:NAME=<NAME>],[IGNPATHALM=<ignpthalm>] [ACTION=<action>][:];

Input Example

Input Parameters

<SRC>	Source AID.
<CKTID>	Circuit identification parameter can be used to filter this command.
<IGNPTHALM>	(Optional) Ignore Path Alarms. Parameter type is IGNPATHALM.
<ACTION>	Specifies the action to be performed after the WSON Circuit is established. Parameter Type is ACTION.

OPR-MCHG

The Operate Media Channel Group (OPR-MCHG) command activates a Media Channel Group parameter.

Usage Guidelines
- Specify only the source port to identify the MCHG.
- Specify both the source AIDs, if the MCHG is of type ADD 2WAY.
- If the AID is invalid, an IIAC (invalid AID) error message is returned.
- The ALL AID is invalid for this command.
- CMPLD response to this command means that MCHG Activation is started.

- Since this operation can take more than a minute, use RTRV-MCHG to check when is ended positively.
- If the MCHSTATUS remain in ACTIVATING for more than 10 min the operation is automatically cancelled and status return to INACTIVE.
- CLIENT MCHG type support FAC and VFAC AID type.
- TRUNK MCHG type support CHAN AID type.
- ADD MCHG type support CHAN, PCHAN, and LINEWL AID type.

Category
DWDM

Security
Provisioning

Input Format
OPR-MCHG:[<TID>]:<src>:<CTAG>::[:NAME=<NAME>][:];

Input Example

Input Parameters

<SRC>	Source AID.
<NAME>	NAME

OPR-PROTNSW-<MOD2DWDMPAYLOAD>

The Operate Protection Switch for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 8GFC, D1VIDEO, DV6000, DVBASI, ETRCLO, FSTE, GIGE, HDTV, ISC1, ISC3, OTU3, PASSTHRU, 3GVIDEO, SDSDI, HDSDI, AUTO, OTU1, OTU4, OTU4C2, ISC3STP1G, or ISC3STP2G (OPR-PROTNSW-<MOD2DWDMPAYLOAD>) command initiates a Y-cable protection switch request. User switch requests initiated with this command remain active until they are released through the RLS-PROTNSW-<MOD2DWDMPAYLOAD> command or are overridden by a higher priority protection switch request.

Usage Guidelines
The command supports the modifier 3GVIDEO, SDSDI, HDSDI, AUTO, OTU1, ISC3STP1G, and ISC3STP2G.

The switch commands MAN (Manual Switch), FRCD (Forced Switch), and LOCKOUT (Lockout) are supported.

- Manual Switch of Protection Line (to Working Line). If the AID identifies the protection line in a 1+1 protection group, 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, 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, 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, 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 have higher priority than a Force 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 in protection, then the protection 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 in protection, then the working line will be switched back from the protection line to its original working line.

If the command is used against preprovisioned cards, the SROF (Protection Switching Failed) error is returned.

Category
DWDM

Security
Maintenance

Input Format
OPR-PROTNSW-<MOD2DWDMPAYLOAD>:[<TID>]:<SRC>:<CTAG>::<SC>[:];

Input Example
OPR-PROTNSW-SDSDI:CISCO:VFAC-1-1-1:100::FRCD;

Input Parameters

<SRC>	Access identifier. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.
<SC>	Switch command that is to be initiated on the paths. The parameter type is SW.
• 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. CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.

• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.

OPR-PROTNSW-<OCN_TYPE>

The Operate Protection Switch for OC3, OC12, OC48, OC192, or OC768 (OPR-PROTNSW-<OCN_TYPE>) 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.

Usage Guidelines

The switch commands; MAN (Manual Switch), FRCD (Forced Switch), and LOCKOUT (Lockout) are supported.

- Manual Switch of Protection Line (to Working Line). If the AID identifies the protection line in a 1+1 protection group, 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 (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 have higher priority than a Force 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 in protection, then the protection 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 the protection line. If the working line is already in protection, then the working line will be switched back from protection line to its original working line.

The following actions will return error messages:

- This command cannot be used for the common control cards (TCC2/TCC2P/TCC3 or XCVT/XC10G). A query on a common control card will generate an IIAC (Input, Invalid Access Identifier) error message. For common control card switching, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
- Sending this command to electrical cards will return an IIAC error message. For electrical card switching, use the ALW-SWTOPROTN/SWTOWKG-EQPT and INH-SWTOPROTN/SWTOWKG-EQPT commands.
- Sending this command to query on a card that is not in a protection group will return the SNVS (Status, Not in Valid State) error message.
- Sending this command to a working card that is failed or missing will return the SROF error message.
- Sending this command to a protect card that is failed or missing will return the SROF error message.
- Protection for preprovisioned cards will not succeed.
- Sending this command to a card that is already in protection with a higher priority will return the SSRD (Status, Switch Request Denied) error message.

- Sending this command to an OCN line with a switching mode that is already in process will return a SAMS (Already in the Maintenance State) error message.
- Sending this command with the EXERCISE or APS_CLEAR switch operations will return an error SROF (Invalid Protection Switch Operation) because these operations are not valid according to Telcordia GR-833-CORE. The EX-SW-<OCN_BLSR> is the correct command to perform the EXERCISE switch over the BLSR line.
- Protection switch will be denied if signal degrade/signal fail (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. The switch will not be overwritten despite an SD or SF condition if the switch is a Lockout of Protection or a Force switch, because these switches have a higher priority than SD and SF.

  Note • To get the protection switching state (Manual, Force, and lockout), use the RTRV-COND-ALL or RTRV-ALM-ALL commands.

- If the far end of the same span has a higher protection switching state (for example, the near end is in the Manual protection state and the far end is in the Force protection state) the near-end protection switching state will be preemptive and will have an APS_CLEAR switching state. The RTRV-PROTNSW-OCN command is used to retrieve the current switching state of a SONET line.
- Sending the following Manual ring switch requests on both east and west sides/spans of a two-fiber or four-fiber BLSR in less than 30 to 45 seconds will cause the system to execute only one (WEST) side BLSR query and preempt the other (EAST) side query.
  - A single TL1 command with both side/span AIDs (in the list AID format) of the same two-fiber or four-fiber ring.
  - The separated (via TL1, CTC, or TL1 and CTC user interfaces) queries on both sides/spans of the same two-fiber or four-fiber ring.

  There will be no event messages for the preempted side, whose switching state will be in the APS-CLEAR state.
- DIRN is an optional parameter. A NULL value defaults to BTH for BLSR protection, BTH for 1+1 bidirectional protection, and RCV for 1+1 unidirectional protection.

  DIRN follows these rules: TRMT will always fail for all protection groups. For two-fiber and four-fiber BLSR protection groups, both the RCV and TRMT directions will fail.
- 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;
- A Lockout of Protection command is required before putting the span of either a two-fiber or four-fiber BLSR line in loopback.
  - A span lockout on one side (for example, the east side) of the two-fiber BLSR is required before operating a facility (or terminal) line loopback on the same side (for example, the east side) of the ring.
  - A span lockout on one protection side (for example, the east side) of the four-fiber BLSR is required before operating a facility (or terminal) line loopback on the same side Working line (for example, the east side) of the ring.
- A span lockout on the working port is not supported.

Category
Protection

Security
Maintenance

Input Format

OPR-PROTNSW-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>::<SC>,[<SWITCHTYPE>][:<DIRN>];

Input Example

OPR-PROTNSW-OC48:CHICKALUMA:FAC-6-1:204::LOCKOUT,SPAN:BTH;

Input Parameters

<AID>	Access identifier. Identifies the facility in the NE to which the switch request is directed.
<SC>	Switch command that is to be initiated on the paths. The parameter type is SW.
• 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. The CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. The EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.
<SWITCHTYPE>	BLSR switch type. The parameter type is SWITCH_TYPE (switch type).
• RING	BLSR ring switch type
• SPAN	BLSR span switch type
<DIRN>	The direction relative to the entity defined in the AID field. The direction of the switching. DIRN defaults to RCV. The parameter type is DIRECTION (transmit and receive directions).
• BTH	Both transmit and receive directions
• RCV	Receive direction only
• TRMT	Transmit direction only

OPR-PROTNSW-<PATH>

The Operate Protection Switch for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, VT1, or VT2 (OPR-PROTNSW-<PATH>) command initiates a 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.

Usage Guidelines

Note • This command applies to path protection configurations only.

- The VTAID should be the working or protect AID only.
- If you send this command on the drop AID, a DENY (Invalid AID, should use working/protect AID) message will be returned.
- To retrieve the protection switching state (Manual, Force, lockout), use the RTRV-COND-ALL or RTRV-ALM-ALL commands.
- Telcordia GR-1400 does not allow the LOCKOUT_OF_WORKING command on the path protection WORKING path/AID. When sending this command on the path protection WORKING path, a SROF (Invalid Protection Switch Operation) is returned.
- If sending this command with EXERCISE or APS_CLEAR switch operations, an SROF error will be returned because these operations are not valid according to Telcordia GR-833-CORE.
- A protection switch will be denied if an SD or SF condition is already present on the switching path. If an SD or SF is generated on the switching path after the switch is performed, the switch will be overwritten by the APS_CLEAR state. The switch is not overwritten if it is a lockout of protection or a Force switch, because these switch types have a higher priority than SD/SF conditions.

Category

Protection

Security

Maintenance

Input Format

OPR-PROTNSW-<PATH>:[<TID>]:<SRC>:<CTAG>::<SC>[:];

Input Example

OPR-PROTNSW-STS1:CISCO:STS-2-1-1:123::MAN;

Input Parameters

<SRC>	Source access identifier.

<SC>	The switch command that is to be initiated on the paths. The parameter type is SW, which is the type of switch.
• 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. The CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. The EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.

OPR-PROTNSW-OCH

The Operate Protection Switch Optical Channel (OPR-PROTNSW-OCH) command performs a protection switch on the trunk port of a card that has splitter protection.

Usage Guidelines

None

Category

DWDM

Security

Maintenance

Input Format

OPR-PROTNSW-OCH:[<TID>]:<AID>:<CTAG>::<SW>;

Input Example

OPR-PROTNSW-OCH:VA454-22:CHAN-2-2:100::FRCD;

Input Parameters

<AID>	Access identifier. Indicates the trunk port.

<SW>	Switch operation. The parameter type is SW, which is the type of switch.
• 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. The CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. The EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.

OPR-PROTNSW-ODU

This command performs a Protection switch for ODU.

Usage Guidelines

None

Category

DWDM

Security

Maintenance

Input Format

OPR-PROTNSW-ODU:[<TID>]:<aid>:<CTAG>::<sc>:[BANDWIDTH=<bandwidth>];

Input Example

> OPR-PROTNSW-ODU::ODU-1-3-1-1-1-1:a::LOCKOUT-OF-PROTECTION:BANDWIDTH=ODU2E;

vxTarget35 2017-07-21 12:02:29

M a COMPLD

;

>

Input Parameters	
<AID>	AID is Mandatory. ODU AID. Example: ODU-1-5-7-1-1-1
<BANDWIDTH>	ENUM is Mandatory. The type of switch to be initiated. ODU Level (ODU2E).

OPR-PROTNSW-OTS

The Operate Protection Switch OTS (OPR-PROTNSW-OTS) command performs a protection switch on the protection switch on the OTS ports of the PSM cards.

Usage Guidelines
None

Category
DWDM

Security
Maintenance

Input Format
OPR-PROTNSW-OTS:[<TID>]:<AID>:<CTAG>::<SW>;

Input Example
OPR-PROTNSW-OTS:VA454-22:LINE-2-2-RX:100::FRCD;

Input Parameters	
<AID>	The CHAN aid is used to access Optical Channels (OCH) layer of Optical Network/Client units. Format is CHAN-[slot]-[port]-[direction] Values
<SW>	The type of switch to be initiated.

OPR-RAMAN

The Operate RAMAN (OPR-RAMAN) command operates the Raman amplifier.

Usage Guidelines

None

Category

DWDM

Security

Maintenance

Input Format

OPR-RAMAN:[<TID>]:<AID>:<CTAG>:::[RAMANACT=<RAMANACT>],[AID2=<AID2>], [MEASIDX=<MEASIDX>],[RAMANST=<RAMANST>],[LAMBDA=<LAMBDA>], [DELTAPWR=<DELTAPWR>];

Input Example

OPR-RAMAN::LINE-2-5-TX:AA:::RAMANACT=DO-TEST,AID2=LINE-2-5-RX, RAMANST=MEASURE,LAMBDA=1,DELTAPWR=0.0;

Input Parameters

<AID>	The LINE aid is used to access Optical Transport Section (OTS) layer of Optical Network units. Format is LINE-[slot]-[port]-[direction].
• LINE[-{1-50}]-{1-5,12-16}-{1-5}-{RX,TX}	The receive/transmit Lines (COM=1, OSC=2, LINE=3, DC=4, RAMAN=5) in a OPT-RAMP-C cards. Where format is LINE-[shelf]-[slot]-[port]-[dirn]
• LINE[-{1-50}]-{1-5,12-16}-{1-5}-ALL	All the Lines (COM=1,OSC=2,LINE=3, DC=4, RAMAN=5) in a OPT-RAMP-C cards. Where format is LINE-[shelf]-[slot]-[port]-ALL
<RAMANACT>	RAMAN action
• DO-MEASURE	Starts RAMAN Measure.
• DO-RSTSM	Restarts RAMAN SM.
• DO-TEST	Starts RAMAN test.
• RESTORE	Restores after RAMAN test.
• DO-CALCPAR	Calculates RAMAN parameters.
• ACCEPT	Accepts tuning parameters.
• FORCE-UPD	Restores Raman after fiber cut.

<AID2>	The LINE aid is used to access Optical Transport Section (OTS) layer of Optical Network units. Format is LINE-[slot]-[port]-[direction]
• LINE[-{1-50}]-{1-5,12-16}-{1-5}-{RX,TX}	The receive/transmit Lines (COM=1, OSC=2, LINE=3, DC=4, RAMAN=5) in a OPT-RAMP-C cards. Where format is LINE-[shelf]-[slot]-[port]-[dirn].
• LINE[-{1-50}]-{1-5,12-16}-{1-5}-ALL	All the Lines (COM=1,OSC=2,LINE=3, DC=4, RAMAN=5) in a OPT-RAMP-C cards. Where format is LINE-[shelf]-[slot]-[port]-ALL.
<MEASIDX>	The RAMAN measure index.
<RAMANST>	Indicates the Raman setup state.
• NOT-TUNED	RAMAN is not tuned. Default values are set
• TUNING	RAMAN is tuning
• TUNED	RAMAN is tuned but not verified
• FORCE-TUNED	RAMAN is tuned with values not measured but calculated
• ACCEPTED-TUNED	RAMAN setup has been accepted by the user
• TUNED-VERIFIED	RAMAN is tuned and verified
<LAMBDA>	The enumerate number used to indicate the wavelength inside an optical channel port
<DELTAPWR>	The delta power to add at each node interested in the Raman setup. DELTAPWR is a float.

OPR-SLV-WDMANS

The Operate Span Loss Verification Wavelength Division Multiplexing Automatic Node Set-Up (OPR-SLV-WDMANS) command performs the calculation of the expected span loss verification.

Usage Guidelines

None

Category

DWDM

Security

Maintenance

Input Format

OPR-SLV-WDMANS[:<TID>]:<AID>:<CTAG>[::<ROLE>];;

Input Example

OPR-SLV-WDMANS:VA454-22:WDMSIDE-E:116;

Input Parameters

<AID>	Access identifier.

OPR-SYNCNSW

The Operate Synchronization Switch (OPR-SYNCNSW) command initiates a switch to the reference specified by the synchronization reference number if the reference supplied is valid and of the same quality.

Usage Guidelines

For manual types of switches, the reference where 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 Force switch option.

The Operate Synchronization Switches are released by the RLS-SYNCNSW command or are overridden by a synchronization reference failure.

After the switch is effective, the MANSWTOPRI (Manual Switch to Primary or Secondary Reference) minor alarm will be raised.

Category

Synchronization

Security

Maintenance

Input Format

OPR-SYNCNSW:[<TID>]:[<AID>]:<CTAG>::<SWITCHTO>,[<SC>];

Input Example

OPR-SYNCNSW:CISCO:SYNC-NE:3::PRI,MAN;

Input Parameters

<AID>	Access identifier. The default is SYNC-NE.
<SWITCHTO>	Access identifier. Identifies the new synchronization reference that will be used.
<SC>	Switch command to be initiated on the paths. Only MAN and FRCD switches are allowed for this command. The parameter type is SW, which is the type of switch.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• MAN	Requests a manual switch of the facility.

OPR-VLB-REP

The Operate VLAN Load Balancing Resilient Ethernet Protocol (OPR-VLB-REP) command manually triggers the VLAN Load Balancing (VLB) on REP segment.

Usage Guidelines

- Enable VLB on the ports to activate VLB.
- This command is applicable only to GE_XP and 10GE_XP cards.

Category

Ethernet

Security

Provisioning

Input Format

OPR-VLB-REP:[<TID>]:<AID>:<CTAG>:::<TRIGGERTYPE>;

Input Example

OPR-VLB-REP::ETH-16-2-1:1::ACTIVATE;

<AID>	Access identifier.
<TRIGGERTYPE>	Indicates the TRIGGERTYPE.
• ACTIVATE	Activates manual trigger.
• DEACTIVATE	De-activates manual trigger.

Input Parameters

OPR-WDMANS

The Operate Wavelength Division Multiplexing Automatic Node Set Up (OPR-WDMANS) command initiates the Automatic Optical Node Set Up (AONS) application inside the NE to force a recompute of the value assigned to all variable optical attenuators (VOAs) representing the optical path inside the node.

Usage Guidelines

None

Category

DWDM

Security

Maintenance

Input Format

OPR-WDMANS:[<TID>]::<CTAG>[:];

Input Example

OPR-WDMANS:PENNGROVE::114;

OPR-EQPT

The Operate Equipment (OPR-EQPT) command lets the user perform the upgrade of GDT/Fiber Shuffle equipment.

Usage Guidelines

The command accepts the GDT fiber shuffle equipment AID and the action to be performed on the equipment.

Category

Equipment

Security

Provisioning

Input Format

OPR-EQPT:[<TID>]:<AID>:<CTAG>::ACTION=<action>;

Input Example

> opr-eqpt::PSHELF-9:1::ACTION= UPGRADE-BOOTROM;

msm1-ssc 2015-10-20 03:37:13

M 1 COMPLD;

Input Parameters

<AID>	AID of GDT or fiber shuffle equipment.
<ACTION> • UPGRADE-KERNEL • UPGRADE-BOOTROM	Indicates the TRIGGERTYPE

OPR-PROTSW-EQPT

The OPR-PROTSW-EQPT command configures working and protection Power Supply Module for a node.

Usage Guidelines

The configuration can only be applied to a NCS 2015 node and the command accepts only NCS 2015 node AID. The node controller must be a NCS 2015 node in a multi-shelf node. AID is not provided in a single-shelf node.

Category

DWDM

Security

Maintenance

Input Format

OPR-PROTSW-EQPT:[<TID>]:[<ShelfAid>]:<CTAG>::WRK=<working>,[PRT=<protect>];

Input Example

opr-protsw-eqpt::SHELF-2:1::WRK=PWRM-2-1&PWRM-2-3,PRT=PWRM-2-2&PWRM-2-3,APPLYTOALL=NO;

TNC 2017-04-01 04:04:09

M 1 COMPLD;

Input Parameters

<SHELFAID>	Shelf AID where Power Supply Module configuration needs to be modified
<WRK>	Power Supply Module AID acting as Working Power Supply(s)
<PRT>	Power Supply Module AID acting as Protect Power Supply(s)

OPR-LNK

This OPR-LNK command performs a set of actions on a patch cord.

Usage Guidelines

The command accepts AIDs for source and destination of a patch cord and the action to be performed on it. The action can be performed only on one patch cord at a time.

The ILVERFCHK and CONNVERFCHK actions give same results as the VERFCHK action is performed only on one patch cord.

Category

DWDM

Security

Circuits

Input Format

OPR-LNK:[<TID>]:<from>,<to>:<CTAG>::<action>;

Input Example

> opr-lnk::LINE-6-27-TX,PLINE-2-7-RX:1::CONNVERFCHK;

msm1-ssc 2015-10-20 03:37:13

M 1 COMPLD ;

Input Parameters

<FROM>	Patch cord source AID.
<TO>	Patch cord destination AID.
<ACTION> • CONNVERFCHK • ILVERFCHK • EXCLVERFCHK • INCLVERFCHK • ACKNOWLEDGEIL • CLEARACKNOWLEDGE	Enum type parameter having the following values

OPR-OTDR

OPR-OTDR command is used to clear Latest scan alarm events

Usage Guidelines

To clear the alarm, SECTOR, DIRECTION, EVENTID, ACTION and SCANTYPE are the mandatory parameterS. Since BASELINE events cannot be cleared, THE command will throw error response, if SCANTYPE=BASELINE. All alarm events can be retrieved using the command RTRV-OTDRALMEVENTS.

Category

Equipment

Security

Provisioning

Input Format

OPR-OTDR:[<TID>]:<AID>:<CTAG>:::SECTOR=<sector>,DIRECTION=<direction>,EVENTID=<eventid>, ACTION=<action>,SCANTYPE=<scantype>;

Input Example

> opr-lnk::LINE-6-27-TX,PLINE-2-7-RX:1::CONNVERFCHK;

msm1-ssc 2015-10-20 03:37:13

M 1 COMPLD ;

Input Parameters

<AID>	Two types of AID are possible:

	• Specific PPM port on the TNC – Format: PPM-Shelf-Slot-PPM_port • ALL is also allowed. This will give the list of all Alarm events present in all ppm ports.
<SECTOR>	An enum which takes the values: • EXPERT • ZONE#1 (0 to 1km) • ZONE#2 (0 to 25km) • ZONE#3 (0 to 80km) • ZONE#4 (0 to 100km) • AUTOSCANMODE
<DIRECTION>	An enum which takes the values: • TX • RX
<EVENTID>	Event id got from RTRV-OTDRALMEVENTS
<SCANTYPE>	An enum which takes the values: • LASTSCAN • BASELINE

Output Format

NA

Output Example

> OPR-OTDR::PPM-1-8-1:a:::SECTOR=ZONE#1,DIRECTION=TX,EVENTID=0,ACTION=ACKALMEVENT, SCANTYPE=LASTSCAN;

node126 2016-02-18 15:53:03

M a COMPLD

;

>

Output Parameters

NA

Chapter 19: REPT Messages

This chapter provides report (REPT) messages for the Cisco NCS 2000 Series.

REPT ALM <MOD2ALM>

The Report Alarm for 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, DS1, E100, E1000, E3, E4, EC1, ETH, FSTE, G1000, GFPOS, GIGE, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OC12, OC192, OC3, OC48, OCH, OMS, OTS, 10GFC, 8GFC, 10GIGE, 100GIGE, 40GIGE, OC192, OTU1, OTU2, OTU3, OTU4, POS, STM1, STM4, STM16, STM64, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, UDCDCC, UDCF, VC3, VC4, VC4-2c, VC4-3c, VC4-4c, VC4-8c,VC4-16c,VC4-64c, VC12, VCG, VT1, VT2, or WLEN (REPT ALM <MOD2ALM>) message reports an alarm condition against a facility, an RPR interface, or a path.

Usage Guidelines

See Table 30-1 on page 30-1 for supported modifiers by platform.

Category

Fault

Security

Retrieve

Output Format

```
    SID DATE TIME
** ATAG REPT ALM <MOD2ALM>
    "<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],
    [<OCRTM>],[<LOCN>],[<DIRN>]:[<DESC>],[<AIDDET>]"
;
SID DATE TIME
** ATAG REPT ALM <MOD2ALM>
    "<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],[<OCRTM>],[<LOCN>],
    [<DIRN>]:[<DESC>],[<AIDDET>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM 1GFC
    "FAC-2-1:MJ,LOS,SA,08-01,14-25-59,,:\"LOSS OF SIGNAL\",OC12"
;
```

Output Parameters

Parameter	Description
<AID>	Access identifier.

<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is a two-character notification code associated with an autonomous message.
• 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
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, Not Alarmed conditions (NA), and Not Reported (NR) conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting
• SA	The condition is service affecting
<OCRDAT>	(Optional) Date
<OCRTM>	(Optional) Time
<DESC>	(Optional) Condition description.
<AIDDET>	(Optional) AIDDET uses the same addressing rules as the AID, but specifies AID type and additional details about the entity being managed. The parameter type is EQPT_TYPE, which is the type of equipment being provisioned into a slot.
• 100G-LC-C	100G-LC-C card
• 100G-CK-C	100G-CK-C card
• 10X10G-LC	10X10G-LC card
• CFP-LC	CFP-LC card
• AR-MXP	Any rate muxponder

• AR-XP	Any rate xponder
• AR-XPE	Any rate enhanced xponder.
• 16-WXC-FS	16-WXC-FS card.
• 15216-MD-40-EVEN	Thermal Multiplex/Demultiplex Passive Unit, spaced at 50 GHz on even grid
• 15216-MD-40-ODD	Thermal Multiplex/Demultiplex Passive Unit, spaced at 50 GHz on odd grid
• 15216-MD-ID-50	Thermal Interleaver Passive Unit, spaced at 50 GHz grid
• 15216-FLD4-30-3	Edge 4-Ch Bi-Directional OADM Module 1530.33 to 1532.68.
• 15216-FLD4-33-4	Edge 4-Ch Bi-Directional OADM Module 1533.47 to 1535.82.
• 15216-FLD4-36-6	Edge 4-Ch Bi-Directional OADM Module 1536.61 to 1538.98.
• 15216-FLD4-39-7	Edge 4-Ch Bi-Directional OADM Module 1539.77 to 1542.14.
• 15216-FLD4-42-9	Edge 4-Ch Bi-Directional OADM Module 1542.94 to 1545.32.
• 15216-FLD4-46-1	Edge 4-Ch Bi-Directional OADM Module 1546.12 to 1548.51.
• 15216-FLD4-49-3	Edge 4-Ch Bi-Directional OADM Module 1549.32 to 1551.72.
• 15216-FLD4-52-5	Edge 4-Ch Bi-Directional OADM Module 1552.52 to 1554.94.
• 15216-FLD4-55-7	Edge 4-Ch Bi-Directional OADM Module 1555.75 to 1558.17.
• 15216-FLD4-58-9	Edge 4-Ch Bi-Directional OADM Module 1558.98 to 1561.42.
• 32DMX-L	3- channel demultiplexer for L-band
• 32WSS-L	32-channel wavelength switch selector for L-band
• 40-MXP-C	40 Gbit/Sec Multirate Muxponder
• 40-SMR1-C	The single module 40-channel ROADM on C-band
• 40-SMR2-C	The single module 40-channel ROADM with EDFA on C-band

• 40-TXP-C	40 Gigabits per second Multirate Transponder
• 80-WXC-C	80-channel wavelength cross-connect spaced at 100 GHz grid
• AD-1B	OADM 1-Band Filter
• AD-1C	OADM 1-Channel Filter
• AD-2C	OADM 2-Channel Filter
• AD-4B	OADM 4-Band Filter
• AD-4C	OADM 4-Channel Filter
• AICI	AIC-I card
• AIP	Alarm Indication Panel
• ALM-PWR	Alarm Power
• ASAP-4	ASAP carrier card with four PIM slots
• BP	The backplane of the NE
• CE-100T-8	8-port 100T card
• CE-1000-4	4-port GIGE mapper card
• CRFT-TMG	Craft Timing
• DCC	Data Communications Channel
• DCU	Dispersion Compensation Unit
• DMX-32	Optical DMX 32 Channels
• DS3i-N-12	DS3i-N-12 card
• E1	E1 card
• E1-42	42-port E1 card
• E1000T-2	2-port interface card supporting 1000BaseT Ethernet facilities
• E100T-12	12-port interface card supporting 100BaseT Ethernet facilities
• E100T-4	Four-port interface card supporting 100BaseT Ethernet facilities
• E1N	E1N card

• E3	E3 card
• EDRA-1-26	EDRA-1-26 amplifier
• EDRA-1-35	EDRA-1-35 amplifier
• EDRA-2-26	EDRA-2-26 amplifier
• EDRA-2-35	EDRA-2-35 amplifier
• FBGDCU-1157	
• FBGDCU-1322	
• FBGDCU-165	
• FBGDCU-1653	
• FBGDCU-1983	
• FBGDCU-331	
• FBGDCU-496	
• FBGDCU-661	
• FBGDCU-826	
• FBGDCU-992	
• FILLER_CARD	Filler card
• FMEC-155E-1TO1	The equipment type for FMEC STM1E12 card
• FMEC-155E-1TO3	The equipment type for FMEC STM1E12 card with 1:3 protection
• FMEC-155E-UNPROT	The equipment type for FMEC STM1E12 card without protection
• FMEC-SMZ-E1	FMEC card corresponding to E1 card
• FMEC-SMZ-E3	FMEC card corresponding to E3 card
• FTA	Fan Tray of the NE
• FTA1	Fan Tray 1 of the NE
• FTA2	Fan Tray 2 of the NE
• G1K-4	G1K-4 card
• MD-4	Optical Multiplexer/Demultiplexer with 4 Channels
• MD-48-CM	

• MD-48-EVEN	
• MD-48-ODD	
• MESH-PP-SMR	The passive unit Patch Panel device used to connect upto four 40-SMR2-C cards
• MF-16AD-CFS	16-channels - 1 direction, colorless, omnidirectional add/drop unit.
• MF-4x4-COFS	4-channels, 4-directions, colorless, omnidirectional add/drop unit.
• MF-AST-EDFA	MF-AST-EDFA unit
• MF-DEG-5	5-degrees mesh patch panel
• MF-MPO-8LC	MPO to 8-LC adapter
• MF-UPG-4	4-degrees upgrade module
• ML100X-8	8-port 100X card with optical interface
• ML-100T-8	8-port 100T card with optical interface
• MMU	Multiring mesh upgrade unit
• MS-ISC-100T	Fast Ethernet switch card used for internal shelf connection
• MUX-32	Optical MUX 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder card
• MXP-MR-10DME	10 Gbps datamux with enhanced FEC
• OPT-AMP-L	Optical preamplifier for L-band
• OPT-BST	Optical booster amplifier
• OPT-BST-L	Optical booster for L-band
• OPT-EDFA-17	MAL-less EDFA Optical Amplifier - C-band - 17dB Gain
• OPT-EDFA-24	MAL-less EDFA Optical Amplifier - C-band - 24dB Gain
• OPT-PRE	Optical Preamplifier
• OPT-RAMP-C	Raman pump amplifier C-band
• OPT-RAMP-CE	An extended version of Raman pump amplifier
• OPT-RAMP-COP	Raman COP card.
• OPT-RAMP-CTP	Raman CTP card.

• OPT-RAMP-E	Raman pump amplifier E-band
• OSC-CSM	Optical Service Channel with Combiner/Separator Module
• OSCM	Optical Service Channel Module
• OTU2-XP	A 4x10G transponder that is capable to operate with multiple bit rates - 10G FC, 10GE, and OC192/STM64
• PIM-4	Pluggable interface module with 4 PPM slots
• PP-4-SMR	Patch-Panel, 4 degrees, for SMR cards
• PP-MESH-4	Patch-Panel, 4 degrees
• PP-MESH-8	Patch-Panel, 8 degrees
• PPM-1	Pluggable port module with 1-port SFP module
• PSM	Protection Service Module card
• PTF-4	Fabric card.
• PTM-4	Line card.
• PTSA	CPT 50 panel.
• PTSYS- Fan-Out-Group	PTSYS Fan-Out-Group.
• SHELF	Shelf entity
• STM4	An interface card that supports one or more STM4 (622 Mbps) optical facilities
• STM4-4	A four port STM4 card
• STM4-IR-1	An interface card that supports one intermediate range STM4 (622 Mbps) optical facilities
• STM4-LR-1	An interface card that supports one long range STM4 (622 Mbps) optical facilities
• STM4-SR-1	An interface card that supports one short range STM4 (622 Mbps) optical facilities
• STM64-4	A four port STM64 card
• STM64-LR-1	An interface card that supports one or more STM64 optical facilities
• STM1	An interface card that supports multiple STM1 (155 Mbps) optical facilities

• STM1-IR-4	An interface card that supports four intermediate range STM1 (155 Mbps) optical facilities
• STM1-SR-4	An interface card that supports four short range STM1 (155 Mbps) optical facilities
• STM1ATM-IR-6	An interface card that supports six intermediate range STM1 (155 Mbps) ATM optical fibers
• STM1IR-STM1SH-1310-8	An STM1 card which has 8 ports over the lower speed slot with XC-VXL-10G/XC-VXL-2.5G
• STM1POS-SR-4	An interface card that supports four short range STM1 (155 Mbps) POS optical facilities
• STM16	An interface card that supports one or more STM16 (10 Gbps) optical facilities
• STM16-AS-1	An interface card that supports one short range OC-48 (10 Gbps) optical facilities that can be provisioned in any I/O slot
• STM16-ELR-1	An interface card that supports one short range STM16 (2.5 Gbps) optical facility
• STM16-IR-1	An interface card that supports one intermediate range STM16 (10 Gbps) optical facility
• STM16-LR-1	An interface card that supports one long range STM16 (10 Gbps) optical facility
• STM16-SR-1	An interface card that supports one short range STM16 (10 Gbps) optical facilities
• TCC	Timing, Communications, and Control card
• TDC-CC	Coarse tunable dispersion compensation unit
• TDC-FC	Fine tunable dispersion compensation unit
• TXP-MR-10G	10G Multirate Transponder card
• TXP-MR-2.5G	Multirate 2.5G Unprotected
• TXPP-MR-2.5G	Multirate 2.5G Protected
• UNKNOWN	Unknown equipment type
• UNPROVISIONED	Unprovisioned equipment type
• WSE	Wire Speed Encryption (WSE) card
• XC-VXC-10G	XC-VXC-10G cross-connect card

• XCVXL-10G	XC-VXL-10G cross-connect card
• XCVXL-2.5G	XC-VXL-2.5G cross-connect card
• FLD-OSC	
• VPP-MESH-4-1	
• VPP-MESH-4-2	
• VPP-MESH-4-3	
• VPP-MESH-4-4	
• VPP-MESH-8-1	
• VPP-MESH-8-2	
• VPP-MESH-8-3	
• VPP-MESH-8-4	
• VPP-MESH-8-5	
• VPP-MESH-8-6	
• VPP-MESH-8-7	
• VPP-MESH-8-8	
• AD-12-FS	Line Card
• ECU	
• MF-10AD-CFS	
• MF-16AE-CFS	
• MF-2MPO-ADP	
• MF-MPO-16LC	
• MF-PPMESH8-5AD	
• SMR20-FS	Line Card
• SMR9-17-FS	Line Card
• SMR9-24-FS	Line Card
• SMR9-34-FS	Line Card
• MR-MXP	
• MOD2ALM	

REPT ALM BITS

The Report Alarm Building Integrated Timing Supply (REPT ALM BITS) message reports an alarm condition on a BITS facility.

Usage Guidelines

None

Category

Synchronization

Security

Retrieve

Output Format

```
    SID DATE TIME
** ATAG REPT ALM BITS
    "<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],[<OCRTM>],[<LOCN>],
    [<DIRN>]:[<DESC>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM BITS
    "BITS-1:MJ,SYNC,SA,08-01,14-25-59,,:\"LOSS OF TIMING\""
;
```

Output Parameters

<AID>	Access identifier.
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, the two-character notification code associated with an autonomous message.
• 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.

<CONDTYPE>	The condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, Not-Alarmed conditions (NA), and Not-Reported (NR) conditions.
<OCRDAT>	(Optional) Date
<OCRTM>	(Optional) Time
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description.

REPT ALM COM

The Report Alarm Common (REPT ALM COM) message reports an alarm condition when an AID cannot be given. For example, a fan failure is reported using this message.

Usage Guidelines

None

Category

Fault

Security

Retrieve

Output Format

SID DATE TIME
** ATAG REPT ALM COM
"[<AID>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],[<OCRTM>],[<LOCN>],
[<DIRN>]:[<DESC>]"
;

Output Example

TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM COM
"COM:MJ,FAN,NSA,08-01,14-25-59,,:\"FAN FAILURE\""
;

Output Parameters

<AID>	(Optional) Access identifier. Identifies the entity to which the command pertains. Indicates an alarm without AID. AID is a string.
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<CONDTYPE>	The condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether it generates a trouble notification). Reported conditions include alarms, Not-Alarmed conditions (NA), and Not-Reported (NR) conditions.
<OCRDAT>	(Optional) Date
<OCRTM>	(Optional) Time

<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description.

REPT ALM ENV

The Report Alarm Environment (REPT ALM ENV) message reports a customer-defined condition on an environmental alarm input.

Usage Guidelines

None

Category

Environment

Security

Retrieve

Output Format

```
    SID DATE TIME
** ATAG REPT ALM ENV
    "<AID>:<NTFCNCDE>,<ALMTYPE>,[<OCRDAT>],[<OCRTM>],[<DESC>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM ENV
    “ENV-IN-1:MJ,OPENDR,08-01,14-25-59,\“OPEN DOOR\””
;
```

Output Parameters

<AID>	Access identifier. Identifies an environmental input.
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is a two-character notification code associated with an autonomous message.
• 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.
<ALMTYPE>	Abbreviated code identifying the alarm. The parameter type is ENV_ALM, which is the environmental alarm types.
• 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
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure

• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail
• HATCH	Controlled Environment Vault (CEV) hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnect bypass
• 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 V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter

• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure
<OCRDAT>	(Optional) Date.
<OCRTM>	(Optional) Time.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

<DESC>	(Optional) Condition description.

REPT ALM LMP

() The Report Alarm Link Management Protocol (REPT ALM LMP) is the autonomous message which is used to report the LMP-FAIL alarms for the control channels and traffic engineering (TE) links.

Usage Guidelines

None

Category

Fault

Security

Retrieve

Output Format

SID DATE TIME** ATAG REPT ALM LMP
"[<AID>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],[<OCRTM>],[<LOCN>],
[<DIRN>]:[<DESC>]"
;

Output Example

va454-5 1998-06-20 14:30:00
A 814.812 REPT ALM LMP
"CTRL-1:MJ,LMP-FAIL,NSA,08-01,14-25-59,,\"LMP Failure\","
;

Output Parameters

<AID>	The LMP control channel AID values.
• CTRL-ALL	Specifies all the control channels.
• CTRL-{1-4}	Specifies an individual control channel.
<NTFCNCDE>	The two-character notification code associated with an autonomous message.
• 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 condition is not reported.
<CONDTYPE>	The condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether it generates a trouble notification). Reported conditions include alarms, Not-Alarmed conditions (NA), and Not-Reported (NR) conditions.
<SRVEFF>	Indicates the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date (YYYY-MM-DD)
<OCRTM>	(Optional) Time (HH:MM:SS)
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	The condition description.

REPT ALM EQPT

The Report Alarm Equipment (REPT ALM EQPT) message reports an alarm condition against an equipment unit or slot.

Usage Guidelines

None

Category
Equipment

Security
Retrieve

Output Format

SID DATE TIME
** ATAG REPT ALM EQPT
"<AID>:<NTFCNCDE>,<CONDITION>,<SRVEFF>,[<OCRDAT>],[<OCRTM>],[<LOCN>],
[<DIRN>],:[<DESC>],[<AIDDET>]"
;

Output Example

TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM EQPT
"SLOT-7:MJ,CONTR,NSA,08-01,14-25-59,NEND,RCV:\"CONTROLLER FAILURE\",TSC"
;

Output Parameters

Parameter	Description
<AID>	Access identifier. Equipment AID SLOT-{1-17}.
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is a two-character notification code associated with an autonomous message.
• 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.

<CONDITION>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, Not Alarmed conditions (NA), and Not Reported (NR) conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date
<OCRTM>	(Optional) Time
<DESC>	(Optional) Condition description.
<AIDDET>	(Optional) AIDDET uses the same addressing rules as the AID, but specifies AID type and additional details about the entity being managed. The parameter type is EQPT_TYPE, which is the type of equipment being provisioned into a slot.
• 100G-LC-C	100G-LC-C card
• 100G-CK-C	100G-CK-C card
• 10X10G-LC	10X10G-LC card
• CFP-LC	CFP-LC card
• AR-MXP	Any rate muxponder
• AR-XP	Any rate xponder
• AR-XPE	Any rate enhanced xponder.
• 16-WXC-FS	16-WXC-FS card.
• 15216-MD-40-EVEN	Thermal Multiplex/Demultiplex Passive Unit, spaced at 50 GHz on even grid
• 15216-MD-40-ODD	Thermal Multiplex/Demultiplex Passive Unit, spaced at 50 GHz on odd grid
• 15216-MD-ID-50	Thermal Interleaver Passive Unit, spaced at 50 GHz grid

• 15216-FLD4-30-3	Edge 4-Ch Bi-Directional OADM Module 1530.33 to 1532.68.
• 15216-FLD4-33-4	Edge 4-Ch Bi-Directional OADM Module 1533.47 to 1535.82.
• 15216-FLD4-36-6	Edge 4-Ch Bi-Directional OADM Module 1536.61 to 1538.98.
• 15216-FLD4-39-7	Edge 4-Ch Bi-Directional OADM Module 1539.77 to 1542.14.
• 15216-FLD4-42-9	Edge 4-Ch Bi-Directional OADM Module 1542.94 to 1545.32.
• 15216-FLD4-46-1	Edge 4-Ch Bi-Directional OADM Module 1546.12 to 1548.51.
• 15216-FLD4-49-3	Edge 4-Ch Bi-Directional OADM Module 1549.32 to 1551.72.
• 15216-FLD4-52-5	Edge 4-Ch Bi-Directional OADM Module 1552.52 to 1554.94.
• 15216-FLD4-55-7	Edge 4-Ch Bi-Directional OADM Module 1555.75 to 1558.17.
• 15216-FLD4-58-9	Edge 4-Ch Bi-Directional OADM Module 1558.98 to 1561.42.
• 32DMX-L	3- channel demultiplexer for L-band
• 32WSS-L	32-channel wavelength switch selector for L-band
• 40-MXP-C	40 Gbit/Sec Multirate Muxponder
• 40-SMR1-C	The single module 40-channel ROADM on C-band
• 40-SMR2-C	The single module 40-channel ROADM with EDFA on C-band
• 40-TXP-C	40 Gigabits per second Multirate Transponder
• 80-WXC-C	80-channel wavelength cross-connect spaced at 100 GHz grid
• AD-1B	OADM 1-Band Filter
• AD-1C	OADM 1-Channel Filter
• AD-2C	OADM 2-Channel Filter
• AD-4B	OADM 4-Band Filter

• AD-4C	OADM 4-Channel Filter
• AICI	AIC-I card
• AIP	Alarm Indication Panel
• ALM-PWR	Alarm Power
• ASAP-4	ASAP carrier card with four PIM slots
• BP	The backplane of the NE
• CE-100T-8	8-port 100T card
• CE-1000-4	4-port GIGE mapper card
• CRFT-TMG	Craft Timing
• DCC	Data Communications Channel
• DCU	Dispersion Compensation Unit
• DMX-32	Optical DMX 32 Channels
• DS3i-N-12	DS3i-N-12 card
• E1	E1 card
• E1-42	42-port E1 card
• E1000T-2	2-port interface card supporting 1000BaseT Ethernet facilities
• E100T-12	12-port interface card supporting 100BaseT Ethernet facilities
• E100T-4	Four-port interface card supporting 100BaseT Ethernet facilities
• E1N	E1N card
• E3	E3 card
• EDRA-1-26	EDRA-1-26 amplifier
• EDRA-1-35	EDRA-1-35 amplifier
• EDRA-2-26	EDRA-2-26 amplifier
• EDRA-2-35	EDRA-2-35 amplifier
• FBGDCU-1157	
• FBGDCU-1322	

• FBGDCU-165	
• FBGDCU-1653	
• FBGDCU-1983	
• FBGDCU-331	
• FBGDCU-496	
• FBGDCU-661	
• FBGDCU-826	
• FBGDCU-992	
• FILLER_CARD	Filler card
• FMEC-155E-1TO1	The equipment type for FMEC STM1E12 card
• FMEC-155E-1TO3	The equipment type for FMEC STM1E12 card with 1:3 protection
• FMEC-155E-UNPROT	The equipment type for FMEC STM1E12 card without protection
• FMEC-SMZ-E1	FMEC card corresponding to E1 card
• FMEC-SMZ-E3	FMEC card corresponding to E3 card
• FTA	Fan Tray of the NE
• FTA1	Fan Tray 1 of the NE
• FTA2	Fan Tray 2 of the NE
• G1K-4	G1K-4 card
• MD-4	Optical Multiplexer/Demultiplexer with 4 Channels
• MD-48-CM	
• MD-48-EVEN	
• MD-48-ODD	
• MESH-PP-SMR	The passive unit Patch Panel device used to connect upto four 40-SMR2-C cards
• MF-16AD-CFS	16-channels – 1 direction, colorless, omnidirectional add/drop unit.
• MF-4x4-COFS	4-channels, 4-directions, colorless, omnidirectional add/drop unit.

• MF-AST-EDFA	MF-AST-EDFA unit
• MF-DEG-5	5-degrees mesh patch panel
• MF-MPO-8LC	MPO to 8-LC adapter
• MF-UPG-4	4-degrees upgrade module
• ML100X-8	8-port 100X card with optical interface
• ML-100T-8	8-port 100T card with optical interface
• MMU	Multiring mesh upgrade unit
• MS-ISC-100T	Fast Ethernet switch card used for internal shelf connection
• MUX-32	Optical MUX 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder card
• MXP-MR-10DME	10 Gbps datamux with enhanced FEC
• OPT-AMP-L	Optical preamplifier for L-band
• OPT-BST	Optical booster amplifier
• OPT-BST-L	Optical booster for L-band
• OPT-EDFA-17	MAL-less EDFA Optical Amplifier – C-band – 17dB Gain
• OPT-EDFA-24	MAL-less EDFA Optical Amplifier – C-band – 24dB Gain
• OPT-PRE	Optical Preamplifier
• OPT-RAMP-C	Raman pump amplifier C-band
• OPT-RAMP-CE	An extended version of Raman pump amplifier
• OPT-RAMP-COP	Raman COP card.
• OPT-RAMP-CTP	Raman CTP card.
• OPT-RAMP-E	Raman pump amplifier E-band
• OSC-CSM	Optical Service Channel with Combiner/Separator Module
• OSCM	Optical Service Channel Module
• I2-XP	A 4x10G transponder that is capable to operate with multiple bit rat–s - 10G FC, 10GE, and OC192/STM64
• PIM-4	Pluggable interface module with 4 PPM slots
• PP-4-SMR	Patch-Panel, 4 degrees, for SMR cards

• PP-MESH-4	Patch-Panel, 4 degrees
• PP-MESH-8	Patch-Panel, 8 degrees
• PPM-1	Pluggable port module with 1-port SFP module
• PSM	Protection Service Module card
• PTF-4	Fabric card.
• PTM-4	Line card.
• PTSA	CPT 50 panel.
• PTSYS- Fan-Out-Group	PTSYS Fan-Out-Group.
• SHELF	Shelf entity
• STM4	An interface card that supports one or more STM4 (622 Mbps) optical facilities
• STM4-4	A four port STM4 card
• STM4-IR-1	An interface card that supports one intermediate range STM4 (622 Mbps) optical facilities
• STM4-LR-1	An interface card that supports one long range STM4 (622 Mbps) optical facilities
• STM4-SR-1	An interface card that supports one short range STM4 (622 Mbps) optical facilities
• STM64-4	A four port STM64 card
• STM64-LR-1	An interface card that supports one or more STM64 optical facilities
• STM1	An interface card that supports multiple STM1 (155 Mbps) optical facilities
• STM1-IR-4	An interface card that supports four intermediate range STM1 (155 Mbps) optical facilities
• STM1-SR-4	An interface card that supports four short range STM1 (155 Mbps) optical facilities
• STM1ATM-IR-6	An interface card that supports six intermediate range STM1 (155 Mbps) ATM optical fibers
• STM1IR-STM1SH-1310-8	An STM1 card which has 8 ports over the lower speed slot with XC-VXL-10G/XC-VXL-2.5G
• STM1POS-SR-4	An interface card that supports four short range STM1 (155 Mbps) POS optical facilities

• STM16	An interface card that supports one or more STM16 (10 Gbps) optical facilities
• STM16-AS-1	An interface card that supports one short range OC-48 (10 Gbps) optical facilities that can be provisioned in any I/O slot
• STM16-ELR-1	An interface card that supports one short range STM16 (2.5 Gbps) optical facility
• STM16-IR-1	An interface card that supports one intermediate range STM16 (10 Gbps) optical facility
• STM16-LR-1	An interface card that supports one long range STM16 (10 Gbps) optical facility
• STM16-SR-1	An interface card that supports one short range STM16 (10 Gbps) optical facilities
• TCC	Timing, Communications, and Control card
• TDC-CC	Coarse tunable dispersion compensation unit
• TDC-FC	Fine tunable dispersion compensation unit
• TXP-MR-10G	10G Multirate Transponder card
• TXP-MR-2.5G	Multirate 2.5G Unprotected
• TXPP-MR-2.5G	Multirate 2.5G Protected
• UNKNOWN	Unknown equipment type
• UNPROVISIONED	Unprovisioned equipment type
• WSE	Wire Speed Encryption (WSE) card
• XC-VXC-10G	XC-VXC-10G cross-connect card
• XCVXL-10G	XC-VXL-10G cross-connect card
• XCVXL-2.5G	XC-VXL-2.5G cross-connect card
• FLD-OSC	
• VPP-MESH-4-1	
• VPP-MESH-4-2	
• VPP-MESH-4-3	
• VPP-MESH-4-4	
• VPP-MESH-8-1	

• VPP-MESH-8-2	
• VPP-MESH-8-3	
• VPP-MESH-8-4	
• VPP-MESH-8-5	
• VPP-MESH-8-6	
• VPP-MESH-8-7	
• VPP-MESH-8-8	
• AD-12-FS	Line Card
• ECU	
• MF-10AD-CFS	
• MF-16AE-CFS	
• MF-2MPO-ADP	
• MF-MPO-16LC	
• MF-PPMESH8-5AD	
• SMR20-FS	Line Card
• SMR9-17-FS	Line Card
• SMR9-24-FS	Line Card
• SMR9-34-FS	Line Card
• MR-MXP	

REPT ALM SECU

The Report Alarm Security (REPT ALM SECU) reports the occurrence of an alarmed security event against the NE.

Usage Guidelines

Based on TR-NWT-000835, the AID of the security alarm should be the connection identifier (CID) that is not currently supported.

The COM or user identifier (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.

Category
Security

Security
Superuser

Output Format

```
    SID DATE TIME
** ATAG REPT ALM SECU
    "<AID>:<NOTIFCODE>,<SECUALMTYPE>"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM SECU
    "COM:CR,INTRUSION-PSWD"
;
```

Output Parameters

<AID>	Access identifier. Identifies an entity with the condition. Defaults to COM. AID is a string.
<NOTIFCODE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is a two-character notification code associated with an autonomous message.
• 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.
<SECUALMTYPE>	Security alarm type. It is a subset of the CONDITION type. In this release, the only allowable type is INTRUSION-PSWD. The parameter type is SECUALMTYPE (security alarm type).
• INTRUSION-PSWD	Condition raised after an invalid password is used during login. This condition is raised only if the password is used a specific number of times.

REPT ALM SYNCN

The Report Alarm Synchronization (REPT ALM SYNCN) message reports an alarm condition against a synchronization reference.

Usage Guidelines

None

Category

Synchronization

Security

Retrieve

Output Format

```
    SID DATE TIME
** ATAG REPT ALM SYNCN
    "<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],[<OCRTM>],[<LOCN>],
    [<DIRN>]:[<DESC>],[<EQPTTYPE>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM SYNCN
    "SYNC-NE:MJ,MAN,SA,08-01,14-25-59,,:\"MANUAL SWITCH\",TCC"
;
```

Output Parameters

<AID>	Access identifier. Identifies a synchronization reference with alarm condition.
<NTFCNCDE>	Notification code. The parameter type is NOTIF_CODE, which is a two-character notification code associated with an autonomous message.
• 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.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, Not Alarmed (NA) conditions, and Not Reported (NR) conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date
<OCRTM>	(Optional) Time
<DESC>	(Optional) Condition description.
<EQPTTYPE>	(Optional) The parameter type is EQPT_TYPE, which is the type of equipment being provisioned into a slot.
• 100G-LC-C	100G-LC-C card
• 100G-CK-C	100G-CK-C card
• 10X10G-LC	10X10G-LC card
• CFP-LC	CFP-LC card
• AR-MXP	Any rate muxponder
• AR-XP	Any rate xponder
• AR-XPE	Any rate enhanced xponder.
• 16-WXC-FS	16-WXC-FS card.
• 15216-MD-40-EVEN	Thermal Multiplex/Demultiplex Passive Unit, spaced at 50 GHz on even grid
• 15216-MD-40-ODD	Thermal Multiplex/Demultiplex Passive Unit, spaced at 50 GHz on odd grid
• 15216-MD-ID-50	Thermal Interleaver Passive Unit, spaced at 50 GHz grid
• 15216-FLD4-30-3	Edge 4-Ch Bi-Directional OADM Module 1530.33 to 1532.68.

• 15216-FLD4-33-4	Edge 4-Ch Bi-Directional OADM Module 1533.47 to 1535.82.
• 15216-FLD4-36-6	Edge 4-Ch Bi-Directional OADM Module 1536.61 to 1538.98.
• 15216-FLD4-39-7	Edge 4-Ch Bi-Directional OADM Module 1539.77 to 1542.14.
• 15216-FLD4-42-9	Edge 4-Ch Bi-Directional OADM Module 1542.94 to 1545.32.
• 15216-FLD4-46-1	Edge 4-Ch Bi-Directional OADM Module 1546.12 to 1548.51.
• 15216-FLD4-49-3	Edge 4-Ch Bi-Directional OADM Module 1549.32 to 1551.72.
• 15216-FLD4-52-5	Edge 4-Ch Bi-Directional OADM Module 1552.52 to 1554.94.
• 15216-FLD4-55-7	Edge 4-Ch Bi-Directional OADM Module 1555.75 to 1558.17.
• 15216-FLD4-58-9	Edge 4-Ch Bi-Directional OADM Module 1558.98 to 1561.42.
• 32DMX-L	3- channel demultiplexer for L-band
• 32WSS-L	32-channel wavelength switch selector for L-band
• 40-MXP-C	40 Gbit/Sec Multirate Muxponder
• 40-SMR1-C	The single module 40-channel ROADM on C-band
• 40-SMR2-C	The single module 40-channel ROADM with EDFA on C-band
• 40-TXP-C	40 Gigabits per second Multirate Transponder
• 80-WXC-C	80-channel wavelength cross-connect spaced at 100 GHz grid
• AD-1B	OADM 1-Band Filter
• AD-1C	OADM 1-Channel Filter
• AD-2C	OADM 2-Channel Filter
• AD-4B	OADM 4-Band Filter
• AD-4C	OADM 4-Channel Filter
• AICI	AIC-I card

• AIP	Alarm Indication Panel
• ALM-PWR	Alarm Power
• ASAP-4	ASAP carrier card with four PIM slots
• BP	The backplane of the NE
• CE-100T-8	8-port 100T card
• CE-1000-4	4-port GIGE mapper card
• CRFT-TMG	Craft Timing
• DCC	Data Communications Channel
• DCU	Dispersion Compensation Unit
• DMX-32	Optical DMX 32 Channels
• DS3i-N-12	DS3i-N-12 card
• E1	E1 card
• E1-42	42-port E1 card
• E1000T-2	2-port interface card supporting 1000BaseT Ethernet facilities
• E100T-12	12-port interface card supporting 100BaseT Ethernet facilities
• E100T-4	Four-port interface card supporting 100BaseT Ethernet facilities
• E1N	E1N card
• E3	E3 card
• EDRA-1-26	EDRA-1-26 amplifier
• EDRA-1-35	EDRA-1-35 amplifier
• EDRA-2-26	EDRA-2-26 amplifier
• EDRA-2-35	EDRA-2-35 amplifier
• FBGDCU-1157	
• FBGDCU-1322	
• FBGDCU-165	
• FBGDCU-1653	

• FBGDCU-1983	
• FBGDCU-331	
• FBGDCU-496	
• FBGDCU-661	
• FBGDCU-826	
• FBGDCU-992	
• FILLER_CARD	Filler card
• FMEC-155E-1TO1	The equipment type for FMEC STM1E12 card
• FMEC-155E-1TO3	The equipment type for FMEC STM1E12 card with 1:3 protection
• FMEC-155E-UNPROT	The equipment type for FMEC STM1E12 card without protection
• FMEC-SMZ-E1	FMEC card corresponding to E1 card
• FMEC-SMZ-E3	FMEC card corresponding to E3 card
• FTA	Fan Tray of the NE
• FTA1	Fan Tray 1 of the NE
• FTA2	Fan Tray 2 of the NE
• G1K-4	G1K-4 card
• MD-4	Optical Multiplexer/Demultiplexer with 4 Channels
• MD-48-CM	
• MD-48-EVEN	
• MD-48-ODD	
• MESH-PP-SMR	The passive unit Patch Panel device used to connect upto four 40-SMR2-C cards
• MF-16AD-CFS	16-channe–s - 1 direction, colorless, omnidirectional add/drop unit.
• MF-4x4-COFS	4-channels, 4-directions, colorless, omnidirectional add/drop unit.
• MF-AST-EDFA	MF-AST-EDFA unit
• MF-DEG-5	5-degrees mesh patch panel

• MF-MPO-8LC	MPO to 8-LC adapter
• MF-UPG-4	4-degrees upgrade module
• ML100X-8	8-port 100X card with optical interface
• ML-100T-8	8-port 100T card with optical interface
• MMU	Multiring mesh upgrade unit
• MS-ISC-100T	Fast Ethernet switch card used for internal shelf connection
• MUX-32	Optical MUX 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder card
• MXP-MR-10DME	10 Gbps datamux with enhanced FEC
• OPT-AMP-L	Optical preamplifier for L-band
• OPT-BST	Optical booster amplifier
• OPT-BST-L	Optical booster for L-band
• OPT-EDFA-17	MAL-less EDFA Optical Amplifi–r - C-ba–d - 17dB Gain
• OPT-EDFA-24	MAL-less EDFA Optical Amplifi–r - C-ba–d - 24dB Gain
• OPT-PRE	Optical Preamplifier
• OPT-RAMP-C	Raman pump amplifier C-band
• OPT-RAMP-CE	An extended version of Raman pump amplifier
• OPT-RAMP-COP	Raman COP card.
• OPT-RAMP-CTP	Raman CTP card.
• OPT-RAMP-E	Raman pump amplifier E-band
• OSC-CSM	Optical Service Channel with Combiner/Separator Module
• IOTU2-XP	A 4x10G transponder that is capable to operate with multiple bit –ates - 10G FC, 10GE, and OC192/STM64
• PIM-4	Pluggable interface module with 4 PPM slots
• PP-4-SMR	Patch-Panel, 4 degrees, for SMR cards
• PP-MESH-4	Patch-Panel, 4 degrees
• PP-MESH-8	Patch-Panel, 8 degrees
• PPM-1	Pluggable port module with 1-port SFP module

• PSM	Protection Service Module card
• PTF-4	Fabric card.
• PTM-4	Line card.
• PTSA	CPT 50 panel.
• PTSYS- Fan-Out-Group	PTSYS Fan-Out-Group.
• SHELF	Shelf entity
• STM4	An interface card that supports one or more STM4 (622 Mbps) optical facilities
• STM4-4	A four port STM4 card
• STM4-IR-1	An interface card that supports one intermediate range STM4 (622 Mbps) optical facilities
• STM4-LR-1	An interface card that supports one long range STM4 (622 Mbps) optical facilities
• STM4-SR-1	An interface card that supports one short range STM4 (622 Mbps) optical facilities
• STM64-4	A four port STM64 card
• STM64-LR-1	An interface card that supports one or more STM64 optical facilities
• STM1	An interface card that supports multiple STM1 (155 Mbps) optical facilities
• STM1-IR-4	An interface card that supports four intermediate range STM1 (155 Mbps) optical facilities
• STM1-SR-4	An interface card that supports four short range STM1 (155 Mbps) optical facilities
• STM1ATM-IR-6	An interface card that supports six intermediate range STM1 (155 Mbps) ATM optical fibers
• STM1IR-STM1SH-1310-8	An STM1 card which has 8 ports over the lower speed slot with XC-VXL-10G/XC-VXL-2.5G
• STM1POS-SR-4	An interface card that supports four short range STM1 (155 Mbps) POS optical facilities
• STM16	An interface card that supports one or more STM16 (10 Gbps) optical facilities

• STM16-AS-1	An interface card that supports one short range OC-48 (10 Gbps) optical facilities that can be provisioned in any I/O slot
• STM16-ELR-1	An interface card that supports one short range STM16 (2.5 Gbps) optical facility
• STM16-IR-1	An interface card that supports one intermediate range STM16 (10 Gbps) optical facility
• STM16-LR-1	An interface card that supports one long range STM16 (10 Gbps) optical facility
• STM16-SR-1	An interface card that supports one short range STM16 (10 Gbps) optical facilities
• TCC	Timing, Communications, and Control card
• TDC-CC	Coarse tunable dispersion compensation unit
• TDC-FC	Fine tunable dispersion compensation unit
• TXP-MR-10G	10G Multirate Transponder card
• TXP-MR-2.5G	Multirate 2.5G Unprotected
• TXPP-MR-2.5G	Multirate 2.5G Protected
• UNKNOWN	Unknown equipment type
• UNPROVISIONED	Unprovisioned equipment type
• WSE	Wire Speed Encryption (WSE) card
• XC-VXC-10G	XC-VXC-10G cross-connect card
• XCVXL-10G	XC-VXL-10G cross-connect card
• XCVXL-2.5G	XC-VXL-2.5G cross-connect card
• FLD-OSC	
• VPP-MESH-4-1	
• VPP-MESH-4-2	
• VPP-MESH-4-3	
• VPP-MESH-4-4	
• VPP-MESH-8-1	
• VPP-MESH-8-2	

• VPP-MESH-8-3	
• VPP-MESH-8-4	
• VPP-MESH-8-5	
• VPP-MESH-8-6	
• VPP-MESH-8-7	
• VPP-MESH-8-8	
• AD-12-FS	Line Card
• ECU	
• MF-10AD-CFS	
• MF-16AE-CFS	
• MF-2MPO-ADP	
• MF-MPO-16LC	
• MF-PPMESH8-5AD	
• SMR20-FS	Line Card
• SMR9-17-FS	Line Card
• SMR9-24-FS	Line Card
• SMR9-34-FS	Line Card
• MR-MXP	

REPT DBCHG

The Report Database Change (REPT DBCHG) message reports any changes on the NE that result from:

- TL1 provisioning commands or their graphical user interface (GUI) equivalents containing the verbs ALW, DLT, ED, ENT, INH, INIT, OPR, RLS, SET, and SW (for example, DLT-EQPT, ENT-CRS-STS1)
- External event such as a board insertion

Usage Guidelines

- When the secondary state is changed from AINS state to any other state, no REPT DBCHG messages are generated.
- REPT DBCHG is turned off by default. To turn REPT DBCHG on, you must issue the ALW-MSG-DBCHG command.
- REPT DBCHG messages are generated every time a roll is performed. A cross-connect delete and add REPT DBCHG message will not be sent every time a roll is performed; instead a REPT DBCHG message on the roll will be sent.

Category
Log

Security
Retrieve

Output Format

SID DATE TIME
A ATAG REPT DBCHG
"TIME=<TIME>,DATE=<DATE>,[SOURCE=<SOURCE>],[USERID=<USERID>],
DBCHGSEQ=<DBCHGSEQ>:<COMMAND>:[<AID>]:::[<PSTPSTQ>,],<SST>"
;

Output Example

TID-000 1998-06-20 14:30:00
A 100 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:::PST-PSTQ,SST"
;

Output Parameters

<TIME>	The time of the message triggered by the NE.
<DATE>	The date of the message triggered by the NE.
<SOURCE>	(Optional) An input-command CTAG if present. SOURCE is a string. Maximum length of 20 characters.
<USERID>	(Optional) The user name or user identifier. USERID is a string. Maximum length of 20 characters.
<DBCHGSEQ>	Identifier or range of identifiers to be retrieved. It is a sequential number of the DBCHGSEQ message. DBCHGSEQ is an integer.
<COMMAND>	The input command or substitute. Maximum length of 20 characters. COMMAND is a string.
<AID>	Access identifier. Maximum length of 64 characters.Excess characters will be truncated. AID is a string.
<PSTPSTQ>	Admin state in the PST-PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ).
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous

• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatched Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

REPT EVT <MOD2ALM>

The Report Event for 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, DS1, E100, E1000, E3, E4, EC1, ETH, FSTE, G1000, GFPOS, GIGE, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STM1,STM4,STM16,STM64, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, UDCDCC, UDCF, VC3, VC4, VC4-2c, VC4-3c, VC4-4c, VC4-8c, VC4-16c,VC4-64c, VC12, VCG, VT1, VT2, WLEN, or RPRIF (REPT EVT <MOD2ALM>) message reports the occurrence of a nonalarmed event. In Software Release 5.0 and later, REPT EVT <MOD2ALM> can report the remote monitoring (RMON)-managed threshold crossing alarm.

Usage Guidelines

See Table 30-1 on page 30-1 for supported modifiers by platform.

Category

Fault

Security

Retrieve

Output Format

SID DATE TIME
A ATAG REPT EVT <MOD2ALM>

"<AID>:<CONDTYPE>,[<CONDEFF>],,,[<LOCN>],[<DIRN>],[<MONVAL>],[<THLEV>],
[<TMPER>]:[<DESC>],[<AIDDET>]"
;

Output Example

TID-000 1998-06-20 14:30:00
A 100.100 REPT EVT 1GFC
"FAC-5-1:WKSWPR,TC,,,FEND,,12,13,15-MIN:\"WORKING SWITCH TO PROTECTION\",
OC48"
;

Output Parameters

<AID>	Access identifier.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, Not Alarmed (NA) conditions, and Not Reported (NR) conditions.
<CONDEFF>	(Optional) The effect of the event on the condition of the NE. The parameter type is COND_EFF, which is the state of the condition upon the affected unit.
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
<LOCN>	(Optional) Location associated with a particular command in reference to the entity identified by the AID. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the Far End of the facility.
• NEND	Action occurs on the Near End of the facility.
<DIRN>	Direction relative to the entity identified by the AID. Direction of PM relative to the entity identified by the AID. The parameter type is DIRECTION (transmit and receive directions).
• BTH	Both transmit and receive directions
• RCV	Receive direction only

• TRMT	Transmit direction only
<MONVAL>	(Optional) Monitored value. Value to which the register identified by MONTYPE is to be initialized to or the measured value of a monitored parameter. The value is in the form of numeric counts or rates. MONVAL is a float.
<THLEV>	(Optional) Threshold level. THLEV is a float.
<TMPER>	(Optional) Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24-hours. For SONET PM data only one day of history data is available. For RMON managed PM data seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.
<DESC>	(Optional) Condition description.
<AIDDET>	(Optional) AIDDET uses the same addressing rules as the AID, but specifies AID type and additional details about the entity being managed. The parameter type is EQPT_TYPE, which is the type of equipment being provisioned into a slot.
• 100G-LC-C	100G-LC-C card
• 100G-CK-C	100G-CK-C card
• 10X10G-LC	10X10G-LC card
• CFP-LC	CFP-LC card
• AR-MXP	Any rate muxponder

• AR-XP	Any rate xponder
• AR-XPE	Any rate enhanced xponder.
• 16-WXC-FS	16-WXC-FS card.
• 15216-MD-40-EVEN	Thermal Multiplex/Demultiplex Passive Unit, spaced at 50 GHz on even grid
• 15216-MD-40-ODD	Thermal Multiplex/Demultiplex Passive Unit, spaced at 50 GHz on odd grid
• 15216-MD-ID-50	Thermal Interleaver Passive Unit, spaced at 50 GHz grid
• 15216-FLD4-30-3	Edge 4-Ch Bi-Directional OADM Module 1530.33 to 1532.68.
• 15216-FLD4-33-4	Edge 4-Ch Bi-Directional OADM Module 1533.47 to 1535.82.
• 15216-FLD4-36-6	Edge 4-Ch Bi-Directional OADM Module 1536.61 to 1538.98.
• 15216-FLD4-39-7	Edge 4-Ch Bi-Directional OADM Module 1539.77 to 1542.14.
• 15216-FLD4-42-9	Edge 4-Ch Bi-Directional OADM Module 1542.94 to 1545.32.
• 15216-FLD4-46-1	Edge 4-Ch Bi-Directional OADM Module 1546.12 to 1548.51.
• 15216-FLD4-49-3	Edge 4-Ch Bi-Directional OADM Module 1549.32 to 1551.72.
• 15216-FLD4-52-5	Edge 4-Ch Bi-Directional OADM Module 1552.52 to 1554.94.
• 15216-FLD4-55-7	Edge 4-Ch Bi-Directional OADM Module 1555.75 to 1558.17.
• 15216-FLD4-58-9	Edge 4-Ch Bi-Directional OADM Module 1558.98 to 1561.42.
• 32DMX-L	3- channel demultiplexer for L-band
• 32WSS-L	32-channel wavelength switch selector for L-band
• 40-MXP-C	40 Gbit/Sec Multirate Muxponder
• 40-SMR1-C	The single module 40-channel ROADM on C-band
• 40-SMR2-C	The single module 40-channel ROADM with EDFA on C-band

• 40-TXP-C	40 Gigabits per second Multirate Transponder
• 80-WXC-C	80-channel wavelength cross-connect spaced at 100 GHz grid
• AD-1B	OADM 1-Band Filter
• AD-1C	OADM 1-Channel Filter
• AD-2C	OADM 2-Channel Filter
• AD-4B	OADM 4-Band Filter
• AD-4C	OADM 4-Channel Filter
• AICI	AIC-I card
• AIP	Alarm Indication Panel
• ALM-PWR	Alarm Power
• ASAP-4	ASAP carrier card with four PIM slots
• BP	The backplane of the NE
• CE-100T-8	8-port 100T card
• CE-1000-4	4-port GIGE mapper card
• CRFT-TMG	Craft Timing
• DCC	Data Communications Channel
• DCU	Dispersion Compensation Unit
• DMX-32	Optical DMX 32 Channels
• DS3i-N-12	DS3i-N-12 card
• E1	E1 card
• E1-42	42-port E1 card
• E1000T-2	2-port interface card supporting 1000BaseT Ethernet facilities
• E100T-12	12-port interface card supporting 100BaseT Ethernet facilities
• E100T-4	Four-port interface card supporting 100BaseT Ethernet facilities
• E1N	E1N card

• E3	E3 card
• EDRA-1-26	EDRA-1-26 amplifier
• EDRA-1-35	EDRA-1-35 amplifier
• EDRA-2-26	EDRA-2-26 amplifier
• EDRA-2-35	EDRA-2-35 amplifier
• FBGDCU-1157	
• FBGDCU-1322	
• FBGDCU-165	
• FBGDCU-1653	
• FBGDCU-1983	
• FBGDCU-331	
• FBGDCU-496	
• FBGDCU-661	
• FBGDCU-826	
• FBGDCU-992	
• FILLER_CARD	Filler card
• FMEC-155E-1TO1	The equipment type for FMEC STM1E12 card
• FMEC-155E-1TO3	The equipment type for FMEC STM1E12 card with 1:3 protection
• FMEC-155E-UNPROT	The equipment type for FMEC STM1E12 card without protection
• FMEC-SMZ-E1	FMEC card corresponding to E1 card
• FMEC-SMZ-E3	FMEC card corresponding to E3 card
• FTA	Fan Tray of the NE
• FTA1	Fan Tray 1 of the NE
• FTA2	Fan Tray 2 of the NE
• G1K-4	G1K-4 card
• MD-4	Optical Multiplexer/Demultiplexer with 4 Channels
• MD-48-CM	

• MD-48-EVEN	
• MD-48-ODD	
• MESH-PP-SMR	The passive unit Patch Panel device used to connect upto four 40-SMR2-C cards
• MF-16AD-CFS	16-channels – 1 direction, colorless, omnidirectional add/drop unit.
• MF-4x4-COFS	4-channels, 4-directions, colorless, omnidirectional add/drop unit.
• MF-AST-EDFA	MF-AST-EDFA unit
• MF-DEG-5	5-degrees mesh patch panel
• MF-MPO-8LC	MPO to 8-LC adapter
• MF-UPG-4	4-degrees upgrade module
• ML100X-8	8-port 100X card with optical interface
• ML-100T-8	8-port 100T card with optical interface
• MMU	Multiring mesh upgrade unit
• MS-ISC-100T	Fast Ethernet switch card used for internal shelf connection
• MUX-32	Optical MUX 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder card
• MXP-MR-10DME	10 Gbps datamux with enhanced FEC
• OPT-AMP-L	Optical preamplifier for L-band
• OPT-BST	Optical booster amplifier
• OPT-BST-L	Optical booster for L-band
• OPT-EDFA-17	MAL-less EDFA Optical Amplifier – C-band – 17dB Gain
• OPT-EDFA-24	MAL-less EDFA Optical Amplifier – C-band – 24dB Gain
• OPT-PRE	Optical Preamplifier
• OPT-RAMP-C	Raman pump amplifier C-band
• OPT-RAMP-CE	An extended version of Raman pump amplifier
• OPT-RAMP-COP	Raman COP card.
• OPT-RAMP-CTP	Raman CTP card.

• OPT-RAMP-E	Raman pump amplifier E-band
• OSC-CSM	Optical Service Channel with Combiner/Separator Module
• OSCM	Optical Service Channel Module
• I2-XP	A 4x10G transponder that is capable to operate with multiple bit rat–s - 10G FC, 10GE, and OC192/STM64
• PIM-4	Pluggable interface module with 4 PPM slots
• PP-4-SMR	Patch-Panel, 4 degrees, for SMR cards
• PP-MESH-4	Patch-Panel, 4 degrees
• PP-MESH-8	Patch-Panel, 8 degrees
• PPM-1	Pluggable port module with 1-port SFP module
• PSM	Protection Service Module card
• PTF-4	Fabric card.
• PTM-4	Line card.
• PTSA	CPT 50 panel.
• PTSYS- Fan-Out-Group	PTSYS Fan-Out-Group.
• SHELF	Shelf entity
• STM4	An interface card that supports one or more STM4 (622 Mbps) optical facilities
• STM4-4	A four port STM4 card
• STM4-IR-1	An interface card that supports one intermediate range STM4 (622 Mbps) optical facilities
• STM4-LR-1	An interface card that supports one long range STM4 (622 Mbps) optical facilities
• STM4-SR-1	An interface card that supports one short range STM4 (622 Mbps) optical facilities
• STM64-4	A four port STM64 card
• STM64-LR-1	An interface card that supports one or more STM64 optical facilities
• STM1	An interface card that supports multiple STM1 (155 Mbps) optical facilities

• STM1-IR-4	An interface card that supports four intermediate range STM1 (155 Mbps) optical facilities
• STM1-SR-4	An interface card that supports four short range STM1 (155 Mbps) optical facilities
• STM1ATM-IR-6	An interface card that supports six intermediate range STM1 (155 Mbps) ATM optical fibers
• STM1IR-STM1SH-1310-8	An STM1 card which has 8 ports over the lower speed slot with XC-VXL-10G/XC-VXL-2.5G
• STM1POS-SR-4	An interface card that supports four short range STM1 (155 Mbps) POS optical facilities
• STM16	An interface card that supports one or more STM16 (10 Gbps) optical facilities
• STM16-AS-1	An interface card that supports one short range OC-48 (10 Gbps) optical facilities that can be provisioned in any I/O slot
• STM16-ELR-1	An interface card that supports one short range STM16 (2.5 Gbps) optical facility
• STM16-IR-1	An interface card that supports one intermediate range STM16 (10 Gbps) optical facility
• STM16-LR-1	An interface card that supports one long range STM16 (10 Gbps) optical facility
• STM16-SR-1	An interface card that supports one short range STM16 (10 Gbps) optical facilities
• TCC	Timing, Communications, and Control card
• TDC-CC	Coarse tunable dispersion compensation unit
• TDC-FC	Fine tunable dispersion compensation unit
• TXP-MR-10G	10G Multirate Transponder card
• TXP-MR-2.5G	Multirate 2.5G Unprotected
• TXPP-MR-2.5G	Multirate 2.5G Protected
• UNKNOWN	Unknown equipment type
• UNPROVISIONED	Unprovisioned equipment type
• WSE	Wire Speed Encryption (WSE) card
• XC-VXC-10G	XC-VXC-10G cross-connect card

• XCVXL-10G	XC-VXL-10G cross-connect card
• XCVXL-2.5G	XC-VXL-2.5G cross-connect card
• FLD-OSC	
• VPP-MESH-4-1	
• VPP-MESH-4-2	
• VPP-MESH-4-3	
• VPP-MESH-4-4	
• VPP-MESH-8-1	
• VPP-MESH-8-2	
• VPP-MESH-8-3	
• VPP-MESH-8-4	
• VPP-MESH-8-5	
• VPP-MESH-8-6	
• VPP-MESH-8-7	
• VPP-MESH-8-8	
• AD-12-FS	Line Card
• ECU	
• MF-10AD-CFS	
• MF-16AE-CFS	
• MF-2MPO-ADP	
• MF-MPO-16LC	
• MF-PPMESH8-5AD	
• SMR20-FS	Line Card
• SMR9-17-FS	Line Card
• SMR9-24-FS	Line Card
• SMR9-34-FS	Line Card
• MR-MXP	

REPT EVT BITS

The Report Event Building Integrated Timing Supply (REPT EVT BITS) message reports a non-alarmed event against a BITS facility.

Usage Guidelines

None

Category

Synchronization

Security

Retrieve

Output Format

```
    SID DATE TIME
** ATAG REPT EVT BITS
    "<AID>:<CONDTYPE>,[<CONDEFF>],,,[<LOCN>],[<DIRN>],,,:[<DESC>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
A 100.100 REPT ALM BITS
    "BITS-1:SSM-STU,TC,,,,,,,:\"SYNCHRONIZ–D - TRACEABILITY UNKNOWN\""
;
```

Output Parameters

<AID>	Access identifier.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an node, whether or not the problem is reported (that is, whether it generates a trouble notification). Reported conditions include alarms, Not-Alarmed conditions (NA), and Not-Reported (NR) conditions.
<CONDEFF>	The effect of the event on the condition of the NE. The parameter type is COND_EFF, which is the state of the condition upon the affected unit.
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition

<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description.

REPT EVT COM

The Report Event Common (REPT EVT COM) message reports a nonalarmed event against an NE when there is no AID associated with it.

Usage Guidelines

None

Category

Fault

Security

Retrieve

Output Format

```
    SID DATE TIME
A ATAG REPT EVT COM
    “[<AID>]:<CONDTYPE>,[<CONDEFF>],,,,,,[<LOCN>],[<DIRN>]:[<DESC>]”
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
A 100.100 REPT EVT COM
    “COM:CLDRESTART,TC,,,,,,,:\“COLD RESTART\”,”
;
```

Output Parameters	
<AID>	(Optional) Access identifier. Identifies the entity to which the command pertains. AID is a string.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, Not-Alarmed conditions (NA), and Not-Reported (NR) conditions.
<CONDEFF>	The effect of the event on the condition of the NE. The parameter type is COND_EFF, which is the state of the condition upon the affected unit.
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description.

REPT EVT ENV

The Report Event Environment (REPT EVT ENV) message reports the occurrence of a nonalarmed event against an environment alarm input.

Usage Guidelines

None

Category

Environment

Security

Retrieve

Output Format

SID DATE TIME
A ATAG REPT EVT ENV
"<AID>:<ALMTYPE>,[<CONDEFF>],,,,,,[<LOCN>],[<DIRN>]:[<DESC>]"
;

Output Example

TID-000 1998-06-20 14:30:00
A 100.100 REPT EVT ENV
"ENV-IN-2:OPENDR,TC,,,,,,,:\"OPEN DOOR\""
;

Output Parameters

<AID>	Access identifier. Identifies an environmental input.
<ALMTYPE>	Abbreviated code identifying the alarm. The parameter type is ENV_ALM (environmental alarm types).
• 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
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood

• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail
• HATCH	CEV hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnect bypass
• 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 V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor

• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure
<CONDEFF>	The effect of the event on the condition of the NE. The parameter type is COND_EFF, which is the state of the condition upon the affected unit.
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions

• RCV	Receive direction only
<DESC>	(Optional) Condition description.

REPT EVT EQPT

The Report Event Equipment (REPT EVT EQPT) message reports the occurrence of a nonalarmed event against an equipment unit or slot.

Usage Guidelines

None

Category

Equipment

Security

Retrieve

Output Format

```
    SID DATE TIME
A ATAG REPT EVT EQPT
    "<AID>:<CONDTYPE>,[<CONDEFF>],,,,,,[<LOCN>],[<DIRN>]:[<DESC>],[<AIDDET>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
A 100.100 REPT EVT EQPT
    "SLOT-7:PLUGIN,TC,,,,,,,:\"EQUIPMENT PLUG-IN\",TCC"
;
```

Output Parameters

Parameter	Description
<AID>	Access identifier. Equipment AID SLOT-{1-17}.

<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, Not Alarmed (NA) conditions, and Not Reported (NR) conditions.
<CONDEFF>	(Optional) The effect of the event on the condition of the NE. The parameter type is COND_EFF, which is the state of the condition upon the affected unit.
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
<DESC>	(Optional) Condition description.
<AIDDET>	(Optional) AIDDET uses the same addressing rules as the AID, but specifies AID type and additional details about the entity being managed. The parameter type is EQPT_TYPE, which is the type of equipment being provisioned into a slot.
• 100G-LC-C	100G-LC-C card
• 100G-CK-C	100G-CK-C card
• 10X10G-LC	10X10G-LC card
• CFP-LC	CFP-LC card
• AR-MXP	Any rate muxponder
• AR-XP	Any rate xponder
• AR-XPE	Any rate enhanced xponder.
• 16-WXC-FS	16-WXC-FS card.
• 15216-MD-40-EVEN	Thermal Multiplex/Demultiplex Passive Unit, spaced at 50 GHz on even grid
• 15216-MD-40-ODD	Thermal Multiplex/Demultiplex Passive Unit, spaced at 50 GHz on odd grid
• 15216-MD-ID-50	Thermal Interleaver Passive Unit, spaced at 50 GHz grid
• 15216-FLD4-30-3	Edge 4-Ch Bi-Directional OADM Module 1530.33 to 1532.68.

• 15216-FLD4-33-4	Edge 4-Ch Bi-Directional OADM Module 1533.47 to 1535.82.
• 15216-FLD4-36-6	Edge 4-Ch Bi-Directional OADM Module 1536.61 to 1538.98.
• 15216-FLD4-39-7	Edge 4-Ch Bi-Directional OADM Module 1539.77 to 1542.14.
• 15216-FLD4-42-9	Edge 4-Ch Bi-Directional OADM Module 1542.94 to 1545.32.
• 15216-FLD4-46-1	Edge 4-Ch Bi-Directional OADM Module 1546.12 to 1548.51.
• 15216-FLD4-49-3	Edge 4-Ch Bi-Directional OADM Module 1549.32 to 1551.72.
• 15216-FLD4-52-5	Edge 4-Ch Bi-Directional OADM Module 1552.52 to 1554.94.
• 15216-FLD4-55-7	Edge 4-Ch Bi-Directional OADM Module 1555.75 to 1558.17.
• 15216-FLD4-58-9	Edge 4-Ch Bi-Directional OADM Module 1558.98 to 1561.42.
• 32DMX-L	3- channel demultiplexer for L-band
• 32WSS-L	32-channel wavelength switch selector for L-band
• 40-MXP-C	40 Gbit/Sec Multirate Muxponder
• 40-SMR1-C	The single module 40-channel ROADM on C-band
• 40-SMR2-C	The single module 40-channel ROADM with EDFA on C-band
• 40-TXP-C	40 Gigabits per second Multirate Transponder
• 80-WXC-C	80-channel wavelength cross-connect spaced at 100 GHz grid
• AD-1B	OADM 1-Band Filter
• AD-1C	OADM 1-Channel Filter
• AD-2C	OADM 2-Channel Filter
• AD-4B	OADM 4-Band Filter
• AD-4C	OADM 4-Channel Filter
• AICI	AIC-I card

• AIP	Alarm Indication Panel
• ALM-PWR	Alarm Power
• ASAP-4	ASAP carrier card with four PIM slots
• BP	The backplane of the NE
• CE-100T-8	8-port 100T card
• CE-1000-4	4-port GIGE mapper card
• CRFT-TMG	Craft Timing
• DCC	Data Communications Channel
• DCU	Dispersion Compensation Unit
• DMX-32	Optical DMX 32 Channels
• DS3i-N-12	DS3i-N-12 card
• E1	E1 card
• E1-42	42-port E1 card
• E1000T-2	2-port interface card supporting 1000BaseT Ethernet facilities
• E100T-12	12-port interface card supporting 100BaseT Ethernet facilities
• E100T-4	Four-port interface card supporting 100BaseT Ethernet facilities
• E1N	E1N card
• E3	E3 card
• EDRA-1-26	EDRA-1-26 amplifier
• EDRA-1-35	EDRA-1-35 amplifier
• EDRA-2-26	EDRA-2-26 amplifier
• EDRA-2-35	EDRA-2-35 amplifier
• FBGDCU-1157	
• FBGDCU-1322	
• FBGDCU-165	
• FBGDCU-1653	

• FBGDCU-1983	
• FBGDCU-331	
• FBGDCU-496	
• FBGDCU-661	
• FBGDCU-826	
• FBGDCU-992	
• FILLER_CARD	Filler card
• FMEC-155E-1TO1	The equipment type for FMEC STM1E12 card
• FMEC-155E-1TO3	The equipment type for FMEC STM1E12 card with 1:3 protection
• FMEC-155E-UNPROT	The equipment type for FMEC STM1E12 card without protection
• FMEC-SMZ-E1	FMEC card corresponding to E1 card
• FMEC-SMZ-E3	FMEC card corresponding to E3 card
• FTA	Fan Tray of the NE
• FTA1	Fan Tray 1 of the NE
• FTA2	Fan Tray 2 of the NE
• G1K-4	G1K-4 card
• MD-4	Optical Multiplexer/Demultiplexer with 4 Channels
• MD-48-CM	
• MD-48-EVEN	
• MD-48-ODD	
• MESH-PP-SMR	The passive unit Patch Panel device used to connect upto four 40-SMR2-C cards
• MF-16AD-CFS	16-channe–s - 1 direction, colorless, omnidirectional add/drop unit.
• MF-4x4-COFS	4-channels, 4-directions, colorless, omnidirectional add/drop unit.
• MF-AST-EDFA	MF-AST-EDFA unit
• MF-DEG-5	5-degrees mesh patch panel

• MF-MPO-8LC	MPO to 8-LC adapter
• MF-UPG-4	4-degrees upgrade module
• ML100X-8	8-port 100X card with optical interface
• ML-100T-8	8-port 100T card with optical interface
• MMU	Multiring mesh upgrade unit
• MS-ISC-100T	Fast Ethernet switch card used for internal shelf connection
• MUX-32	Optical MUX 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder card
• MXP-MR-10DME	10 Gbps datamux with enhanced FEC
• OPT-AMP-L	Optical preamplifier for L-band
• OPT-BST	Optical booster amplifier
• OPT-BST-L	Optical booster for L-band
• OPT-EDFA-17	MAL-less EDFA Optical Amplifi–r - C-ba–d - 17dB Gain
• OPT-EDFA-24	MAL-less EDFA Optical Amplifi–r - C-ba–d - 24dB Gain
• OPT-PRE	Optical Preamplifier
• OPT-RAMP-C	Raman pump amplifier C-band
• OPT-RAMP-CE	An extended version of Raman pump amplifier
• OPT-RAMP-COP	Raman COP card.
• OPT-RAMP-CTP	Raman CTP card.
• OPT-RAMP-E	Raman pump amplifier E-band
• OSC-CSM	Optical Service Channel with Combiner/Separator Module
• IOTU2-XP	A 4x10G transponder that is capable to operate with multiple bit –ates - 10G FC, 10GE, and OC192/STM64
• PIM-4	Pluggable interface module with 4 PPM slots
• PP-4-SMR	Patch-Panel, 4 degrees, for SMR cards
• PP-MESH-4	Patch-Panel, 4 degrees
• PP-MESH-8	Patch-Panel, 8 degrees
• PPM-1	Pluggable port module with 1-port SFP module

• PSM	Protection Service Module card
• PTF-4	Fabric card.
• PTM-4	Line card.
• PTSA	CPT 50 panel.
• PTSYS- Fan-Out-Group	PTSYS Fan-Out-Group.
• SHELF	Shelf entity
• STM4	An interface card that supports one or more STM4 (622 Mbps) optical facilities
• STM4-4	A four port STM4 card
• STM4-IR-1	An interface card that supports one intermediate range STM4 (622 Mbps) optical facilities
• STM4-LR-1	An interface card that supports one long range STM4 (622 Mbps) optical facilities
• STM4-SR-1	An interface card that supports one short range STM4 (622 Mbps) optical facilities
• STM64-4	A four port STM64 card
• STM64-LR-1	An interface card that supports one or more STM64 optical facilities
• STM1	An interface card that supports multiple STM1 (155 Mbps) optical facilities
• STM1-IR-4	An interface card that supports four intermediate range STM1 (155 Mbps) optical facilities
• STM1-SR-4	An interface card that supports four short range STM1 (155 Mbps) optical facilities
• STM1ATM-IR-6	An interface card that supports six intermediate range STM1 (155 Mbps) ATM optical fibers
• STM1IR-STM1SH-1310-8	An STM1 card which has 8 ports over the lower speed slot with XC-VXL-10G/XC-VXL-2.5G
• STM1POS-SR-4	An interface card that supports four short range STM1 (155 Mbps) POS optical facilities
• STM16	An interface card that supports one or more STM16 (10 Gbps) optical facilities

• STM16-AS-1	An interface card that supports one short range OC-48 (10 Gbps) optical facilities that can be provisioned in any I/O slot
• STM16-ELR-1	An interface card that supports one short range STM16 (2.5 Gbps) optical facility
• STM16-IR-1	An interface card that supports one intermediate range STM16 (10 Gbps) optical facility
• STM16-LR-1	An interface card that supports one long range STM16 (10 Gbps) optical facility
• STM16-SR-1	An interface card that supports one short range STM16 (10 Gbps) optical facilities
• TCC	Timing, Communications, and Control card
• TDC-CC	Coarse tunable dispersion compensation unit
• TDC-FC	Fine tunable dispersion compensation unit
• TXP-MR-10G	10G Multirate Transponder card
• TXP-MR-2.5G	Multirate 2.5G Unprotected
• TXPP-MR-2.5G	Multirate 2.5G Protected
• UNKNOWN	Unknown equipment type
• UNPROVISIONED	Unprovisioned equipment type
• WSE	Wire Speed Encryption (WSE) card
• XC-VXC-10G	XC-VXC-10G cross-connect card
• XCVXL-10G	XC-VXL-10G cross-connect card
• XCVXL-2.5G	XC-VXL-2.5G cross-connect card
• FLD-OSC	
• VPP-MESH-4-1	
• VPP-MESH-4-2	
• VPP-MESH-4-3	
• VPP-MESH-4-4	
• VPP-MESH-8-1	
• VPP-MESH-8-2	

• VPP-MESH-8-3	
• VPP-MESH-8-4	
• VPP-MESH-8-5	
• VPP-MESH-8-6	
• VPP-MESH-8-7	
• VPP-MESH-8-8	
• AD-12-FS	Line Card
• ECU	
• MF-10AD-CFS	
• MF-16AE-CFS	
• MF-2MPO-ADP	
• MF-MPO-16LC	
• MF-PPMESH8-5AD	
• SMR20-FS	Line Card
• SMR9-17-FS	Line Card
• SMR9-24-FS	Line Card
• SMR9-34-FS	Line Card
• MR-MXP	

REPT EVT FXFR

The Report Event Software Download (REPT EVT FXFR) message reports the FTP software download status of the start, completion, and completed percentage.

Usage Guidelines

- The FXFR_RSLT is only sent when the FXFR_STATUS is COMPLD.
- The BYTES_XFRD is only sent when the FXFR_STATUS is IP or COMPLD.

Category

File Transfer

Security
Retrieve

Output Format

SID DATE TIME
A ATAG REPT EVT FXFR
"<FILENAME>,<FXFR_STATUS>,[<FXFR_RSLT>],[<BYTES_XFRD>]"
;

Output Example

TID-000 1998-06-20 14:30:00
A 100.100 REPT EVT FXFR
"NEW.PKG,COMPLD,SUCCESS,21215147"
;

Output Parameters

<FILENAME>	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 common-control card on the NE, the file will be copied over to the second card during which time REPT EVT FXFR messages will be generated with a filename of STANDBY. FILENAME is a string.
<FXFR_STATUS>	The status of the file transfer. The parameter type is TX_STATUS, which is the status of the file transfer.
• COMPLD	The file transmission is completed.
• IP	The file transmission is in progress.
• START	The file transmission is started.
<FXFR_RSLT>	(Optional) The result of the file transfer. The parameter type is TX_RSLT, which is the result of the file transfer.
• FAILURE	A failed result
• SUCCESS	A successful result
<BYTES_XFRD>	(Optional) The percentage of bytes transferred. BYTES_XFRED is a string.

REPT EVT IOSCFG

The Report Event Internet Operating System Configuration File (REPT EVT IPSCFG) message reports the status of copying the Cisco IOS configuration file when the COPY-IOSCFG command is issued.

Usage Guidelines

- You can identify if this message is caused by a Cisco IOS configuration file downloading, uploading, or merging by looking at the SRC and DEST fields in the message.

  There is no success/failure in the message to indicate the success or failure of the merge process when merging the startup Cisco IOS config file to the running config file.

Category

File Transfer

Security

Retrieve

Output Format

```
    SID DATE TIME
A   ATAG REPT EVT IOSCFG
    "<AID>:<SRC>,<DEST>,<STATUS>,[<RESULT>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
A 100.100 REPT EVT IOSCFG
    "SLOT-1:STARTUP,IOS-CONFIG-FILE-IN-NETWORK,COMPLD,SUCCESS"
;
```

Output Parameters

<AID>	Access identifier. Slot AID for the equipment.
<SRC>	Source access identifier. Specifies where the Cisco IOS configuration file is copied from. SRC is a string.
<DEST>	Destination. Specifies where the Cisco IOS configuration file is copied to. DEST is a string.
<STATUS>	The status of COPY-IOSCFG. The parameter type is TX_STATUS, which is the status of the file transfer.
• COMPLD	The file transmission is completed.
• IP	The file transmission is in progress.
• START	The file transmission is started.
<RESULT>	(Optional) The result of the file transfer. The parameter type is TX_RSLT, which is the result of the file transfer.
• FAILURE	A failed result

• SUCCESS	A successful result

REPT EVT SECU

The Report Event Security (REPT EVT SECU) message reports the occurrence of a nonalarmed security event against the NE.

Usage Guidelines

- Based on TR-NWT-000835 in TR-NWT-000835 and the AID of the security alarm should be the CID, which is not supported in this release. The COM or UID is an acceptable substitute for the AID here. CIDs 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.
- This message is inhibited by default. A Superuser will have to issue the ALW-MSG-SECU to see this message.

Category

Security

Security

Superuser

Output Format

```
    SID DATE TIME
A   ATAG REPT EVT SECU
    "<AID>:<DNFIELD>,[<CONDEFF>],,,[<LOCN>],[<DIRN>],,,:<SECURITY>:<DNFIELD1>"
;
```

Output Example

```
    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\""
;
```

Output Parameters

<AID>	Access identifier. Identifies an entity with the condition. Defaults to COM. AID is a string.
<DNFIELD>	String

<CONDEFF>	The effect of the event on the condition of the NE. The parameter type is COND_EFF, which is the state of the condition upon the affected unit.
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<SECURITY>	SECURITY is a string.
<DNFIELD1>	DNFIELD1 is a string.

REPT EVT SESSION

The Report Event Session (REPT EVT SESSION) message reports a nonalarmed event related to establishing a session with the NE.

Usage Guidelines

The WARN field might contain different information depending on the type of session-related event.

- 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*/
- 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*/
- If a session is terminated for any reason (except a user timeout), the reason for the session termination is indicated in the WARN field.

Category

Security

Security

Retrieve

Output Format

```
    SID DATE TIME
A   ATAG REPT EVT SESSION
    "<AID>:<EXP>,<PCN>"
    "<WARN>"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
A   100.100 REPT EVT SESSION
    "TCCP:YES,5-DAY"
    "/* USER TERRI LOGGED IN TO TCCP */"
;
```

<AID>	Access identifier. Identifies the NE with which a session is established. AID is a string.
<EXP>	Indicates whether the password is alive (for example, no password updating is required at the moment), expired, or is about to expire. The parameter type is YES_NO, which indicates whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes
<PCN>	The number of days still remaining before the existing password expires. PCN appears only if EXP=YES and one of the following conditions has been met: • The warning period has not been exhausted. • The user is a new user establishing a session for the first time and the forced password change policy has been activated. PCN is a string.
<WARN>	Free format text containing additional information about the security event. WARN is a string.

Output Parameters

REPT EVT SYNCN

The Report Event Synchronization (REPT EVT SYNCN) message reports the occurrence of a nonalarmed event against a synchronization entity.

Usage Guidelines

None

Category

Synchronization

Security

Retrieve

Output Format

```
    SID DATE TIME
A   ATAG REPT EVT SYNCN
    "<AID>:<CONDTYPE>,[<CONDEFF>],,,,,,[<LOCN>],[<DIRN>]:[<DESC>],[<AIDDET>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
A   100.100 REPT EVT SYNCN
    "SYNC-NE:SWTOINT,SC,,,,,,,:\"SWITCH TO INTERNAL CLOCK\",TCC"
;
```

Output Parameters

Parameter	Description
<AID>	Access identifier.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, Not Alarmed (NA) conditions, and Not Reported (NR) conditions.
<CONDEFF>	(Optional) The effect of the event on the condition of the NE. The parameter type is COND_EFF, which is the state of the condition upon the affected unit.
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
<DESC>	(Optional) Condition description.

<AIDDET>	(Optional) AIDDET uses the same addressing rules as the AID, but specifies AID type and additional details about the entity being managed. The parameter type is EQPT_TYPE, which is the type of equipment being provisioned into a slot.
• 100G-LC-C	100G-LC-C card
• 100G-CK-C	100G-CK-C card
• 10X10G-LC	10X10G-LC card
• CFP-LC	CFP-LC card
• AR-MXP	Any rate muxponder
• AR-XP	Any rate xponder
• AR-XPE	Any rate enhanced xponder.
• 16-WXC-FS	16-WXC-FS card.
• 15216-MD-40-EVEN	Thermal Multiplex/Demultiplex Passive Unit, spaced at 50 GHz on even grid
• 15216-MD-40-ODD	Thermal Multiplex/Demultiplex Passive Unit, spaced at 50 GHz on odd grid
• 15216-MD-ID-50	Thermal Interleaver Passive Unit, spaced at 50 GHz grid
• 15216-FLD4-30-3	Edge 4-Ch Bi-Directional OADM Module 1530.33 to 1532.68.
• 15216-FLD4-33-4	Edge 4-Ch Bi-Directional OADM Module 1533.47 to 1535.82.
• 15216-FLD4-36-6	Edge 4-Ch Bi-Directional OADM Module 1536.61 to 1538.98.
• 15216-FLD4-39-7	Edge 4-Ch Bi-Directional OADM Module 1539.77 to 1542.14.
• 15216-FLD4-42-9	Edge 4-Ch Bi-Directional OADM Module 1542.94 to 1545.32.
• 15216-FLD4-46-1	Edge 4-Ch Bi-Directional OADM Module 1546.12 to 1548.51.
• 15216-FLD4-49-3	Edge 4-Ch Bi-Directional OADM Module 1549.32 to 1551.72.
• 15216-FLD4-52-5	Edge 4-Ch Bi-Directional OADM Module 1552.52 to 1554.94.

• 15216-FLD4-55-7	Edge 4-Ch Bi-Directional OADM Module 1555.75 to 1558.17.
• 15216-FLD4-58-9	Edge 4-Ch Bi-Directional OADM Module 1558.98 to 1561.42.
• 32DMX-L	3- channel demultiplexer for L-band
• 32WSS-L	32-channel wavelength switch selector for L-band
• 40-MXP-C	40 Gbit/Sec Multirate Muxponder
• 40-SMR1-C	The single module 40-channel ROADM on C-band
• 40-SMR2-C	The single module 40-channel ROADM with EDFA on C-band
• 40-TXP-C	40 Gigabits per second Multirate Transponder
• 80-WXC-C	80-channel wavelength cross-connect spaced at 100 GHz grid
• AD-1B	OADM 1-Band Filter
• AD-1C	OADM 1-Channel Filter
• AD-2C	OADM 2-Channel Filter
• AD-4B	OADM 4-Band Filter
• AD-4C	OADM 4-Channel Filter
• AICI	AIC-I card
• AIP	Alarm Indication Panel
• ALM-PWR	Alarm Power
• ASAP-4	ASAP carrier card with four PIM slots
• BP	The backplane of the NE
• CE-100T-8	8-port 100T card
• CE-1000-4	4-port GIGE mapper card
• CRFT-TMG	Craft Timing
• DCC	Data Communications Channel
• DCU	Dispersion Compensation Unit
• DMX-32	Optical DMX 32 Channels

• DS3i-N-12	DS3i-N-12 card
• E1	E1 card
• E1-42	42-port E1 card
• E1000T-2	2-port interface card supporting 1000BaseT Ethernet facilities
• E100T-12	12-port interface card supporting 100BaseT Ethernet facilities
• E100T-4	Four-port interface card supporting 100BaseT Ethernet facilities
• E1N	E1N card
• E3	E3 card
• EDRA-1-26	EDRA-1-26 amplifier
• EDRA-1-35	EDRA-1-35 amplifier
• EDRA-2-26	EDRA-2-26 amplifier
• EDRA-2-35	EDRA-2-35 amplifier
• FBGDCU-1157	
• FBGDCU-1322	
• FBGDCU-165	
• FBGDCU-1653	
• FBGDCU-1983	
• FBGDCU-331	
• FBGDCU-496	
• FBGDCU-661	
• FBGDCU-826	
• FBGDCU-992	
• FILLER_CARD	Filler card
• FMEC-155E-1TO1	The equipment type for FMEC STM1E12 card
• FMEC-155E-1TO3	The equipment type for FMEC STM1E12 card with 1:3 protection

• FMEC-155E-UNPROT	The equipment type for FMEC STM1E12 card without protection
• FMEC-SMZ-E1	FMEC card corresponding to E1 card
• FMEC-SMZ-E3	FMEC card corresponding to E3 card
• FTA	Fan Tray of the NE
• FTA1	Fan Tray 1 of the NE
• FTA2	Fan Tray 2 of the NE
• G1K-4	G1K-4 card
• MD-4	Optical Multiplexer/Demultiplexer with 4 Channels
• MD-48-CM	
• MD-48-EVEN	
• MD-48-ODD	
• MESH-PP-SMR	The passive unit Patch Panel device used to connect upto four 40-SMR2-C cards
• MF-16AD-CFS	16-channels – 1 direction, colorless, omnidirectional add/drop unit.
• MF-4x4-COFS	4-channels, 4-directions, colorless, omnidirectional add/drop unit.
• MF-AST-EDFA	MF-AST-EDFA unit
• MF-DEG-5	5-degrees mesh patch panel
• MF-MPO-8LC	MPO to 8-LC adapter
• MF-UPG-4	4-degrees upgrade module
• ML100X-8	8-port 100X card with optical interface
• ML-100T-8	8-port 100T card with optical interface
• MMU	Multiring mesh upgrade unit
• MS-ISC-100T	Fast Ethernet switch card used for internal shelf connection
• MUX-32	Optical MUX 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder card
• MXP-MR-10DME	10 Gbps datamux with enhanced FEC

• OPT-AMP-L	Optical preamplifier for L-band
• OPT-BST	Optical booster amplifier
• OPT-BST-L	Optical booster for L-band
• OPT-EDFA-17	MAL-less EDFA Optical Amplifier – C-band – 17dB Gain
• OPT-EDFA-24	MAL-less EDFA Optical Amplifier – C-band – 24dB Gain
• OPT-PRE	Optical Preamplifier
• OPT-RAMP-C	Raman pump amplifier C-band
• OPT-RAMP-CE	An extended version of Raman pump amplifier
• OPT-RAMP-COP	Raman COP card.
• OPT-RAMP-CTP	Raman CTP card.
• OPT-RAMP-E	Raman pump amplifier E-band
• OSC-CSM	Optical Service Channel with Combiner/Separator Module
• OSCM	Optical Service Channel Module
• I2-XP	A 4x10G transponder that is capable to operate with multiple bit rat–s - 10G FC, 10GE, and OC192/STM64
• PIM-4	Pluggable interface module with 4 PPM slots
• PP-4-SMR	Patch-Panel, 4 degrees, for SMR cards
• PP-MESH-4	Patch-Panel, 4 degrees
• PP-MESH-8	Patch-Panel, 8 degrees
• PPM-1	Pluggable port module with 1-port SFP module
• PSM	Protection Service Module card
• PTF-4	Fabric card.
• PTM-4	Line card.
• PTSA	CPT 50 panel.
• PTSYS- Fan-Out-Group	PTSYS Fan-Out-Group.
• SHELF	Shelf entity
• STM4	An interface card that supports one or more STM4 (622 Mbps) optical facilities
• STM4-4	A four port STM4 card

• STM4-IR-1	An interface card that supports one intermediate range STM4 (622 Mbps) optical facilities
• STM4-LR-1	An interface card that supports one long range STM4 (622 Mbps) optical facilities
• STM4-SR-1	An interface card that supports one short range STM4 (622 Mbps) optical facilities
• STM64-4	A four port STM64 card
• STM64-LR-1	An interface card that supports one or more STM64 optical facilities
• STM1	An interface card that supports multiple STM1 (155 Mbps) optical facilities
• STM1-IR-4	An interface card that supports four intermediate range STM1 (155 Mbps) optical facilities
• STM1-SR-4	An interface card that supports four short range STM1 (155 Mbps) optical facilities
• STM1ATM-IR-6	An interface card that supports six intermediate range STM1 (155 Mbps) ATM optical fibers
• STM1IR-STM1SH-1310-8	An STM1 card which has 8 ports over the lower speed slot with XC-VXL-10G/XC-VXL-2.5G
• STM1POS-SR-4	An interface card that supports four short range STM1 (155 Mbps) POS optical facilities
• STM16	An interface card that supports one or more STM16 (10 Gbps) optical facilities
• STM16-AS-1	An interface card that supports one short range OC-48 (10 Gbps) optical facilities that can be provisioned in any I/O slot
• STM16-ELR-1	An interface card that supports one short range STM16 (2.5 Gbps) optical facility
• STM16-IR-1	An interface card that supports one intermediate range STM16 (10 Gbps) optical facility
• STM16-LR-1	An interface card that supports one long range STM16 (10 Gbps) optical facility
• STM16-SR-1	An interface card that supports one short range STM16 (10 Gbps) optical facilities
• TCC	Timing, Communications, and Control card
• TDC-CC	Coarse tunable dispersion compensation unit

• TDC-FC	Fine tunable dispersion compensation unit
• TXP-MR-10G	10G Multirate Transponder card
• TXP-MR-2.5G	Multirate 2.5G Unprotected
• TXPP-MR-2.5G	Multirate 2.5G Protected
• UNKNOWN	Unknown equipment type
• UNPROVISIONED	Unprovisioned equipment type
• WSE	Wire Speed Encryption (WSE) card
• XC-VXC-10G	XC-VXC-10G cross-connect card
• XCVXL-10G	XC-VXL-10G cross-connect card
• XCVXL-2.5G	XC-VXL-2.5G cross-connect card
• FLD-OSC	
• VPP-MESH-4-1	
• VPP-MESH-4-2	
• VPP-MESH-4-3	
• VPP-MESH-4-4	
• VPP-MESH-8-1	
• VPP-MESH-8-2	
• VPP-MESH-8-3	
• VPP-MESH-8-4	
• VPP-MESH-8-5	
• VPP-MESH-8-6	
• VPP-MESH-8-7	
• VPP-MESH-8-8	
• AD-12-FS	Line Card
• ECU	
• MF-10AD-CFS	
• MF-16AE-CFS	
• MF-2MPO-ADP	

• MF-MPO-16LC	
• MF-PPMESH8-5AD	
• SMR20-FS	Line Card
• SMR9-17-FS	Line Card
• SMR9-24-FS	Line Card
• SMR9-34-FS	Line Card
• MR-MXP	

REPT PM <MOD2>

The Report Performance Monitoring for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, D1VIDEO, DS1, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, ETH, FSTE, G1000, GFPOS, GIGE, HDTV, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OC12, OC192, OC3, OC48, OCH, OMS, OTS, 10GFC, 8GFC,10GIGE,100GIGE,40GIGE,OC192,OTU1,OTU2,OTU3, OTU4, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, or VT2 (REPT PM <MOD2>) message reports autonomous monitoring statistics as a result of the schedule created by SCHED-PMREPT.

Usage Guidelines

Note Autonomous performance monitoring (Auto PM) report will have all PM paths reported without any filtering. If a particular parameter is not applicable to that card or circuit, then the value of MONVAL and VLDTY will be NA.

Category

Performance

Security

Retrieve

Output Format

```
    SID DATE TIME
A   ATAG REPT PM <MOD2>
    "<AID>:<MONTYPE>,<MONVAL>,<VLDTY>,<LOCN>,<DIRN>,<TMPER>,<MONDAT>,
    <MONTM>"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
A   100   REPT PM 10GFC
```

“FAC-3-1:CVL,10,PRTL,NEND,BTH,15-MIN,05-25,14-46”
;

Output Parameters

<AID>	Access identifier.
<MONTYPE>	Monitored type. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• 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 one tenth of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A—Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B—Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path

• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including frame check sequence [FCS] octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block

• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High-Order Path Negative Pointer Justification Count, Path Detected
• HP-NPJC-PGEN	High-Order Path, Negative Pointer Justification Count, Path Generated
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count, Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset

• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload cyclic redundancy check (CRC) errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in microA
• LBCL-MAX	Maximum Laser Bias current in microA
• LBCL-MIN	Minimum Laser Bias current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds—A
• LP-ESB	Low-Order Path Errored Seconds—B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated

• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in tenths of a microW
• OPR-MAX	Maximum Receive Power in tenths of a microW
• OPR-MIN	Minimum Receive Power in tenths of a microW
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in tenths of a microW
• OPT-MAX	Maximum Transmit Power in tenths of a microW
• OPT-MIN	Minimum Transmit Power in tenths of a microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• PRE-FECBER	Enum to hold PRE-FECBER value
• 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
• SASCPP	Severely Errored Framing/Alarm Indication Signal (SEF/AIS) Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point

• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	Forward Error Correction (FEC)—Uncorrectable Words
• VPC	Valid Packet Count
<MONVAL>	The value to which the register identified by MONTYPE is to be initialized to or the measured value of a monitored parameter. The value is in the form of numeric counts or rates. MONVAL is a string.
<VLDTY>	Indicates whether the information for the specified time period was accumulated over the entire time period or a portion of that time period. Validity indicator for the reported PM data. The parameter type is VALIDITY, which is the response validity.
• COMPL	Complete response
• PRTL	Partial response
<LOCN>	Location associated with a particular command in reference to the entity identified by the AID. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	Direction relative to the entity identified by the AID. Direction of PM relative to the entity identified by the AID. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
• TRMT	Transmit direction only
<TMPER>	Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24 hours. For SONET PM data only one day of history data is available. For RMON managed PM data seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.

• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.
<MONDAT>	The beginning date of the PM or storage register period specified in TMPER. The format is MM-DD. MONDAT is a string.
<MONTM>	The beginning time of day of the PM or storage register period specified in TMPER. The format is HH-MM. MONTM is a string.

REPT SW

The Report Switch (REPT SW) message 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 might be associated with the message.

Usage Guidelines

None

Category

Protection

Security

Retrieve

Output Format

```
    SID DATE TIME
A   ATAG REPT SW
    "<ACTID>,<STDBYID>"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
A   100.100 REPT SW
    "SLOT-8,SLOT-10"
;
```

Output Parameters	
<ACTID>	Identifies the equipment unit that was placed in the active state. Parameter grouping cannot be used with this parameter.
<STDBYID>	Identifies the equipment unit that was placed in the standby state. Parameter grouping cannot be used with this parameter.

Chapter 20: RLS Commands

This chapter provides release (RLS) commands for the Cisco NCS 2000 Series.

RLS-CPS

The Release Control Plane Service (RLS-CPS) command is used to deactivate a Control Plane Service parameter.

Usage Guidelines

- Specify only the source port to identify the CPS
- Specify both the source AIDs, if the CPS is of type ADD 2WAY
- If the AID is invalid, an IIAC (invalid AID) error message is returned
- The ALL AID is invalid for this command
- CLIENT cps type support FAC and VFAC AID type.
- TRUNK cps type support CHAN AID type.
- ADD cps type support CHAN, PCHAN, and LINEWL AID type.

Category

NCS

Security

Provisioning

Input Format

RLS-CPS:[<TID>]:<SRC>:<CTAG>::[:CKTID=<CKTID>][:];

Input Example

RLS-CPS::PCHAN-8-8-RX&PCHAN-8-8-TX:8::;

Input Parameters

<SRC>	Source AID.
<CKTID>	Circuit identification parameter can be used to filter this command

RLS-EXT-CONT

The Release External Control (RLS-EXT-CONT) command releases a forced contact state and returns the control of the contact to an AUTOMATIC control state.

Usage Guidelines

- In AUTOMATIC control state, the contact can be opened or closed depending on triggers that might or might not be provisioned in the NE. Therefore, issuing a 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.
- The duration is not supported; it defaults to CONTS.
- 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.
- 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.
- RLS-EXT-CONT cannot change the contact state to Automatic if the existing state is Manual Open.

Category

Environment

Security

Maintenance

Input Format

RLS-EXT-CONT:[<TID>]:<AID>:<CTAG>[::,];

Input Example

RLS-EXT-CONT:CISCO:ENV-OUT-2:123;

Input Parameters

<AID>	Access identifier. Identifies the external control being released.

RLS-LPBK-<MOD2NCSPAYLOAD>

The Release Loopback for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 4GFC, 2GFICON, 5GIB, 8GFC, CLNT, D1VIDEO, DS3I, DV6000, E1, E3, E4, ESCON, ETRCLO, ETH, EQPT, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, STM4, STM64, STM1, STM16, OCH, OMS, OTS, OTU3, POS, STM1E, 3GVIDEO, SDSDI, HDSDI, AUTO, OTU1, OTU2, OTU4, OTU4C2, ISC3STP1G, or ISC3STP2G (RLS-LPBK-<MOD2>) command releases a signal loopback on an I/O card or a cross-connect.

Usage Guidelines

The command supports the modifier 3GVIDEO, SDSDI, HDSDI, AUTO, OTU1, ISC3STP1G, and ISC3STP2G.

- The value CRS for the LPBKTYPE parameter is applicable only for the VC modifier. The FACILITY and TERMINAL values for LPBKTYPE parameter are applicable to the ports.

- The optional [<LPBKTYPE>] field defaults to the current existing loopback type.
- FEAC loopbacks can be released by specifying LINE as the loopback type and FEND as the location.
- FEAC loopbacks on the DS1 interface of a DS3XM card can be applied only if a Virtual Tributary (VT) connection has been created on it. An attempt to operate or release FEAC loopbacks in the absence of a VT connection will result in an error message.
- Only the following MOD2 fields are supported in this release: DS1 EC1, G1000, FSTE, OC12, OC192, OC3, OC48, OCH, T1, T3, STS1, STS12C, STS192C, STS24C, STS3C, STS36C, STS48C, STS6C, STS9C, E1, 1GFC, 2GFC, 4GFC, 10GFC, 1GFICON, 2GFICON, 4GFICON, GIGE, 10GIGE, ESCON, STS18C, DV6000, ETRCLO, ISCCOMPAT, ISC3PEER1G, ISC3PEER2R, PASSTHRU, ISC3PEER2G.
- RLS-LPBK-EQPT uses the backplane loopback type to unprovision the loopback provisioned.
- You can run the command even if the loopback type is not specified in the command.
- When the backplane loopback provisioned on the equipment is released, it unprovisions all the ports present on the equipment loopback.

Category
Troubleshooting and Test Access

Security
Maintenance

Input Format
RLS-LPBK-<MOD2>:[<TID>]:<SRC>:<CTAG>::[<LOCATION>],,,[<LPBKTYPE>];

Input Example
RLS-LPBK-3GVIDEO:PTREYES:VFAC-1-2-5-1:203::NEND,,,FACILITY;

RLS-LPBK-EQPT::SLOT-2:1::NEND,,,BACKPLANE-TERMINAL;

Table 20-1 Parameter Support

Parameter	Description
<SRC>	Source access identifier. The valid values for AID are FACILITY, DS1, and STS. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.
<LOCATION>	(Optional) The location where the operation is to be carried out. LOCATION defaults to NEND. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<LPBKTYPE>	(Optional) Type of loopback signal. The parameter type is LPBK_TYPE, which indicates the type of loopback that is to be operated or released.

• LINE	LINE
• PAYLOAD	PAYLOAD
• FE-CMD-ESF-PAYLOAD	FE-CMD-ESF-PAYLOAD
• BACKPLANE-FACILITY	Puts the 100G-LC-C, 10x10G-LC, and CFP-LC cards in facility loopback.
• BACKPLANE-TERMINAL	Puts the 100G-LC-C, 10x10G-LC, and CFP-LC cards in Terminal loopback.
• CRS	Path-level loopback that is established at the cross-connect matrix level. A VC level cross-connect loopback causes an AIS-P to be sent on the outgoing direction of transmission.
• FACILITY	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.
• TERMINAL	A loopback that connects the signal that is about to be transmitted (after scrambling but before the electrical-to-optical conversion) and is connected to the associated, incoming receiver.

RLS-LPBK-EFM

The Release Loopback Ethernet in the First Mile (RLS-LPBK-EFM) command releases the loopback that is provisioned on the Ethernet in the First Mile (EFM) enabled port.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Ports

Security

Provisioning

Input Format

RLS-LPBK-EFM:[<TID>]:<AID>:<CTAG>;

Input Example

RLS-LPBK-EFM::ETH-12-1-1:1;

Table 20-2 REP-LPBK-EFM Command - Parameter Support

Input Parameters	Description
<AID>	Access identifier.

RLS-MCH

The release of media channel (RLS-MCH).

Usage Guidelines

- Specify only the source port to identify the MCHG
- Specify both the source AIDs, if the MCHG is of type ADD 2WAY
- If the AID is invalid, an IIAC (invalid AID) error message is returned
- The ALL AID is invalid for this command
- CLIENT MCHG type support FAC and VFAC AID type.
- TRUNK MCHG type support CHAN AID type.
- ADD MCHG type support CHAN, PCHAN, and LINEWL AID type

Category

NCS

Security

Provisioning

Input Format

RLS-MCH:[<TID>]:<src>:<CTAG>::[:NAME=<NAME>][:];

Input Example

Input Parameters

<SRC>	Source access identifier. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.
< NAME>	Name of the Media Channel Group Name.

RLS-MCHG

The release of media channel group (RLS-MCHG).

Usage Guidelines

- Specify only the source port to identify the MCHG
- Specify both the source AIDs, if the MCHG is of type ADD 2WAY
- If the AID is invalid, an IIAC (invalid AID) error message is returned
- The ALL AID is invalid for this command
- CLIENT MCHG type support FAC and VFAC AID type.
- TRUNK MCHG type support CHAN AID type.
- ADD MCHG type support CHAN, PCHAN, and LINEWL AID type

Category

NCS

Security

Provisioning

Input Format

RLS-MCHG:[<TID>]:<src>:<CTAG>::[:NAME=<NAME>][:];

Input Example

Input Parameters

<SRC>	Source access identifier. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.
< NAME>	Name of the Media Channel Group Name.

RLS-PROTNSW-<MOD2NCSPAYLOAD>

The Release Protection Switch for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 8GFC, D1VIDEO, DV6000, DVBASI, ETRCLO, FSTE, GIGE, HDTV, ISC1, ISC3, OTU3, OTU4, PASSTHRU, 3GVIDEO, SDSDI, HDSDI, AUTO, OTU1, OTU4C2, ISC3STP1G, or ISC3STP2G (RLS-PROTNSW-<MOD2NCSPAYLOAD>) command releases a SONET line protection switch request.

Usage Guidelines

The command supports the modifier 3GVIDEO, SDSDI, HDSDI, AUTO, OTU1, ISC3STP1G, and ISC3STP2G.

Category

NCS

Security

Maintenance

Input Format

RLS-PROTNSW-<MOD2NCSPAYLOAD>:[<TID>]:<SRC>:<CTAG>[::];

Input Example

RLS-PROTNSW-3GVIDEO:CISCO:VFAC-1-1-1:100;

Input Parameters

<SRC>	Source access identifier. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.

RLS-PROTNSW-<PATH>

The Release Protection Switch for VC3, VC44C, VC464C, VC48C, VC4, VC412C, VC46C, VC416C, VC42C, VC43C, or VC11 (RLS-PROTNSW-<PATH>) command releases an NCS 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.

Usage Guidelines

- This command applies to subnetwork connection protection (SNCP) configurations only.
- The VTAID should be working or protect AID only.
- Sending this command on the Drop AID will return a DENY (Invalid AID, should use working/protect AID) message.
- Use the RTRV-COND-ALL or RTRV-ALM-ALL command to retrieve the protection switching state (manual, lockout, forced).

Category
Protection

Security
Maintenance

Input Format
RLS-PROTNSW-<PATH>:[<TID>]:<SRC>:<CTAG>[::];

Input Example
RLS-PROTNSW-VC3:CISCO:VC3-2-1-1:123;

Input Parameters

<SRC>	Source access identifier.

RLS-PROTNSW-<STM_TYPE>

The Release Protection Switch (STM1, STM4, STM16, STM64) command releases a protection switch request.

Usage Guidelines

- The release of a protection switch request is applicable only to the OPR-PROTNSW protection switch commands, the user-initiated switch protection commands.
- Use the RTRV-COND-ALL or RTRV-ALM-ALL command to retrieve the protection switching state (manual, lockout, forced).
- DIRN is an optional parameter. A NULL value defaults to BTH for a MS-SPRing protection, BTH for 1+1 bidirectional protection group, and RCV for 1+1 unidirectional protection group.

  DIRN follows these rules: TRMT will always fail for any kind of protection groups. For two-fiber and four-fiber MS-SPRing protection groups, both the RCV and TRMT directions will fail.
- DIRN is applicable for both 1+1 and MS-SPRing protection groups. OPR-PROTNSW applies to a MS-SPRing span/ring as shown by the following command:

  RLS-PROTNSW-STM16::FAC-5-1:A::BTH;

  This command instructs the NE to release a line protection switch request between a working line and a protection line.

The following actions will return error messages:

- This command is not used for the common control (TCC2, TCC2P, TCC3, XC-VXL-10G, XC-VXL-2.5G, or XC-VXC-10G) cards. Sending a command on a common control card will return an Input, Invalid Access Identifier (IIAC) error message. To switch common control cards, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
- Sending this command to non-NCS (STM) cards will return an Input, Invalid Access Identifier (IIAC) error message. To switch a non-NCS card, use the ALW-SWTOPROTN-EQPT, ALS-SWTOWKG-EQPT, INH-SWTOPROTN-EQPT, and INH-SWTOWKG-EQPT commands.

- Sending this command to query on a card that is not in a protection group will return the Status, Not in Valid State (SNVS) error message.
- Sending this command to a working card that is failed or missing will return the Status, Working Unit Failed (SWFA) error message.
- Sending this command to a protect card that is failed or missing will return the Status, Protection Unit Failed (SPFA) error message.
- Sending this command to a card that is not in protection will return the Status, Not in Protection State (SNPR) error message.
- Sending this command to an STM line that is already in clear mode will return an Already in Clear Maintenance State (SAMS) error message.

Category
Protection

Security
Maintenance

Input Format
RLS-PROTNSW-<STM_TYPE>:[<TID>]:<AID>:<CTAG>[::<DIRECTION>];

Input Example
RLS-PROTNSW-STM16:PETALUMA:FAC-6-1:209::BTH;

Table 20-3 Parameter Support

Parameter	Description
<AID>	Access identifier. Identifies the facility in the NE to which the switch request is directed.
<DIRECTION>	(Optional) Direction. Defaults to RCV. The parameter type is DIRECTION (transmit and receive direction).
• BTH	Both transmit and receive directions
• RCV	Receive direction only
• TRMT	Transmit direction only

RLS-PROTNSW-<OCN_TYPE>

The Release Protection Switch for OC3, OC12, OC48, OC192, or OC768 (RLS-PROTNSW-<OCN_TYPE>) command releases a SONET line protection switch request.

Usage Guidelines

The release of a protection switch request is applicable only to the OPR-PROTNSW protection switch commands, which are the user-initiated switch protection commands.

The following actions will return error messages:

- This command is not used for the common control (TCC2/TCC2P/TCC3 or XCVT/XC10G) cards. Sending a command on a common control card will return an IIAC (Input, Invalid Access Identifier) error message. To query the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
- Sending this command to electrical cards will return an IIAC (Input, Invalid Access Identifier) error message. For electrical card switching, use the ALW-SWTOPROTN/SWTOWKG-EQPT and INH-SWTOPROTN/SWTOWKG-EQPT commands.
- Sending this command to query on a card that is not in a protection group will return the SNVS (Status, Not in Valid State) error message.
- Sending this command to a working card that is failed or missing will return the SWFA (Status, Working unit Failed) error message.
- Sending this command to a protect card that is failed or missing will return the SPFA (Status, Protection unit Failed) error message.
- Sending this command to a card that is not in protection will return the SNPR (Status, Not in Protection State) error message.
- Sending this command to an OC-N line that is already in clear mode will return a SAMS (Already in Clear Maintenance State) error message.

  Note • To get the protection switching state (manual, lockout, forced), use the RTRV-COND-ALL or RTRV-ALM-ALL command.

- DIRN is an optional parameter. A NULL value defaults to BTH for a bidirectional line switched ring (BLSR), BTH for a 1+1 bidirectional protection group, and RCV for 1+1 unidirectional 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.

- 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;

  This command instructs the NE to release a line protection switch request between a working line and a protection line

Category

Protection

Security

Maintenance

Input Format

RLS-PROTNSW-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[::<DIRECTION>];

Input Example

RLS-PROTNSW-OC48:PETALUMA:FAC-6-1:209::BTH;

Input Parameters

<AID>	Access identifier. Identifies the facility in the NE to which the switch request is directed.
<DIRECTION>	Direction. Defaults to RCV. The parameter type is DIRECTION (transmit and receive direction)
• BTH	Both transmit and receive directions
• RCV	Receive direction only
• TRMT	Transmit direction only

RLS-PROTNSW-OCH

The Release Protection Switch Optical Channel (RLS-PROTNSW-OCH) command releases the protection switch on a TXPP_MR_2.5G card.

Usage Guidelines

None

Category

NCS

Security

Maintenance

Input Format

RLS-PROTNSW-OCH:[<TID>]:<AID>:<CTAG>;

Input Example

RLS-PROTNSW-OCH:VA454-22:CHAN-2-2:1;

Input Parameters

<AID>	Access identifier.

RLS-PROTNSW-ODU

This command clears switch for ODU.

Usage Guidelines

None

Category

NCS

Security

Maintenance

Input Format

RLS-PROTNSW-ODU:[<TID>]:<aid>:<CTAG>;

Input Example

RLS-PROTNSW-ODU::ODU-1-3-1-1-2-1:a:::BANDWIDTH=ODU2E;

vxTarget35 2017-07-21 04:55:53

M a COMPLD

;

Input Parameters

<AID>	Access identifier. ODU AID. Example ODU-1-5-11-1-1-1
<BANDWIDTH>	ENUM (Mandatory). ODU Level (ODU2E)

RLS-PROTNSW-OTS

The Release Protection Switch OTS (RLS-PROTNSW-OTS) command releases the protection switch on a TXPP_MR_2.5G card or a protection switch unit or a OTU2-XP card.

When Y-cable protection is provisioned on the OTU2-XP, this command releases a Y-cable protection switch.

Usage Guidelines

None

Category
NCS

Security
Maintenance

Input Format
RLS-PROTNSW-OTS:[<TID>]:<AID>:<CTAG>;

Input Example
RLS-PROTNSW-OTS:VA454-22:CHAN-2-2:1;

Input Parameters

<AID>	Access identifier.

RLS-SYNCNSW

The Release Synchronization Switch (RLS-SYNCHSW) command releases the previous synchronization reference provided by the OPR-SYNCNSW command.

Usage Guidelines
In a nonrevertive system, the use of the RLS-SYNCNSW command might not be appropriate. All the switching between synchronization references should be initiated with the OPR-SYNCNSW command.

After a switch is released, a minor alarm, Manual Switch to Primary Reference or Secondary (MANSWTOPRI) or Forced Switch to Primary Reference or Secondary (FRDCSWTOPRI), will be cleared.

Category
Synchronization

Security
Maintenance

Input Format
RLS-SYNCNSW:[<TID>]:[<AID>]:<CTAG>;

Input Example
RLS-SYNCNSW:CISCO:SYNC-NE:3;

Input Parameters	
<AID>	(Optional) Access identifier. Defaults to SYNC-NE.

Chapter 21: RMV Commands

This chapter provides remove (RMV) commands for the Cisco NCS 2000 Series.

RMV-<MOD2>

The Remove 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 5GIB, 8GFC, CLNT, D1VIDEO, DS1, DV6000, DVBASI, E1, E3, E4, EC1, ESCON, ETRCLO, ETH, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OC12, OC192, OC3, OC48, OC768, OCH, OMS, OTS, OTU3, OTU4, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, VT2, 3GVIDEO, SDSDI, HDSDI, AUTO, OTU1, OTU4C2, ISC3STP1G, or ISC3STP2G (RMV-<MOD2>) command removes a facility from service.

Usage Guidelines

The command supports the modifier 3GVIDEO, SDSDI, HDSDI, AUTO, OTU1, ISC3STP1G, and ISC3STP2G.

Category

Ports

Security

Maintenance

Input Format

RMV-<MOD2>:[<TID>]:<AID>:<CTAG>[::];

Input Example

RMV-OTU1:ROCCIANERA:VFAC-14-3-1:123;

Input Parameters

<AID>	Access identifier. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.

RMV-EQPT

The Remove Equipment (RMV-EQPT) command removes equipment from the In Service state and places it into the Maintenance state.

Usage Guidelines

This command is applicable only to equipment that is in transition from the In-Service state to the Maintenance state.

Note This command can be executed only if the equipment is in the unlocked, unlocked-disabled,mismatchOfequipment or unlocked-disabled,notInstalled state.

Category
Equipment

Security
Maintenance

Input Format
RMV-EQPT:[<TID>]:<AID>:<CTAG>[::];

Input Example
RMV-EQPT:CISCO:SLOT-1:1;

Input Parameters

<AID>	Access identifier.

Chapter 22: RST Commands

This chapter provides restore (RST) commands for the Cisco NCS 2000 Series.

RST-<MOD2>

The Restore 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 5GIB, 8GFC, CLNT, D1VIDEO, DS1, DV6000, DVBASI, E1, E3, E4, EC1, ESCON, ETRCLO, ETH, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OC12, OC192, OC3, OC48, OC768, OCH, OMS, OTS, OTU3, OTU4, OTU4C2, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, VT2, 3GVIDEO, SDSDI, HDSDI, AUTO, OTU1, ISC3STP1G, or ISC3STP2G (RST-<MOD2>) command provisions a facility as In-Service (IS).

Usage Guidelines

The command supports the modifier 3GVIDEO, SDSDI, HDSDI, AUTO, OTU1, ISC3STP1G, and ISC3STP2G.

Note	This command can only be executed when the port is in the Out of Service and Maintenance (OOS,MT) state.

Category

Ports

Security

Maintenance

Input Format

RST-<MOD2>:[<TID>]:<AID>:<CTAG>::::[<PST>[,<SST>]];

Input Example

RST-OTU1:ROCCIANERA:VFAC-14-3-1:123::::IS,AINS;

Input Parameters

<AID>	Access identifier. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.
<PST>	Primary state. Defaults to IS. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. Defaults to AINS. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.

• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RST-EQPT

The Restore Equipment (RST-EQPT) command provisions equipment into the IS state from the Maintenance (MT) state.

Usage Guidelines

This command is only applicable to equipment that is in transition from the Maintenance state to the In-Service state.

Category

Equipment

Security

Maintenance

Input Format

RST-EQPT:[<TID>]:<AID>:<CTAG>[::];

Input Example

RST-EQPT:CISCO:SLOT-1:1;

Input Parameters

<AID>	Access identifier.

RST-NE-DEFAULT

Description
Reset NE to Default Values and clears the Database

Usage Guidelines
- No AID
- This command can be given only by Super User

Category
NCS

Security
Maintenance

Input Format
RST-NE-DEFAULT:[<TID>]::<CTAG>;

Input Example
RST-NE-DEFAULT:::1;

Input Parameters

Parameter	Description
None	

Output Format
None

Output Example
> RST-NE-DEFAULT:::1;

NE123 2014-07-14 02:07:08

```
M    1 COMPLD
;
```

Chapter 23: RTRV Commands

This chapter provides retrieve (RTRV) commands for the Cisco NCS 2000 Series.

RTRV-AAASERVERAUTH

This command is used to retrieve the information about Authentication/RADIUS/TACACS server.

Usage Guidelines

The server information is available only when the TACAC server is not configured using TL1 interface.

Category

System

Security

Provisioning

Input Format

RTRV-AAASERVERAUTH:[<TID>]::<CTAG>;

Input Example

RTRV-AAASERVERAUTH:::1;

Output Parameters

<AUTHTYPE>	Possible values are: • NO-REMOTE-SERVER • RADIUS-SERVER • TACACS-SERVER
<ENABLEAUTH>	Possible values are: • Y • N
<FINALAUTH>	Possible values are: • Y • N

<ENABLERADIUSACCT> Possible values are:

- Y
- N

RTRV-ACL

This command can be used to retrieve the ACL list for fetching the host IP addresses and the configured ACL list.

Usage Guidelines

- Used to fetch the host IP addresses from the ACL list.
- This command accepts the ALL AID to retrieve the all the configured ACL IP addresses.
- Use IP address as AID to retrieve a particular ACL-authenticated node.

Category
System

Security
provisioning

Input Format:
RTRV-ACL:::1:::;

N-6 2023-01-08 16:39:31
M 1 COMPLD
"ISACLENABLE=N"
"IPADDR=10.64.107.166,"
"IPADDR=10.64.107.23,"
"IPADDR=10.64.105.1,"
"IPADDR=2001:db8:3333:4444:5555:6666:7700:0,"
"IPADDR=2001:db8:3333:4444:5555:6666:7777:8888,"
"IPADDR=2001:db8:3333:4444:5555:6666:7777:22,"
"IPADDR=2001:420:c0e0:1006::619,";

RTRV-100GIGE

The retrive 100GIGE (RTRV-100GIGE) command retrieves the attributes of provisioned 100GIGE facility.

Usage Guidelines
The new parameter NUMOFLANESis added for payloads provisioned on CFP-LC cards.

Category
Ports

Security

Input Format
RTRV-100GIGE:[<TID>]:<AID>:<CTAG>[::::];

Input Example
RTRV-100GIGE::VFAC-5-1-1:1;

Input Parameters

<AID>	Access Identifier • VFAC[-{1-50}]-{2-7}-{1-2}-1 • AGGR[-{1-50}]-{2-7}-{1-2}-1 • VCFAC[-{1-50}]-{2-7}-{1-2}

Output Format
SID DATE TIME
M CTAG COMPLD
"<AID>:,,[<ROLE>],[<STATUS>]:[<MTU>],[NAME=<NAME>],[MACADDR=<MACADDR>],[LBCL=<LBCL>],[OPT=<OPT>],[OPR=<OPR>],[FREQ=<FREQ>],[LOSSB=<LOSSB>],[<SOAK>],[<SYNCMSG>],[<SENDDUS>],[<ADMSSM>],[<PROVIDESYNC>],[ALARMSUPPRESS=<ALARMSUPPRESS>],[<SQUELCHMODE>]:<PST>,[<SST>]"
;

Output Example
100g 2012-05-21 12:11:02

M 1 COMPLD

"VFAC-1-3-1-1:,,WORK,STBY:SOAK=32,SYNCMSG=N,SENDDUS=N,ADMSSM=STU,PROVIDESYNC=N,NUMOFLANES=4:OOS-MA,DSBLD"

Output Parameters	
<AID>	Access Identifiers • VFAC[-{1-50}]-{2-7}-{1-2}-1 • AGGR[-{1-50}]-{2-7}-{1-2}-1
<ROLE>	(Optional) The port role in a Y-cable protection scheme. The parameter type is SIDE, which is the role the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	(Optional) The port status in a Y-cable protection scheme. The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<SOAK>	(Optional) Locked-Automatic In Service to Unlocked transition soak time as measured in 15-minute intervals. SOAK is an integer. Default value is 32. It can be set through ED command.
<SYNCMSG>	(Optional) Synchronization status message. The parameter type is EXT_RING, which indicates if the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<SENDDUS>	(Optional) The facility will send the Do Not Use for Synchronization (DUS) value in 0x0f bit pattern as the synchronization status message for that facility. Defaults to N. The parameter type is ON_OFF (disable or enable an attribute)
• N	Disable an attribute.
• Y	Enable an attribute.
<ADMSSM>	(Optional) SSM selectable value. Only displayed when SSM is disabled. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS_SDH	Do Not Use For Synchronization
• G811	G811 Standard

• RES_SDH	Reserved For Network Synchronization Use
• G812T	G812T Standard
• STU_SDH	Synchronized, Traceability Unknown
• G812TL	G812TL Standard
• SETS	Synchronous Equipment Timing Source
<PROVIDESYNC>	(Optional) Indicates whether the facility provides synchronization. Defaults to N.
• Y	Yes
• N	No
<ALARMSUPPRESS>	It is an enum which has the values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress
<NUMOFLANES>	Identifies the number of sublanes provisioned on the main Aggregate port. Values are 1 or 4.

RTRV-CPS

This command can be used to retrieve Control Plane Service circuit main PATH. The user needs to specify only the source port to identify the CPS. ALL and group AID are allowed.

- If the AID is invalid, an IIAC (invalid AID) error message is returned
- The ALL AID and group AID are valid for this command
- In case of ADD 2-WAY with two source AIDs use only one aid to avoid a double response: one for each AID specified
- CLIENT cps type support FAC and VFAC AID type.
- TRUNK cps type support CHAN AID type.
- ADD cps type support CHAN, PCHAN, and LINEWL AID type.
- In case of 1WAY, unidirectional connection, SRC and DST are single AIDs. In case of 2WAY, bidirectional connection, SRC and DST are double AIDs. However, in case of CLIENT or TRUNK cpstype, src and dst are single AID and the connection is of type 2WAY because of bidirectional ports hence this rule is not applicable.
- Commands are sent after the circuit is created.

Category
DWDM

Security
provisioning

Input Format
RTRV-CPS:[<TID>]:<SRC>:<CTAG>::[:CKTID=<CKTID>][:];

Input Example
RTRV-CPS::PCHAN-1-1-RX:8::;

Input Parameters

<SRC>	Source AID from the "28.12 CrossConnectId1" section on page 28-31.
<CKTID>	Circuit identification parameter can be used to filter this command

Output Format
SID DATE TIME

M CTAG COMPLD

"

<SRCAID>:<DSTADDR>,<DSTAID>,<WCT>,<CPSTYPE>:<CKTID>,[<VALMODE>],[<VAL-ZONE>],[<VALMODESEC>],[<VALZONESEC>],[<CPSSTATUS>],[<ACTVALZONE>],[<RESTTYPE>],[<REVERT-MODE>],[<SOAKTIME>],[<RESTSTS>],[<CKTLABEL>],[<FREQ>],[<WIDTH>],[<CKTPRI>],[<AL-WRGN>],[<PATHPOLICY>],[<DNSTRMPWR>],[<UPSTRMPWR>],[<WSONVER>],[<SERVICEID>],[<LASTAC-TION>],[<NODEID>],[<ISUNI>],[<UNICTRLMODE>],[<RESTVALMODE>]:[<RESTVALZONE>], [<PST>]

Response for flex-
"<SRCAID>:<DSTADDR>,<DSTAID>,<WCT>,<CPSTYPE>:<CKTID>,[<VALMODE>],[<VALZONE>],[<VALMODESEC>],[<VALZONESEC>],[<CPSSTATUS>],[<ACTVALZONE>],[<RESTTYPE>],[<REVERTMODE>],[<SOAKTIME>],[<RESTSTS>],[<CKTLABEL>],[<FREQ>],[<WIDTH>],[<CKTPRI>],[<ALWRGN>],[<PATHPOLICY>],[<DNSTRMPWR>],[<UPSTRMPWR>],[<WSONVER>],[<LSPDIVERSITY>]:[<PST>],[<SST>]"
;

Output Example
tcc232 2011-08-05 16:37:44

M 8 COMPLD “CHAN-4-2:10.64.107.36,CHAN-7-2,1WAY,ADD:CKTID=,VALMODE=NONE,CPSSTATUS=INACTIVE,RESTTYPE=NONE,RESTSTATUS=NONE:OOS,DSBLD”

;

M_ 1 COMPLD

“LINE-1-2-13-RX:10.10.1.101,LINE-1-4-1-TX,1WAY,ADD:CKTID=CKT-01,VALMODE=FULL,VALZONE=GREEN,CPSSTATUS=INACTIVE,ACTVALZONE=UNKNOWN,RESTTYPE=NONE,RESTSTATUS=NONE,CKTLABEL=\"CKT01\",FREQ=195851.00,CKTPRIORITY=0,ALLOWRGN=N,PATHPOLICY=ANY,DSPWROFS=0.0,USPWROFS=0.0,SIGNALTYPE=UPGRADED:IS,”

rtrv-cps::All:1;

BH-Site2 2021-03-19 14:20:00
M 1 COMPLD
"PSLINE-2-2-16-RX&PSLINE-2-2-16-TX:10.58.229.21,PSLINE-2-2-16-TX&PSLINE-2-2-16-RX,2WAY,ADD:CKTID=\"OCHNC\",VALMODE=FULL,VALZONE=RED,CPSSTATUS=ACTIVE,ACTVALZONE=GREEN,RESTTYPE=REVERT,REVERTMODE=AUTO,SOAK=00-01-00,RESTSTATUS=NONE,CKTLABEL=\"a0788ae0_0262\",FREQ=196100.00,WIDTH=50.00,CKTPRIORITY=0,ALLOWRGN=N,PATHPOLICY=ANY,DSPWROFS=0.0,USPWROFS=0.0,SIGNALTYPE=UPGRADED,LSPDIVERSITY=/PSLINE-2-2-15-RX&PSLINE-2-2-15-TX,SERVICEID=610,LASTACTIONSTATUS=Success,NODEID=A0788AE0,ISUNI=NO,UNICTRLMODE=CLIENT,RESTVALMODE=NONE,PREFFREQ=0.00,DIVERSITYTYPE=LINK,ISLOOSE=TRUE,REQDFREQ=0.00,PROVREQDFREQ=AUTOPROV,PROVPREFFREQ=UNKNOWN,PROTTYPE=NONE,WRKTRAILSRVID=0,DIVERSITYVAL=114/NODE/N&613/LINK/Y,LOOSEDIVERSITYVIOLATION=TRUE,MAINCONSTRAINT=TRUE:IS,

Output Parameters

<SRC>	Source access identifier from the “28.1 ALL” section on page 28-1. Listable.
<DSTADDR>	Identifies the destination node IP address.
<DST>	Destination AID from the “28.1 ALL” section on page 28-1.
<WCT>	Identifies the wavelength connection type.
• 1WAY	A unidirectional connection from a source to a destination port. Deafult is 1WAY
• 2WAY	A bidirectional connection between the two ports.
<CPSTYPE>	Identifies the type of CPS.
• CLIENT	CPS End Point are client ports
• TRUNK	CPS End Point are trunk ports
• ADD	CPS Source End Point is an ADD port

• DROP	Not applicable
• TNA	Not applicable
<CKTID>	(Optional) Circuit identification parameter contains the Common Language Circuit ID or other alias of the circuit being provisioned. Does not contain blank spaces. CKTID is a string of ASCII characters. The maximum length of CKTID can be 48.
<VALMODE>	Identifies the validation mode.
• NONE	No Optical validation is performed.
• FULL	The optical validation is performed as indicated in VALZONE parameter.
• INHERITED	The VALMODE and VALZONE parameters for the restoration path are inherited from the original path.
<VALZONE>	Identifies the validation operate zone.
• UNKNOWN	Not evaluated
• GREEN	Margin > 3 sigma
• YELLOW	1 < margin < 3 sigma
• ORANGE	0 < margin < 1 sigma
• RED	-3 < margin < 0 sigma
• OUT	Margin < -3 sigma
<CPSSTATUS>	Specifies the CURRENT status of the circuit.
• INACTIVE	There is no valid path for creating the circuits due to frequency or wavelength not available, inconsistent constraints, optical validation failure, etc. Note: This is also the initial state (after ENT-CPS) before OPR is requested. It is not considered an error as there are errors only if it is INACTIVE after an OPR.
• ACTIVE	Circuit is successfully working, cross corrections are created and path is available.
• ACTIVATING	CPS activation is started
• DEACTIVATING	CPS deactivation is started
• FAILED	CPS circuit failed (i.e. link down, node down)
• DEGRADED	CPS trail failed (i.e. PSM working or protected is down or fail)

• RECOVERING	Temporary reboot status at CPS restart
• HANDOVER	The circuit is configured to be upgraded from non-WSON to WSON through an OPR operation. **Note**: The status is the initial configuration. If the OPR is successful, the circuit turns to the ACTIVE state.
• REPAIRING	CPS repair is started (i.e. node IP changed)
• RELEASING	A downgrade from WSON to non-WSON circuit has been requested and the action is running. **Note:** If the release is successful, the circuit goes to the HANDOVER state.
<ACTVALZONE>	Identifies the actual validation operate zone.
• UNKNOWN	Not evaluated
• GREEN	Margin > 3 sigma
• YELLOW	1 < margin < 3 sigma
• ORANGE	0 < margin < 1 sigma
• RED	-3 < margin < 0 sigma
• OUT	Margin < -3 sigma
<VALMODESEC>	Identifies the validation mode for secondary circuit
<VALZONESEC>	Identifies the validation operate zone for secondary circuit
<<RESTTYPE>>	Specifies the restoration type on CPS circuit or UNI configuration. Parameter type is RESTTYPE.
• NONE	The restoration option is not enabled.
• RESTORE	The circuit switches from the original path to an alternate path because of failure in the original path, but it doesn't return to the original path if the failure is fixed in the original path.
• REVERT	Restoration is enabled, and manual or auto revert mode is set. • AUTO: Automatically reverts the circuit from the restored path to the original path after the failure is fixed, WSON alarms are acknowledged, and the soak time expires. • MANUAL: Manually reverts the circuit from the restored path to the original path after the failure is fixed, the WSON alarms are acknowledged, and the soak time expires.

< RESTSTS>	Specifies the restoration status. Parameter type is RESTSTS.
• FAILED	Restoration failed.
• NONE	The circuit is in the original path or the RESTTYPE is NONE (not enabled).
• RESTORED	The circuit is restored.
• RESTORING	The circuit is in restoring state.
• REVERTIBLE	The circuit is revertible.
• REVERTING	The circuit is reverting back to the original path.
<REVERTMODE>	Specifies the revertive mode type. Paraneter type is REVERTMODE.
• AUTO	Restoration is enabled with the auto revert option. See RESTTYPE REVERT AUTO option.
• MANUAL	Restoration is enabled with the manual revert option. See RESTTYPE REVERT MANUAL option.
• NONE	Restoration is not enabled.
<SOAKTIME>	Time after which the circuit switches back to the original circuit.
<PATHPOLICY>	Path selection policy.
• ANY	No path selection policy selected.
• LOGO	Path selection policy restricted to LOGO domain.
<CKTLABEL>	Circuit label.
<FREQ>	Optical wavelength
<WIDTH>	Width
<CKTPRIORITY>	Circuit priority
<ALLOWRGN>	Allow RGN. It can be ON/OFF.
<DSPWROFS>	Down stream power offset.
<USPWROFS>	Up stream power offset.
<SIGNALTYPE>	Specifies the signal type.
• LEGACY	Legacy circuit type.
• UPGRADEABLE	Circuit is upgradeable.

• UPGRADED	Circuit is upgraded.
<WSONVER>	This is the signaling mode in use.
• LEGACY	Two directional RSVP LSP are used (upstream/downstream).
• UPGRADEABLE	Current signaling is LEGACY but the nodes release in the path supports the upgraded version (there is an action to upgrade the signaling mode).
• UPGRADED	A single bidirectional RSVP LSP is used.
<LASTACTIONSTATUS>	Last status of WSON operation.
• ABORTED	Operation is aborted.
• FAILED	Operation is failed.
• RUNNING	Operation is in progress.
• SUCCESS	Operation went successful.
• UNKNOWN	Unknown status.
<DIVERSITYVAL>	This parameter is a combination of three values, which are Service ID, Diversity type and ISLOOSE (Example: 1531/SRLG/Y&1533/NODE/N) In the above example, there are two entries where • The first value is the serviceID, which is unique at the node level. • The second value is the Diversity type, which is one of the following values: LINK NODE SRLG • The third value is ISLOOSE flag. The flag value is Y for LOOSE and N for not LOOSE (STRICT).
<ISLOOSE>	Indicates if the required diversity is LOOSE (TRUE) or STRICT (FALSE).
<DIVERSITYTYPE>	The parameter takes one of the following values: NONE LINK NODE SRLG
<LSPDIVERSITY>	The source identifier of the diversified circuit, Example (CHAN-1-2-2)

<LOOSEDIVERSITYVIOLATION>	Indicates if the required diversity is LOOSE (TRUE) or STRICT (FALSE).

RTRV-CPSPATH

Description

This command can be used to retrieve Control Plane Service circuit PATH. The user needs to specify only the source port to identify the CPS. ALL and group AID are allowed.

Usage Guidelines

- If the AID is invalid, an IIAC (invalid AID) error message is returned
- The ALL AID and group AID are valid for this command
- In case of ADD 2-WAY with two source AIDs use only one aid to avoid a double response: one for each AID specified
- CLIENT cps type support FAC and VFAC AID type.
- TRUNK cps type support CHAN AID type.
- ADD cps type support CHAN, PCHAN, and LINEWL AID type.
- In case of 1WAY, unidirectional connection, SRC and DST are single AIDs.
- In case of 2WAY,bidirectional connection, SRC and DST are double AIDs. However, in case of CLIENT or TRUNKcpstype, src and dst are single AID and the connection is of type 2WAY because of bidirectional ports hence this rule is not applicable.
- Commands are sent after the circuit is created.

Category

NCS

Security

Maintenance

Input Format

RTRV-CPSPATH:[<TID>]:<aid>:<CTAG>[::::];

InputParameter

Parameter	Description

<AID>	Source access identifier from the “27.1 ALL” section on page 27-1. Listable.

Output Format

SID DATE TIME
M CTAG COMPLD
“<SRCAID>:<DSTADDR>,<DSTAID>,<CKTID>,[<ROUTE>]:<PST>,[<SST>]”;

Output Example

rtrv-cpspath::all:1;

NE123 2014-06-30 03:18:58
M 1 COMPLD
"CHAN-2-3-3-1:10.64.107.168,CHAN-2-3-3-1,CKTID=TRAIL-test,**ROUTE=10.64.107.123/A,10.64.107.168/A**:OOS,DSBLD"
"VFAC-2-3-1-1:10.64.107.168,VFAC-2-3-1-1,CKTID=test,**ROUTE=10.64.107.123/A,10.64.107.168/A**:OOS,DSBLD"
"LINE-1-2-13-RX:10.10.1.101,LINE-1-4-1-TX,CKTID=CKT-01,**ROUTE=NONE**:IS,"

Output Parameters

Parameter	Description
<SRC>	Source access identifier from the “27.1 ALL” section on page 27-1. Listable.
<DSTADDR>	Identifies the destination node IP address.
<DST>	Destination AID from the “27.1 ALL” section on page 27-1.
<CKTID>	(Optional) Circuit identification parameter contains the Common Language Circuit ID or other alias of the circuit being provisioned. Does not contain blank spaces. CKTID is a string of ASCII characters. The maximum length of CKTID can be 48.
<ROUTE>	(Optional) CPS Route- Format is “IPAddress/Side Identifier”. If there is no Route, the “NONE” would be displayed
For PST and SST	Please take it from other commands.

RTRV-CPSPROTECTPATH

This command can be used to retrieve Control Plane Service circuit protect PATH. The user needs to specify only the source port to identify the CPS. ALL and group AID are allowed.

Usage Guidelines

- If the AID is invalid, an IIAC (invalid AID) error message is returned
- The ALL AID and group AID are valid for this command
- In case of ADD 2-WAY with two source AIDs use only one aid to avoid a double response: one for each AID specified
- CLIENT cps type support FAC and VFAC AID type.
- TRUNK cps type support CHAN AID type.
- ADD cps type support CHAN, PCHAN, and LINEWL AID type.
- In case of 1WAY, unidirectional connection, SRC and DST are single AIDs. In case of 2WAY, bidirectional connection, SRC and DST are double AIDs. However, in case of CLIENT or TRUNK cpstype, src and dst are single AID and the connection is of type 2WAY because of bidirectional ports hence this rule is not applicable.

Category

DWDM

Security

provisioning

Input Format:

RTRV-CPSPROTECTPATH:[<TID>]:<AID>:<CTAG>[::::];

Output Format:

SID DATE TIME
M CTAG COMPLD
"<SRCAID>:[<DSTADDR>],[<DSTAID>],[CKTID=<CKTID>],[ROUTE=<ROUTE>]:[<PST>],[<SST>]"
;

Output Example:

```
> rtrv-cpsprotectpath::all:a;
    Sun 52-40WXC-I-O 2015-03-24 01:39:21
M   a COMPLD
    "FAC-4-12-2-1:10.64.107.58,FAC-5-6-2-1,CKTID=\"adamello1\",ROUTE=NONE:unlocked,"
    "CHAN-4-12-9:10.64.107.58,CHAN-5-6-9,CKTID=\"OCHTRAIL_Sun 52-40WXC-I-O_50\",ROUTE=NONE:unlocked,"
    "FAC-4-14-2-1:10.64.107.58,FAC-5-7-2-1,CKTID=\"adamello2\",ROUTE=NONE:unlocked,"
    "CHAN-4-14-9:10.64.107.58,CHAN-5-7-9,CKTID=\"OCHTRAIL_Sun 52-40WXC-I-O_54\",ROUTE=NONE:unlocked,"
```

"CHAN-50-6-9:10.64.107.58,CHAN-2-5-9,CKTID=\"OCHTRAIL_Sun 52-40WXC-I-O_57\",ROUTE=10.64.107.52/A&10.64.107.59/B&10.64.107.59/A&10.64.107.54/B&10.64.107.54/A&10.64.107.58/B:unlocked,"

Output Parameters

<SRCAID>	Access identifier from the "28.15 EQPT" section on page 28-39
<DSTADDR>	Identifies the destination node IP address.
<DSTAID>	Destination AID from the "28.1 ALL" section on page 28-1.
<CKTID>	Circuit identification parameter can be used to filter this command
<ROUTE>	Identifies the target circuit route. Allowed values are MAINROUTE, BRIDGEROUTE.
<PST>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by primary state (PST) and primary state qualifier (PSTQ).
• IS	In Service
• OOS	Out of Service
• IS_SDH	In Service SDH
• OOS_SDH	Out Of Service SDH
• NONE	None
<SST>	Secondary state of the entity. The parameter type is secondary state(SST) which provides additional information pertaining to PST and PSTQ
• AINS	Automatic In-Service
• MT	Maintenance

• DSBLD	Disabled
• OOG	Out of Group
• AINS_HIGH	Automatic In-Service HIGH
• MT_SDH	Maintenance SDH
• DSBLD_SDH	Disabled SDH
• OOG_SDH	Out of Group SDH
• NONE	NONE

RTRV- CPSPROTECTRESTPATH

This command can be used to retrieve Control Plane Service circuit Protect Restored PATH. The user needs to specify only the source port to identify the CPS. ALL and group AID are allowed.

Usage Guidelines

- If the AID is invalid, an IIAC (invalid AID) error message is returned
- The ALL AID and group AID are valid for this command
- In case of ADD 2-WAY with two source AIDs use only one aid to avoid a double response: one for each AID specified
- CLIENT cps type support FAC and VFAC AID type.
- TRUNK cps type support CHAN AID type.
- ADD cps type support CHAN, PCHAN, and LINEWL AID type.
- In case of 1WAY, unidirectional connection, SRC and DST are single AIDs. In case of 2WAY, bidirectional connection, SRC and DST are double AIDs. However, in case of CLIENT or TRUNK cpstype, src and dst are single AID and the connection is of type 2WAY because of bidirectional ports hence this rule is not applicable.

Category

DWDM

Security

provisioning

Input Format:

RTRV-CPSPROTECTRESTPATH:[<TID>]:<aid>:<CTAG>[::::];

Output Format:

SID DATE TIME

M CTAG COMPLD

"<SRCAID>:[<DSTADDR>],[<DSTAID>],[CKTID=<CKTID>],[ROUTE=<ROUTE>]:[<PST>],[<SST>]"

;

Output Format:

> rtrv-cpsprotectrestpath::all:a;

Sun 52-40WXC-I-O 2015-03-24 01:39:21

M a COMPLD

"FAC-4-12-2-1:10.64.107.58,FAC-5-6-2-1,CKTID=\"adamello1\",ROUTE=NONE:unlocked,"

"CHAN-4-12-9:10.64.107.58,CHAN-5-6-9,CKTID=\"OCHTRAIL_Sun 52-40WXC-I-O_50\",ROUTE=NONE:unlocked,"

"FAC-4-14-2-1:10.64.107.58,FAC-5-7-2-1,CKTID=\"adamello2\",ROUTE=NONE:unlocked,"

"CHAN-4-14-9:10.64.107.58,CHAN-5-7-9,CKTID=\"OCHTRAIL_Sun 52-40WXC-I-O_54\",ROUTE=NONE:unlocked,"

"CHAN-50-6-9:10.64.107.58,CHAN-2-5-9,CKTID=\"OCHTRAIL_Sun 52-40WXC-I-O_57\",ROUTE=10.64.107.52/A&10.64.107.59/B&10.64.107.59/A&10.64.107.54/B&10.64.107.54/A&10.64.107.58/B:unlocked,"

;

Output Parameters

<SRCAID>	Access identifier from the "28.15 EQPT" section on page 28-39
<DSTADDR>	Identifies the destination node IP address.
<DSTAID>	Destination AID from the "28.1 ALL" section on page 28-1.
<CKTID>	Circuit identification parameter can be used to filter this command
<ROUTE>	Identifies the target circuit route. Allowed values are MAINROUTE, BRIDGEROUTE.
<PST>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by primary state (PST) and primary state qualifier (PSTQ).
• IS	In Service

• OOS	Out of Service
• IS_SDH	In Service SDH
• OOS_SDH	Out Of service SDH
• NONE	None
<SST>	Secondary state of the entity. The parameter type is secondary state(SST) which provides additional information pertaining to PST and PSTQ
• AINS	Automatic In-Service
• MT	Maintenance
• DSBLD	Disabled
• OOG	Out of Group
• AINS_HIGH	Automatic In-Service HIGH
• MT_SDH	Maintenance SDH
• DSBLD_SDH	Disabled SDH
• OOG_SDH	Out of Group SDH
• NONE	NONE

RTRV- CPSRESTPATH

This command can be used to retrieve Control Plane Service restored PATH parameter. The user needs to specify only the source port to identify the CPS. ALL and group AID are allowed.

Usage Guidelines

- If the AID is invalid, an IIAC (invalid AID) error message is returned
- The ALL AID and group AID are valid for this command
- In case of ADD 2-WAY with two source AIDs use only one aid to avoid a double response: one for each AID specified
- CLIENT cps type support FAC and VFAC AID type.
- TRUNK cps type support CHAN AID type.
- ADD cps type support CHAN, PCHAN, and LINEWL AID type.
- In case of 1WAY, unidirectional connection, SRC and DST are single AIDs. In case of 2WAY, bidirectional connection, SRC and DST are double AIDs. However, in case of CLIENT or TRUNK cpstype, src and dst are single AID and the connection is of type 2WAY because of bidirectional ports hence this rule is not applicable.

Category

DWDM

Security

provisioning

Input Format:

RTRV-CPSRESTPATH:[<TID>]:<AID>:<CTAG>[::::];

Output Format:

SID DATE TIME
M CTAG COMPLD
"<SRCAID>:[<DSTADDR>],[<DSTAID>],[CKTID=<CKTID>],[ROUTE=<ROUTE>]:[<PST>],[<SST>]"
;

Output Example:

```
rtrv-cpsrestpath::all:a;
    Sun 52-40WXC-I-O 2015-03-24 01:37:01
M   a COMPLD
    "FAC-4-12-2-1:10.64.107.58,FAC-5-6-2-1,CKTID=\"adamello1\",ROUTE=NONE:unlocked,"

    "FAC-4-14-2-1:10.64.107.58,FAC-5-7-2-1,CKTID=\"adamello2\",ROUTE=NONE:unlocked,"
    "CHAN-4-14-9:10.64.107.58,CHAN-5-7-9,CKTID=\"OCHTRAIL_Sun 52-40WXC-I-O_54\",ROUTE=NONE:unlocked,"
    "VFAC-50-5-1-1:10.64.107.58,VFAC-4-4-1-1,CKTID=\"splitter\",ROUTE=NONE:unlocked,"
    "VFAC-50-5-5-1:10.64.107.58,VFAC-4-4-5-1,CKTID=\"OCHTRAIL_Sun 52-40WXC-I-O_59\",ROUTE=NONE:un-
locked,"
```

Output Parameters	
<SRCAID>	Access identifier from the "28.15 EQPT" section on page 28-39
<DSTADDR>	Identifies the destination node IP address.
<DSTAID>	Destination AID from the "28.1 ALL" section on page 28-1
<CKTID>	Circuit identification parameter can be used to filter this command
<ROUTE>	Identifies the target circuit route. Allowed values are MAINROUTE, BRIDGEROUTE.
<PST>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by primary state (PST) and primary state qualifier (PSTQ).
• IS	In Service
• OOS	Out of Service
• IS_SDH	In service SDH
• OOS_SDH	Out Of Service SDH
• NONE	None
<SST>	Secondary state of the entity. The parameter type is secondary state(SST) which provides additional information pertaining to PST and PSTQ
• AINS	Automatic In-Service
• MT	Maintenance
• DSBLD	Disabled
• OOG	Out of Group
• AINS_HIGH	Automatic In-Service HIGH
• MT_SDH	Maintenance

• DSBLD_SDH	Disabled
• OOG_SDH	Out of Group
• NONE	NONE

RTRV-HOP-MCH

This command can be used to retrieve constraints of Media Channel.

Usage Guidelines

Category
DWDM

Security
provisioning

Input Format:
RTRV-HOP-MCH:[<TID>]:<SRC>:<CTAG>::[<CIRCUITTYPE>],[<ROUTETYPE>],[<HOPTYPE>],[<HOP-NODE>],[<HOPSIDE>][::];MCH:[<TID>]:<SRC>:<CTAG>::[<CIRCUITTYPE>],[<ROUTETYPE>],[<HOP-TYPE>],[<HOPNODE>],[<HOPSIDE>][::];

Output Format:

Output Example:
rtrv-hop-mch::all:a;

-40WXC-I-O 2015-04-20 03:38:43

M a COMPLD

"CHAN-4-12-9:10.64.107.58,CHAN-5-6-9,PRIMARY,MAINROUTE,1,LOOSE,10.64.107.52,WDMSIDE

Parameters

<AID>	Source AID of the CPS Circuit.

<DST-ADDR>	
<CIRCUIT TYPE>	PRIMARY/SECONDARY
<ROUTE TYPE>	MAINROUTE
<HOP TYPE>	STRICT/LOOSE/EXCLUDE
<HOP NODE>	IP of the HOPNODE
<HOPSIDE>	WDMSIDE of the HOPSIDE

RTRV-HOP-MCHG

This command can be used to retrieve constraints of Media Channel Group.

Usage Guidelines

Category
DWDM

Security
provisioning

Input Format:
RTRV-HOP-MCHG:[<TID>]:<src>:<CTAG>::[<circuittype>],[<routetype>],[<hoptype>],[<hopnode>],[<hopside>][::];

Output Format:

Output Example:
rtrv-hop-mchg::all:a;

Sun 52-40WXC-I-O 2015-04-20 03:38:43

M a COMPLD

"MCHG-1:10.64.107.58,PRIMARY,MAINROUTE,1,LOOSE,10.64.107.52,WDMSIDE-C"

Output Parameters

<AID>	Source AID of the CPS Circuit.
<DST-ADDR>	
<CIRCUIT TYPE>	PRIMARY/SECONDARY
<ROUTE TYPE>	MAINROUTE
<HOP TYPE>	STRICT/LOOSE/EXCLUDE
<HOP NODE>	IP of the HOPNODE
<HOPSIDE>	WDMSIDE of the HOPSIDE

RTRV-HOP-CPS

The Retrieve HOP Control Plane Service (RTRV-HOP-CPS) command is used to retrieve the HOPs route contraint of the Control Plane Services.

Usage Guidelines

- Specify only the source port to identify the CPS.
- ALL and group AID are allowed.
- Optional parameters can be used as filter to the command.
- CLIENT cps type support FAC and VFAC AID type.
- TRUNK cps type support CHAN AID type.
- ADD cps type support CHAN, PCHAN, and LINEWL AID type.
- In case of 1WAY, unidirectional connection, SRC and DST are single AIDs. In case of 2WAY, bidirectional connection, SRC and DST are double AIDs. However, in case of CLIENT or TRUNK cpstype, src and dst are single AID and the connection is of type 2WAY because of bidirectional ports hence this rule is not applicable.

Category

DWDM

Security

Provisioning

Input Format

RTRV-HOP-CPS:[<TID>]:<SRC>:<CTAG>::[<CIRCUITTYPE>],[<ROUTETYPE>],[<HOPTYPE>],[<HOPNODE>],[<HOPSIDE>][::];

Input Example

> RTRV-HOP-CPS::ALL:333;

tcc232 2011-08-02 16:27:24

M 333 COMPLD

"CHAN-1-15-10-RX&CHAN-1-14-10-TX:10.20.30.40,CHAN-10-1-10-TX&CHAN-10-1-10-RX,PRIMARY,MAINROUTE,1,LOOSE,10.20.33.44,"

"CHAN-1-15-10-RX&CHAN-1-14-10-TX:10.20.30.40,CHAN-10-1-10-TX&CHAN-10-1-10-RX,PRIMARY,MAINROUTE,2,LOOSE,10.20.33.45,"

"CHAN-1-15-10-RX&CHAN-1-14-10-TX:10.20.30.40,CHAN-10-1-10-TX&CHAN-10-1-10-RX,PRIMARY,MAINROUTE,3,LOOSE,10.20.33.46,"

"VFAC-1-5-2:10.20.30.40,,PRIMARY,MAINROUTE,1,LOOSE,10.20.33.44,"

;

Input Parameters

<SRC>	Source AID from the "28.12 CrossConnectId1" section on page 28-31.
<CIRCUITTYPE>	Identifies the target circuit. Allowed values are PRIMARY, SECONDARY.
<ROUTETYPE>	Identifies the target circuit route. Allowed values are MAINROUTE, BRIDGEROUTE.
<POSITION>	Identifies the position of the hop in the item list. Default value is 0. • If action=ADD and position=0 than append at the end; • If action=REMOVE and position=0 than remove all matching items; • If action=REMOVE and position<>0 than hop values are ignored; • If action=MODIFY and position<>0 than replace the item in the position indicated; • If action=CLEARALL than clears the list ignoring position and other parameters;
<HOPTYPE>	Type of hop constraint. Allowed values are STRICT, LOOSE, EXCLUDE
• STRICT	The next hop of the path must be the indicated node and side

• LOOSE	The path must cross the indicated node and side
• EXCLUDE	The path must exclude the indicated node
<HOPNODE>	IP address of the target node.
<HOPSIDE>	Hop constraint target WDM side.

Output Format

SID DATE TIME

M CTAG COMPLD

"<SRC>:<DSTADDR>,<DST>,<CIRCUITTYPE>,<ROUTETYPE>,<POSITION><HOPTYPE>,<HOPNODE>,<HOPSIDE>";

Output Example

tcc232 2011-08-02 16:27:24

M 333 COMPLD

"CHAN-1-15-10-RX&CHAN-1-14-10-TX:10.20.30.40,CHAN-10-1-10-TX&CHAN-10-1-10-RX,PRIMARY,MAINROUTE,1,LOOSE,10.20.33.44,"

"CHAN-1-15-10-RX&CHAN-1-14-10-TX:10.20.30.40,CHAN-10-1-10-TX&CHAN-10-1-10-RX,PRIMARY,MAINROUTE,2,LOOSE,10.20.33.45,"

"CHAN-1-15-10-RX&CHAN-1-14-10-TX:10.20.30.40,CHAN-10-1-10-TX&CHAN-10-1-10-RX,PRIMARY,MAINROUTE,3,LOOSE,10.20.33.46,"

"VFAC-1-5-2:10.20.30.40,,PRIMARY,MAINROUTE,1,LOOSE,10.20.33.44,"

;

tcc232 2011-08-02 16:27:37

M 333 COMPLD

"CHAN-1-15-10-RX&CHAN-1-14-10-TX:10.20.30.40,CHAN-10-1-10-TX&CHAN-10-1-10-RX,PRIMARY,MAINROUTE,1,LOOSE,10.20.33.44,"

"CHAN-1-15-10-RX&CHAN-1-14-10-TX:10.20.30.40,CHAN-10-1-10-TX&CHAN-10-1-10-RX,PRIMARY,MAINROUTE,2,LOOSE,10.20.33.45,"

"CHAN-1-15-10-RX&CHAN-1-14-10-TX:10.20.30.40,CHAN-10-1-10-TX&CHAN-10-1-10-RX,PRIMARY,MAINROUTE,3,LOOSE,10.20.33.46,"

;

Output Parameters	
<SRC>	Source access identifier from the "28.1 ALL" section on page 28-1. Listable.
<DSTADDR>	Identifies the destination node IP address.
<DST>	Destination AID from the "28.1 ALL" section on page 28-1.
<CIRCUITTYPE>	Identifies the target circuit. Allowed values are PRIMARY,SECONDARY.
<ROUTETYPE>	Identifies the target circuit route. Allowed values are MAINROUTE, BRIDGEROUTE.
<POSITION>	Identifies the position of the hop in the item list.
<HOPTYPE>	Type of hop constraint. Allowed values are STRICT, LOOSE, EXCLUDE.
• STRICT	The next hop of the path must be the indicated node and side.
• LOOSE	The path must cross the indicated node and side.
• EXCLUDE	The path must exclude the indicated node.
<HOPNODE>	IP address of the target node.
<HOPSIDE>	Hop constraint target WDM side.

RTRV-MCH

This command can be used to retrieve the Media Channel.

Usage Guidelines

- If the AID is invalid, an IIAC (invalid AID) error message is returned
- The ALL AID and group AID are valid for this command
- In case of ADD 2-WAY with two source AIDs use only one aid to avoid a double response: one for each AID specified

Category

DWDM

Security

Provisioning

Input Format

RTRV-MCH::<AID>:<CTAG>::[:NAME=<name>]

Output Example

rtrv-mch::all:a;

tcc29 2021-02-17 12:37:29
M a COMPLD

"CHAN-1-5-2:10.10.1.27,CHAN-1-5-2,2WAY,TRUNK:NAME=\"TRAIL-OCHCC_tcc29_4\",CKTLABEL=\"ad8a011d_000a\",RESTTYPE=NONE,CKTPRIORITY=0,ALLOWRGN=N, PATHPOLICY=ANY,VALMODE=FULL,VALZONE=GREEN,ACTVALZONE=GREEN,RESTVALMODE=INHERITED,RESTVALZONE=UNKNOWN,DIVERSITY=18/LINK/N&19/LINK/Y&21/LINK/Y,GUARDBANDFILTERING=0,GUARDBANDMODULATION=0,PROVCARRIERFREQ=0.00,PROVCARRIERFREQMANDATORY=TRUE,CARRIERFREQ=191350.00,FREQ=191350.00,WIDTH=50.00,PROVFREQ=0.00,CARRIERIDS=ad8a011d/11,ISMANDATORYFREQ=FALSE,MCHSTATUS=ACTIVE,LASTACTIONSTATUS=Success,RESTSTATUS=NONE,NODEID=AD8A011D,SERVICEID=10,WRKTRAILSRVID=0,ISUNI=NO,BANDWIDTH=0,LOOSEDIVERSITYVIOLATION=TRUE,MAINCONSTRAINT=TRUE:IS,"

Input Parameters

<AID>	AID format – Port AID Format, similar to CPS.
<NAME>	Circuit name

Output Parameters

<NAME>	Circuit name
<CKTLABEL>	Circuit label
<RESTTYPE>	Specifies the restoration type on MCH circuit or UNI configuration. Parameter type is RESTTYPE.
• NONE	Restore type is not specified.
• RESTORE	Only restoration is allowed. The circuit is not revertible.
• REVERT	The circuit is revertible, manually or automatically.
<VALMODE>	Identifies the validation mode.
• NONE	No Optical validation is performed

• FULL	The optical validation is performed as indicated in VALZONE parameter
• INHERITED	
<VALZONE>	Identifies the validation operate zone.
• UNKNOWN	Not evaluated
• GREEN	Margin > 3 sigma
• YELLOW	1 < margin < 3 sigma
• ORANGE	0 < margin < 1 sigma
• RED	-3 < margin < 0 sigma
• OUT	Margin < -3 sigma
<FREQ>	Optical wavelength
<WIDTH>	Width
<PROVFREQ>	This is the PROVISIONED Value of the FREQ by the user
<CARRIERIDS>	These are the carrier service id of the carriers in the system of the active circuit
<ISMANDATORYFREQ>	This value can be True or False.
<MCHSTATUS>	If the MCHSTATUS remain in ACTIVATING for more than 10 min the operation is automatically cancelled and status return to INACTIVE.
<LASTACTIONSTATUS>	This is the status of the last executed or executing action. It can be one of the following: • Unknown • Running • Success • Failed • Aborted

<RESTSTATUS>	Restoration status – MCHSTATUS
<NODEID>	LMP Node ID. NODEID is a stable IP address that is always reachable if there is any connectivity to it. The default LMP node ID value is the IP address of the node.
<SERVICEID>	ServiceId of the CircuitInfo on the SRCNode
<WRKTRAILSRVID>	In case of client circuit, it is the SERVICEID of the supporting trail circuit. In case of trail circuit it has no meaning and is left to 0
<ISUNI>	YES if the circuit creation has been requested from a GMPLS UNI Client; NO otherwise.
<BANDWIDTH>	Bandwidth percentage, a value between 0 and 100
<LOOSEDIVERSITYVIOLATION>	Indicates if the required diversity is LOOSE (TRUE) or STRICT (FALSE).
<MAINCONSTRAINT>	Describes the main circuit path
<DIVERSITY>	This parameter is a combination of three values, which are Service ID, Diversity type and ISLOOSE (Example: 1531/SRLG/Y&1533/NODE/N) In the above example, there are two entries where • The first value is the serviceID, which is unique at the node level. • The second value is the Diversity type, which is one of the following values: LINK NODE SRLG • The third value is ISLOOSE flag. The flag value is Y for LOOSE and N for not LOOSE (STRICT).
<GUARDBANDMODULATION>	This parameter represents the amount of spectrum that needs to be allocated, beside the channel bandwidth. GUARDBANDMODULATION depends on modulation.
<GUARDBANDFILTERING>	This parameter represents the amount of spectrum that needs to be allocated, beside the channel bandwidth GUARDBANDFILTERING on the filters traversed by the channel.

RTRV-MCHFAILUREINFO

This command can be used to retrieve the Media Channel Failure information.

Usage Guidelines

- If the AID is invalid, an IIAC (invalid AID) error message is returned.
- The ALL AID and group AID are valid for this command
- In case of ADD 2-WAY with two source AIDs use only one aid to avoid a double response: one for each AID specified

Category

DWDM

Security

provisioning

Input Format

RTRV-MCHFAILUREINFO-:[<TID>]:<src>:<CTAG>

Input Example

Input Parameters

<SRC>	AID format – Port AID Format, similar to CPS.
<CTAG>	NAME

Output Parameters

<DIVERSITY>	This parameter is a combination of three values, which are Service ID, Diversity type and ISLOOSE (Example: 1531/SRLG/Y&1533/NODE/N) In the above example, there are two entries where • The first value is the serviceID, which is unique at the node level. • The second value is the Diversity type, which is one of the following values: LINK NODE SRLG • The third value is ISLOOSE flag. The flag value is Y for LOOSE and N for not LOOSE (STRICT).

RTRV-MCHG

This command can be used to retrieve the Media Channel Group.

Usage Guidelines

- If the AID is invalid, an IIAC (invalid AID) error message is returned
- The ALL AID and group AID are valid for this command
- In case of ADD 2-WAY with two source AIDs use only one aid to avoid a double response: one for each AID specified

Category

DWDM

Security

provisioning

Input Format

RTRV-MCHG::<AID>:<CTAG>::[:NAME=<name>]

Output Example

rtrv-mchg::all:1;

tnc-102-ROADM 2017-03-24 01:59:43

M 1 COMPLD

"MCHG-1:10.58.225.103:NAME=\"102-103_Flex\",CPSSTATUS=ACTIVE,
CKTLABEL=\"d96ad3e0_0022\",FREQ=191354.00,WIDTH=32.00,ISMANDATORYFREQ=TRUE,PROVFREQ=191354.00,P
ROVWIDTH=32.00,SRLGSTRICTCONSTRAINT=1&2,SRLGLOOSECONSTRAINT=3&4,DIVERSITY=2/SRLG/Y&3/SRLG
/N,SERVICEID=34,CONTAINEDSERVICES= 2,LASTACTIONSTATUS=Success,NODEID=D96AD3E0:IS,"

rtrv-mchg::all:1;

BH-Site1 2021-08-31 17:51:43
M 1 COMPLD
"MCHG-
3:10.58.229.22:NAME=\"TEST\",CKTLABEL=\"50be5560_01d5\",FREQ=191437.50,WIDTH=50.00,ISMANDATORYFR
EQ=FALSE,PROVFREQ=0.00,PROVWIDTH=50.00,DIVERSITY=128/NODE/N,LASTACTIONSTATUS=Success,CPSSTA
TUS=ACTIVE,SERVICEID=469,NODEID=50BE5560,RESTFREQ=0.00,RESTWIDTH=0.00,RESTTYPE=NONE,SPECTRUM
POLICY=DEFAULT,RESTSTATUS=NONE,LOOSEDIVERSITYVIOLATION=FALSE,"
;

Input Parameters		
	<AID>	AID format – Port AID Format, similar to CPS.
	<NAME>	Circuit name
Output Parameters		
	<CKTLABEL>	Circuit label
	<FREQ>	Optical wavelength
	<WIDTH>	Width
	<ISMANDATORYFREQ>	This value can be True or False.
	<PROVFREQ>	This is the PROVISIONED Value of the FREQ by the user
	<PROVWIDTH>	This is the PROVISIONED Value of the WIDTH by the user
	<SRLGSTRICTCONSTRAINT>	SRLG Strict Constraint, Optional. Each SRLG Long value separated by &
	<SRLGLOOSECONSTRAINT>	SRLG LOOSE Constraint, Optional. Each SRLG Long value separated by &
	<DIVERSITY>	This parameter is a combination of three values, which are Service ID, Diversity type and ISLOOSE (Example: 1531/SRLG/Y&1533/NODE/N) In the above example, there are two entries where • The first value is the serviceID, which is unique at the node level. • The second value is the Diversity type, which is one of the following values: LINK NODE SRLG • The third value is ISLOOSE flag. The flag value is Y for LOOSE and N for not LOOSE (STRICT).
	<CONTAINED SERVICES>	Contained Media Channels. Format- ServiceId1&serviceId2 etc. Node Id which is part of the contained services will be added internally by TL1 as the node id of the MCHG

<LASTACTIONSTATUS>	This is the status of the last executed or executing action. It can be one of the following: • Unknown • Running • Success • Failed • Aborted
<NODEID>	Node Id of the SourceNode.
<LOOSEDIVERSITYVIOLATION>	Indicates if the required diversity is LOOSE (TRUE) or STRICT (FALSE).

RTRV-MCHGXC

This command can be used to retrieve the Media Channel Group Cross Connection.

Usage Guidelines

- If the AID is invalid, an IIAC (invalid AID) error message is returned
- The ALL AID and group AID are valid for this command
- In case of ADD 2-WAY with two source AIDs use only one aid to avoid a double response: one for each AID specified

Category

DWDM

Security

provisioning

Input Format

RTRV-MCHGXC::<AID>:<CTAG>

Input Example

RTRV-MCHGXC-1-2-3-RX-Label1;

Input Parameters

<AID>	AID format – similar to OCHNC AID for FLEX pkgs..
<NAME>	NAME

RTRV-MCHGFAILUREINFO

This command can be used to retrieve the Media Channel Group Failure information.

Usage Guidelines

- If the AID is invalid, an IIAC (invalid AID) error message is returned.
- The ALL AID and group AID are valid for this command
- In case of ADD 2-WAY with two source AIDs use only one aid to avoid a double response: one for each AID specified

Category
DWDM

Security
provisioning

Input Format
RTRV-MCHGFAILUREINFO-:[<TID>]:<src>:<CTAG>

Input Example

Input Parameters

<SRC>	AID format – Port AID Format, similar to CPS.

RTRV-CARRIERXC

This command can be used to retrieve the Media Channel Group Carrier Cross Connection.

Usage Guidelines

- If the AID is invalid, an IIAC (invalid AID) error message is returned.
- The ALL AID and group AID are valid for this command
- In case of ADD 2-WAY with two source AIDs use only one aid to avoid a double response: one for each AID specified

Category
DWDM

Security
provisioning

Input Format
RTRV-CARRIERXC::<AID>:<CTAG>

Input Example
LINEWL-1-2-3-RX-CarrierXC.

Input Parameters

<AID>	AID with ALL and specific value is supported. AID format of the command is similar to OCHNC AID for FLEX pkgs.

RTRV-CKTINFOCARRIER

This command is used to retrieve Carrier Cross Connection.

Usage Guidelines

- If the AID is invalid, an IIAC (invalid AID) error message is returned
- The ALL AID and group AID are valid for this command
- In case of ADD 2-WAY with two source AIDs use only one aid to avoid a double response: one for each AID specified
- CLIENT cps type support FAC and VFAC AID type.
- TRUNK cps type support CHAN AID type.
- ADD cps type support CHAN, PCHAN, and LINEWL AID type.
- In case of 1WAY, unidirectional connection, SRC and DST are single AIDs. In case of 2WAY, bidirectional connection, SRC and DST are double AIDs. However, in case of CLIENT or TRUNK cpstype, src and dst are single AID and the connection is of type 2WAY because of bidirectional ports hence this rule is not applicable.

Category
DWDM

Security
provisioning

Input Format

RTRV-CKTINFOCARRIER::<Aid>:<CTAG>

Input Example

Input Parameters

<AID>	Source AID from the "28.12 CrossConnectId1" section on page 28-31.

RTRV-MCHPATH

This command can be used to retrieve the Media Channel Group.

Usage Guidelines

- If the AID is invalid, an IIAC (invalid AID) error message is returned.
- The ALL AID and group AID are valid for this command
- In case of ADD 2-WAY with two source AIDs use only one aid to avoid a double response: one for each AID specified

Category

DWDM

Security

provisioning

Input Format

RTRV-MCHG::<AID>:<CTAG>::[:NAME=<name>]

Input Example

LINEWL-1-2-3-RX-CarrierXC.

Input Parameters

<AID>	AID with ALL and specific value is supported. AID format of the command is similar to OCHNC AID for FLEX pkgs.
<NAME>	NAME

RTRV-MCHTRAILADIT

This command can be used to retrieve the Media Channel Trial Adits.

Usage Guidelines

- If the AID is invalid, an IIAC (invalid AID) error message is returned.
- The ALL AID and group AID are valid for this command
- In case of ADD 2-WAY with two source AIDs use only one aid to avoid a double response: one for each AID specified

Category

DWDM

Security

provisioning

Input Format

RTRV-MCHTRAILADIT:::<CTAG>

Input Example

Input Parameters

<AID>	AID with ALL and specific value is supported. AID format of the command is similar to OCHNC AID for FLEX pkgs.

RTRV-<MOD1FCPAYLOAD>

The Retrieve 1GFC, 2GFC, 4 GFC, 5GIB, 8GFC, or 10GFC (RTRV-<MOD1FCPAYLOAD>) command retrieves the attributes related with the Fibre Channel port.

Usage Guidelines

See Table 30-1 on page 30-1 for supported modifiers by platform.

Category

Ports

Security

Retrieve

Input Format

RTRV-<MOD1FCPAYLOAD>:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-1GFC:CISCO:FAC-6-1:888;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:,,[<ROLE>],[<STATUS>]:LINKRATE=<LINKRATE>,LINKSTATE=<LINKSTATE>,
[LINKRCVRY=<LINKRCVRY>],[DISTEXTN=<DISTEXTN>],
[LINKCREDITS=<LINKCREDITS>],[MFS=<MFS>],[NAME=<NAME>],
[SOAK=<SOAK>],[SOAKLEFT=<SOAKLEFT>],[OSFBER=<OSFBER>],[LBCL=<LBCL>],[OPT=<OPT>],[OPR=<OPR>],
[FREQ=<FREQ>],[LOSSB=<LOSSB>],[GCCRATE=<GCCRATE>],[OTNTRMAP=<
OTNTRMAP>],[SYNCMSG=<SYNCMSG>],[SENDDUS=<SENDDUS>],[ADMSSM=<ADMSSM>],[PROVIDESYNC=<PRO
VIDESYNC>],[ODUTRANSMODE=<ODUTRANSMODE>],[PORTMODE=<PORTMODE>],[PPR=<PPR>],[TRIGTH=<TRI
GTH>],[RVRTTH=<RVRTTH>],[TRIGWINDOW=< TRIGWINDOW>],[RVRTWINDOW=<RVRTWINDOW>],[OVRCLK=
<OVRCLK>],[FECALMSUPRESS=<FECALMSUPRESS>],[EGRESSFRR=<EGRESSFRR>],[ENCAP=<ENCAP>],[LPBKTY
PE=<LPBKTYPE>],[ALARMSUPPRESS=<ALARMSUPPRESS>],[SQUELCHMODE=<SQUELCHMODE>],[SQUELCHH
OLDOFFTIMER=<SQUELCHHOLDOFFTIMER>],[IFINDEX=<IFINDEX>],[GRIDLESS=<GRIDLESS>],[GRIDLESSFREQ
=<GRIDLESSFREQ>],[CDLOW=<CDLOW>],[CDHIGH=<CDHIGH>],[VOATXPOWER=<VOATXPOWER>],[TXLASERS
HUTDN=<TXLASERSHUTDN>],[OSNR=<OSNR>],[PMD=<PMD>],[CD=<CD>],[SOPMD=<SOPMD>],[PCR=<PCR>],[PD
L=<PLD>],[ALARMPROFILENAME=<ALARMPROFILENAME>:<PST_PSTQ>,[<SST>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"FAC-1-1:,,WORK,ACT:LINKRATE=1GFC,LINKSTATE=UP,LINKRCVRY=Y,
DISTEXTN=NONE,LINKCREDITS=0,MFS=2148,ENCAP=GFP-T,
NAME=\"FC PORT\",SOAK=32,SOAKLEFT=\"12-25\",FREQ=1550,
LOSSB=LR-1:OOS-MA,MT,SQUELCHMODE=SQUELCH:OOS-MA,DSBLD"
;

Output Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

<ROLE>	(Optional) The port role in Y-cable protection (WORK or PROT). The parameter type is SIDE, which is the role played by the unit in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	(Optional) A port status in Y-cable protection (ACT or STBY). The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<MFS>	(Optional) Maximum frame size. MFS is an integer.
• GFP_F	Generic framing procedure (GFP) frame mode
• GFP_T	GFP transparent mode
• HDLC	High-level data link control (HDLC) frame mode
• HDLC_LEX	HDLC LAN extension frame mode
• HDLC_X86	HDLC X.86 frame mode
<ENCAP>	(Optional) Frame encapsulation type. The parameter type is ENCAP, which is the frame encapsulation type.
• GFP	GFP frame mode.
• CBR	Contant Bit Rate mode.
• TRP	Transparent mode.
• GMP	GMP mapping mode.
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer. Default value is 32. It can be set through ED command.

<SOAKLEFT>	(Optional) 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. Rules for <SOAKLEFT> are as follows: • When the port is in OOS, OOS_MT or IS state, the parameter will not appear. • When the port is in OOS_AINS state but the countdown has not started due to a fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in OOS_AINS state and the countdown has started, the value will be shown in HH-MM format.
<FREQ>	(Optional) Parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1528.77	Wavelength 1528.77
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64

• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32

• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15

• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78

• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46

• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32

• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	(Optional) Parameter type is REACH (reach values).
• AUTOPROV	Autoprovisioning
• 40GBASE-SR4	Reach supported on 40GIGE payload on CFP-LC card.
• CX	Reach CX
• CX1	Reach CX1
• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3

• LX	Reach LX
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• TEN-GE-ER	10 GE extended range
• TEN-GE-LR	10 GE long range
• TEN-GE-SR	10 GE short range
• VX	Reach VX
• ZX	Reach ZX
<SQUELCHMODE>	Shuts down the far-end laser in response to certain defects.
• SQUELCH	Squelch is enabled
• NONE	No Squelch
• NOS	Squelch is disabled
<PST_PSTQ>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by primary state (PST) and primary state qualifier (PSTQ).
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<ALARMSUPPRESS>	It is an enum which has the values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress

<OSFBER>	Bit error rate level at which we declare signal fail. SF is cleared only after the ber level is measured to be 10 times better.
<LBCL>	Normalized laser bias current lower bound [0 - 255].
<OPT>	Optical power transmitted
<OPR>	Optical power received

<GCCRATE>	(Optional) The data rate of the GCC traffic. The default is 192 Kbps. For MXP_2.5G_10G and TXP_MR_10G cards, this applies only to the DWDM port. The parameter type is GCCRATE, which is the data rate of the GCC traffic.
• 192K	192 Kbps
• 400K	400 Kbps
• 1200K	1200 Kbps
<OTNTRMAP>	OTN Traffic Mapping
<SYNCMSG>	Synchronization status messaging is enabled or disabled on the T1 facility.
• N	Disable an attribute.
• Y	Enable an attribute.
<SENDDUS>	The facility will send the DUS value as the sync status message for that facility.
• N	Disable an attribute.
• Y	Enable an attribute.
<PROVIDESYNC>	(Optional) Indicates whether the facility provides synchronization. Only supported on. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
< ODUTRANSMODE>	To configure the "ODUk OH" transparency on the OTU2-XP card.
• TRANS-STD	Transparent Standard Use. The transponder, behaving as a regenerator, terminates the OUT layer and is transparent to the ODU layer. Also in this case the FEC-MISM (FEC Mismatch) alarm is not generated.

• CISCO-EXT	Cisco Extended. When the Cisco Extended configuration is selected, two bytes of the ODU layer is terminated to guarantee the interoperability with the older Transpon-der/Muxponder cards.
<PORTMODE>	Describes the termination mode of each interface on the card.
• DWDM-LINE	Line terminating mode.
• DWDM-SECTION	Section terminating mode.
• DWDM-TRANS-AIS	Transparent mode AIS.
• DWDM-TRANS-SQUELCH	Transparent mode Squelch
• 10GLANWAN-SQUELCH	10G LAN to WAN Squelch.
<PPR>	(Optional) To enable or disable the Proactive Protection Regen (PPR) in the OTU2 Card in Regen Mode.
• Y	Proactive protection is enabled.
• N	Proactive protection is disabled.
<TRIGTH>	Specifies the trigger threshold value for Proactive Protection Regen. The parameter type is TRIGGER_THRESHOLD.
• 1E-2	Trigger threshold is 1E-2.
• 1E-3	Trigger threshold is 1E-3.
• 1E-4	Trigger threshold is 1E-4.
• 1E-5	Trigger threshold is 1E-5
• 1E-6	Trigger threshold is 1E-6.
• 1E-7	Trigger threshold is 1E-7.
• 2E-2	Trigger threshold is 2E-2.
• 2E-3	Trigger threshold is 2E-3.
• 2E-4	Trigger threshold is 2E-4
• 2E-5	Trigger threshold is 2E-5
• 2E-6	Trigger threshold is 2E-6.
• 2E-7	Trigger threshold is 2E-7.
• 3E-2	Trigger threshold is 3E-2.
• 3E-3	Trigger threshold is 3E-3.

• 3E-4	Trigger threshold is 3E-4.
• 3E-5	Trigger threshold is 3E-5.
• 3E-6	Trigger threshold is 3E-6.
• 3E-7	Trigger threshold is 4E-7.
• 4E-2	Trigger threshold is 4E-2.
• 4E-3	Trigger threshold is 4E-3.
• 4E-4	Trigger threshold is 4E-4.
• 4E-5	Trigger threshold is 4E-5.
• 4E-6	Trigger threshold is 4E-6.
• 4E-7	Trigger threshold is 4E-7.
• 5E-2	Trigger threshold is 5E-2.
• 5E-3	Trigger threshold is 5E-3.
• 5E-4	Trigger threshold is 5E-4.
• 5E-5	Trigger threshold is 5E-5.
• 5E-6	Trigger threshold is 5E-6.
• 5E-7	Trigger threshold is 5E-7.
• 6E-2	Trigger threshold is 6E-2.
• 6E-3	Trigger threshold is 6E-3.
• 6E-4	Trigger threshold is 6E-4.
• 6E-5	Trigger threshold is 6E-5
• 6E-6	Trigger threshold is 6E-6.
• 6E-7	Trigger threshold is 6E-7.
• 7E-2	Trigger threshold is 7E-2.
• 7E-3	Trigger threshold is 7E-3.
• 7E-4	Trigger threshold is 7E-4.
• 7E-5	Trigger threshold is 7E-5
• 7E-6	Trigger threshold is 7E-6.
• 7E-7	Trigger threshold is 7E-7.

• 8E-2	Trigger threshold is 8E-2.
• 8E-3	Trigger threshold is 8E-3.
• 8E-4	Trigger threshold is 8E-4.
• 8E-5	Trigger threshold is 8E-5
• 8E-6	Trigger threshold is 8E-6.
• 8E-7	Trigger threshold is 8E-7.
• 9E-2	Trigger threshold is 9E-2.
• 9E-3	Trigger threshold is 9E-3.
• 9E-4	Trigger threshold is 9E-4.
• 9E-5	Trigger threshold is 9E-5
• 9E-6	Trigger threshold is 9E-6.
• 9E-7	Trigger threshold is 9E-7.
<RVRTTH>	Specifies the revert threshold for Proactive Protection Regen. The parameter type is RVRTTH.
• 1E-3	Revert threshold is 1E-3.
• 1E-4	Revert threshold is 1E-4.
• 1E-5	Revert threshold is 1E-5
• 1E-6	Revert threshold is 1E-6.
• 1E-7	Revert threshold is 1E-7.
• 2E-3	Revert threshold is 2E-3.
• 2E-4	Revert threshold is 2E-4.
• 2E-5	Revert threshold is 2E-5
• 2E-6	Revert threshold is 2E-6.
• 2E-7	Revert threshold is 2E-7.
• 3E-3	Revert threshold is 3E-3.
• 3E-4	Revert threshold is 3E-4.
• 3E-6	Revert threshold is 3E-6
• 3E-7	Revert threshold is 4E-7.

• 4E-3	Revert threshold is 4E-4.
• 4E-4	Revert threshold is 4E-4.
• 4E-5	Revert threshold is 4E-5
• 4E-6	Revert threshold is 4E-6.
• 4E-7	Revert threshold is 4E-7.
• 5E-3	Revert threshold is 5E-3.
• 5E-4	Revert threshold is 5E-4.
• 5E-5	Revert threshold is 5E-5
• 5E-6	Revert threshold is 5E-6.
• 5E-7	Revert threshold is 5E-7.
• 5E-8	Revert threshold is 5E-8.
• 6E-3	Revert threshold is 6E-3.
• 6E-4	Revert threshold is 6E-4.
• 6E-5	Revert threshold is 6E-5
• 6E-6	Revert threshold is 6E-6.
• 6E-7	Revert threshold is 6E-7.
• 6E-8	Revert threshold is 6E-8.
• 7E-3	Revert threshold is 7E-3.
• 7E-4	Revert threshold is 7E-4.
• 7E-5	Revert threshold is 7E-5
• 7E-6	Revert threshold is 7E-6.
• 7E-7	Revert threshold is 7E-7.
• 7E-8	Revert threshold is 7E-8.
• 8E-3	Revert threshold is 8E-3.
• 8E-4	Revert threshold is 8E-4.
• 8E-5	Revert threshold is 8E-5
• 8E-6	Revert threshold is 8E-6.
• 8E-7	Revert threshold is 8E-7.

• 8E-8	Revert threshold is 8E-8.
• 9E-3	Revert threshold is 9E-3.
• 9E-4	Revert threshold is 9E-4.
• 9E-5	Revert threshold is 9E-5
• 9E-6	Revert threshold is 9E-6.
• 9E-7	Revert threshold is 9E-7.
• 9E-8	Revert threshold is 9E-8.
<TRIGWINDOW>	Specifies the trigger window value for Proactive Protection Regen in milli seconds. It should always be a multiple of the sample slot value, derived from the trigger threshold value. The maximum TRIGWINDOW value is 10000.
<RVRTWINDOW>	Specifies the revert window value for Proactive Protection Regen in milli seconds. It should always be a multiple of the sample slot value, derived from the revert threshold value. The maximum RVRTWINDOW value is 10000 and minimum value is 2000.
<EGRESSFRR>	Egress FRR protection.
• Y	Egress FRR protection is enabled.
• N	Egress FRR protection is disabled.
<SQUELCHHOLDOFFTIMER>	Laser will be turned off, once this timer expire
<IFINDEX>	Index of a particular port
<CDLOW>	(Optional) Lower limit of CD working range.
<CDHIGH>	(Optional) Upper limit of CD working range.
<VOATXPOWER>	(Optional) VOA Transmit Power. The parameter type is VOATXPOWER, indicates the VOA transmit power on a fixed trunk.
<GRIDLESSFREQ>	Gridless Frequency
<GRIDLESS>	Gridless data transmission
<TXLASERSHUTDN>	(Optional) Transmit Laser Shut down. The parameter type is TXLASERSHUTDN indicates the transmit laser shut down status as Y or N.

<OSNR>	Measure of the optical signal to noise ration
<PMD>	Measure of the polarization mode value, an average of the 2 polarization modes.
<ALARMPROFILENAME>	Name of the profile created using the command ENT-ALMPROFILE
<SST>	(Optional) Secondary state of the entity. The parameter type is secondary state (SST), which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RTRV-<MOD1FICONPAYLOAD>

The Retrieve 1GFICON, 2GFICON, or 4GFICON (RTRV-<MOD1FICONPAYLOAD>) command returns Fibre Channel-specific settings for ports that have been configured to carry FICON traffic using the ENT-FICON command.

Usage Guidelines

The MXPP_MR_2.5G card only supports the GFP-T frame type.

See Table 30-1 on page 30-1 for supported modifiers by platform.

Category

Ports

Security

Retrieve

Input Format

RTRV-<MOD1FICONPAYLOAD>:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-1GFICON:CISCO:FAC-1-1:123;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:,,[<ROLE>],[<STATUS>]:[LINKRATE=<LINKRATE>],[LINKSTATE=<LINKSTATE>],
[LINKRCVRY=<LINKRCVRY>],[DISTEXTN=<DISTEXTN>],
[LINKCREDITS=<LINKCREDITS>],[MFS=<MFS>],[NAME=<NAME>],[SOAK=<SOAK>],[SOAKLEFT=<SOAKLEFT>],[LOSSB=<LOSSB>],[OSFBER=<OSFBER>],[LBCL=<LBCL>],[OPT=<OPT>],[OPR=<OPR>],[FREQ=<FREQ>],[LOSSB=<LOSSB>],[GCCRATE=<GCCRATE>],[OTNTRMAP=<OTNTRMAP>],[SYNCMSG=<SYNCMSG>],[SENDDUS=<SENDDUS>],[ADMSSM=<ADMSSM>],[PROVIDESYNC=<PROVIDESYNC>],[ODUTRANSMODE=<ODUTRANSMODE>],[PORTMODE=<PORTMODE>],[PPR=<PPR>],[TRIGTH=<TRIGTH>],[RVRTTH=<RVRTTH>],[TRIGWINDOW=<TRIGWINDOW>],[RVRTWINDOW=<RVRTWINDOW>],[OVRCLK=<OVRCLK>],[FECALMSUPRESS=<FECALMSUPRESS>],[EGRESSFRR=<EGRESSFRR>],[ENCAP=<ENCAP>],[LPBKTYPE=<LPBKTYPE>],[ALARMSUPPRESS=<ALARMSUPPRESS>],[SQUELCHMODE=<SQUELCHMODE>],[SQUELCHHOLDOFFTIMER=<SQUELCHHOLDOFFTIMER>],[IFINDEX=<IFINDEX>],[GRIDLESS=<GRIDLESS>],[GRIDLESSFREQ=<GRIDLESSFREQ>],[CDLOW=<CDLOW>],[CDHIGH=<CDHIGH>],[VOATXPOWER=<VOATXPOWER>],[TXLASERSHUTDN=<TXLASERSHUTDN>],[OSNR=<OSNR>],[PMD=<PMD>],[CD=<CD>],[SOPMD=<SOPMD>],[PCR=<PCR>],[PDL=<PLD>],[ALARMPROFILENAME=<ALARMPROFILENAME>:<PST_PSTQ>,<SST>";

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"FAC-1-1:,,WORK,ACT:LINKRATE=1GFICON,LINKSTATE=UP,LINKRCVRY=Y,
DISTEXTN=NONE,LINKCREDITS=0,MFS=2148,ENCAP=GFP-T,NAME=\"FC PORT\",
SOAK=32,SOAKLEFT=\"12-25\",FREQ=1550,LOSSB=LR-1:OOS-MA,MT"
;

Output Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

<ROLE>	(Optional) The port role in Y-cable protection (WORK or PROT). The parameter type is SIDE, which is the role that the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	(Optional) A port status in Y-cable protection (ACT or STBY). The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<LINKRATE>	The actual rate running on the Fibre Channel port. It can differ from the payload type provisioned. The parameter type is LINKRATE, which is the link rate on a Fibre Channel port.
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• UNKNOWN	The rate is unknown.
• UNPLUGGED	The SFP is not plugged into the Fibre Channel port so the link rate cannot be detected.
<LINKSTATE>	Link state. The parameter type is DIRN, which specifies the discriminating level for the requested monitored parameter.
• DN	Monitored parameter with values equal to or greater than the level of LEV will be reported.
• UP	Monitored parameter with values equal or less than the value of LEV will be reported.
<LINKRCVRY>	Link recovery. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<DISTEXTN>	(Optional) Distance extension. The parameter type is DISTANCE_EXTENSION (distance extension).
• B2B	Buffer to buffer flow control

• NONE	No distance extension
<LINKCREDITS>	(Optional) Number of link credits. LINKCREDITS is an integer.
<MFS>	(Optional) Maximum frame size. MFS is an integer.
<ENCAP>	(Optional) Frame encapsulation type. The parameter type is ENCAP (frame encapsulation type).
• GFP_F	GFP frame mode
• GFP_T	GFP transparent mode
• HDLC	HDLC frame mode
• HDLC_LEX	HDLC LAN extension frame mode
• HDLC_X86	HDLC X.86 frame mode
<NAME>	(Optional) Identifies the port name. NAME is a string.
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer. Default value is 32. It can be set through ED command.
<SOAKLEFT>	(Optional) 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. Rules for <SOAKLEFT> are as follows: • When the port is in OOS, OOS_MT, or IS state, the parameter will not appear. • When the port is in OOS_AINS state but the countdown has not started due to a fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in OOS_AINS state and the countdown has started, the value will be shown in HH-MM format.
<FREQ>	(Optional) Parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1528.77	Wavelength 1528.77
• 1529.16	Wavelength 1529.16
• 1529.55	Wavelength 1529.55

• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16

• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52

• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83

• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05
• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27
• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50
• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61

• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30

• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06

• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	(Optional) Parameter type is REACH (reach values).
• AUTOPROV	Autoprovisioning
• 40GBASE-SR4	Reach supported on 40GIGE payload on CFP-LC card.
• CX	Reach CX
• CX1	Reach CX1
• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• S1	Reach S1

• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• TEN-GE-ER	10 GE extended range
• TEN-GE-LR	10 GE long range
• TEN-GE-SR	10 GE short range
• VX	Reach VX
• ZX	Reach ZX
<PST_PSTQ>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by the PST and PSTQ.
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<ALARMSUPPRESS>	It is an enum which has the values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress
<OSFBER>	Bit error rate level at which we declare signal fail. SF is cleared only after the ber level is measured to be 10 times better.
<LBCL>	Normalized laser bias current lower bound [0 - 255].
<OPT>	Optical power transmitted
<OPR>	Optical power received
<GCCRATE>	(Optional) The data rate of the GCC traffic. The default is 192 Kbps. For MXP_2.5G_10G and TXP_MR_10G cards,

	this applies only to the DWDM port. The parameter type is GCCRATE, which is the data rate of the GCC traffic.
• 192K	192 Kbps
• 400K	400 Kbps
• 1200K	1200 Kbps
<OTNTRMAP>	OTN Traffic Mapping
<SYNCMSG>	Synchronization status messaging is enabled or disabled on the T1 facility.
• N	Disable an attribute.
• Y	Enable an attribute.
<SENDDUS>	The facility will send the DUS value as the sync status message for that facility.
• N	Disable an attribute.
• Y	Enable an attribute.
<PROVIDESYNC>	(Optional) Indicates whether the facility provides synchronization. Only supported on. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
< ODUTRANSMODE>	To configure the "ODUk OH" transparency on the OTU2-XP card.
• TRANS-STD	Transparent Standard Use. The transponder, behaving as a regenerator, terminates the OUT layer and is transparent to the ODU layer. Also in this case the FEC-MISM (FEC Mismatch) alarm is not generated.
• CISCO-EXT	Cisco Extended. When the Cisco Extended configuration is selected, two bytes of the ODU layer is terminated to guarantee the interoperability with the older Transpon-der/Muxponder cards.
<PORTMODE>	Describes the termination mode of each interface on the card.
• DWDM-LINE	Line terminating mode.
• DWDM-SECTION	Section terminating mode.
• DWDM-TRANS-AIS	Transparent mode AIS.
• DWDM-TRANS-SQUELCH	Transparent mode Squelch

• 10GLANWAN-SQUELCH	10G LAN to WAN Squelch.
<PPR>	(Optional) To enable or disable the Proactive Protection Regen (PPR) in the OTU2 Card in Regen Mode.
• Y	Proactive protection is enabled.
• N	Proactive protection is disabled.
<TRIGTH>	Specifies the trigger threshold value for Proactive Protection Regen. The parameter type is TRIGGER_THRESHOLD.
• 1E-2	Trigger threshold is 1E-2.
• 1E-3	Trigger threshold is 1E-3.
• 1E-4	Trigger threshold is 1E-4.
• 1E-5	Trigger threshold is 1E-5
• 1E-6	Trigger threshold is 1E-6.
• 1E-7	Trigger threshold is 1E-7.
• 2E-2	Trigger threshold is 2E-2.
• 2E-3	Trigger threshold is 2E-3.
• 2E-4	Trigger threshold is 2E-4
• 2E-5	Trigger threshold is 2E-5
• 2E-6	Trigger threshold is 2E-6.
• 2E-7	Trigger threshold is 2E-7.
• 3E-2	Trigger threshold is 3E-2.
• 3E-3	Trigger threshold is 3E-3.
• 3E-4	Trigger threshold is 3E-4.
• 3E-5	Trigger threshold is 3E-5.
• 3E-6	Trigger threshold is 3E-6.
• 3E-7	Trigger threshold is 4E-7.
• 4E-2	Trigger threshold is 4E-2.
• 4E-3	Trigger threshold is 4E-3.
• 4E-4	Trigger threshold is 4E-4.
• 4E-5	Trigger threshold is 4E-5.

• 4E-6	Trigger threshold is 4E-6.
• 4E-7	Trigger threshold is 4E-7.
• 5E-2	Trigger threshold is 5E-2.
• 5E-3	Trigger threshold is 5E-3.
• 5E-4	Trigger threshold is 5E-4.
• 5E-5	Trigger threshold is 5E-5.
• 5E-6	Trigger threshold is 5E-6.
• 5E-7	Trigger threshold is 5E-7.
• 6E-2	Trigger threshold is 6E-2.
• 6E-3	Trigger threshold is 6E-3.
• 6E-4	Trigger threshold is 6E-4.
• 6E-5	Trigger threshold is 6E-5
• 6E-6	Trigger threshold is 6E-6.
• 6E-7	Trigger threshold is 6E-7.
• 7E-2	Trigger threshold is 7E-2.
• 7E-3	Trigger threshold is 7E-3.
• 7E-4	Trigger threshold is 7E-4.
• 7E-5	Trigger threshold is 7E-5
• 7E-6	Trigger threshold is 7E-6.
• 7E-7	Trigger threshold is 7E-7.
• 8E-2	Trigger threshold is 8E-2.
• 8E-3	Trigger threshold is 8E-3.
• 8E-4	Trigger threshold is 8E-4.
• 8E-5	Trigger threshold is 8E-5
• 8E-6	Trigger threshold is 8E-6.
• 8E-7	Trigger threshold is 8E-7.
• 9E-2	Trigger threshold is 9E-2.
• 9E-3	Trigger threshold is 9E-3.

• 9E-4	Trigger threshold is 9E-4.
• 9E-5	Trigger threshold is 9E-5
• 9E-6	Trigger threshold is 9E-6.
• 9E-7	Trigger threshold is 9E-7.
<RVRTTH>	Specifies the revert threshold for Proactive Protection Regen. The parameter type is RVRTTH.
• 1E-3	Revert threshold is 1E-3.
• 1E-4	Revert threshold is 1E-4.
• 1E-5	Revert threshold is 1E-5
• 1E-6	Revert threshold is 1E-6.
• 1E-7	Revert threshold is 1E-7.
• 2E-3	Revert threshold is 2E-3.
• 2E-4	Revert threshold is 2E-4.
• 2E-5	Revert threshold is 2E-5
• 2E-6	Revert threshold is 2E-6.
• 2E-7	Revert threshold is 2E-7.
• 3E-3	Revert threshold is 3E-3.
• 3E-4	Revert threshold is 3E-4.
• 3E-6	Revert threshold is 3E-6
• 3E-7	Revert threshold is 4E-7.
• 4E-3	Revert threshold is 4E-4.
• 4E-4	Revert threshold is 4E-4.
• 4E-5	Revert threshold is 4E-5
• 4E-6	Revert threshold is 4E-6.
• 4E-7	Revert threshold is 4E-7.
• 5E-3	Revert threshold is 5E-3.
• 5E-4	Revert threshold is 5E-4.
• 5E-5	Revert threshold is 5E-5
• 5E-6	Revert threshold is 5E-6.

• 5E-7	Revert threshold is 5E-7.
• 5E-8	Revert threshold is 5E-8.
• 6E-3	Revert threshold is 6E-3.
• 6E-4	Revert threshold is 6E-4.
• 6E-5	Revert threshold is 6E-5
• 6E-6	Revert threshold is 6E-6.
• 6E-7	Revert threshold is 6E-7.
• 6E-8	Revert threshold is 6E-8.
• 7E-3	Revert threshold is 7E-3.
• 7E-4	Revert threshold is 7E-4.
• 7E-5	Revert threshold is 7E-5
• 7E-6	Revert threshold is 7E-6.
• 7E-7	Revert threshold is 7E-7.
• 7E-8	Revert threshold is 7E-8.
• 8E-3	Revert threshold is 8E-3.
• 8E-4	Revert threshold is 8E-4.
• 8E-5	Revert threshold is 8E-5
• 8E-6	Revert threshold is 8E-6.
• 8E-7	Revert threshold is 8E-7.
• 8E-8	Revert threshold is 8E-8.
• 9E-3	Revert threshold is 9E-3.
• 9E-4	Revert threshold is 9E-4.
• 9E-5	Revert threshold is 9E-5
• 9E-6	Revert threshold is 9E-6.
• 9E-7	Revert threshold is 9E-7.
• 9E-8	Revert threshold is 9E-8.
<TRIGWINDOW>	Specifies the trigger window value for Proactive Protection Regen in milli seconds. It should always be a multiple of the sample slot value, derived from the trigger threshold value. The maximum TRIGWINDOW value is 10000.

<RVRTWINDOW>	Specifies the revert window value for Proactive Protection Regen in milli seconds. It should always be a multiple of the sample slot value, derived from the revert threshold value. The maximum RVRTWINDOW value is 10000 and minimum value is 2000.
<EGRESSFRR>	Egress FRR protection.
• Y	Egress FRR protection is enabled.
• N	Egress FRR protection is disabled.
<SQUELCHHOLDOFFTIMER>	Laser will be turned off, once this timer expire
<IFINDEX>	Index of a particular port
<CDLOW>	(Optional) Lower limit of CD working range.
<CDHIGH>	(Optional) Upper limit of CD working range.
<VOATXPOWER>	(Optional) VOA Transmit Power. The parameter type is VOATXPOWER, indicates the VOA transmit power on a fixed trunk.
<GRIDLESSFREQ>	Gridless Frequency
<GRIDLESS>	Gridless data transmission
<TXLASERSHUTDN>	(Optional) Transmit Laser Shut down. The parameter type is TXLASERSHUTDN indicates the transmit laser shut down status as Y or N.
<OSNR>	Measure of the optical signal to noise ration
<PMD>	Measure of the polarization mode value, an average of the 2 polarization modes.
<ALARMPROFILENAME>	Name of the profile created using the command ENT-ALMPROFILE
<SST>	(Optional) Secondary state of the entity. The parameter type is secondary state (SST), which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group

• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RTRV-<MOD2DWDMPAYLOAD>

The Retrieve D1VIDEO, DV6000, DVBASI, ETRCLO, HDTV, ISCCOMPAT, ISC1, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, PASSTHRU, 3GVIDEO, SDSDI, HDSDI, AUTO, OTL, OTU1, ISC3STP1G, and ISC3STP2G (RTRV-<MOD2DWDMPAYLOAD>) command retrieves the configuration parameter of a dense wavelength division multiplexing (DWDM) client.

Usage Guidelines

The command supports the modifier 3GVIDEO, SDSDI, HDSDI, AUTO, OTU1, ISC3STP1G, and ISC3STP2G. The RTRV-OTL command retrieves the Current values on sublanes of 100G-LC-C and retrieves only state of tha facility on CFP-LC cards.

See Table 30-1 on page 30-1 for supported modifiers by platform.

Category

Ports

Security

Maintenance

Input Format

RTRV-<MOD2DWDMPAYLOAD>:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-SDSDI::VFAC-3-2-1:321;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.

Output Format

SID DATE TIME M CTAG COMPLD
"<AIDUNIONID>,<AIDTYPE>:,,[<ROLE>],[<STATUS>]:[NAME=<NAME>],[LBCL=<LBCL>],
[OPT=<OPT>],[OPR=<OPR>],[FREQ=<FREQ>],[LOSSB=<LOSSB>],[SQUELCHMODE=,SQUELCHMODE.]:<PSTPSTQ>,[<SST>]" ;

Output Example

TID-000 1998-06-20 14:30:00

M 321 COMPLD

"VFAC-3-2-1,SDSDI:,,WORK,ACT:NAME=\"NY PORT\",LBCL=10.0,OPT=10.0,OPR=10.0, FREQ=1550,LOSSB=LR-1,SQUELCHMODE=SQUELCH:OOS-AU,AINS" ;

Output Parameters

<AIDUNIONID>	Access identifier from the "28.2 AidUnionId" section on page 28-13
<AIDTYPE>	A type of access identifier. The parameter type is MOD2DWDMPAYLOAD, which contains the payload types applicable to DWDM ports.
• 100GIGE	100 Gigabit Ethernet.
• 10GFC	10-Gigabit Fibre Channel payload
• 10GIGE	10-Gigabit Ethernet
• 40GIGE	40-Gigabit Ethernet
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• D1VIDEO	D1Video payload
• DV6000	DV6000 payload
• DVBASI	DVBASI payload
• ETRCLO	ETR_CLO payload

• GIGE	Gigabit Ethernet payload
• HDTV	High definition television (HDTV) payload
• ISC1	ISC1 payload
• ISC3	ISC3 payload
• OTL	Optical Channel Transport Lane.
• OTU1	Optical Transport Unit Level 1
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• PASSTHRU	Any pass-through (2R) payload
<ROLE>	(Optional) The port role in Y-cable protection (WORK or PROT). The parameter type is SIDE, which is the role the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	(Optional) A port status in Y-cable protection (ACT or STBY). The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<NAME>	(Optional) Identifies the port name. NAME is a string.
<LBCL>	(Optional) Displays the current value of the laser current. LBCL is a float.
<OPT>	(Optional) Displays the current value of the transmitted optical power. OPT is a float.
<OPR>	(Optional) Displays the current value of the received optical power. OPR is a float.
<FREQ>	(Optional) Parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490

• 1510	Wavelength 1510
• 1528.77	Wavelength 1528.77
• 1529.16	Wavelength 1529.16
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58

• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32

• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20

• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05
• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27
• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50
• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95

• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62

• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47

• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	(Optional) Parameter type is REACH (reach values).
• 100GBASE-LR4	100GBASE-LR4
• 100GBASE-SR10	100GBASE-SR10
• 40GBASE-FR	40GBASE-FR
• 40GBASE-LR4	40GBASE-LR4
• 40GBASE-SR4	Reach supported on 40GIGE payload on CFP-LC card.
• 4I1-9D1F	4I1-9D1F
• C4S1-2D1	C4S1-2D1
• FE-BX	FE-BX
• FX	FX
• GE-BX	GE-BX
• GE-EX	GE-EX
• LX-10	LX-10
• TEN-GE-LRM	TEN-GE-LRM

• TEN-GE-ZR	TEN-GE-ZR
• VSR2000-3R2	VSR2000-3R2
• AUTOPROV	Autoprovisioning
• CX	Reach CX
• CX1	Reach CX1
• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• TEN-GE-ER	10 GE extended range
• TEN-GE-LR	10 GE long range
• TEN-GE-SR	10 GE short range
• VX	Reach VX
• ZX	Reach ZX

<SQUELCHMODE>	Shuts down the far-end laser in response to certain defects.
• SQUELCH	Squelch is enabled.
• NONE	No Squelch
• ODU-AIS	ODU AIS
<PST_PSTQ>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by the PST and PSTQ.
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SST>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RTRV-<OCN_TYPE>

The Retrieve OC3, OC12, OC48, or OC192 command retrieves the attributes (for example, service parameters) and the state of an OC-N facility.

Usage Guidelines

See Table 30-1 on page 30-1 for supported modifiers by platform.

Both RINGID and BLSRTYPE identify the OC-N port connected with a BLSR. These attributes are only presented for the OC-12, OC-48, and OC-192 ports within a BLSR connection. The RTRV-<MOD_RING> command with the AID BLSR-RINGID can provide more information about a BLSR.

Note This command does not show the WVLEN attribute if the OC-N port has a zero value.

Category
Ports

Security
Retrieve

Input Format
RTRV-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[::::];

Input Example
RTRV-OC48:PENNGROVE:FAC-6-1:236;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:,,[<ROLE>],[<STATUS>]:[DCC=<DCC>],[AREA=<AREA>],[TMGREF=<TMGREF>],
[SYNCMSG=<SYNCMSG>],[SENDDUS=<SENDDUS>],[PJMON=<PJMON>],
[SFBER=<SFBER>],[SDBER=<SDBER>],[MODE=<MODE>],[WVLEN=<WVLEN>],
[RINGID=<RINGID>],[BLSRTYPE=<BLSRTYPE>],[MUX=<MUX>],[UNIC=<UNIC>],
[SOAK=<SOAK>],[SOAKLEFT=<SOAKLEFT>],[SSMRCV=<SSMRCV>],[OSPF=<OSPF>],
[LDCC=<LDCC>],[NAME=<NAME>],[LBCL=<LBCL>],[OPT=<OPT>],[OPR=<OPR>],
[EXPTRC=<EXPTRC>],[TRC=<TRC>],[TRCMODE=<TRCMODE>],
[TRCFORMAT=<TRCFORMAT>],[ADMSSM=<ADMSSM>],
[SENDDUSFF=<SENDDUSFF>],[AISONLPBK=<AISONLPBK>],
[FREQ=<FREQ>],[LOSSB=<LOSSB>],[FOREIGNFEND=<FOREIGNFEND>],
[FOREIGNIPADDRESS=<FOREIGNIPADDRESS>],[SQUELCHMODE=<SQUELCHMODE>][ALARMSUPPRESS=<alarmsuppress>]:<PSTPSTQ>,[<SSTQ>]"
;

Output Example

```
    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,SYNCMSG=N,SENDDUS=N,
    PJMON=48,SFBER=1E-4,SDBER=1E-6,MODE=SINGLESHELF,WVLEN=1310.00,RINGID=43,
    BLSRTYPE=WESTWORK,MUX=E2,UNIC=Y,
    SOAKLEFT=\"12-25\",SSMRCV=STU,OSPF=Y,LDCC=Y,NAME=\"OCN PORT\",LBCL=10.0,
    OPT=10.0,OPR=10.0,EXPTRC=\"AAA\",TRC=\"AAA\",TRCMODE=MAN,
    TRCFORMAT=16-BYTE,ADMSSM=PRS,SENDDUSFF=N,AISONLPBK=AIS_ON_LPBK_ALL,
    FREQ=1550,LOSSB=LR-1,FOREIGNFEND=Y,
    FOREIGNIPADDRESS=10.92.63.44,:OOS-AU,AINS",SQUELCHMODE=SQUELCH"
;
```

Output Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<ROLE>	(Optional) An OC-N port role. The parameter type is SIDE, which is the role the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	(Optional) An OC-N port status. The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<DCC>	(Optional) Indicates whether or not the Section data communications channel (DCC) is to be used. The parameter type is EXT_RING, which indicates whether the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<AREA>	(Optional) Area ID. Shows up only if the DCC is enabled. AREA is a string.
<TMGREF>	(Optional) The termination to be used, whether primary or secondary. Identifies if an OC-N port has a timing reference. Defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.

<SYNCMSG>	Synchronization status message. The parameter type is EXT_RING, which indicates whether the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<SENDDUS>	(Optional) The facility will send the DUS (Do not use for Synchronization) value in 0x0f bits pattern as the synchronization status message for that facility. Defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<PJMON>	(Optional) Identifies an OC-N port PJMON. Defaults to 0 (zero). PJMON is an integer. Set a valid STS number of the optical port. **Note** The PJMON number displayed in TL1 interface does not correspond to the PJVC4MON number in CTC, but instead corresponds to the STS number of the optical port.
<SFBER>	(Optional) An OC-N port signal failure threshold. Defaults to 1E-4. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	(Optional) An OC-N port signal degrade threshold. Defaults 1E-7. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<MODE>	(Optional) OC-N port mode. Defaults to SONET. The parameter type is OPTICAL_MODE, which is the facility's optical mode.
• SINGLESHELF	The NE contains only one shelf and the AID representation does not consider the shelf identifier for command requests/response and autonomous reports.

• MULTISHELF	The AID representation considers the shelf identifier for command requests/response and autonomous reports. This means the NE has more than one shelf configured or the user wants to use the new AID style.
• MULTISHELFETH	The AID representation considers the shelf identifier for command requests/response and autonomous reports. This means the NE has more than one shelf configured or the user wants to use the new AID style. The shelves are connected by means of an external Ethernet switch.
<WVLEN>	(Optional) An OC-N port wavelength in nanometers. For example, WVLEN=1310.00 means it operates at 1310 nm in the DWDM application. WVLEN is a float.
<RINGID>	(Optional) The BLSR RINGID with which the port is connected. RINGID ranges from 0 to 9999. RINGID is an integer.
<BLSRTYPE>	(Optional) The BLSR type with which the port is connected. The parameter type is BLSR_TYPE, which is the BLSR type of an OC-N port.
• EASTPROT	The OC-N port is an east protecting port.
• EASTWORK	The OC-N port is an east working port.
• WESTPROT	The OC-N port is an west protecting port.
• WESTWORK	The OC-N port is an west working port.
<MUX>	(Optional) BLSR extension byte. The parameter type is MUX_TYPE, which is the BLSR extension byte.
• E2	E2 byte (orderwire)
• F1	F1 byte (user)
• K3	K3 byte
• Z2	Z2 byte
<UNIC>	(Optional) Indicates if the port connects to the UCP. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer. Default value is 32. It can be set through ED command.

<SOAKLEFT>	(Optional) 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. Rules for <SOAKLEFT> are as follows: • When the port is in OOS, OOS_MT, or IS state, the parameter will not appear. • When the port is in OOS_AINS but the countdown has not started due to a fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in OOS_AINS state and the countdown has started, the value will be shown in HH-MM format.
<SSMRCV>	(Optional) Displays the quality of the individual port. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not 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
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<OSPF>	(Optional) The Open Shortest Path First protocol. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<LDCC>	(Optional) The Line DCC connection on the port. The parameter type is EXT_RING, which indicates if the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<NAME>	(Optional) Port Name. NAME is a string.

<LBCL>	(Optional) Displays the current value of the laser current. LBCL is a float.
<OPT>	(Optional) Displays the current value of the transmitted optical power. OPT is only displayed for DWDM cards. OPT is a float.
<OPR>	(Optional) Received optical power. OPR is a float.
<EXPTRC>	(Optional) Expected path trace content. EXPTRC is a string.
<TRC>	(Optional) Path trace message to be transmitted. TRC is a string.
<TRCMODE>	(Optional) Path trace mode. Applicable only to STS-level Paths in SONET. Defaults to the OFF mode. The parameter type is TRCMODE (trace mode).
• 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 alarm indication signal (AIS) and remote defect indication (RDI) if TIM-P is 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 TIM-P is detected.
• OFF	Turn off path trace capability. Nothing will be reported.
<TRCFORMAT>	(Optional) Trace message size. The parameter type is TRCFORMAT (trace format).
• 1-BYTE	1-byte trace message
• 16-BYTE	16-byte trace message
• 64-BYTE	64-byte trace message
• Y	Enable an attribute.
<ADMSSM>	(Optional) SSM selectable value. Only displayed when SSM is disabled. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not 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
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<SENDDUSFF>	(Optional) Indicates that the facility will send the DUS value in 0xff bits pattern as the synchronization status message for that facility. Defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<AISONLPBK>	(Optional) AIS on loopback. The parameter type is AIS_ON_LPBK, which indicates whether AIS is sent on a loopback.
• AIS_ONLPBK_FACILITY	AIS is sent on facility loopbacks.
• AIS_ON_LPBK_ALL	AIS is sent on all loopbacks.
• AIS_ON_LPBK_OFF	AIS is not sent on loopbacks.
• AIS_ON_LPBK_TERMINAL	AIS is sent on terminal loopbacks.
<FREQ>	(Optional) Parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1528.77	Wavelength 1528.77
• 1529.16	Wavelength 1529.16
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33

• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35

• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72

• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05

• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27
• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50
• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86

• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57

• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88

• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	(Optional) Parameter type is REACH (reach values).
• 100GBASE-LR4	100GBASE-LR4
• 100GBASE-SR10	100GBASE-SR10
• 40GBASE-FR	40GBASE-FR
• 40GBASE-LR4	40GBASE-LR4
• 40GBASE-SR4	Reach supported on 40GIGE payload on CFP-LC card.
• 4I1-9D1F	4I1-9D1F
• C4S1-2D1	C4S1-2D1
• FE-BX	FE-BX
• FX	FX
• GE-BX	GE-BX
• GE-EX	GE-EX
• LX-10	LX-10
• TEN-GE-LRM	TEN-GE-LRM
• TEN-GE-ZR	TEN-GE-ZR
• VSR2000-3R2	VSR2000-3R2
• AUTOPROV	Autoprovisioning
• CX	Reach CX
• CX1	Reach CX1
• DX	Reach DX
• HX	Reach HX

• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• P1I1-2D1	Long haul 10G Ethernet with 1310 nm wavelength
• P1L1-1D2	Longhaul 2.5G Ethernet with 1550 nm wavelength
• P1L1-2D2	Long haul 10G Ethernet with 1550 nm wavelength
• P1S1-1D1	Shorthaul 2.5G Ethernet with 1310 nm wavelength
• P1S1-2D1	Short haul 10G Ethernet in 1310 nm wavelength
• SC	Reach SC
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• TEN-GE-ER	10 GE extended range
• TEN-GE-LR	10 GE long range
• TEN-GE-SR	10 GE short range
• VX	Reach VX
• ZX	Reach ZX

<FOREIGNFEND>	(Optional) Indicates whether the far-end NE on the DCC is a foreign NE. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<FOREIGNIPADDRESS>	(Optional) The IP address of the far-end NE on the DCC. Used only if FOREIGNFEND is Y. FOREIGNIPADDRESS is a string.
<SQUELCHMODE>	Shuts down the far-end laser in response to certain defects.
• SQUELCH	Squelch is enabled.
• NONE	No Squelch.
• G-AIS	Generic AIS
<PST_PSTQ>	Administrative state in the PST_PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the PST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<ALARMSUPPRESS>	It is an enum which has the values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group

• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RTRV-<PATH>

The Retrieve STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, VT1, or VT2 (RTRV-<PATH>) command retrieves the attributes associated with an STS/VT path.

Usage Guidelines

See Table 30-1 on page 30-1 for supported modifiers by platform.

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 configurations.

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 that the contents of the expected incoming path trace are provisioned by the user in the ED-STS_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, DS3/EC1-48, OC3, OC48AS, OC192, MRC-12, and OC192-XFP cards.

TRC and INCTRC are supported on DS1N, DS3NE, DS3/EC1-48, and DS3XM cards.

The following actions will result in error messages:

- If you send this command while BLSRPTHTYPE=PCA, whether there is a BLSR switch or not, the protection channel access (PCA) path J1/C2 data will be returned (if there is PCA circuit on the AID).
- Sending this command with an STS AID that does not have circuits and where no BLSR is switched on the STS will return an error message.
- In LAN to WAN card mode, ALL aid is not supported for RTRV-VC464c.

Note • An optional input parameter, BLSRPTHTYPE, is introduced into this command to provide more options to retrieve the J1/C2 of a particular BLSR path. This field is valid only if the queried AID port has BLSR. The BLSRPTHTYPE defaults to the "non-pca" path type if the BLSR is switched, or defaults to all BLSR path types if there is no BLSR switching.

- 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.
- After BLSR switching, the J1/IPPM/C2 data can be retrieved over the protection path. J1 trace string, trace mode, or threshold is not allowed on the protection path.
- HOLDOFFTIMER is not specific to a path. Instead, it is applicable to the path protection selector.
- VT1.5 J2 path trace provisioning is supported on the DS3XM-12 card and the CE-100T-8 card VT1.5 path using the ED-VT1, RTRV-VT1, and RTRV-PTHTRC-VT1 commands.
- For the selector path on a BLSR, the SWPDIP path attribute is not editable and is always in the ON state.
- SFBER and SDBER are applied for the when the has an XC-VXC-10G card.

Category
Paths

Security
Retrieve

Input Format
RTRV-<PATH>:[<TID>]:<AID>:<CTAG>[:::BLSRPTHTYPE=<BLSRPTHTYPE>][:];

Input Example
RTRV-STS3C:FERNDALE:STS-2-1-4:238:::BLSRPTHTYPE=NON-PCA;

Input Parameters

<AID>	Access identifier from the "28.12 CrossConnectId1" section on page 28-31.
<BLSRPTHTYPE>	The BLSR path type only if the port is on the BLSR. No value or a null value defaults to NON-PCA. Applicable only to STS-level paths in SONET. The parameter type is BLSR_PTH_TYPE, which is the BLSR path type only if the port is on the BLSR.
• NON-PCA	The AID is on the working path, or the cross-connection card protection path.
• PCA	The AID is on the BLSR PCA path.

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    "<AID>::[LEVEL=<LEVEL>],[SFBER=<SFBER>],[SDBER=<SDBER>],[RVRTV=<RVRTV>],
    [RVTM=<RVTM>],[SWPDIP=<SWPDIP>],[HOLDOFFTIMER=<HOLDOFFTIMER>],
    [EXPTRC=<EXPTRC>],[TRC=<TRC>],[INCTRC=<INCTRC>],[TRCMODE=<TRCMODE>],
    [TRCFORMAT =<TRCFORMAT>],[TACC=<TACC>],[TAPTYPE=<TAPTYPE>],
    [UPSRPTHSTATE=<UPSRPTHSTATE>],[C2=<C2>],
    [BLSRPTHSTATE=<BLSRPTHSTATE>]:<PST_PSTQ>,[<SSTQ>]"
;
```

Output Example

```
    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,TRCFORMAT=64-BYTE,TACC=8,
    TAPTYPE=DUAL,UPSRPTHSTATE=ACT,C2=0X04,
    BLSRPTHSTATE=PROTPTHACT:OOS-AU,AINS"
;
```

Output Parameters

<AID>	Access identifier from the "28.12 CrossConnectId1" section on page 28-31.
<LEVEL>	(Optional) The rate of the cross-connect. Indicates the rate of the cross-connected channel. Applicable only to the STS path in SONET. The parameter type is PATH, which is the modifier for path commands.
• STS1	Synchronous transport signal/module level 1 (51.84 Mbps)
• STS3C	Synchronous transport signal/module level 3 concatenated (155.52 Mbps)
• STS6C	Synchronous transport signal/module level 6 (311.04 Mbps)
• STS9C	Synchronous transport signal/module level 9 concatenated (466.56 Mbps)
• STS12C	Synchronous transport signal/module level 12 concatenated (622.08 Mbps)
• STS18C	Synchronous transport signal/module level 18 concatenated (933.12 Mbps)

• STS24C	Synchronous transport signal/module level 24 concatenated (1244.16 Mbps)
• STS36C	Synchronous transport signal/module level 36 concatenated (1866.24 Mbps)
• STS48C	Synchronous transport signal/module level 48 concatenated (2488.32 Mbps)
• STS192C	Synchronous transport signal/module level 192 concatenated (9953.28 Mbps)
<SFBER>	(Optional) An STS path signal failure threshold that only applies to path protection. Applicable only to STS-level paths in SONET. Defaults to 1E-4. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	(Optional) An STS path signal degrade threshold that only applies to path protection. Applicable only to STS-level paths in SONET. Defaults 1E-6. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<RVRTV>	Revertive mode. Only applies to path protection. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. Only applies to path protection. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.

<SWPDIP>	(Optional) Switch on PDI-P. Applicable only to STS-level paths in SONET. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<HOLDOFFTIMER>	(Optional) Hold off timer. HOLDOFFTIMER is an integer.
<EXPTRC>	(Optional) Expected path trace content. Indicates the expected path trace message (J1) contents. EXPTRC is any 64-character ASCII string, including the terminating CR (carriage return) and LF (line feed). Applicable to STS-level paths in SONET. Defaults to NULL when a path protection path is created. EXPTRC is a string.
<TRC>	(Optional) The path trace message to be transmitted. The trace byte (J1) continuously transmits a 64-byte, fixed length ASCII string, one byte at a time. A null value defaults to the NE transmitting 62 null characters (hex 00) and CR and LF. A null value defaults to the NE transmitting null characters (Hex 00). Applicable to STS-level paths in SONET. Applicable to VT-level paths for the DS3XM-12 card on the . TRC is a string.
<INCTRC>	(Optional) The incoming path trace message contents. INCTRC is any combination of 64 characters. Applicable only to STS-level paths in SONET (STSn). Defaults to null when a path protection path is created. INCTRC is a string.
<TRCMODE>	(Optional) Path trace mode. Applicable only to STS-level paths in SONET (STSn). Defaults to OFF when a path protection path is created. The parameter type is TRCMODE (trace mode).
• AUTO	Use the previously received path trace string as the expected string (not applicable to MXP_2.5G_10G and TXP_MR_10G cards).
• AUTO-NO-AIS	Use the previously received path trace string as the expected string and do not turn on AIS and RDI if TIM-P 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 TIM-P detected.
• OFF	Turn off path trace capability. Nothing will be reported.
<TRCFORMAT>	(Optional) Trace message size. The parameter type is TRCFORMAT (trace format).
• 1-BYTE	1-byte trace message
• 16-BYTE	16-byte trace message

• 64-BYTE	64-byte trace message
• Y	Enable an attribute.
<TACC>	(Optional) Test access. Indicates whether the digroup being provisioned is to be used as a test access digroup. Defaults to N.
<TAPTYPE>	(Optional) TAP type. The parameter type is TAPTYPE, which is the test access point type
• DUAL	Dual FAD
• SINGLE	Single FAD
<UPSRPTHSTATE>	(Optional) Indicates whether a given AID is the working or standby path of a path protection cross-connect. The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<C2>	(Optional) The C2 byte hex code. Applicable only to STS-level paths in SONET (STSn). The parameter type is C2_BYTE, which is the C2 byte hex code.
• 0X00	Unequipped
• 0X01	Equipped Non-Specific payload
• 0X02	VT-Structured STS-1 synchronous payload envelope (SPE)
• 0X03	Locked VT Mode
• 0X04	Asynchronous Mapping for DS3
• 0X12	Asynchronous Mapping for DS4 North American (NA)
• 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
• 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 an AIS-L is being generated by an optical card or cross-connect downstream.

<BLSRPTHSTATE>	(Optional) The BLSR path state only if the port is on the BLSR. Applicable only to STS-level paths in SONET (STSn). The parameter type is BLSR_PTH_STATE, which is the BLSR path state only if the port is on the BLSR.
• PCAPTHACT	Indicates the BLSR is not switched and its PCA path is in the active state.
• PCAPTHSTB	Indicates the BLSR is switched and its PCA path is in the standby state.
• PROTPTHACT	Indicates the BLSR is switched and its protection path is in the active state.
• WKGPTHACT	Indicates the BLSR is not switched and its working path is in the active state.
• WKGPTHSTB	Indicates the BLSR is switched and its working path is in the standby state.
<PST_PSTQ>	Administrative state in the PST_PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the PST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RTRV-10GIGE

The Retrieve 10GIGE (RTRV-10GIGE) command retrieves the 10 Gbps-specific parameters for a port that has been configured to support the Gigabit Ethernet payload with the ENT-10GIGE command.

Usage Guidelines

None

Category

Ports

Security

Retrieve

Input Format

RTRV-10GIGE:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-10GIGE:TID:FAC-1-1:100;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:,,[<ROLE>],[<STATUS>]:[NAME=<NAME>],[MACADDR=<MACADDR>],

[LBCL=<LBCL>],[OPT=<OPT>],[OPR=<OPR>],[FREQ=<FREQ>],[ALARMSUPPRESS=<ALARMSUPPRESS>],[ALARMPROFILENAME=<alarmprofilename>],[SQUELCHTIMER=<squelchtimer>],[BJFEC=<bjfec>],[IFINDEX=<ifIndex>],[OPTINDEX=<optIndex>],[LOSSB=<LOSSB>]:<PSTPSTQ>,[<SST>]"
;

Output Example

100g 2012-05-21 12:40:14

M 1 COMPLD

"VFAC-1-6-1-1:,,WORK,STBY:MTU=1548,MACADDR=1c-93-87-e0-01-a9,SOAK=32,ENCAP=CBR,SYNCMSG=N,SENDDUS=N,ADMSSM=STU,PROVIDESYNC=N,:OOS-MA,DSBLD"

;

Output Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<ROLE>	(Optional) The port role in Y-cable protection (WORK or PROT). The parameter type is SIDE, which is the role the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	(Optional) A port status in Y-cable protection (ACT or STBY). The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<NAME>	(Optional) Port name. NAME is a string.
<MTU>	
<ENCAP>	
<ENCAP>	(Optional) Frame encapsulation type. The parameter type is ENCAP, which is the frame encapsulation type.
• GFP	GFP frame mode
• HDLC	HDLC frame mode
• WIS	
• CBR	
• TRP	
<SOAK>	(Optional) Locked-AutomaticInService to Unlocked transition soak time as measured in 15-minute intervals. Default value is 32. It can be set through ED command.

<SYNCMSG>	(Optional) Indicates if the BITS facility supports synchronization status message. Default is on (Y). The parameter type is EXT_RING, which indicates if the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<SENDDUS>	(Optional) The facility sends out a Do Not Use for Synchronization Message. This does not apply to the TXPD-10G card. This applies to an MXPD-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. No trunk ports are available. • LINE: All ports are available for all timing selections. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<ADMSSM>	(Optional) SSM selectable. Only applicable to BITS-IN when SSM is disabled. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS_SDH	Do Not Use For Synchronization
• G811	ITU-T G.811 Standard
• RES_SDH	Reserved For Network Synchronization Use
• G812T	ITU-T G.812T Standard
• STU_SDH	Synchronized, Traceability Unknown
• G812TL	ITU-T G.812TL Standard
• SETS	Synchronous Equipment Timing Source
<PROVIDESYNC>	(Optional) Indicates whether the facility provides synchronization. Defaults to N.
• Y	Yes
• N	No
<MACADDR>	(Optional) The MAC address for the 10-Gigabit Ethernet payload. MACADDR is a string.
<LBCL>	(Optional) Displays the current value of the laser current. LBCL is a float.

<OPT>	(Optional) Displays the current value of the transmitted optical power. OPT is a float.
<OPR>	(Optional) Displays the current value of the received optical power. OPR is a float.
<FREQ>	(Optional) Parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61

• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32

• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17

• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86

• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57

• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88

• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	(Optional) The parameter type is REACH (reach values).
• AUTOPROV	Autoprovisioning
• 40GBASE-SR4	Reach supported on 40GIGE payload on CFP-LC card.
• CX	Reach CX
• CX1	Reach CX1
• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1

• SX	Reach SX
• T	Reach T
• TEN-GE-ER	10 GE extended range
• TEN-GE-LR	10 GE long range
• TEN-GE-SR	10 GE short range
• VX	Reach VX
• ZX	Reach ZX
<PST_PSTQ>	Administrative state in the PST_PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the SST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<ALARMSUPPRESS>	It is an enum which has the values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress

<ALARMPROFILENAME>		Name of the profile created using the command ENT-ALMPROFILE
<BJFEC>		This is an enum whose values are:
• NA		
• AUTO		For 100GIGE, default option (Line card will set ON/OFF automatically)
	• FORCE-FEC-ON	Force ON from NMS
	• FORCE-FEC-OFF	Force OFF from NMS
<SQUELCHTIMER>		Laser will be turned off, once this timer expire

<IFINDEX>	Index of a particular port
<OPTINDEX>	Optics index of a particular port
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RTRV-ALM-<MOD2ALM>

The Retrieve Alarm for (10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 4GFC, 4GFICON, 5GIB, 8GFC, CHGRP, DS1, DS3I, DVBASI, E1, E100, E1000, E3, E4, EC1, ETH, FSTE, G1000, GFPOS, GIGE, HDLC, ILK, ISCCOMPAT, ISC1, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, MSISC, OC12, OC192, OC3, OC48, OC768, OCH, ODU0, OMS, OTS, OTL, OTU2, OTU3, OTU4, OTU4C2, POS, RPRIF, STM1, STM4, STM16, STM64, STM1E, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, T1, T3, UDCDCC, UDCF, VC3,VC4,VC4-2c,VC4-3c,VC4-4c,VC4-16c,VC4-64c, VC11, VC12, VC3, VCG, VT1, VT2, WLEN, 3GVIDEO, HDSDI, ISC3STP1G, ISC3STP2G, OTU1, or SDSDI (RTRV-ALM-<MOD2ALM>) 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.

Usage Guidelines

The command supports the modifier 3GVIDEO, OTU1, SDSDI, HDSDI, ISC3STP1G, and ISC3STP2G.

- VT1-n-n-n replaces PS_VC12-n-n-n for the VC12 alarm AID.
- The [<AIDTYPE>] shows VC3 for VC alarms.
- The RTRV-ALM-OTL command retrieves the alarms raised on sublanes of 100G-LC-C and CFP-LC cards.
- RTRV-ALM-ODU0 command retrieves the alarms raised on the ODU0's on AR-XPE card only.

Category

Fault

Security
Retrieve

Input Format
RTRV-ALM-
<MOD2ALM>:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>],[<LOCN>],[<DIRN>][,];

Input Example
RTRV-ALM-OTU1::VFAC-5-3-1:1::MN,,NSA,NEND,RCV;

Input Parameters

<AID>	Access identifier from the "28.1 ALL" section on page 28-1. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.
<NTFCNCDE>	Two-letter notification code. A null value is equivalent to ALL. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service. A null value is equivalent to ALL.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.

• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

SID DATE TIME

M CTAG COMPLD

"<AID>,[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],

[<OCRTM>],[<LOCN>],[<DIRN>]:[<DESC>]"

;

Output Example

tcc2 2011-08-18 16:16:18

M 1 COMPLD

"VFAC-5-3-1,OTU1:MN,HI-RXPOWER,NSA,08-18,12-56-40,NEND,RCV:\"Facility High Rx power\","

;

Output Parameters

<AID>	Access identifier from the "28.1 ALL" section on page 28-1.
<AIDTYPE>	(Optional) Type of access identifier. The parameter type is MOD2ALM (alarm type).
• 100GIGE	100 Gigabit Ethernet.
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 1GISC3	1-Gigabit ISC3 compatible
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 3GVIDEO	3G-SDI video payload.

• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 40GIGE	40-Gigabit Ethernet
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• CLNT	Client facility for MXP/TXP cards
• CHGRP	Channel group
• CPS	CPS modifier signifies WSON control plane circuits.
• DS1	DS1 alarm
• DS3I	DS3I alarm
• DVBASI	Digital Video Broadband Asynchronous Serial Interface (DVBASI) payload
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GFPOS	Generic framing protocol over packet over SONET virtual port alarm
• GIGE	Gigabit Ethernet port alarm
• HDSDI	1.5G HD-SDI video payload.
• ISC1	InterSystem Channel, a protocol defined by IBM (ISC1) payload
• ISC3PEER1G	1-Gigabit ISC3 Peer
• ISC3PEER2G	2-Gigabit ISC3 Peer
• ISC3PEER2R	1-Gigabit or 2-Gigabit ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1-Gigabit ISC1, ISC2, and ISC3 compatibility
• ML1000-2	ML-Series two port Gigabit Ethernet card

• MSISC	MSISC
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OC768	OC768 alarm
• OCH	Optical channel
• ODU0	Optical Data Unit Level 0
• OCHTERM	OCH termination
• ODU0	Optical Data Unit Level 0
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTL	Optical Channel Transport Lane.
• OTU1	Optical Transport Unit Level 1
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• POS	POS port alarm
• SDSDI	SDSDI
• STS1	STS1 alarm
• STS3C	STS3c alarm
• STS6C	STS6c alarm
• STS9C	STS9c alarm
• STS18C	STS18c alarm
• STS12C	STS12c alarm
• STS24C	STS24c alarm
• STS36C	STS36c alarm
• STS48C	STS48c alarm
• STS192C	STS192c alarm

• T1	T1 alarm
• T3	T3 alarm
• UDCDCC	UDC-DCC alarm
• UDCF	UCD-F alarm
• VCG	Virtual concatenation group alarm
• VT1	VT1 alarm
• VT2	VT2 alarm
• WLEN	Wavelength path provisioning
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date when the specific event or violation occurred, MM-DD.
<OCRTM>	(Optional) Time when the specific event or violation occurred, HH-MM-SS.

<LOCN>	Location associated with a particular command in reference to the entity identified by the AID. A null value defaults to NEND. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) A condition description. DESC is a string.

RTRV-ALMTYPE

The Retrieve Alarm Type command retrieves all system and user-defined alarm types.

Usage Guidelines

None

Category

System

Security

Retrieve

Input Format

RTRV-ALMTYPE:[<TID>]::<CTAG>;

Input Example

RTRV-ALMTYPE:CISCONODE::1;

Input Parameters

None.

Output Format

SID DATE TIME
M CTAG COMPLD
"<TYPEOFALM>,<ALMTYPE>"
;

Output Examples

CISCONODE 2007-06-26 14:30:00
M 1 COMPLD
"SYSTEMDEFINED,AIRCOMPR"
;

Output Parameters

<TYPEOFALM>	Specifies the type of alarm, that is, system or user-defined.
• SYSTEMDEFINED	Specifies a system-defined alarm type.
• USERDEFINED	Specifies a user-defined alarm type.
<ALMTYPE>	Specifies user-defined alarm types associated with virtual wires in environmental alarm inputs.

RTRV-ALM-ALL

The Retrieve Alarm All (RTRV-ALM-ALL) 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.

Usage Guidelines

According to Telcordia GR-833, the RTRV-ALM-ALL command only reports EQPT, COM, T1, T3, OCN, EC1, STSN, VT1, DS1, E100, E1000, 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

Category

Fault

Security

Retrieve

Input Format

RTRV-ALM-ALL:[<TID>]:[<AID>]:<CTAG>::[<NTFCNCDE>],
[<CONDITION>],[<SRVEFF>],[<LOCN>],[<DIRN>],[,];

Input Example

RTRV-ALM-ALL:COTATI:ALL:229::MN,PWRRESTART,NSA,NEND,RCV;

Input Parameters

<AID>	Access identifier from the "28.1 ALL" section on page 28-1. A null value is equivalent to ALL. AID is a string.
<NTFCNCDE>	Two-letter notification code. A null value is equivalent to ALL. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
<CONDITION>	The type of alarm condition. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service. A null value is equivalent to ALL.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

- MOD2B

Output Format

SID DATE TIME
M CTAG COMPLD
"[<AID>],[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<LOCN>],[<DIRN>]:
[<DESC>],[<AIDDET>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"SLOT-2,EQPT:MN,PWRRESTART,NSA,08-01,14-25-59,NEND,RCV:\"POWER FAIL RESTART\", DS1-14"
;

Output Parameters

<AID>	(Optional) Access identifier from the "28.1 ALL" section on page 28-1.
<AIDTYPE>	(Optional) Type of facility, link, or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.
• 100GIGE	100 Gigabit Ethernet.
• 10GIGE	10 Gigabit Ethernet.
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 40GIGE	40-Gigabit Ethernet
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload

• BITS	Building integrated timing supply (BITS) alarm
• CHGRP	Channel group
• CLNT	Client facility for muxponder (MXP) and transponder (TXP) cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3i-N-12 alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	Gigabit Ethernet port alarm
• HDLC	High-level data link control (HDLC) frame mode.
• HDSDI	1.5G HD-SDI video payload
• ISC3PEER1G	1-Gigabit ISC3 Peer
• ISC3PEER2G	2-Gigabit ISC3 Peer
• ISC3PEER2R	1-Gigabit or 2-Gigabit ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1-Gigabit ISC1, ISC2, and ISC3 compatibility
• ML1000-2	ML-Series two port Gigabit Ethernet card
• MSISC	MSISC
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm

• OC768	OC768 alarm
• OCH	Optical channel
• ODU0	Optical Data Unit Level 0
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTL	Optical Channel Transport Lane.
• OTU1	Optical Transport Unit Level 1
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• POS	Packet over SONET (POS) port alarm
• REP	Resilient Ethernet Protocol
• SDSDI	270M SDI video payload
• STS1	STS1 alarm
• STS3C	STS3c alarm
• STS6C	STS6c alarm
• STS9C	STS9c alarm
• STS18C	STS18c alarm
• STS12C	STS12c alarm
• STS24C	STS24c alarm
• STS36C	STS36c alarm
• STS48C	STS48c alarm
• STS192C	STS192c alarm
• SYNCN	SYNCN alarm
• T1	T1 alarm
• T3	T3 alarm
• TCC	TCC alarm
• VT1	VT1 alarm
• VT2	VT2 alarm

<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<OCRDAT>	(Optional) Date when the specific event or violation occurred, MM-DD.
<OCRTM>	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
<DESC>	(Optional) A condition description. DESC is a string.

<AIDDET>	(Optional) AIDDET uses the same addressing rules as the AID, but specifies AID type and additional details about the entity being managed. The supplementary equipment identification.

RTRV-ALM-BITS

The Retrieve Alarm Building Integrated Timing Supply (RTRV-ALM-BITS) 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.

Usage Guidelines

None

Category

Synchronization

Security

Retrieve

Input Format

RTRV-ALM-BITS:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>],[<LOCN>],[<DIRN>];

Input Example

RTRV-ALM-BITS:ELVERANO:BITS-1:228::CR,LOS,SA;

Input Parameters

<AID>	Access identifier from the "28.6 BITS" section on page 28-22.
<NTFCNCDE>	Two-letter notification code. A null value is equivalent to ALL. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<CONDTYPE>	The condition type for an alarm or reported event. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service. A null value is equivalent to ALL.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

SID DATE TIME
M CTAG COMPLD

"<AID>,[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],[<OCRTM>],[<LOCATION>],[<DIRECTION>]:[<DESC>],"

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"BITS-1,BITS:CR,LOS,SA,,,,:\"LOSS OF SIGNAL\","
;

Output Parameters	
<AID>	(Optional) Access identifier from the "28.6 BITS" section on page 28-22.
<AIDTYPE>	(Optional) Type of facility, link, or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.
• 100GIGE	100 Gigabit Ethernet.
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• 40GIGE	40-Gigabit Ethernet
• BITS	BITS alarm
• CHGRP	Channel group
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3i-N-12 alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm

• GIGE	Gigabit Ethernet port alarm
• HDLC	High-level data link control (HDLC) frame mode.
• HDSDI	1.5G HD-SDI video payload
• ISC3PEER1G	1-Gigabit ISC3 Peer
• ISC3PEER2G	2-Gigabit ISC3 Peer
• ISC3PEER2R	1-Gigabit or 2-Gigabit ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1-Gigabit ISC1, ISC2, and ISC3 compatibility
• MSISC	MSISC
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OC768	OC 768 alarm
• OCH	Optical channel
• ODU0	Optical Data Unit Level 0
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTU1	Optical Transport Unit Level 1
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• POS	POS port alarm
• REP	Resilient Ethernet Protocol
• SDSDI	270M SDI video payload
• STS1	STS1 alarm
• STS3C	STS3c alarm
• STS6C	STS6c alarm

• STS9C	STS9c alarm
• STS18C	STS18c alarm
• STS12C	STS12c alarm
• STS24C	STS24c alarm
• STS36C	STS36c alarm
• STS48C	STS48c alarm
• STS192C	STS192c alarm
• SYNCN	SYNCN alarm
• T1	T1 alarm
• T3	T3 alarm
• TCC	TCC alarm
• VT1	VT1 alarm
• VT2	VT2 alarm
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.

• SA	The condition is service affecting.
<LOCATION>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRECTION>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) A condition description. DESC is a string.

RTRV-ALM-CPS

The Retrieve Alarm Control Plane Service (RTRV-ALM-CPS) command retrieves the alarm reported on the control plane service.

Usage Guidelines

- Specify ALL AID to retrieve the alarms.
- Specify the notification code, condition type, service effecting, location, and direction parameters to retrieve the particular type of alarm.
- The command is applicable only to WSON alarms.
- <INDEX> got from the response is used as the input parameter in DLT-ALM-CPS.

Category

DWDM

Security

Retrieve

Input Format

RTRV-ALM-CPS:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>],[<LOCN>],[<DIRN>][,];

Input Example

RTRV-ALM-CPS::ALL:1;

Parameter	Description
<AID>	Only ALL AID is supported.
<NTFCNCDE>	(Optional) Two-letter notification code. A null value is equivalent to ALL. The parameter type is NOTIF_CODE, which is a two-character notification code associated with an autonomous message.
• 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
<CONDTYPE>	(Optional) The condition type for an alarm or reported event. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Table 29-1 for a list of conditions
<SRVEFF>	(Optional) The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service. A null value is equivalent to ALL.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

SID DATE TIME
M CTAG COMPLD

"<SRC>,<INDEX>,<MOD2>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,<DATE>,<TIME>,<LOCN>,<DIRN>:<CONDITION DESCRIPTION>"

;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"CHAN-6-1-RX,6,CPS:MJ,LOS-P,SA,01-16,01-18-31,NEND,RCV:\"INCOMING PAYLOAD SIGNAL ABSENT\""
;

Parameter	Description
<AID>	Access identifier from the"28.1 ALL" section on page 28-1 .
<INDEX>	Auto generated sequence number associated with the alarm.
<MOD2>	Modifier 2 of the Alarm command.
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Table 29-1 for a list of conditions.
<SRVEFF>	(Optional) The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service. A null value is equivalent to ALL.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date when the specific event or violation occurred, MM-DD.

<OCRTIM>	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) A condition description. DESC is a string.

RTRV-ALM-ENV

The Retrieve Alarm Environment (RTRV-ALM-ENV) command retrieves the environmental alarms.

Usage Guidelines

None

Category

Environment

Security

Retrieve

Input Format

RTRV-ALM-ENV:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<ALMTYPE>];

Input Example

RTRV-ALM-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR;

Input Parameters

<AID>	Access identifier from the "28.14 ENV" section on page 28-39. **Note** For RTRV-ALM-ENV, only ENV-IN-{1-4} is a valid AID for . ENV-OUT-{1,6} is not a valid AID for RTRV-ALM-ENV.

<NTFCNCDE>	Two-letter notification code. A null value is equivalent to ALL. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<ALMTYPE>	The alarm type for the environmental alarm. A null value is equivalent to ALL. The parameter type is ENV_ALM, which is the environmental alarm types.
• 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
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail

• HATCH	Controlled Environment Vault (CEV) hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnected bypass
• 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 V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage

• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:<NTFCNCDE>,<ALMTYPE>,[<OCRDAT>],[<OCRTM>],[<DESC>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"ENV-IN-1:MJ,OPENDR,08-01,14-25-59,\"OPEN DOOR\""
;

Output Parameters

<AID>	Access identifier from the "28.14 ENV" section on page 28-39.
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<ALMTYPE>	The alarm type for the environmental alarm. A null value is equivalent to ALL. The parameter type is ENV_ALM, which is the environmental alarm types.
• 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
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure

• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail
• HATCH	CEV hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnected bypass
• 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 V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage

• RECTLO	Rectifier low voltage
• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure
OCRDAT	(Optional) Date when the specific event or violation occurred, MM-DD.
OCRTM	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
DESC	(Optional) A condition description. DESC is a string.

RTRV-ALM-EQPT

The Retrieve Alarm Equipment (RTRV-ALM-EQPT) 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.

Usage Guidelines

None

Category

Equipment

Security
Retrieve

Input Format
RTRV-ALM-EQPT:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>],
[<LOCN>],[<DIRN>];

Input Example
RTRV-ALM-EQPT:TWOROCK:SLOT-7:227::MJ,HITEMP,NSA;

Input Parameters

<AID>	Access identifier from the "28.15 EQPT" section on page 28-39.
<NTFCNCDE>	Two-letter notification code. A null value is equivalent to ALL. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<CONDTYPE>	The condition type for an alarm or a reported event. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service. A null value is equivalent to ALL.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.

• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

SID DATE TIME
M CTAG COMPLD
"[<AID>],[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,
[<OCRDAT>],[<OCRTM>],[<LOCN>],[<DIRN>]:[<DESC>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"SLOT-7,EQPT:MJ,HITEMP,NSA,08-01,14-25-59,,:\"HI TEMPERATURE\","
;

Output Parameters

<AID>	(Optional) Access identifier from the "28.15 EQPT" section on page 28-39.
<AIDTYPE>	(Optional) Type of facility, link, or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.
• 100GIGE	100 Gigabit Ethernet.
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload

• 4GFICON	4-Gigabit fiber connectivity payload
• 40GIGE	40-Gigabit Ethernet
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• BITS	BITS alarm
• CHGRP	Channel group
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• DVBASI	Digital Video Broadband Asynchronous Serial Interface (DVBASI) payload
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	Gigabit Ethernet port alarm
• HDLC	High-level data link control (HDLC) frame mode.
• HDSDI	1.5G HD-SDI video payload
• ISC1	InterSystem Channel, a protocol defined by IBM (ISC1) payload
• ISC3PEER1G	1-Gigabit ISC3 Peer
• ISC3PEER2G	2-Gigabit ISC3 Peer
• ISC3PEER2R	1-Gigabit or 2-Gigabit ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1-Gigabit ISC1, ISC2, and ISC3 compatibility

• MSISC	MSISC
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OC768	OC768 alarm
• OCH	Optical channel
• ODU0	Optical Data Unit Level 0
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTU1	Optical Transport Unit Level 1
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• POS	POS port alarm
• REP	Resilient Ethernet Protocol
• SDSDI	270M SDI video payload
• STS1	STS1 alarm
• STS3C	STS3c alarm
• STS6C	STS6c alarm
• STS9C	STS9c alarm
• STS18C	STS18c alarm
• STS12C	STS12c alarm
• STS24C	STS24c alarm
• STS36C	STS36c alarm
• STS48C	STS48c alarm
• STS192C	STS192c alarm
• SYNCN	SYNCN alarm
• T1	T1 alarm

• T3	T3 alarm
• TCC	TCC alarm
• VT1	VT1 alarm
• VT2	VT2 alarm
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

<OCRDAT>	(Optional) Date when the specific event or violation occurred, MM-DD.
<OCRTM>	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
<DESC>	(Optional) A condition description. DESC is a string.

RTRV-ALM-SYNCN

The Retrieve Alarm Synchronization (RTRV-ALM-SYNCN) 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.

Usage Guidelines

None

Category

Synchronization

Security

Retrieve

Input Format

RTRV-ALM-SYNCN:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>],[<LOCN>],[<DIRN>];

Input Example

RTRV-ALM-SYNCN:FULTON:SYNC-NE:226::CR,FAILTOSW,SA;

Input Parameters

<AID>	Access identifier from the "28.31 SYNC_REF" section on page 28-60.
<NTFCNCDE>	Two-letter notification code. A null value is equivalent to ALL. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<CONDTYPE>	The condition type for an alarm or a reported event. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service. A null value is equivalent to ALL.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,
   [<OCRDAT>],[<OCRTM>],[<LOCN>],[<DIRN>]:[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
```

“SYNC-NE,SYNCN:CR,FAILTOSW,SA,08-01,
14-25-59,,:\“FAILURE TO SWITCH TO PROTECTION\”,”
;

Output Parameters

<AID>	Access identifier from the “28.29 SYN” section on page 28-59.
<AIDTYPE>	(Optional) Type of facility, link or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.
• 100GIGE	100 Gigabit Ethernet.
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 40GIGE	40-Gigabit Ethernet
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• BITS	BITS alarm
• CHGRP	Channel group
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• DVBASI	Digital Video Broadband Asynchronous Serial Interface (DVBASI) payload
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm

• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	Gigabit Ethernet port alarm
• HDLC	High-level data link control (HDLC) frame mode.
• HDSDI	1.5G HD-SDI video payload
• ISC1	InterSystem Channel, a protocol defined by IBM (ISC1) payload
• ISC3PEER1G	1-Gigabit ISC3 Peer
• ISC3PEER2G	2-Gigabit ISC3 Peer
• ISC3PEER2R	1-Gigabit or 2-Gigabit ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1-Gigabit ISC1, ISC2, and ISC3 compatibility
• MSISC	MSISC
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OC768	OC768 alarm
• OCH	Optical channel
• ODU0	Optical Data Unit Level 0
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTU1	Optical Transport Unit Level 1
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• POS	POS port alarm

• REP	Resilient Ethernet Protocol
• SDSDI	270M SDI video payload
• STS1	STS1 alarm
• STS3C	STS3c alarm
• STS6C	STS6c alarm
• STS9C	STS9c alarm
• STS18C	STS18c alarm
• STS12C	STS12c alarm
• STS24C	STS24c alarm
• STS36C	STS36c alarm
• STS48C	STS48c alarm
• STS192C	STS192c alarm
• SYNCN	SYNCN alarm
• T1	T1 alarm
• T3	T3 alarm
• TCC	TCC alarm
• VT1	VT1 alarm
• VT2	VT2 alarm
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.

<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<OCRDAT>	(Optional) Date when the specific event or violation occurred, MM-DD.
<OCRTM>	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
<DESC>	(Optional) A condition description. DESC is a string.

RTRV-ALMTH-<MOD2>

The Retrieve Alarm Threshold for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 5GIB, 8GFC, CLNT, D1VIDEO, DS1, DV6000, DVBASI, E1, E3, E4, EC1, ESCON, ETRCLO, ETH, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OC12, OC192, OC3, OC48, OC768, OCH, OMS, OTS, OTU3, OTU4, OTU4C2, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, VT2, 3GVIDEO, SDSDI, HDSDI, AUTO, OTU1, OTL, ISC3STP1G, or ISC3STP2G (RTRV-ALMTH-<MOD2>) command retrieves the alarm threshold values. The only applicable MOD2 values are OC3, OC12, OC48, OC192, OCH, OMS, and OTS.

Usage Guidelines

The command supports 3GVIDEO, SDSDI, HDSDI, AUTO, OTU1, ISC3STP1G, and ISC3STP2G modifiers.

- OTL is the new modifier added for the sublanes of 100G-LC-C and CFP-LC cards.
- RTRV-ALMTH-OTL retrieves optical thresholds only on Sublanes of 100G-LC-C card. RTRV-ALMTH-OTL with single montype is denied for sublanes of CFP-LC card.
- RTRV-ALMTH-<MOD2> on 100G-LC-C card is denied as the optical thresholds are retrieved on sublanes of 100G-LC-C.
- RTRV-ALMTH-<100GIGE/40GIGE/OTU4/OTU3> on CFP-LC card retrieves optical thresholds.
- RTRV-ALMTH-<MOD2> does not retrieve any optical thresholds on virtual ports as they are retrieved by CFP ports of CFP-LC.
- RTRV-ALMTH-OCH should retrieve optical thresholds for non OTU Payloads on 100G-LC-C, 10x10G-LC, and CFP-LC cards. For OTU payloads RTRV-ALMTH-<MOD2> retrieves optical thresholds.

Category
Fault

Security
Retrieve

Input Format
RTRV-ALMTH-<MOD2>:[<TID>]:<AID>:<CTAG>::[<CONDTYPE>][,,::];

Input Example
RTRV-ALMTH-OTU1::VFAC-5-3-1:A::OPT-LOW;

Input Parameters

<AID>	Access identifier from the "28.1 ALL" section on page 28-1. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.
<CONDTYPE>	Alarm threshold. A null value is equivalent to ALL. The parameter type is ALM_THR, which is the alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, 4MD-xx.x, 32MUX-O, 32DMX-O, AD-1C-xx.x, AD-2C-xx.x, AD-4C-xx.x, AD-1B-xx.x, and AD-4B-xx.x cards.
• ADD-HDEG	ADD Power - High Degrade
• ADD-HFAIL	ADD Power - High Failure
• ADD-LDEG	ADD Power - Low Degrade
• ADD-LFAIL	ADD Power - Low Failure
• BATV-LOW	Battery Voltage—Low

• CD-LOW	Low Threshold value for Chromatic Dispersion. Measured value -70000dBm to +70000dBm.
• CD-HIGH	High Threshold value for Chromatic Dispersion. Measured value -70000dBm to +70000dBm.
• 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 microA as one tenth of a percent. High Warning Threshold, Low Warning Threshold. Measured value (0.0 percent, 100.0 percent).
• OPR-HIGH	Receive power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPR-LOW	Receive power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-HIGH	Transmit power in one tenth of a microwatt. Measured value (–40.0 dBm, +30.0 dBm).
• OPT-LOW	Transmit power in one tenth of a microwatt. Measured value (–0.0 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
• OSNR-LOW	Low Threshold value for Optical Signal to Noise Ratio. Measured value +40dBm to +80dBm.
• OSNR-HIGH	High Threshold value for Optical Signal to Noise Ratio. Measured value +40dBm to +80dBm.
• PMD-LOW	Low Threshold value for Polarization Mode for Dispersion. Measured value +0 to +100dBm.
• PMD-HIGH	High Threshold value for Polarization Mode for Dispersion. Measured value +0 to +100dBm.
• 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

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>,<MOD>:<CONDTYPE>,,,<THLEVEL>"
;

Output Example

TCC2 2011-08-18 16:01:38
M A COMPLD
"VFAC-5-3-1,OTU1:OPT-LOW,,,-4.5,"
;
RN-DEV-107 2013-05-16 12:47:54
M 1 COMPLD
"VFAC-5-1-1,GIGE:OPT-LOW,,,-40.0,"
"VFAC-5-1-1,GIGE:OPT-HIGH,,,30.0,"
"VFAC-5-1-1,GIGE:LBCL-HIGH,,,100.0,"
"VFAC-5-1-1,GIGE:OPR-LOW,,,-40.0,"
"VFAC-5-1-1,GIGE:OPR-HIGH,,,30.0,"
;

Output Parameters

<AID>	Access identifier from the "28.1 ALL" section on page 28-1.
<MOD2>	AID type. The parameter type is MOD2, which is the line/path modifier.
• 10GFC	10-Gigabit Fibre Channel payload
• 10GFICON	10-Gigabit fiber connectivity payload
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 1GISC3	1-Gigabit ISC3 compatible
• 2GFC	2-Gigabit Fibre Channel payload

• 2GFICON	2-Gigabit fiber connectivity payload
• 100GIGE	100 Gigabit Ethernet.
• 10GIGE	10 Gigabit Ethernet.
• 2GISC3	2-Gigabit ISC3 compatible
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 40GIGE	40-Gigabit Ethernet
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• D1VIDEO	D1 video
• DS1	DS1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• DVBASI	Digital Video Broadband Asynchronous Serial Interface (DVBASI) payload
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETR_CLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over POS. Virtual ports partitioned using GFP's multiplexing capability.
• GIGE	Gigabit Ethernet
• HDTV	HDTV
• ISC1	InterSystem Channel, a protocol defined by IBM (ISC1) payload
• ISC3PEER1G	1-Gigabit ISC3 Peer
• ISC3PEER2G	2-Gigabit ISC3 Peer
• ISC3PEER2R	1-Gigabit or 2-Gigabit ISC3 peer used in transparent (2R) mode

• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1-Gigabit ISC1, ISC2, and ISC3 compatibility
• OC3	OC-3 facility
• OC12	OC-12 facility
• OC48	OC-48 facility
• OC192	OC-192 facility
• OC768	OC-768 facility
• OCH	Optical Channel
• OCHCC	OCH client connection
• OCHNC	OCH network connection
• OCHTERM	OCH termination
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTL	Optical Channel Transport Lane.
• OTU1	Optical Transport Unit Level 1
• OTU2	Optical Transport Unit Level 2
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• POS	POS port
• STS1	STS1 path
• STS3C	STS3c path
• STS6C	STS6c path
• STS9C	STS9c path
• STS18C	STS18c path
• STS12C	STS12c path
• STS24C	STS24c path
• STS36C	STS36c path

• STS48C	STS48c path
• STS192C	STS192c path
• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 path
• VT2	VT2 path
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is ALM_THR, which is the alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, 4MD-xx.x, 32MUX-O, 32DMX-O, AD-1C-xx.x, AD-2C-xx.x, AD-4C-xx.x, AD-1B-xx.x, and AD-4B-xx.x cards.
• BATV-EHIGH	Battery Voltage—Extremely High
• BATV-ELOW	Battery Voltage—Extremely Low
• BATV-HIGH	Battery Voltage—High
• BATV-LOW	Battery Voltage—Low
• CD-LOW	Low Threshold value for Chromatic Dispersion. Measured value -70000dBm to +70000dBm.
• CD-HIGH	High Threshold value for Chromatic Dispersion. Measured value -70000dBm to +70000dBm.
• 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 microA as one tenth of a percent. High Warning Threshold, Low Warning Threshold. Measured value (0.0 percent, 100.0 percent).
• OPR-HIGH	Receive power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPR-LOW	Receive power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-HIGH	Transmit power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-LOW	Transmit power in one tenth of a microwatt. Measured value (–0.0 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
• OSNR-LOW	Low Threshold value for Optical Signal to Noise Ratio. Measured value +40dBm to +80dBm.
• OSNR-HIGH	High Threshold value for Optical Signal to Noise Ratio. Measured value +40dBm to +80dBm.
• PMD-LOW	Low Threshold value for Polarization Mode for Dispersion. Measured value +0 to +100dBm.
• PMD-HIGH	High Threshold value for Polarization Mode for Dispersion. Measured value +0 to +100dBm.
• 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
<THLEVEL>	Threshold level. THLEVEL is a float.

RTRV-ALMTH-EQPT

The Retrieve Alarm Threshold Equipment (RTRV-ALMTH-EQPT) command retrieves the alarm thresholds for the power level monitoring on an NE.

Usage Guidelines

None

Category

Equipment

Security

Retrieve

Input Format

RTRV-ALMTH-EQPT:[<TID>]:[<AID>]:<CTAG>::[<CONDTYPE>][,,::];

Input Example

RTRV-ALMTH-EQPT:::1::BATV-HIGH;

RTRV-ALMTH-EQPT::SHELF-2:1::BATV-HIGH;

Input Parameters

<AID>	The node or shelf access identifier from the "28.27 SHELF" section on page 28-55. If omitted it addresses the node or first shelf of the node.
<CONDTYPE>	Must not be null. The parameter type is ALM_THR, which is the alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, 4MD-xx.x, 32MUX-O, 32DMX-O, AD-1C-xx.x, AD-2C-xx.x, AD-4C-xx.x, AD-1B-xx.x, and AD-4B-xx.x cards.
• BATV-EHIGH	Battery Voltage—Extremely High
• BATV-ELOW	Battery Voltage—Extremely Low
• BATV-HIGH	Battery Voltage—High
• BATV-LOW	Battery Voltage—Low
• CD-LOW	Low Threshold value for Chromatic Dispersion. Measured value -70000dBm to +70000dBm.
• CD-HIGH	High Threshold value for Chromatic Dispersion. Measured value -70000dBm to +70000dBm.
• 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 microA as one tenth of a percent. High Warning Threshold, Low Warning Threshold Measured value (0.0 percent, 100.0 percent)
• OPR-HIGH	Receive power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPR-LOW	Receive power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-HIGH	Transmit power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-LOW	Transmit power in one tenth of a microwatt. Measured value (–0.0 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
• OSNR-LOW	Low Threshold value for Optical Signal to Noise Ratio. Measured value +40dBm to +80dBm.
• OSNR-HIGH	High Threshold value for Optical Signal to Noise Ratio. Measured value +40dBm to +80dBm.
• PMD-LOW	Low Threshold value for Polarization Mode for Dispersion. Measured value +0 to +100dBm.
• PMD-HIGH	High Threshold value for Polarization Mode for Dispersion. Measured value +0 to +100dBm.
• 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

Output Format

SID DATE TIME
M CTAG COMPLD
"[<AID>],<MOD2B>:<CONDTYPE>,,,<DNFIELD>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"SHELF-1,EQPT:BATV-HIGH,,,-52.0,"
;

TID-000 1998-06-20 14:30:00
M 001 COMPLD
",EQPT:BATV-HIGH,,,-52.0,""
;

Output Parameters	
<AID>	The node or shelf access identifier from the "28.27 SHELF" section on page 28-55. If omitted, it addresses the node or the first shelf of the node.
<MOD2B>	Alarm type. The parameter type is MOD2B, which is the alarm type.
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 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
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	Gigabit Ethernet port alarm
• ISC3PEER1G	1-Gigabit ISC3 Peer
• ISC3PEER2G	2-Gigabit ISC3 Peer
• ISC3PEER2R	1-Gigabit or 2-Gigabit ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1-Gigabit ISC1, ISC2, and ISC3 compatibility
• 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 port alarm
• STS1	STS1 alarm
• STS3C	STS3c alarm
• STS6C	STS6c alarm
• STS9C	STS9c alarm
• STS18C	STS18c alarm
• STS12C	STS12c alarm
• STS24C	STS24c alarm
• STS36C	STS36c alarm
• STS48C	STS48c alarm
• STS192C	STS192c alarm
• SYNCN	SYNCN alarm
• T1	T1 alarm
• T3	T3 alarm
• TCC	TCC alarm
• VT1	VT1 alarm
• VT2	VT2 alarm
<CONDTYPE>	Parameter type is ALM_THR, which is the alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, 4MD-xx.x, 32MUX-O, 32DMX-O, AD-1C-xx.x, AD-2C-xx.x, AD-4C-xx.x, AD-1B-xx.x, and AD-4B-xx.x cards.
• BATV-EHIGH	Battery Voltage—Extremely High
• BATV-ELOW	Battery Voltage—Extremely Low
• BATV-HIGH	Battery Voltage—High

• BATV-LOW	Battery Voltage—Low
• CD-LOW	Low Threshold value for Chromatic Dispersion. Measured value -70000dBm to +70000dBm.
• CD-HIGH	High Threshold value for Chromatic Dispersion. Measured value -70000dBm to +70000dBm.
• 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 microA as one tenth of a percent. High Warning Threshold, Low Warning Threshold. Measured value (0.0 percent, 100.0 percent).
• OPR-HIGH	Receive power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPR-LOW	Receive power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-HIGH	Transmit power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-LOW	Transmit power in one tenth of a microwatt. Measured value (–0.0 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
• OSNR-LOW	Low Threshold value for Optical Signal to Noise Ratio. Measured value +40dBm to +80dBm.
• OSNR-HIGH	High Threshold value for Optical Signal to Noise Ratio. Measured value +40dBm to +80dBm.
• PMD-LOW	Low Threshold value for Polarization Mode for Dispersion. Measured value +0 to +100dBm.
• PMD-HIGH	High Threshold value for Polarization Mode for Dispersion. Measured value +0 to +100dBm.
• 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
<DNFIELD>	DNFIELD is a float.

RTRV-ALM-ODU

The command retrieves alarm ODU.

Usage Guidelines

The AID in the command is mandatory.

Category

Equipment

Security

Retrieve

Input Format

RTRV-ALM-ODU:[<TID>]:<aid>:<CTAG>::[<ntfcncde>],[<condtype>],[<srveff>],[<locn>],[<dirn>]:[BANDWIDTH=<bandwidth>];

Input Example

RTRV-ALM-ODU::ODU-1-3-7-1-3-1:a:::BANDWIDTH=ODU2E;

node113 2017-06-02 20:35:49

M a COMPLD

"ODU-1-3-7-1-3-1,ODU:,PEER-CSF,,06-02,20-25-26,NEND,NA,\"Peer Port Client Signal Fail Detected\""

;

Input Parameters

<AID>	The AID is mandatory. AID of the ODU2. ALL AID is also supported.
<BANDWIDTH>	ODU Level (ODU2E). ENUM, Mandatory.

• Ntfcncde	CL, CR, MJ, MN, NA, NR
• Condtype	ENUM (optional). The condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, Whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, Not-Alarmed conditions (NA), and Not-Reported (NR) conditions.
• Srveff	ENUM (optional). NSA. The condition is non-service affecting. SA : The condition is service affecting.
• Locn	ENUM (optional). FEND: Action occurs on the far end of the facility NEND: Action occurs on the near end of the facility.
• Dirn	ENUM (optional). BTH : Both transmit and receive directions RCV : Receive direction only.

Output Format

Output Example

Output Parameters

RTRV-ALS

The Retrieve Automatic Laser Shutoff (RTRV-ALS) command retrieves the ALS attributes of an OC-N facility and all the facilities that support the ALS feature. This command is used to retrieve the ALS parameter of the OC48 and OC192 ports on the MXP_2.5G_10E, TXP_MR_10E, TXP_MR_2.5G, TXPP_MR_2.5G, MXP_2.5G_10G, and TXP_MR_10G cards.

Usage Guidelines

RTRV-ALS on 10x10G-LC, 100G-LC-C, and CFP-LC cards retrieves ALS attributes on the OCH interface for non-OTU payloads and on payloads interfaces for OTU payloads.

Category

Ports

Security

Retrieve

Input Format

RTRV-ALS:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-ALS:PENNGROVE:FAC-1-1:1

Input Parameters

<AID>	Access identifier from the “28.1 ALL” section on page 28-1.

Output Format

SID DATE TIME
M CTAG COMPLD

“<AID>,[<AIDTYPE>]:[<ALSMODE>],[<ALSRCINT>],[<ALSRCPW>],[<LSRSTAT>],[<OSRI>]”
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
“FAC-6-1,OC192::ALSMODE=DISABLED,ALSRCINT=100,ALSRCPW=2.0,LSRSTAT=UP:”
;

Output Parameters

<AID>	Access identifier from the “28.1 ALL” section on page 28-1.
<AIDTYPE>	Type of access identifier.The parameter type is MOD2, which is the line/path modifier.
• 100GIGE	100 Gigabit Ethernet.
• 10GFC	10-Gigabit Fibre Channel payload
• 10GFICON	10-Gigabit fiber connectivity payload
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 1GISC3	1-Gigabit ISC3 compatible
• 2GFC	2-Gigabit Fibre Channel payload

• 2GFICON	2-Gigabit fiber connectivity payload
• 2GISC3	2-Gigabit ISC3 compatible
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 40GIGE	40-Gigabit Ethernet
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• D1VIDEO	D1 video
• DS1	DS1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• DVBASI	Digital Video Broadband Asynchronous Serial Interface (DVBASI) payload
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETR_CLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over POS. Virtual ports partitioned using GFP's multiplexing capability.
• GIGE	Gigabit Ethernet
• HDTV	HDTV
• HDSDI	1.5G HD-SDI video payload
• ISC1	InterSystem Channel, a protocol defined by IBM (ISC1) payload
• ISC3PEER1G	1-Gigabit ISC3 Peer
• ISC3PEER2G	2-Gigabit ISC3 Peer
• ISC3PEER2R	1-Gigabit or 2-Gigabit ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.

• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1-Gigabit ISC1, ISC2, and ISC3 compatibility
• OC3	OC-3 facility
• OC12	OC-12 facility
• OC48	OC-48 facility
• OC192	OC-192 facility
• OC768	OC768 facility
• OCH	Optical Channel
• OCHCC	OCH client connection
• OCHNC	OCH network connection
• OCHTERM	OCH termination
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTU1	Optical Transport Unit Level 1
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• POS	POS port
• SDSDI	270M SDI video payload
• STS1	STS1 path
• STS3C	STS3c path
• STS6C	STS6c path
• STS9C	STS9c path
• STS18C	STS18c path
• STS12C	STS12c path
• STS24C	STS24c path
• STS36C	STS36c path
• STS48C	STS48c path
• STS192C	STS192c path

• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 path
• VT2	VT2 path
<ALSMODE>	ALS is enabled or disabled. The parameter type is ALS_MODE, which is the working mode for automatic laser shutdown.
• AUTO	Automatic
• DISABLED	Disabled
• MAN	Manual
• MAN-RESTART	Manual restart for test
<ALSRCINT>	(Optional) ALS interval. The range is 60 to 300 seconds. ALSRCINT is an integer.
<ALSRCPW>	(Optional) ALS recovery pulse width. The range is 2.0 to 100.00 seconds, in increments of 100 ms. ALSRCPW is a float.
<LSRSTAT>	(Optional) Status of the laser. The parameter type is LASER_STATUS (laser status).
• APR	Laser is switched on but is working automatic power reduction.
• DOWN	Laser is switched off.
• UP	Laser is switched on.
<OSRI>	(Optional) OSRI enabled or disabled. Present only on a port where the safety is supported. Defaults to off. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.

RTRV-APC

The Operate Amplifier Power Control (RTRV-APC) command retrieves the APC application attributes.

Usage Guidelines

None

Category
DWDM

Security
Maintenance

Input Format
RTRV-APC:[<TID>]::<CTAG>;

Input Example
RTRV-APC:PENNGROVE:WDMSIDE-A:114;

Input Parameters
None that require description

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    "::[APCENABLE=<APCENABLE>],[APCSTATE=<APCSTATE>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001 COMPLD
    "::APCENABLE=Y,APCSTATE=WORKING"
;
```

Output Parameters

<WDMSIDE>	The AID is used to access the WDM side of an MSTP node.
• WDMSIDE-{UNKNOWN,A,B,C,D,E,F,G,H}	MSTP side identifier
<APCENABLE>	(Optional) Enable or disable the APC application. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<APCSTATE>	(Optional) Indicates the status of the APC application. The parameter type is APC_STATE (APC status).

• DISABLE	The APC is disabled by the user and is not working.
• FORCED-DISABLE	The APC has been internally disabled by the node and is not working.
• WORKING	The APC is enabled by the user and is working.
• PASSIVE	The APC is in the passive state.

RTRV-ATTR-CONT

The Retrieve Attribute Control (RTRV-ATTR-CONT) 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.

Usage Guidelines

None

Category

Environment

Security

Retrieve

Input Format

RTRV-ATTR-CONT:[<TID>]:<AID>:<CTAG>[::<CONTTYPE>];

Input Example

RTRV-ATTR-CONT:CISCO:ENV-OUT-2:123::AIRCOND;

Input Parameters

<AID>	Access identifier from the “28.14 ENV” section on page 28-39. Identifies the external control for which attributes are being set.
<CONTTYPE>	Environmental control type. A null value is equivalent to ALL. The parameter type is CONTTYPE, which is the environmental control type.
• AIRCOND	Air conditioning
• ENGINE	Engine
• FAN	Fan

• GEN	Generator
• HEAT	Heat
• LIGHT	Light
• MISC	Miscellaneous
• SPKLR	Sprinkler

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:[<CONTTYPE>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"ENV-OUT-2:AIRCOND"
;

Output Parameters

<AID>	Access identifier from the "28.14 ENV" section on page 28-39. Identifies the external control for which attributes are being set.
<CONTTYPE>	Environmental control type. A null value is equivalent to ALL. The parameter type is CONTTYPE, which is the environmental control type.
• AIRCOND	Air conditioning
• ENGINE	Engine
• FAN	Fan
• GEN	Generator
• HEAT	Heat
• LIGHT	Light
• MISC	Miscellaneous
• SPKLR	Sprinkler

RTRV-ATTR-ENV

The Retrieve Attribute Environment (RTRV-ATTR-ENV) command retrieves the attributes associated with an environmental alarm.

Usage Guidelines

None

Category

Environment

Security

Retrieve

Input Format

RTRV-ATTR-ENV:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<ALMTYPE>];

Input Example

RTRV-ATTR-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR;

Input Parameters

<AID>	Access identifier from the "28.14 ENV" section on page 28-39.
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<ALMTYPE>	The alarm type for the environmental alarm. A null value is equivalent to ALL. The parameter type is ENV_ALM, which is the environmental alarm type.
• 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
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail
• HATCH	CEV hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnect bypass
• 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 V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas

• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure

Output Format

```
   SID DATE TIME
M   CTAG COMPLD
   "<AID>:[<NTFCNCDE>],[<ALMTYPE>],[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M   001 COMPLD
   "ENV-IN-1:MJ,OPENDR,\"OPEN DOOR\""
;
```

Output Parameters

<AID>	Access identifier from the "28.14 ENV" section on page 28-39.
<NTFCNCDE>	(Optional) Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<ALMTYPE>	(Optional) The alarm type for the environmental alarm. The parameter type is ENV_ALM, which is the environmental alarm type.
• 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
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail or gas monitor fail
• HATCH	CEV hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnect bypass
• 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	48V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure
<DESC>	(Optional) Alarm description. DESC is a string.

RTRV-AUDIT-LOG

The Retrieve Audit Log (RTRV-AUDIT-LOG) command retrieves the contents of the audit log stored in the NE. Audit records contain information for user operations such as login, logout, change of provisioning parameters and other changes a user might make when connected to the NE. Audit records do not store operations related to parameter retrieval.

Usage Guidelines

None

Category

Log

Security

Superuser

Input Format

RTRV-AUDIT-LOG:[<TID>]::<CTAG>;

Input Example

RTRV-AUDIT-LOG:::1;

Input Parameters

None that require description

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    " <ENTRYNUM>,<OCRDAT>,<OCRTM>,<TASKID>,<TXSTATUS>,<DESCRIPTION>"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001 COMPLD
    " 17172,2004-10-05,09-52-44, TPROVMGR,COMPLD,
    \17172,2004-10-05,09-52-44, TPROVMGR,COMPLD,\"DESCRIPTION\""
;
```

Output Parameters

<ENTRYNUM>	Entry number. ENTRYNUM is an integer.
<OCRDAT>	Date when the specific event or violation occurred, MM-DD.

<OCRTM>	Time when the specific event or violation occurred, HH-MM-SS.
<TASKID>	Task ID. TASKID is a string.
<TXSTATUS>	Parameter type is TX_STATUS, which indicates the status of the transferred file.
• COMPLD	The file transmission is completed.
• IP	The file transmission is in process.
• START	The file transmission is started.
<DESCRIPTION>	Description of event. Description format varies depending on the event and can include parameters used during the event. DESCRIPTION is a string.

RTRV-AUTO

The Retrieve Auto (RTRV-AUTO) command retrieves the AUTO ports provisioned. Port bandwidth changes to OC3/OC12/OC48 as per the incoming signal when auto sense is enabled. Default being OC48 when auto sense is disabled.

Usage Guidelines

None

Category

DWDM

Security

Provisioning

Input Format

RTRV-AUTO:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-AUTO:CISCO:VFAC-2-1-1:1;

Input Parameters

None that require description

Output Format

SID DATE TIME

M CTAG COMPLD

"<AID>,[DETECTEDPAYLOAD=<DETECTEDPAYLOAD>],[AUTOSENSE=<AUTOSENSE>]"

;

Output Example

M 1 COMPLD

"VFAC-15-1-1,DETECTEDPAYLOAD=OC48,AUTOSENSE=N"

;

Output Parameters

<AID>	The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.
<DETECTEDPAYLOAD>	Payload detected.
• 100GIGE	100 Gigabit Ethernet.
• 3GVIDEO	3G-SDI video payload.
• AUTO	Auto
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• HDSDI	1.5G HD-SDI video payload.
• OTU1	Optical Transport Unit Level 1.
• OTU4	Optical Transport Unit Level 4.
• SDSDI	270M SDI video payload.
<AUTOSENSE>	Specifies if auto sense is enabled or disabled.
• Y	Enable Autosensing.
• N	Disable Autosensing.

RTRV-BFDLPM-<MOD2>

The Retrieve BFDL Performance Monitoring (DS1, T1) command retrieves the BFDL (enhanced 24-hour ES, UAS, BES, CSS, and LOFC) performance monitoring parameters and applies to the DS3XM-12 card DS1 under BFDL mode. This command returns the current 15-minute and current 24-hour BFDL performance monitoring (PM) parameters and the 96 15-minute history requested type PM parameters.

Usage Guidelines

For example, the following input:

RTRV-BFDLPM-DS1::DS1-14-1-1:1:::REQTYPE=ENH-24HR-ES;

Will retrieve the following output:

DS1-14-1-1:ES,30,CURR-15MIN-INV DS1-14-1-1:UAS,40,CURR-15MIN-INV DS1-14-1-1:BES,50,CURR-15MIN-INV DS1-14-1-1:SES,60,CURR-15MIN-INV DS1-14-1-1:CSS,70,CURR-15MIN-INV DS1-14-1-1:LOFC,80,CURR-15MIN-INV DS1-14-1-1:ES,30,CURR-24HR-INV DS1-14-1-1:UAS,40,CURR-24HR-INV DS1-14-1-1:BES,50,CURR-24HR-INV DS1-14-1-1:SES,60,CURR-24HR-INV DS1-14-1-1:CSS,70,CURR-24HR-INV DS1-14-1-1:LOFC,80,CURR-24HR-INV DS1-14-1-1:ES,30,1-15MIN-INV DS1-14-1-1:ES,40,2-15MIN-INV
DS1-14-1-1:ES,50,3-15MIN-INV
DS1-14-1-1:ES,80,96-15MIN-INV

Sending this command with a REQTYPE of ENH-24HR-CSS-AND-LOFC will retrieve 96 15-minute PM parameters for both CSS and LOFC. The command is applied on the DS3XM-12 DS1 under BFDL mode, ESF frame format, C-BIT IS port with an IS VT circuit configuration.

Category

Performance

Security

Retrieve

Input Format

RTRV-BFDLPM-<MOD2>:[<TID>]:<AID>:<CTAG>:::REQTYPE=<REQTYPE>;

Input Example

RTRV-BFDLPM-DS1:TID:DS1-14-1-1:123:::REQTYPE=ENH-24HR-ES;

Input Parameters

<AID>	Access identifier from the "28.13 DS1" section on page 28-38.
<REQTYPE>	Indicates requested BFDL PM type. Must not be null. The parameter type is REQTYPE, which is the requested PM type.
• ENH-24HR-BES	The enhanced 24-hour BES performance data
• ENH-24HR-CSS-AND-LOFC	The enhanced 24-hour CSS-AND-LOFC performance data
• ENH-24HR-ES	The enhanced 24-hour ES performance data
• ENH-24HR-SES	The enhanced 24-hour SES performance data
• ENH-24HR-UAS	The enhanced 24-hour UAS performance data

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:<MONTYPE>,<MONVAL>,<BUCKET>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"DS1-14-1-1:ES,55,CURR-15MIN-INV"
;

Output Parameters

<AID>	Access identifier from the "28.13 DS1" section on page 28-38.
<MONTYPE>	Monitored type which includes: BES, CSS, ES, LOFC, SES, UAS. MONTYPE is a string.
<MONVAL>	The value to which the register identified by MONTYPE is to be initialized to or the measured value of a monitored parameter. The value is in the form of numeric counts or rates. MONVAL is a string.
<BUCKET>	The BIN of each BFDL PM. BUCKET is a string.

RTRV-BITS

The Retrieve Building Integrated Timing Supply (RTRV-BITS) command retrieves the BITS configuration command. For BITS facility, 64 K and 6 MHz are only applicable to the .

Usage Guidelines

None

Category

Synchronization

Security

Retrieve

Input Format

RTRV-BITS:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-BITS:SONOMA:BITS-1:782;

Input Parameters

<AID>	Access identifier from the "28.6 BITS" section on page 28-22.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[LINECDE=<LINECDE>],[FMT=<FMT>],[LBO=<LBO>],
[SYNCMSG=<SYNCMSG>],[AISTHRSHLD=<AISTHRSHLD>],[SABIT=<SABIT>],
[IMPEDANCE=<IMPEDANCE>],[BITSFAC=<BITSFAC>],[ADMSSM=<ADMSSM>]:[<PST>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"BITS-1::LINECDE=AMI,FMT=ESF,LBO=0-133,SYNCMSG=N,AISTHRSHLD=PRS,
SABIT=BYTE-4,IMPEDANCE=120-OHM,BITSFAC=T1,ADMSSM=PRS:IS"
;

Output Parameters

<AID>	Access identifier from the "28.6 BITS" section on page 28-22
<LINECDE>	(Optional) Line code. The parameter type is LINE_CODE.
• AMI	Line code value is AMI.
• B3ZS	Bipolar with three-zero substitution
• B6ZS	Line code value is B6ZS.
• B8ZS	Line code value is B8ZS.
• JBZS	JBZS
• ZBTSI	ZBTSI
<FMT>	(Optional) Digital signal frame format. The parameter type is FRAME_FORMAT, which is the frame format for a T1 port.

• AUTOPROV	AUTOPROV
• CBIT	C-BIT line type applies to the DS3XM and DS3E cards.
• D4	Frame format is D4.
• DS2 FRAMED	DS2 FRAMED
• E2 FRAMED	E2 FRAMED
• E3-FRAME	E3-FRAME
• E3-PLCP	E3-PLCP
• ESF	Frame format is ESF.
• FRAMENA	FRAMENA
• G-751	G-751
• G-832	G-832
• M13	M13 line type applies to the DS3XM and DS3E cards.
• M23	M23
• SYNTRAN	SYNTRAN
• UNFRAMED	Frame format is unframed.
<LBO>	(Optional) Line buildout settings. BITS line buildout. Default value is 0 to 133. LBP is an integer. The parameter type is BITS_LineBuildOut, which is the BITS line buildout.
• 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.
<SYNCMSG>	Indicates if the BITS facility supports synchronization status message. Default is Y. The parameter type is EXT_RING, which indicates if the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<AISTHRSHLD>	(Optional) Alarm indication signal threshold. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.

• DUS	Do Not 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
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<SABIT>	(Optional) When the frame format selection is E1, SABIT is the BIT used to receive and transmit the SSM. The parameter type is SABITS (SA BITS).
• 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.
<IMPEDANCE>	(Optional) When the frame format selection is E1, IMPEDANCE is the terminal impedance of the BITS-IN port. The parameter type is IMPEDANCE, which is the terminal impedance of the BITS-IN port
• 120-OHM	Impedance of 120 ohms
• 75-OHM	Impedance of 75 ohms
<BITSFAC>	(Optional) BITS facility settings. The parameter type is BITS_FAC, which is the BITS facility rate. 64 K and 6 MHz are only applicable to the .
• 2 M	2 MHz rate
• 64 K	64 K rate
• 6 M	6 MHz rate
• E1	E1 rate

• T1	T1 rate
<ADMSSM>	(Optional) SSM selectable. Only applicable to BITS-IN when SSM is disabled. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not 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
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<PST>	(Optional) Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In Service
• OOS	Out of Service

RTRV-AWCFG

The Retrieve Alien Wavelength Configuration (RTRV-AWCFG) retrieves the alien wavelength attributes configured.

Usage Guidelines

None

Category

DWDM

Security

Provisioning

Input Format

RTRV-AWCFG:[<TID>]:<src>:<CTAG>::[:];

Input Example

RTRV-AWCFG::CHAN-3-5-RX:1;

Table 23-1 Parameter Support

Parameter	Description
<SRC>	AID from the "28.1 ALL" section on page 28-1.

Output Format

SID DATE TIME
M CTAG COMPLD
""<AID>:<ALIENID>,<FECMODE>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"CHAN-3-4-RX:40G DWDM ITU-T TXP,FECMODE=ENHANCED14"
;

Table 23-2 Output Parameter Support

Parameter	Description
<AID>	AID from the "28.1 ALL" section on page 28-1.
<ALIENID>	Indicates the operating mode for alien wavelength. ALIENID is a STRING.
<FECMODE>	Specifies the FEC mode for alien wavelength.
• ENH	Enhanced FEC is enabled.
• ENH-I4	Enhanced FEC 1.4 is enabled.
• ENH-I7	Enhanced FEC 1.7 is enabled.
• HG-7	7% High Gain FEC is enabled.
• HG-20	20% High Gain FEC is enabled.
• OFF	FEC is disabled.

• STD	Standard FEC is enabled.
• SD-20	
• SD-7	

RTRV-BULKROLL-<OCN_TYPE>

The Retrieve Bulkroll for OC12, OC192, OC3, OC48, or OC768 (RTRV-BULKROLL-<OCN_TYPE>) command retrieves roll data parameters on a line.

Usage Guidelines

See Table 30-1 on page 30-1 for supported modifiers by platform.

Category

Bridge and Roll

Security

Provisioning

Input Format

RTRV-BULKROLL-<OCN_TYPE>:[<TID>]:<SRC>:<CTAG>;

Input Example

RTRV-BULKROLL-OC12:CISCO:FAC-3-1:1;

Input Parameters

<SRC>	Source AID from the "28.17 FACILITY" section on page 28-42.

Output Format

SID DATE TIME
M CTAG COMPLD
"<FROM>:RFROM=<RFROM>,RTO=<RTO>,[RMODE=<RMODE>],VLDSIG=<VLDSIG>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD

"STS-3-1-1:RFROM=STS-3-1-1,RTO=STS-5-1-1,RMODE=AUTO,VLDSIG=Y"
;

Output Parameters

<FROM>	One of the end points. Access identifier from the "28.17 FACILITY" section on page 28-42 for line level rolling and bulk rolling.
<RFROM>	The termination point of the existing cross-connect that is to be rolled. The AID is from the "28.12 CrossConnectId1" section on page 28-31 (except VCM and FACILITY).
<RTO>	The termination point that will become a leg of the new cross-connection. The AID is from the "28.12 CrossConnectId1" section on page 28-31 (except VCM and FACILITY).
<RMODE>	(Optional) The rolling mode of operation. The parameter type is RMODE, which specifies the roll mode.
• AUTO	Automatic. When a valid signal is available, the roll under AUTO mode will automatically delete the previous end-point.
• MAN	Manual. Enter the corresponding delete roll/bulkroll command to delete the previous end-point.
• MAN	Manual
• MAN-RESTART	Manual Restart for Test
<VLDSIG>	(Optional) The rolling mode of operation. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.

RTRV-BWP-ETH

This command is used to retrieve a BandWidth Profile entry in BWP DB. The BWP DB is a collection of BWP used in a Network Element.

Usage Guidelines

The "ALL" AID is supported by this command.

If the AID is invalid, an IIAC (Invalid AID) error message is returned.

Category
Ethernet

Security
Retrieve

Input Format
RTRV-BWP-ETH:[<TID>]:<AID>:<CTAG>[::::];

Input Example
RTRV-BWP-ETH:ROCKS:BWP-10000:1;

Input Parameter

Table 23-3 Input Parameter Support

Parameter	Description
<AID>	This AID is used to access BWP.
• BWP-ALL	All aid for BWP.
• BWP-{1-10000}	Single AID for BWP. The valid identifiers ranges from 1 to 10000.

Output Format
SID DATE TIME

M CTAG COMPLD

"<AID>::[NAME=<NAME>],[CIR=<CIR>],[CBS=<CBS>],[PBS=<PBS>],[PIR=<PIR>],[CFMSTATE=<CFM_STATE>]:"
;

;

Output Example
TID-000 1998-06-20 14:30:00

M 001 COMPLD

"BWP-10000::NAME="MyBWP",CIR=10,CBS=1M,PBS=1M,PIR=20,CFMSTATE=Y:";
;

Output Parameters

Table 23-4 Output Parameter Support

Parameter	Description
<AID>	This AID is used to access BWP.
• BWP-ALL	All aid for BWP.
• BWP-{1-10000}	Single AID for BWP. The valid identifiers ranges from 1 to 10000.
<NAME>	The BWP name. BWP name is a String.
<CIR>	Ingress committed information rate. This is a value between 0.0 and 100.0. Default value is 100.0.
<CBS>	Ingress committed burst bucket size.
• 4K	4 Kbit bucket size
• 8K	16 Kbit bucket size
• 16K	32 Kbit bucket size
• 32K	64 Kbit bucket size
• 64K	128 Kbit bucket size
• 128K	256 Kbit bucket size
• 256K	512 Kbit bucket size
• 512K	1 Mbit bucket size
• 1M	2 Mbit bucket size
• 2M	4 Mbit bucket size
• 4M	8 Mbit bucket size
• 8M	16 Mbit bucket size
• 16M	16 Kbit bucket size
<PBS>	Ingress peak burst bucket size
• 4K	4 Kbit bucket size
• 8K	8 Kbit bucket size
• 16K	16 Kbit bucket size

• 32K	32 Kbit bucket size
• 64K	64 Kbit bucket size
• 128K	128 Kbit bucket size
• 256K	256 Kbit bucket size
• 512K	512 Kbit bucket size
• 1M	1 Mbit bucket size
• 2M	2 Mbit bucket size
• 4M	4 Mbit bucket size
• 8M	8 Mbit bucket size
• 16M	16 Mbit bucket size
<PIR>	Peak information rate. This is a value between 0.0 and 100.0. Default value is 100.0.
<CFMSTATE>	Link Integrity status
• Y	Enabled
• N	Disabled

RTRV-CFM

The Retrieve Connectivity Fault Management (RTRV-CFM) command retrieves the Connectivity Fault Management (CFM) protocol state at the port level.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Port

Security

Retrieve

Input Format

RTRV-CFM:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-CFM:454-156:ETH-1-1-1:1;

Input Parameter

<AID>	Access identifier from the "28.16 ETH" section on page 28-41.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>,<STATE>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"ETH-7-1-1,STATE=ENABLE"
;

Output Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "28.16 ETH" section on page 28-41.
<CFM_STATE>	Indicates whether the CFM is enabled or disabled on the port.
• ENABLE	Indicates the CFM is enabled on the port.
• DISABLE	Indicates the CFM is disabled on the port.

RTRV-CHGRP

The Retrieve Channel Group (RTRV-CHGRP) command retrieves the layer 2 channel group information of GE_XP and 10GE_XP ethernet cards.

Category

Channel Group

Security

Retrieve

Input Format

RTRV-CHGRP:[<TID>]:<aid>:<CTAG>[::::];

Input Example

RTRV-CHGRP::CHGRP-1-2:1;

Input Parameters

<AID>	Access identifier from the "28.9 CHGRP" section on page 28-26.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:[LACPMODE=<LACPMODE>],[HASHINGALGO=<HASHINGALGO>],[NIMODE=<NIMODE>],[MACLEARNING=<MACLEARNING>],[INGRESSCOS=<INGRESSCOS>],[ETHERCETYPE=<ETHERCETYPE>],[ETHERSTYPE=>ETHERSTYPE>],[BPDU=<BPDU>],[QNQMODE=<QNQMODE>],[MTU=<MTU>],[FLOWCTRL=<FLOWCTRL>],[SPEED=<SPEED>],[EXPSPEED=<EXPSPEED>],[CIR=<CIR>,[CBS=<CBS>],[EBS=<EBS>]:<PST>,[<SST>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"CHGRP-1-1:LACPMODE=ACTIVE,HASHINGALGO=HASHING_SA_DA_VLAN_INCOMING_PORT,NIMODE=UNI,MACLEARNING=N,INGRESSCOS=0,ETHERCETYPE=8100,ETHERSTYPE=8100,BPDU=Y,QNQMODE=SELECTIVE,MTU=9700,FLOWCTRL=ASYMMETRIC,SPEED=AUTO,EXPSPEED=AUTO,CIR=100,CBS=4K,EBS=4K:OOS-MA,DSBLD"
;

Output Parameters

<AID>	Access identifier from the "28.9 CHGRP" section on page 28-26.
<NIMODE>	Identifies the Ethernet Network Interface Mode.
• NNI	(Default) Network-Network Interface Mode
• UNI	User-Network Interface Mode
<LACPMODE>	LACP mode values
• ON	Manual mode of LACP

• ACTIVE	Active mode of LACP
• PASSIVE	Passive mode of LACP
<HASHINGALGO>	Hashing algorithm value
• HASHING_SA_VLAN_INCOMING_PORT	The Hashing Algorithm value is HASHING_SA_VLAN_INCOMING_PORT.
• HASHING_DA_VLAN_INCOMING_PORT	The Hashing Algorithm is HASHING_DA_VLAN_INCOMING_PORT.
• HASHING_SA_DA_VLAN_INCOMING_PORT	The Hashing Algorithm is HASHING_SA_DA_VLAN_INCOMING_PORT.
• HASHING_SRC_IP_TCP_UDP	The Hashing Algorithm is HASHING_SRC_IP_TCP_UDP.
• HASHING_DST_IP_TCP_UDP	The Hashing Algorithm is HASHING_DST_IP_TCP_UDP
• HASHING_SRC_DST_IP_TCP_UDP	The Hashing Algorithm is HASHING_SRC_DST_IP_TCP_UDP.
<MTU>	(Optional) Maximum transport unit. The parameter type is MTU_TYPE, which indicates the maximum transport unit used by an Ethernet card. Defaults to 9600.
• 10004	10004. Indicates jumbo size.
• 1500	1500
• 1548	1548
• 9600	9600. Indicates jumbo size.
• 64	64
• 9700	9700. Indicates jumbo size.
<ATTACH >	Ethernet AID for the front end CE-MR-6 cards. Ethernet AID for the ethernet port on GE_XP and 10GE_XP card.
<DETACH>	To remove or detach the port.
<SPEED>	(Optional) The parameter type is ETHER_SPEED, which indicates Ethernet speed. Defaults to AUTO.
• 100_MBPS	100 Megabits per second
• 10_GBPS	10 Gigabits per second
• 10_MBPS	10 Megabits per second
• 1_GBPS	1 Gigabit per second

<EXPSPEED>	(Optional) Ethernet speed. The parameter type is ETHER_SPEED, which is the Ethernet speed.
• 100_MBPS	100 Megabits per second
• 10_GBPS	10 Gigabits per second
• 10_MBPS	10 Megabits per second
• 1_GBPS	1 Gigabit per second
• 40_GBPS	40 Gigabit per second
• AUTO_FDX	Enable auto negotiation with full duplex
• AUTO	Auto
<CIR>	Ingress committed information rate. This is a value between 0.0 and 100.0. Default value is 100.0.
<CBS>	Ingress committed burst bucket size.
• 4K	4 Kbit bucket size
• 8K	16 Kbit bucket size
• 16K	32 Kbit bucket size
• 32K	64 Kbit bucket size
• 64K	128 Kbit bucket size
• 128K	256 Kbit bucket size
• 256K	512 Kbit bucket size
• 512K	1 Mbit bucket size
• 1M	2 Mbit bucket size
• 2M	4 Mbit bucket size
• 4M	8 Mbit bucket size
• 8M	16 Mbit bucket size
• 16M	16 Kbit bucket size
<EBS>	Ingress excess burst bucket size.
<MACLEARNING>	MAC Address Learning Mode. This activates the MAC address learning on the interface to avoid packet broadcasting.

• Y	Enables the MAC learning on the interface.
• N	Disables the MAC learning on the interface.
<INGRESSCOS>	Identifies the COS value set in the S-VLAN tag.
• 0 to 7	Set a Cos value
• TRUST	Use the Customer COS
• VLAN	The COS will be provisioned on CVLAN basis (QinQ selective mode)
<ETHERCETYPE>	Identifies a customer foreseen Ethernet type. If the customer uses a non-standard Ethernet type, the incoming packets will be accepted only if the CE-VLAN Ethernet type matches this parameter.
<ETHERSTYPE>	Identifies a customer foreseen Ethernet type. If the customer uses a non-standard Ethernet type, the incoming packets will be accepted only if the CE-VLAN Ethernet type matches this parameter.
<BPDU>	BPDU (Bridge Protocol Data Unit) management mode; Drop/Passthrough BPDU tagged packets.
• Y	Enables the BPDU tag.
• N	Disables the BPDU tag.
<QNQMODE>	This is used to represent the QinQ mode operations.
• Selective	The S-VLAN tag is added only on specified CE-VLANs. The other packets are dropped.
• Transparent	The S-VLAN tag is always performed where all packets having the S-VLAN-ID identified by TRNSPSVLAN parameter are allowed.
<TRNSPSVLAN>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<NAME>	(Optional) NAME is a string. User-assigned port name.

RTRV-CMD-SECU

The Retrieve Command Security (RTRV-CMD-SECU) command retrieves the current command security level of the command specified in the AID field.

Usage Guidelines

None

Category

Security

Security

Superuser

Input Format

RTRV-CMD-SECU:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-CMD-SECU::INIT-REG:1;

Input Parameters

<AID>	Access identifier string. Identifies the entity in the NE to which the command pertains. It is the command verb along with verb modifier(s), as it currently exists. It can be a single command or a block of commands, where the block might include all commands. Only INIT-REG will be supported. String.

Output Format

```
   SID DATE TIME
M   CTAG COMPLD
   "<AID>:<CAP>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M   001 COMPLD
   "INIT-REG:ROOT_USER"
;
```

Output Parameters

<AID>	(Optional) Access identifier. It can be a single command or a block of commands, where the block can include all commands. Only INIT-REG is supported. AID is a string.

<CAP>	Command access privilege. The parameter type is PRIVILEGE, which is the security level.
• PROV	Provisioning security level
• SUPER	Superuser security level
• ROOT_USER	Root user.
• SEC_SUPER	Security super user.
• SEC_USER	Security user.

RTRV-COND-<MOD2ALM>

The Retrieve Condition for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 4GFC, 4GFICON, 5GIB, 8GFC, CHGRP, DS1, DS3I, DVBASI, E1, E100, E1000, E3, E4, EC1, ETH, FSTE, G1000, HDLC, ETH, GFPOS, GIGE, ILK, ISCCOMPAT, ISC1, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, MSISC, OC12, OC192, OC3, OC48, OC768, OCH, ODU0, OMS, OTS, OTL, OTU2, OTU3, OTU4, OTU4C2, POS, RPRIF, STM1, STM4, STM16, STM64, STM1E, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, T1, T3, UDCDCC, UDCF, VC11, VC12, VC3, VC4, VC4-2c,VC4-3c, VC4-4c, VC4-8c, VC4-16c, VC4-64c, VCG, VT1, VT2, WLEN, RPRIF, 3GVIDEO, HDSDI, ISC3STP1G, ISC3STP2G, OTU1, or SDSDI (RTRV-COND-<MOD2ALM>) command retrieves the current standing condition and state associated with an entity.

Usage Guidelines

The command supports the modifiers 3GVIDEO, OTU1, SDSDI, HDSDI, ISC3STP1G, and ISC3STP2G. The RTRV-COND-OTL command retrieves the conditions raised on sublanes of 100G-LC-C and CFP-LC Cards.

RTRV-COND-ODU0 command retrieves the conditions raised on the ODU0's on AR-XPE card only.

See Table 30-1 on page 30-1 for supported modifiers by platform.

Category

Fault

Security

Retrieve

Input Format

RTRV-COND-<MOD2ALM>:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>],[<LOCN>],[<DIRN>];

Input Example

RTRV-COND-OTU1::VFAC-14-3-1:1::OTUK-IAE;

Input Parameters

<AID>	Access identifier from the "28.1 ALL" section on page 28-1. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.
<TYPEREQ>	The type of condition to be retrieved. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

SID DATE TIME

M CTAG COMPLD "<AID>,[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],[<OCRTM>],[<LOCN>],[<DIRN>]:[<DESC>]"

;

Output Example

tcc2 2011-08-18 16:11:55

M 1 COMPLD

"VFAC-14-3-1,OTU1:MN,OTUK-IAE,NSA,08-18,12-58-24,NEND,RCV,\"OTUK: INCOMING ALIGNMENT ERROR\""

;

Output Parameters

<AID>	Access identifier from the "28.1 ALL" section on page 28-1.

<AIDTYPE>	(Optional) Type of access identifier. Specifies the type of facility, link or other addressable entity targeted by the message. The parameter type is MOD2ALM, which is the alarm type.
• 100GIGE	100 Gigabit Ethernet
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 1GISC3	1-Gigabit ISC3 compatible
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 40GIGE	40-Gigabit Ethernet
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• CLNT	Client facility for MXP/TXP cards
• CHGRP	Channel group
• CPS	CPS modifier signifies WSON control plane circuits.
• DS1	DS1 alarm
• DS3I	DS3I alarm
• DVBASI	Digital Video Broadband Asynchronous Serial Interface (DVBASI) payload
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GFPOS	Generic framing protocol over packet over SONET virtual port alarm

• GIGE	Gigabit Ethernet port alarm
• HDSDI	1.5G HD-SDI video payload.
• ISC1	InterSystem Channel, a protocol defined by IBM (ISC1) payload
• ISC3PEER1G	1-Gigabit ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• MSISC	MSISC
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OC768	OC768 alarm
• OCH	Optical channel
• OCHTERM	OCH termination
• ODU0	Optical Data Unit Level 0
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTL	Optical Channel Transport Lane.
• OTU1	Optical Transport Unit Level 1
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• POS	POS port alarm
• SDSDI	270M SDI video payload.
• STS1	STS1 alarm
• STS3C	STS3c alarm

• STS6C	STS6c alarm
• STS9C	STS9c alarm
• STS18C	STS18c alarm
• STS12C	STS12c alarm
• STS24C	STS24c alarm
• STS36C	STS36c alarm
• STS48C	STS48c alarm
• STS192C	STS192c alarm
• T1	T1 alarm
• T3	T3 alarm
• UDCDCC	UDC-DCC alarm
• UDCF	UCD-F alarm
• VCG	Virtual concatenation group alarm
• VT1	VT1 alarm
• VT2	VT2 alarm
• WLEN	Wavelength path provisioning
<NTFCNCDE>	(Optional) Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<TYPEREP>	The condition itself. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.

<SRVEFF>	(Optional) The effect on service caused by the standing alarm or condition The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date when the specific event or violation occurred, MM-DD.
<OCRTM>	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRECTION>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description. DESC is a string.

RTRV-COND-ALL

The Retrieve Condition All (RTRV-CON-ALL) command retrieves the current standing condition for all entities.

Usage Guidelines

According to Telcordia GR-833, the RTRV-COND-ALL command only reports EQPT, COM, and rr (T1, T3, OCn, EC1, STSn, VT1, DS1, E100, E1000, G1000, ML-Series, TXP and MXP) alarms.

This command does not return all conditions that are returned by other, more specific RTRV-COND commands; RTRV-COND-ALL returns a subset of these conditions. Telcordia GR-253-CORE, 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-STS1, for example, includes “same root cause” conditions in the set it returns and RTRV-COND-ALL does not.

To retrieve all the NE conditions, issue all of the following commands:

RTRV-COND-ALL
RTRV-COND-ENV

RTRV-COND-BITS
RTRV-COND-SYNCN

Category
Fault

Security
Retrieve

Input Format
RTRV-COND-ALL:[<TID>]:[<AID>]:<CTAG>::[<TYPEREQ>],[<LOCN>],[<DIRN>];

Input Example
RTRV-COND-ALL:DXT:ALL:229::FORCE-REQ;

Input Parameters

<AID>	Access identifier from the "28.1 ALL" section on page 28-1. String. A null value is equivalent to ALL.
<TYPEREQ>	The type of condition to be retrieved. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>,[<AIDTYPE>]:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>],[<OCRDAT>],
[<OCRTM>],<LOCN>,<DIRECTION>,[<DESC>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"RPRIF-2-0,T3:MJ,FORCE-REQ,SA,01-01,16-00-20,NEND,RCV,\"FORCED SWITCH REQUEST\""
;

Output Parameters

<AID>	Access identifier from the "28.1 ALL" section on page 28-1 that has an alarm condition.
<AIDTYPE>	(Optional) Type of access identifier. Specifies the type of facility, link or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.
• 100GIGE	100 Gigabit Ethernet
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 40-GiGE	40-Gigabit Ethernet
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• BITS	BITS alarm
• CHGRP	Channel group

• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• DVBASI	Digital Video Broadband Asynchronous Serial Interface (DVBASI) payload
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	Gigabit Ethernet port alarm
• HDLC	High-level data link control (HDLC) frame mode.
• HDSDI	1.5G HD-SDI video payload
• ISC1	InterSystem Channel, a protocol defined by IBM (ISC1) payload
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• MSISC	MSISC
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OC768	OC768 alarm

• OCH	Optical channel
• ODU0	Optical Data Unit Level 0
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTL	Optical Channel Transport Lane.
• OTU1	Optical Transport Unit Level 1
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• POS	POS port alarm
• REP	Resilient Ethernet Protocol
• SDSDI	270M SDI video payload
• STS1	STS1 alarm
• STS3C	STS3c alarm
• STS6C	STS6c alarm
• STS9C	STS9c alarm
• STS18C	STS18c alarm
• STS12C	STS12c alarm
• STS24C	STS24c alarm
• STS36C	STS36c alarm
• STS48C	STS48c alarm
• STS192C	STS192c alarm
• SYNCN	SYNCN alarm
• T1	T1 alarm
• T3	T3 alarm
• TCC	TCC alarm
• VT1	VT1 alarm
• VT2	VT2 alarm

<NTFCNCDE>	(Optional) Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<TYPEREP>	The type of condition to be retrieved. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<SRVEFF>	(Optional) The effect on service caused by the standing alarm or condition The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date when the specific event or violation occurred, MM-DD.
<OCRTM>	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRECTION>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description. DESC is a string.

RTRV-COND-BITS

The Retrieve Condition Building Integrated Timing Supply (RTRV-COND-BITS) command retrieves the standing conditions on BITS.

Usage Guidelines

None

Category

Synchronization

Security

Retrieve

Input Format

RTRV-COND-BITS:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>],[<LOCN>],[<DIRN>];

Input Example

RTRV-COND-BITS:TID:BITS-1:229::LOS;

Input Parameters

<AID>	Access identifier from the "28.6 BITS" section on page 28-22.
<TYPEREQ>	The type of condition to be retrieved. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

- MOD2B

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    "<AID>,[<AIDTYPE>]:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>],[<OCRDAT>],
    [<OCRTM>],[<LOCN>],[<DIRN>],[<DESC>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001 COMPLD
    "BITS-1,BITS:CR,LOS,SA,01-01,16-02-15,,,\"LOS OF SIGNAL\""
;
```

Output Parameters

<AID>	Access identifier from the "28.6 BITS" section on page 28-22 that has an alarm condition.
<AIDTYPE>	(Optional) Type of access identifier. Specifies the type of facility, link or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.
• 100GIGE	100 Gigabit Ethernet.
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 40GIGE	40-Gigabit Ethernet
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• BITS	BITS alarm

• CHGRP	Channel group
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS2I alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	Gigabit Ethernet port alarm
• HDLC	High-level data link control (HDLC) frame mode.
• HDSDI	1.5G HD-SDI video payload
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• MSISC	MSISC
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OC768	OC768 alarm
• OCH	Optical channel

• ODU0	Optical Data Unit Level 0
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTU1	Optical Transport Unit Level 1
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• POS	POS port alarm
• REP	Resilient Ethernet Protocol
• SDSDI	270M SDI video payload
• STS1	STS1 alarm
• STS3C	STS3c alarm
• STS6C	STS6c alarm
• STS9C	STS9c alarm
• STS18C	STS18c alarm
• STS12C	STS12c alarm
• STS24C	STS24c alarm
• STS36C	STS36c alarm
• STS48C	STS48c alarm
• STS192C	STS192c alarm
• SYNCN	SYNCN alarm
• T1	T1 alarm
• T3	T3 alarm
• TCC	TCC alarm
• VT1	VT1 alarm
• VT2	VT2 alarm
<NTFCNCDE>	(Optional) Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<TYPEREP>	The type of condition to be retrieved. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<SRVEFF>	(Optional) The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date when the specific event or violation occurred, MM-DD.
<OCRTM>	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description. DESC is a string.

RTRV-COND-ENV

The Retrieve Environmental Condition (RTRV-COND-ENV) command retrieves the environmental conditions.

Usage Guidelines

None

Category

Environment

Security

Retrieve

Input Format

RTRV-COND-ENV:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<ALMTYPE>],[<LOCN>],
[<DIRN>];

Input Example

RTRV-COND-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR;

Input Parameters

<AID>	Access identifier from the "28.14 ENV" section on page 28-39. **Note** For RTRV-ALM-ENV, only ENV-IN-{1-4} is a valid AID for . ENV-OUT-{1,6} is not a valid AID for RTRV-ALM-ENV.
<NTFCNCDE>	Two-letter notification code. A null value is equivalent to ALL. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<ALMTYPE>	The alarm type for the environmental alarm. A null value is equivalent to ALL. The parameter type is ENV_ALM, which is the environmental alarm type.
• 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
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail
• HATCH	CEV hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnect bypass
• 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 V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure

<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    "<AID>:<NTFCNCDE>,<ALMTYPE>,[<OCRDAT>],[<OCRTM>],[<LOCN>],[<DIRN>],
[<DESC>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001 COMPLD
    "ENV-IN-1:MJ,OPENDR,01-01,16-02-15,,,,\"OPEN DOOR\""
;
```

Output Parameters

<AID>	Access identifier from the "28.14 ENV" section on page 28-39.
<NTFCNCDE>	(Optional) Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<ALMTYPE>	The alarm type for the environmental alarm. The parameter type is ENV_ALM, which is the environmental alarm type.
• 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
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail
• HATCH	CEV hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter

• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnect bypass
• 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	48V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored

• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure
<OCRDAT>	(Optional) Date when the specific event or violation occurred, MM-DD.
<OCRTM>	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description. DESC is a string.

RTRV-COND-EQPT

The Retrieve Condition Equipment (RTRV-COND-EQPT) command retrieves the equipment conditions.

Usage Guidelines

None

Category

Equipment

Security

Retrieve

Input Format

RTRV-COND-EQPT:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>],[<LOCN>],[<DIRN>];

Input Example

RTRV-COND-EQPT:TID:SLOT-1:229::LOS;

Input Parameters

<AID>	Access identifier from the "28.15 EQPT" section on page 28-39 that has an alarm condition.
<TYPEREQ>	The type of condition to be retrieved. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>,[<AIDTYPE>]:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>],[<OCRDAT>],
[<OCRTM>],[<LOCN>],[<DIRN>],[<DESC>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"SLOT-1,EQPT:CR,LOS,SA,01-01,16-02-15,NEND,RCV,\"LOS OF SIGNAL\""
;

Output Parameters	
<AID>	Access identifier from the "28.15 EQPT" section on page 28-39 that has an alarm condition.
<AIDTYPE>	(Optional) Type of facility, link or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.
• 100GIGE	100 Gigabit Ethernet.
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 40GIGE	40-Gigabit Ethernet
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• BITS	BITS alarm
• CHGRP	Channel group
• 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
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm

• GIGE	Gigabit Ethernet port alarm
• HDLC	High-level data link control (HDLC) frame mode.
• HDSDI	1.5G HD-SDI video payload
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• MSISC	MSISC
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OC768	OC768 alarm
• OCH	Optical channel
• ODU0	Optical Data Unit Level 0
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTU1	Optical Transport Unit Level 1
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• POS	POS port alarm
• REP	Resilient Ethernet Protocol
• SDSDI	270M SDI video payload
• STS1	STS1 alarm
• STS3C	STS3c alarm
• STS6C	STS6c alarm

• STS9C	STS9c alarm
• STS18C	STS18c alarm
• STS12C	STS12c alarm
• STS24C	STS24c alarm
• STS36C	STS36c alarm
• STS48C	STS48c alarm
• STS192C	STS192c alarm
• SYNCN	SYNCN alarm
• T1	T1 alarm
• T3	T3 alarm
• TCC	TCC alarm
• VT1	VT1 alarm
• VT2	VT2 alarm
<NTFCNCDE>	(Optional) Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<TYPEREP>	The type of condition to be retrieved. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<SRVEFF>	(Optional) The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.

• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date when the specific event or violation occurred, MM-DD.
<OCRTM>	(Optional) Time when the specific event or violation occurred.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description. DESC is a string.

RTRV-COND-SYNCN

The Retrieve Condition Synchronization (RTRV-COND-SYNCN) command retrieves the synchronization condition.

Usage Guidelines

None

Category

Synchronization

Security

Retrieve

Input Format

RTRV-COND-SYNCN:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>],[<LOCN>],[<DIRN>];

Input Example

RTRV-COND-SYNCN:TID:SYNC-NE:229::LOS;

Input Parameters

<AID>	Access identifier from the "28.31 SYNC_REF" section on page 28-60 that has an alarm condition.
<TYPEREQ>	The type of condition to be retrieved. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>,[<AIDTYPE>]:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>],[<OCRDAT>],
[<OCRTM>],[<LOCN>],[<DIRN>],[<DESC>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"SYNC-NE,SYNCN:MJ,FRNGSYNC,SA,01-01,16-02-15,,,
\"FREE RUNNING SYNCHRONIZATION MODE\""
;

Output Parameters

<AID>	Access identifier from the "28.29 SYN" section on page 28-59 that has an alarm condition.

<AIDTYPE>	(Optional) Type of facility, link or other addressable entity targeted by the message. The value is always SYNCN. The parameter type is MOD2B, which is the alarm type.
• 100GIGE	100 Gigabit Ethernet.
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 40GIGE	40-Gigabit Ethernet
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• BITS	BITS alarm
• CHGRP	Channel group
• 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
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	Gigabit Ethernet port alarm
• HDLC	High-level data link control (HDLC) frame mode.

• HDSDI	1.5G HD-SDI video payload
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• MSISC	MSISC
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OC768	OC768 alarm
• OCH	Optical channel
• ODU0	Optical Data Unit Level 0
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTU1	Optical Transport Unit Level 1
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• POS	POS port alarm
• REP	Resilient Ethernet Protocol
• SDSDI	270M SDI video payload
• STS1	STS1 alarm
• STS3C	STS3c alarm
• STS6C	STS6c alarm
• STS9C	STS9c alarm
• STS18C	STS18c alarm

• STS12C	STS12c alarm
• STS24C	STS24c alarm
• STS36C	STS36c alarm
• STS48C	STS48c alarm
• STS192C	STS192c alarm
• SYNCN	SYNCN alarm
• T1	T1 alarm
• T3	T3 alarm
• TCC	TCC alarm
• VT1	VT1 alarm
• VT2	VT2 alarm
<NTFCNCDE>	(Optional) Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<TYPEREP>	The type of condition to be retrieved. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<SRVEFF>	(Optional) The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date when the specific event or violation occurred, MM-DD.

<OCRTM>	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description. DESC is a string.

RTRV-COND-ODU

This command retrieves ODU Alarm condition.

Usage Guidelines

The AID in the command is mandatory.

Category

Equipment

Security

Retrieve

Input Format

RTRV-COND-ODU:[<TID>]:<aid>:<CTAG>::[<typereq>],[<locn>],[<dirn>]:[BANDWIDTH=<bandwidth>];

Input Example

> rtrv-cond-odu::ODU-1-3-1-1-1-1:a:::BANDWIDTH=odu2e;

vxTarget 2017-06-01 06:16:30

M a COMPLD

"ODU-1-3-1-1-1-1,ODU:MN,PEER-CSF,NSA,06-01,05-59-43,NEND,NA,\"Peer Port Client Signal Fail Detected\""

;

>

Input Parameters

<AID>	The AID is mandatory. AID of the ODU2. ALL AID is also supported.
<BANDWIDTH>	ODU Level (ODU2E). ENUM, (Mandatory).
Typereq	ENUM, (Mandatory). The type of condition to be retrieved. A null value is equivalent to ALL. Theparameter type is CONDITION, which is any problem detected on a shelf, whether or not the problem is reported (that is, whether or not it generates atrouble notification). Reported conditions include alarms, NA conditions, and NR conditions.
	(ENUM, optional). FEND : Action occurs on the far end of the facility. NEND : Action occurs on the near end of the facility.
•	(ENUM, optional). BTH : Both transmit and receive directions RCV : Receive direction only

Output Format

Output Example

Output Parameters

RTRV-CONSOLE-PORT

The Retrieve Console Port (RTRV-CONSOLE-PORT) command retrieves the status of the console port from the ML-Series cards.

Usage Guidelines

None

Category

Security

Security

Retrieve

Input Format

RTRV-CONSOLE-PORT:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-CONSOLE-PORT:CISCONODE:SLOT-2:123;

Input Parameters

<AID>	Access identifier from the “28.15 EQPT” section on page 28-39.

Output Format

SID DATE TIME
M CTAG COMPLD
“<EQPT>:[PORT=<PORT>]”
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
“SLOT-2:PORT=ENABLED”
;

Output Parameters

<EQPT>	Identifies the slot number for the data card. EQPT is a string.
<PORT>	(Optional) Status of the console port on the data card. The parameter type is PORTSTAT, which is the status of the console port on the card.
• DISABLED	The port is disabled.

• ENABLED	The port is enabled.

RTRV-COS-ETH

The Retrieve Cost of Service Ethernet (RTRV-COS-ETH) command retrieves the egress parameters of a CoS table associated to an L2 Ethernet port.

Usage Guidelines

None

Category

Ethernet

Security

Provisioning

Input Format

RTRV-COS-ETH:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-COS-ETH:TID:ETH-1-1-1:CTAG;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "28.16 ETH" section on page 28-41.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[QOSENABLED=<QOSENABLED>],[BW0=<BWO>],
[WEIGHT0=<WEIGHT0>],[BW1=<BW1>],[WEIGHT1=<WEIGHT1>],[BW2=<BW2>],
[WEIGHT2=<WEIGHT2>],[BW3=<BW3>],[WEIGHT3=<WEIGHT3>],[BW4=<BW4>],
[WEIGHT4=<WEIGHT4>],[BW5=<BW5>],[WEIGHT5=<WEIGHT5>],[BW6=<BW6>],
[WEIGHT6=<WEIGHT6>],[BW7=<BW7>],[WEIGHT7=<WEIGHT7>][:]"
;

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001   COMPLD
    "ETH-5-1-1::QOSENABLED=Y,BW0=10,WEIGHT0=0,BW1=20,WEIGHT1=2,BW2=40,
WEIGHT2=4,BW3=60,WEIGHT3=6,BW4=70,WEIGHT4=8,BW5=80,WEIGHT5=10,BW6=85,
WEIGHT6=12,BW7=100,WEIGHT7=15:"
;
```

Output Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "28.16 ETH" section on page 28-41.
<QOSENABLED>	Used to enable or disable the egress quality of service (QoS) policy of an L2 Ethernet port.
• N	Disable the service
• Y	Enable the service
<BW0>	Bandwidth percentage, a value between 0 and 100
<WEIGHT0>	Value represents the weighted round-robin (WRR) weight associated to the CoS values. It is an integer value ranging between 0 and 15.
<BW1>	Bandwidth percentage, a value between 0 and 100
<WEIGHT1>	Value represents the WRR weight associated to the CoS values. It is an integer value ranging between 0 and 15.
<BW2>	Bandwidth percentage, a value between 0 and 100
<WEIGHT2>	Value represents the WRR weight associated to the CoS values. It is an integer value ranging between 0 and 15.
<BW3>	Bandwidth percentage, a value between 0 and 100
<WEIGHT3>	Value represents the WRR weight associated to the CoS values. It is an integer value ranging between 0 and 15.
<BW4>	Bandwidth percentage, a value between 0 and 100
<WEIGHT4>	Value represents the WRR weight associated to the CoS values. It is an integer value ranging between 0 and 15.
<BW5>	Bandwidth percentage, a value between 0 and 100
<WEIGHT5>	Value represents the WRR weight associated to the CoS values. It is an integer value ranging between 0 and 15.
<BW6>	Bandwidth percentage, a value between 0 and 100

<WEIGHT6>	Value represents the WRR weight associated to the CoS values. It is an integer value ranging between 0 and 15.
<BW7>	Bandwidth percentage, a value between 0 and 100
<WEIGHT7>	Value represents the WRR weight associated to the CoS values. It is an integer value ranging between 0 and 15.

RTRV-CRS

The Retrieve Cross-Connect (RTRV-CRS) command retrieves all the cross-connections based on the required PATH types.

Usage Guidelines

- This command retrieves all the STS and/or VT cross-connections on the NE, or on the specified shelf, card, or port.
- A NULL AID defaults to ALL (NE).
- A NULL PATH defaults to all the existing cross-connections.
- Both DRITYPE and DRINODE optional fields are available to support MSSPR-DRI. DRITYPE is applied only if the cross-connect is a drop-and-continue connection (1WAYDC or 2WAYDC), and defaults to SNCP for the DRI. DRINODE must be specified only if at least one end of the connection is on the MS-SPRing, and defaults to NA.
- CKTID is a string of ASCII characters. The maximum length of CKTID is 48. If the CKTID is EMPTY or NULL it will not appear.
- VC values in CRS_TYPE are not supported in this command.

Category

Cross Connections

Security

Retrieve

Input Format

RTRV-CRS:[<TID>]:[<AID>]:<CTAG>:::[CRSTYPE=<CRSTYPE>][:];

Input Example

RTRV-CRS:CISCO:ALL:123:::CRSTYPE=STS;

Input Parameters

<AID>	Access identifier from the “28.12 CrossConnectId1” section on page 28-31 that can be EQPT, Facility, STS, VT, or ALL. The ALL AID defaults to NE, which means it reports all the existing cross-connections on the NE. A null value is equivalent to ALL.

<CRSTYPE>	The cross-connection type. Defaults to all existing cross-connections. A null value is equivalent to ALL. The parameter type is PATH, which is the modifier for path commands. **Note** The cross-connection type cannot be VT, if the AID specified is an STS AID.
• STS1	Synchronous transport signal/module level 1 (51.84 Mbps)
• STS3C	Synchronous transport signal/module level 3 concatenated (155.52 Mbps)
• STS6C	Synchronous transport signal/module level 6 (311.04 Mbps)
• STS9C	Synchronous transport signal/module level 9 concatenated (466.56 Mbps)
• STS12C	Synchronous transport signal/module level 12 concatenated (622.08 Mbps)
• STS18C	Synchronous transport signal/module level 18 concatenated (933.12 Mbps)
• STS24C	Synchronous transport signal/module level 24 concatenated (1244.16 Mbps)
• STS36C	Synchronous transport signal/module level 36 concatenated (1866.24 Mbps)
• STS48C	Synchronous transport signal/module level 48 concatenated (2488.32 Mbps)
• STS192C	Synchronous transport signal/module level 192 concatenated (9953.28 Mbps)
• VT1	Virtual Tributary 1
• VT2	Virtual Tributary 2

Output Format

SID DATE TIME
M CTAG COMPLD
"<SRC>,<DST>:<CCT>,<CRSTYPE>:[DRITYPE=<DRITYPE>],[DRINODE=<SYNCSW>],
[CKTID=<CKTID>]:<PST_PSTQ>,[<SSTQ>]"
;

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001 COMPLD
    "STS-5-1-2&STS-6-1-2,STS-12-1-2&STS-13-1-2:1WAYDC,STS1:DRITYPE=BLSR,
    DRINODE=PRI,CKTID=CKTID:OOS-AU,AINS"
;
```

Output Parameters

<SRC>	Source access identifier from the "28.11 CrossConnectId" section on page 28-27. Indicates the source AID(s) of the cross-connection. SRC is listable.
<DST>	Destination AID of the cross-connection from the "28.11 CrossConnectId" section on page 28-27. DST is listable.
<CCT>	Type of connection. Used for specifying one or two-way connections. The parameter type is CCT, which is the type of cross-connect to be created.
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	Path Protection multicast drop with one-way continue
• 1WAYEN	Path Protection multicast end node with one-way continue
• 1WAYMON	A bidirectional connection between the two tributaries **Note** In Software Release 3.0 and later, 1WAYMON is not supported with TL1. However, it is still supported from Cisco Transport Controller (CTC). Using CTC, you can create 1WAYMON cross-connects that can be retrieved with 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 DRIs
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber
• DIAG	Diagnostics cross-connect. Supports BERT (BLSR PCA diagnostics cross-connect).
<CRSTYPE>	The cross-connection type. The parameter type is CRS_TYPE, which is the cross-connection type. **Note** The cross-connection type cannot be VT, if the AID specified is an STS AID.

• 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
• STS18C	STS18c cross-connect
• STS24C	STS24c cross-connect
• STS36C	STS36c 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
<DRITYPE>	(Optional) The DRI connection type. It is applied only if the cross-connection is a drop-and-continue connection type (1WAYDC or 2WAYDC), and defaults to path protection for the DRI configuration. The parameter type is DRITYPE (DRI type).
• BLRS	BLSR DRI type
• Path Protection	Path Protection DRI type
• Path Protection-BLSR	Path Protection-BLSR hand-off DRI type
<DRINODE>	(Optional) Synchronization switch AID from the "28.32 SYNCSW" section on page 28-61.
<CKTID>	(Optional) Circuit identification parameter that contains a common language ID or other alias of the circuit being provisioned. It cannot contain blank spaces. CKTID is a string.
<PST_PSTQ>	Primary state and primary state qualifier separated by a colon. The parameter type is PST_PSTQ, which is the service state of the entity described by the PST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management

• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) One or more secondary states separated by “&”, in alphabetical order. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RTRV-CRS-<PATH>

The Retrieve Cross-Connect for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, VT1, or VT2 (RTRV-CRS-<PATH>) 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.

Usage Guidelines

See Table 30-1 on page 30-1 for supported modifiers by platform.

Note • The path protection STS cross-connection can be retrieved by using “&” in the AID fields of this command.

- 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”

- 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”

- 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”

- 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”

- 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”

- 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”

- All A&B AIDs in the TL1 cross-connection command are in the format of WorkingAID&ProtectAID.

- STS_PATH does not include STS for the RTRV-CRS command because STS is not a standard designator as defined by Telcordia GR-833, Section A-2.
- Both the 1WAYPCA and 2WAYPCA is used to specify a PCA cross-connection.
- The facility AID is only valid on slots with a G1K-4 card.
- The virtual facility AID (VFAC) is only valid on slots holding the ML-Series card.
- Both DRITYPE and DRINODE optional fields are available to support BLSR-DRI. DRITYPE is applied only if the cross-connect is a drop-and-continue connection (1WAYDC or 2WAYDC), and defaults to path protection for the DRI. DRINODE must be specified only if at least one end of the connection is on the BLSR, and defaults to NA.
- The DS3XM-12 card allows portless STS1/VT1.5 cross-connection provisioning on the PORTLESS ports.

Category
Cross Connections

Security
Retrieve

Input Format
RTRV-CRS-<PATH>:[<TID>]:<SRC>:<CTAG>[::::];

Input Example
RTRV-CRS-STS3C:KENWOOD:STS-6-1-1:223;

Input Parameters

<SRC>	Source access identifier from the "28.12 CrossConnectId1" section on page 28-31.

Output Format

SID DATE TIME
M CTAG COMPLD
"<SRC>,<DST>:<CCT>,<MOD>:[DRITYPE=<DRITYPE>],[DRINODE=<SYNCSW>],
[CKTID=<CKTID>]:<PST_PSTQ>,[<SSTQ>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"STS-5-1-2&STS-6-1-2,STS-12-1-2&STS-13-1-2:1WAYDC,STS1:DRITYPE=BLSR,

DRINODE=PRI,CKTID=CKTID:OOS-AU,AINS”
;

Output Parameters

<SRC>	Source access identifier from the “28.11 CrossConnectId” section on page 28-27. Indicates the source AID(s) of the cross-connection. SRC is listable.
<DST>	Destination AID of the cross-connection from the “28.11 CrossConnectId” section on page 28-27. DST is listable.
<CCT>	Type of connection. Used for specifying one or two-way connections. The parameter type is CCT, which is the type of cross-connect to be created.
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	Path Protection multicast drop with one-way continue
• 1WAYEN	Path Protection multicast end node with one-way continue
• 1WAYMON	A bidirectional connection between the two tributaries **Note** With Software R3.0 and later, 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 by 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 interconnects
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber
• DIAG	Diagnostics cross-connect. Supports BERT (BLSR PCA diagnostics cross-connect)
<MOD>	The connection path bandwidth. The parameter type is MOD2, which is the line/path modifier.
• 10GFC	10-Gigabit Fibre Channel payload
• 10GIGE	10-Gigabit Ethernet
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload

• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• D1VIDEO	D1 Video
• DS1	DS1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETR_CLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over POS. Virtual ports partitioned using GFP's multiplexing capability.
• GIGE	Gigabit Ethernet
• HDTV	HDTV
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 facility
• OC12	OC12 facility
• OC48	OC48 facility
• OC192	OC192 facility
• OCH	Optical channel

• OCHCC	OCH client connection
• OCHNC	OCH network connection
• OCHTERM	OCH termination
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS port
• STS1	STS1 path
• STS3C	STS3c path
• STS6C	STS6c path
• STS9C	STS9c path
• STS18C	STS18c path
• STS12C	STS12c path
• STS24C	STS24c path
• STS36C	STS36c path
• STS48C	STS48c path
• STS192C	STS192c path
• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 path
• VT2	VT2 path
<DRITYPE>	(Optional) The DRI connection type. It is applied only if the cross-connection is a drop-and-continue connection type (1WAYDC or 2WAYDC), and defaults to path protection for the DRI configuration. The parameter type is DRITYPE (DRI type).
• BLRS	BLSR DRI type
• Path Protection	Path Protection DRI type
• Path Protection-BLSR	Path Protection-BLSR hand-off DRI type
<SYNCSW>	(Optional) Synchronization switch AID from the "28.32 SYNCSW" section on page 28-61.
<CKTID>	(Optional) A string of ASCII characters. Maximum length is 48. CKTID is a string.

<PST_PSTQ>	Primary state and primary state qualifier separated by a colon. The parameter type is PST_PSTQ, which is the service state of the entity described by the PST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) One or more secondary states separated by “&”, in alphabetical order. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RTRV-CRS-ETH

This command retrieve an Ethernet Connection between two or more ethernet connection end points within ethernet facilities.

Usage Guidelines

This command accept the ALL AID. Use one of the specified ethernet end points and the connection end point identifier associated in order to identify a cross-connection inside the node.

Category

ETHERNET

Security
Retrieve

Input Format
RTRV-CRS-ETH:[<TID>]:<aid>:<CTAG>[::::];

Input Example
RTRV-CRS-ETH:TID:ALL:CTAG;

RTRV-CRS-ETH:TID:ETH-5-1-1-ALL:CTAG;

RTRV-CRS-ETH:TID:ETH-1-1-1-11:CTAG;

Input Parameters

Table 23-5 Input Parameter Support

Parameter	Description
<AID>	Ethernet connection identifier AIDs used to access L2 ethernet connection end point.
• ALL	The ALL aid is applicable for RTRV-only commands, basically the RTRV-rr type of commands.
• ETHID[-{1-12}]-{1-5,12-16}-{1-22}-1-{1-20}	Ethernet connection end point aid for GE-XP card.
• ETHID[-{1-12}]-{1-6,12-17}-{1-4}-1-{1-20}	Facility aid for 10GE-XP card.

Output Format
SID DATE TIME

M CTAG COMPLD

"<SRC>,<DST>:<ECT>:[CKTID=<CKTID>]:<PSTPSTQ>,[<SSTQ>]";

Output Example
TID-000 1998-06-20 14:30:00

M 001 COMPLD

"ETH-1-1-1-13,ETH-1-21-1-13&ETH-1-22-1-13:2WAY:CKTID=ETHERNET:IS-NR";

Output Parameters

<SRC>	Ethernet connection identifier AIDs used to access L2 ethernet connection end point.

• ALL	The ALL aid is applicable for RTRV-only commands, basically the RTRV-rr type of commands.
• ETHID[-{1-12}]-{1-5,12-16}-{1-22}-1-{1-20}	Ethernet connection end point aid for GE-XP card.
• ETHID[-{1-12}]-{1-6,12-17}-{1-4}-1-{1-20}	Facility aid for 10GE-XP card.
<DST>	Ethernet connection identifier AIDs used to access L2 ethernet connection end point.
• ALL	The ALL aid is applicable for RTRV-only commands, basically the RTRV-rr type of commands.
• ETHID[-{1-12}]-{1-5,12-16}-{1-22}-1-{1-20}	Ethernet connection end point aid for GE-XP card.
• ETHID[-{1-12}]-{1-6,12-17}-{1-4}-1-{1-20}	Facility aid for 10GE-XP card.
<ECT>	Defines the type of cross-connect to be created. It is a subset of the CCT.
• 2WAY	A bidirectional connection between the two tributaries
<CKTID>	Circuit identification parameter contains the Common Language Circuit ID or other alias of the circuit being provisioned.
<PST-PSTQ >	Service State of the entity described by the Primary State (PST) and a Primary State Qualifier (PSTQ)
• IS-NRorUnlocked-Enabled	In Service - Normal
• OOS-AUorUnlocked-Disabled	Out of Service - Autonomous
• OOS-AUMAorLocked-Disabled	Out of Service - Autonomous and Management
• OOS-MTorLocked-Enabled	Out of Service - Management
<SST>	Secondary State. This parameter provides additional information pertaining to PST and PSTQ.
AINSorAutomaticInService	Automatic In Service State Transition.
DSBLDorDisabled	Disabled

RTRV-CRS-ODU

This command retrieves ODU Circuit.

Usage Guidelines

The AID in the command is mandatory.

Category

Equipment

Security

Retrieve

Input Format

RTRV-CRS-ODU::AID:<CTAG>:::BANDWIDTH=<bandwidth>

Input Example

RTRV-CRS-ODU::all:a:::BANDWIDTH=ODU2E;

vxTarget 2017-04-25 06:30:37

M a COMPLD

"ODU-1-4-1-1-4-1,ODU-1-4-11-1-1-4&ODU-1-4-12-1-1-4:BANDWIDTH=ODU2E,PROTTYPE=SNC-N,NODEID=6E7EF20,SERVICEID=31,RVRTV=Y,RVTM=7.0,HOLDOFFTIMER=200,CKTNAME=\"CKT_19\":OOS-AU,AINS"

"ODU-1-4-11-1-1-5,ODU-1-4-2-1-3-1:BANDWIDTH=ODU2E,PROTTYPE=NONE,NODEID=0,SERVICEID=0,RVRTV=N,RVTM=5.0,HOLDOFFTIMER=0,CKTNAME=\"CKT_1\":OOS-MA,MT"

"ODU-1-4-11-1-1-6,ODU-1-4-2-1-4-1:BANDWIDTH=ODU2E,PROTTYPE=NONE,NODEID=0,SERVICEID=0,RVRTV=N,RVTM=5.0,HOLDOFFTIMER=0,CKTNAME=\"CKT_2\":OOS-MA,MT"

"ODU-1-4-11-1-1-7&ODU-1-4-12-1-1-5,ODU-1-4-7-1-1-1:BANDWIDTH=ODU2E,PROTTYPE=SNC-N,NODEID=0,SERVICEID=0,RVRTV=Y,RVTM=6.5,HOLDOFFTIMER=300,CKTNAME=\"CKT_12\":OOS-AU,AINS"

"ODU-1-4-11-1-1-20,ODU-1-4-12-1-1-10:BANDWIDTH=ODU2E,PROTTYPE=NONE,NODEID=6E7EF20,SERVICEID=40,RVRTV=N,RVTM=5.0,HOLDOFFTIMER=0,CKTNAME=\"CKT_15\":OOS-MA,MT"

;

Input Parameters

<AID>	The AID is mandatory. AID of the ODU2. ALL AID is also supported.

<BANDWIDTH>	ODU Level (ODU2E). ENUM, (Mandatory).

Output Format

Output Example

Output Parameters

FROM AID	The FROM AID of the ODU Circuit.
	The TO AID of the ODU Circuit.
• CKTNAME	getConnectionName() on connection object to return circuit name.
	uniquePart is for service id.
	Nodeid
	sOduProtectionAttrs getProtectionParams() is used sOduProtectionAttrs->Common::sRevertiveBehavior:: eReversionMode reversionMode=(Y/N)

	sOduProtectionAttrs getProtectionParams() is used sOduProtectionAttrs->Common::sRevertiveBehavior:: reversionTime=A long type
HOLDOFFTIMER	sOduProtectionAttrs getProtectionParams() is used sOduProtectionAttrs-> holdoffTime
PROTTYPE	SonetMedia::eOduProtectionType protectionType().
PST	Common::eAdminState adminState().
SST	Common::sServiceState getServiceState().

RTRV-DFLT-SECU

The Retrieve Default Security (RTRV-DFLT-SECU) command retrieves the system-wide default values associated with several security parameters.

Usage Guidelines

None

Category

Security

Security

Superuser

Input Format

RTRV-DFLT-SECU:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-DFLT-SECU:CISCO:ALL:123;

Input Parameters

<AID>	Access identifier. ALL is the only acceptable value. AID is a string.

Output Format

SID DATE TIME
M CTAG COMPLD

“<NE>:PAGE=<PAGE>,PCND=<PCND>,MXINV=<MXINV>,DURAL=<DURAL>,TMOUT=<TMOUT>,UOUT=<UOUT>,PFRCD=<PFRCD>,POLD=<POLD>,PINT=<PINT>,LOGIN=<LOGIN>,[PRIVLVL=<PRIVLVL>],[PDIF=<PDIF>],[PWDCHRULE=<PWDCHRULE>],[PWDMINLEN=<PWDMINLEN>],[PWDMAXLEN=<PWDMAXLEN>]”
;

Output Example

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,PDIF=1”
;

TID-000 1998-06-20 14:30:00
M 001 COMPLD

“107161:PAGE=0,PCND=0,MXINV=5,DURAL=30,TMOUT=0,UOUT=0,PFRCD=NO,POLD=1,PINT=0,LOGIN=MULTIPLE,PRIVLVL=RTRV,PDIF=1,PWDCHRULE=ANY_CHAR,PWDMINLEN=2,PWDMAXLEN=20”
;

Output Parameters

<NE>	The node name of the NE where the system values are to be retrieved.
<PAGE>	Password aging interval. It is the number of days before a user is prompted to change his or her password. 0 indicates the policy is turned off and is the default. If PAGE is turned on for all privilege levels and is not specified for each privilege level, it defaults to 45 days. PAGE ranges from 20 to 90 days. PAGE is an integer.
<PCND>	Number of days a password can be used before a new one is mandatory (for example, the warning period). Default is 5 days. PCND ranges from 2 to 20 days. PCND is an integer.
<MXINV>	Maximum number of consecutive and invalid session set up attempts allowed to occur before an intrusion attempt is suspected (for example, “Failed Logins Before Lockout” from CTC). 0 indicates the policy is turned off. Default is 5. MXINV ranges from 0 to 10. MXINV is an integer.

<DURAL>	Time interval (in seconds) during which a user ID is locked out when an intrusion attempt is suspected (for example, the “Lockout Duration”). If the user is locked out until unlocked by a Superuser, DURAL=INFINITE. Default is 30 seconds. DURAL ranges from 0 to 600 seconds. DURAL is 0 for RTRV users, 60 minutes for MAINT users, 30 minutes for PROV users, and 15 minutes for SUPER users. DURAL is a string.
<TMOUT>	Interval (in minutes) after which a session is terminated if no messages are exchanged between the user and the NE. 0 indicates that the session will not timeout. TMOUT is an integer.
<UOUT>	UID aging interval, expressed in days. If a userid has not been used in UOUT days, the user will be forced to change his/her password (or logout) at the next login. No other command is allowed until the password has been changed. 0 indicates the policy is turned off and is the default. UOUT ranges from 1 to 99 days. UOUT is an integer.
<PFRCD>	Indicates if a password change is required when a new user establishes a session to the NE for the first time. (For example, “Require password change on 1st login”). Default is NO. The parameter type is YES_NO, which indicates whether the user’s password is about to expire, the user is logged into the NE or the user is locked out of the NE.
• NO	Password change is not required.
• YES	Password change is required.
<POLD>	Number of prior passwords that cannot be reused (for example, “Prevent reusing last X passwords”). Default is 1. POLD ranges from 0 to 10. POLD is an integer.
<PINT>	Number of days that must pass before a password can be changed. If PINT is 0, the policy is turned off. Default is off. PINT ranges from 20 to 95 days. PINT is an integer.
<LOGIN>	Number of times a user can log into an NE. LOGIN is either SINGLE or MULTIPLE. If LOGIN is SINGLE, a user can only log into an NE one time with any given userid, regardless of the method of login (for example, CTC, TL1, etc.). Default is MULTIPLE. The parameter type is USER_LOGINS, which is the number of times a user can log into the same NE with the same user ID.
• MULTIPLE	A user can log into the same NE many times.
• SINGLE	A user can log into the NE only once (includes both CTC and TL1 sessions).
<PRIVLVL>	Parameter type is PRIVILEGE, which is the security level.
• MAINT	Maintenance security level. Unlimited idle time.

• PROV	Provision security level. 60 minutes of idle time.
• RTRV	Retrieve security level. 30 minutes of idle time.
• SUPER	Superuser security level. 15 minutes of idle time.
• ROOT_USER	Root user.
• SEC_SUPER	Security super user.
• SEC_USER	Security user.
<PDIF>	(Optional) Indicates how many characters must differ between old and new passwords. Default minimum character difference is 1. Ranges from 0 to 5 characters. PDIF is an integer.
<PWDCHRULE>	(Optional) Password Characters Rule. Indicates the password characters rule for the specified minimum length of the password.
• ONE_EACH_OF_LETTER_NUM_TL1SPECIAL	One letter, one number, and one TL1 special character (%, #, +).
• ONE_EACH_OF_LETTER_NUM_SPECIAL	One letter, one number, and one special character.
• TWO_EACH_OF_TWO_OF_UPPER_LOWER_NUM_TL1SPECIAL	Two each of any of the two numbers, upper, lower, or TL1 special characters.
• TWO_EACH_OF_TWO_OF_UPPER_LOWER_NUM_SPECIAL	Two each of any of the two numbers, upper, lower, or special characters.
• ANY_CHAR	Any character.
<PWDMINLEN>	(Optional) Password Minimum Length. Indicates the minimum number of characters that can be set for password configuration. The values are 2, 4, 6, 8, 10 and 12.
<PWDMAXLEN>	(Optional) Password Maximum Length. Indicates the maximum number of characters that can be set for password configuration. The values are 20 or 80.

RTRV-DS1

The Retrieve DS1 (RTRV-DS1) command retrieves the test access attributes on a DS1 layer of a DS3XM card.

Note Frame format is not applicable to even port less ports on DS3XM-12 card and cannot be retrieved through RTRV-DS1 command.

Usage Guidelines

- Both the MODE and the FMT fields of this command are applied for the DS3XM-12 card only.
- If the DS1 mode of the DS3XM-12 is ATT, the DS1 path can retrieve AT&T/54016 FEND PM counts up to 96 15-minute intervals; if the DS1 mode of the DS3XM-12 is FDL, the DS1 path can retrieve FDL/T1-403 FEND PM counts up to 32 15-minute intervals in RTRV-PM-DS1.
- For the DS3XM-12 card, the DS1 frame format NE default is AUTO_PROV_FMT for the first 30 seconds to determine the real format. After 30 seconds, the DS1 frame format is the detected frame. If the frame format is not determined, it will be in the UNFRAMED format.
- For the preprovisioning DS3XM-12 card, its DS1 frame format defaults to UNFRAMED.
- For the DS3XM-12 card, the DS1-configurable attributes (PM, TH, alarm, etc.) only apply to the ported ports (1 to 12) and the VT-mapped (odd) portless ports in xxx-xxx-DS1 commands. Provisioning or retrieving DS1 attributes on the DS3-mapped (even) portless ports in xxx-xxx-DS1 commands is not allowed.
- The parameters BERTMODE, BERTPATTERN, BERTERRCOUNT, BERTERRRATE, and BERTSYNCSTATUS apply only to DS1/E1-56 and DS3XM-12 cards
- BERT is implemented on a single port.

Category

Ports

Security

Retrieve

Input Format

RTRV-DS1:[<TID>]:<DS1AID>:<CTAG>[::::];

Input Example

RTRV-DS1:PETALUMA:DS1-2-1-6-12:123;

Input Parameters

<DS1AID>	The DS1 path access identifier of the DS3XM card from the "28.13 DS1" section on page 28-38.

Output Format

```
   SID DATE TIME
M CTAG COMPLD
"<AID>::[<TACC>],[<TAPTYPE>],[<AISONLPBK>],[<MODE>],[<FMT>],[<BERTMODE>],[<BERTPAT-
TERN>],[<BERTERRCOUNT>],[<BERTERRRATE>],[<BERTSYNCSTATUS>],[<LPBKTYPE>]"
;
```

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"DS1-2-1-6-12::TACC=8,TAPTYPE=SINGLE,MODE=FDL,FMT=ESF,BERTMODE=NONE,
BERTPATTERN=NONE,BERTERRCOUNT=0,BERTERRRATE=NONE,
BERTSYNCSTATUS=N";

Output Parameters

<AID>	(Optional) Access identifier from the "28.13 DS1" section on page 28-38.
<TACC>	(Optional) Indicates whether the digroup being provisioned is to be used as a test access digroup. Default is N. TACC is an integer.
<TAPTYPE>	(Optional) TAP type. The parameter type is TAPTYPE, which is the test access point type.
• DUAL	Dual FAD
• SINGLE	Single FAD
<AISONLPBK>	(Optional) AIS on loopback. The parameter type is AIS_ON_LPBK, which indicates if an AIS is sent on a loopback.
• AIS_ONLPBK_FACILITY	AIS is sent on facility loopbacks.
• AIS_ON_LPBK_ALL	AIS is sent on all loopbacks.
• AIS_ON_LPBK_OFF	AIS is not sent on loopbacks.
• AIS_ON_LPBK_TERMINAL	AIS is sent on terminal loopbacks.
<MODE>	(Optional) Mode. The parameter type is DS1MODE, which is the DS1 path mode of the DS3XM-12 card
• ATT	Indicates the DS1 path of the DS3XM-12 is in AT&T 54016 mode.
• FDL	Indicates the DS1 path of the DS3XM-12 is in FDL T1-403 mode.
<FMT>	(Optional) Digital signal frame format. The parameter type is FRAME_FORMAT, which is the frame format for a T1 port.
• AUTOPROV	AUTOPROV
• CBIT	C-BIT line type applies to the DS3XM and DS3E cards.
• D4	Frame format is D4.
• DS2 FRAMED	DS2 FRAMED
• E2 FRAMED	E2 FRAMED

• E3-FRAME	E3-FRAME
• E3-PLCP	E3-PLCP
• ESF	Frame format is ESF.
• FRAMENA	FRAMENA
• G-751	G-751
• G-832	G-832
• M13	M13 line type applies to the DS3XM and DS3E cards.
• M23	M23
• SYNTRAN	SYNTRAN
• UNFRAMED	Frame format is unframed.
<BERTMODE>	Specifies the mode [Test Pattern Generator (TPG) or Test Pattern Monitor (TPM)] of the port for BERT.
• NONE	BERT mode not enabled.
• TPGM-L	Test pattern generator and monitor on line side.
• TPGM-B	Test pattern generator and monitor on backplane.
• TPG-L	Test pattern generator on line side.
• TPM-L	Test pattern monitor on line side.
• TPG-B	Test pattern generator on backplane.
• TPM-B	Test pattern monitor on backplane.
<BERTPATTERN>	Specifies the error pattern to be injected for BERT.
• NONE	BERT pattern not enabled.
• PRBS15	PRBS15 test pattern.
• PRBS20	PRBS20 test pattern.
• PRBS23	PRBS23 test pattern.
• QRSS	QRSS test pattern.
• ALT-ONE-ALT-ZERO	Alternate one and zero pattern.
<BERTERRCOUNT>	Integer value. Value -1 indicates that BERT is disabled/not supported.
<BERTERRRATE>	Specifies the BERT error rate received.

• NONE	No bit errors.
• SINGLE	Single bit error.
• 1E-3	Bit errors in 1E-3 rate.
• 1E-4	Bit errors in 1E-4 rate.
• 1E-5	Bit errors in 1E-5 rate.
• 1E-6	Bit errors in 1E-6 rate.
<BERTSYNCSTATUS>	Synchronization status of BERT values. The parameter type is Y_N, which specifies if synchronization status is up or down.
• Y	BERT synchronization status is up.
• N	BERT synchronization status is down.

RTRV-DSCP-<MOD2>

The RTRV-DSCP-<MOD2> command retrieves Differentiated Service Code Points (DSCP) to COS conversion table associated to a L2 ethernet port or a channel group.

Usage Guidelines

This command is applicable when the INGRESSCOS parameter is set to DSCP value on the ethernet port or channel group.

Category

Ethernet or Channel Group

Security

Retrieve

Input Format

RTRV-DSCP-MOD2:[<TID>]:<AID>:<CTAG>::[<COS>][::];

Input Example

RTRV-DSCP-ETH::ETH-5-1-1:1234;

RTRV-DSCP-CHGRP::CHGRP-1-1:1234::3;

Input Parameters

Input Parameters	Description

<AID>	Access identifier.
• Ethernet	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the “28.16 ETH” section on page 28-41.
• Channel Group	Access identifier from the “28.9 CHGRP” section on page 28-26.

Output Format

SID DATE TIME
M CTAG COMPLD
“AID>:<COS>:[DSCPFIRST=<DSCP_FIRST>],[DSCPLAST=<DSCP_LAST>];”
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
“ETH-5-1-1:0:DSCPFIRST=0,DSCPLAST=9:”
;

TID-000 1998-06-20 14:30:00
M 001 COMPLD
“CHGRP-5-1-1:0:DSCPFIRST=0,DSCPLAST=9:”
;

<AID>	Access identifier.
• Ethernet	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the “28.16 ETH” section on page 28-41.
• Channel Group	Access identifier from the “28.9 CHGRP” section on page 28-26.
<INGRESSCOS>	Identifies the COS value set in the S-VLAN tag.
• 0 to 7	Cos value
• DSCP	The COS set according to DSCP to COS mapping table.
• TRUST	The Customer COS
• VLAN	The COS provisioned on CVLAN basis (QinQ selective mode)
<DSCPFIRST>	DSCP range. Indicates a DSCP value used in the ethernet frame to define the QoS in L3 ethernet transport. It is a number in the range 0..64. Default values is 0

<DSCPLAST>	DSCP range. Indicates a DSCP value used in the ethernet frame to define the QoS in L3 ethernet transport. It is a number in the range 0..64. Default values is 0.

Output Parameters

RTRV-EC1

The Retrieve Electrical Carrier (RTRV-EC1) command retrieves the facility status of an EC1 card.

Usage Guidelines

None

Category

Ports

Security

Retrieve

Input Format

RTRV-EC1:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-EC1:CISCO:FAC-1-1:1234;

Input Parameters

<AID>	Access identifier from the “28.17 FACILITY” section on page 28-42.

Output Format

SID DATE TIME
M CTAG COMPLD
“<AID>::[<PJMON>],[<LBO>],[<RXEQUAL>],[<SOAK>],[<SOAKLEFT>],[<SFBER>],[<SDBER>],[<NAME>],[<AISONLPBK>],[<EXPTRC>],[<TRC>],[<INCTRC>],[<TRCMODE>],[<TRCFORMAT>],[<LPBKTYPE>]:<PST>,[<SST>]”
;

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001 COMPLD
    “FAC-1-1::PJMON=0,LBO=0-225,RXEQUAL=Y,SOAK=52,SOAKLEFT=12-25,SFBER=1E-4,
    SDBER=1E-7,NAME=\"EC1 PORT\",EXPTRC="AAA",TRC="AAA",TRCMODE=MAN,
    TRCFORMAT=16-BYTE,AISONLPBK=AIS_ON_LPBK_ALL:IS-NR,AINS”
;
```

Output Parameters

<AID>	Access identifier from the “28.17 FACILITY” section on page 28-42.
<PJMON>	(Optional) A SONET pointer monitor attribute of an EC1 port. PJMON is an integer.
<LBO>	(Optional) Line buildout settings. LBO is an integer. The parameter type is E_LBO, which is the electrical signal line buildout.
• 0–225	Electrical signal line buildout range is 0–225.
• 226–450	Electrical signal line buildout range is 226–450.
<RXEQUAL>	(Optional) Parameter type is EXT_RING, which indicates if the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<SOAK>	IS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer. Default value is 32. It can be set through ED command.
<SOAKLEFT>	(Optional) 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. Rules for SOAKLEFT are as follows: • When the port is in OOS, OOS_MT, or IS state, the parameter will not appear. • When the port is in IS-AINS but the countdown has not started due to fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in IS_AINS state and the countdown has started, the value will be shown in HH-MM format.
<SFBER>	(Optional) Signal failure threshold. The default value is 1E-4. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.

• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	(Optional) Signal degrade threshold. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<NAME>	(Optional) Port Name. NAME is a string.
<EXPTRC>	(Optional) EXPTRC is a string.
<TRC>	(Optional) TRC is a string.
<TRCMODE>	(Optional) Trace mode. The parameter type is TRCMODE.
• 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 TIM-P is 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 TIM-P is detected.
• OFF	Turn off path trace capability. Nothing will be reported.
<TRCFORMAT>	(Optional) Trace message size. The parameter type is TRCFORMAT (trace format).
• 1-BYTE	1-byte trace message
• 16-BYTE	16-byte trace message
• 64-BYTE	64-byte trace message
• Y	Enable an attribute.
<AISONLPBK>	(Optional) AIS on loopback. The parameter type is AIS_ON_LPBK, which indicates if an AIS is sent on a loopback.

• AIS_ONLPBK_FACILITY	AIS is sent on facility loopbacks.
• AIS_ON_LPBK_ALL	AIS is sent on all loopbacks.
• AIS_ON_LPBK_OFF	AIS is not sent on loopbacks.
• AIS_ON_LPBK_TERMINAL	AIS is sent on terminal loopbacks.
<PST_PSTQ>	Administrative state in the PST_PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the SST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RTRV-EFM

The Retrieve Edit Ethernet in the First Mile (RTRV-EFM) command retrieves the Edit Ethernet in the First Mile (EFM) state on the port and EFM protocol parameters associated with that port.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category
Ports

Security
Retrieve

Input Format
RTRV-EFM:[<TID>]:<AID>:<CTAG>;

Input Example
RTRV-EFM::ETH-12-1-1:1;

Input Parameters

<AID>	Access identifier from the "28.16 ETH" section on page 28-41.

Output Format
SID DATE TIME
M CTAG COMPLD
"AID>:[STATE=<STATE>], [MODE=<MODE>],
[LFACTION=<LFACTION>],[DGACTION=<DGACTION>],[SESSIONTIMER=<SESSIONTIMER>],[EFMREMOTELPBK=<EFMREMOTELPBK>];"
;

Output Example
TID-000 1998-06-20 14:30:00
M 001 COMPLD
"ETH-7-1-1,STATE=DISABLE,MODE=ACTIVE,LFACTION=NONE,SESSIONTIMER=5,EFMREMOTELPBK=N:"
;

<AID>	Access identifier from the "28.16 ETH" section on page 28-41.
<STATE>	Indicates whether the EFM is enabled or disabled on the port.
• ENABLE	Indicates the EFM is enabled on the port.
• DISABLE	Indicates the EFM is disabled on the port.
<MODE>	Indicates the mode of the EFM port.

• ACTIVE	The port is in the active state.
• PASSIVE	The port is in the passive state.
<LFACTION>	Action to be taken for the failure of the link on the port.
• RFIACTION-NONE	No action.
• ERROR-BLOCK	Block the port.
<SESSIONTIMER>	Session expire timer for EFM (in seconds).
<EFMREMOTELPBK>	Indicates the EFM remote loopback state on the port.
• Y	Loopback is enabled on the remote port.
• N	Loopback is disabled on the remote Port.

Output Parameters

RTRV-CKTINFO-ODU

This command retrieves ODU Circuit Info.

Usage Guidelines

The AID in the command is mandatory.

Category

Equipment

Security

Retrieve

Input Format

RTRV-CKTINFO-ODU::AID:<CTAG>:::BANDWIDTH=<bandwidth>;

Input Example

RTRV-CKTINFO-ODU::ODU-1-5-1-1-1-1:1;

test1743 2016-04-12 04:53:27

M 1 COMPLD

"ODU-1-5-1-1-1-1, ODU-1-5-11-1-1-4:NODEID=9B3104A0,SERVICEID=5,CKTNAME=\"2W_1\",SOURCETP=9b3104a0/0x2029/1,DROPTP=9b2e0400/0x3029/1/PATH-UNPROTECTED,CKTTYPE=ODU_CIRCUIT,CKTSIZE=ODU2E,ISGMPLS=N"

;

Input Parameters

<AID>	The AID is mandatory. AID of the ODU2. ALL AID is also supported.
<BANDWIDTH>	ODU Level (ODU2E). ENUM, Mandatory.
FROM AID	The FROM AID of the ODU Circuit.
	The TO AID of the ODU Circuit.
• CKTNAME	getConnectionName() on connection object to return circuit name.
	enum provided by user of type Circuits::eCircuitSize.
	enum provided by user of type Circuits::eCircuitType.
	uniquePart is for service id.
	nodeid

Output Format

Output Example

Output Parameters

Note: The existing command RTRV-CKTINFO will return the ODU circuit also. The difference between the output of RTRV-CKTINFO and RTRV-CKTINFO-ODU is RTRV-CKTINFO return the Circuit info without AID and RTRV-CKTINFO-ODU will return Circuit info with AID. The fields are generic across circuit. There is no ODU specific Fields.

cnPort index is not same as ODU index. Port index need to be populated in SOURCETP & DROPTP.

TO and FROM fields are not fixed to client or trunk. It can be client to trunk, trunk to trunk and trunk to client.

Input can be FROM or TO AID. Output parameter will be circuit info.

RTRV-EQPT

The Retrieve Equipment (RTRV-EQPT) command retrieves the data parameters and state parameters associated with a card or shelf. The command retrieves the card type, equipped state, and the state of that card. The command modifies the provision details of AR-MXP, AR-XP, and AR-XPE cards and its facilities.

Usage Guidelines

This command returns the PRTYPE, PROTID, RVTM, and RVRTV parameters for a card inside a protection group according to the following scenarios:

- A working AID/card within a 1:1 protection group will return PRTYPE, PROTID, RVTM, and RVRTV.
- A protection/AID card within a 1:1 protection group will return PRTYPE, RVTM, and RVRTV.
- A working AID/card within a 1:N protection group will return PRTYPE, PROTID, RVTM, and RVRTV=Y.
- A protection AID/card of a 1:1 protection group will return PRTYPE, RVTM, and RVRTV=Y.
- An unprotected AID/card will return the AID type, equip (equip/unequip), status (act/standby), and state (IS/OOS) values.
- Preprovisioned cards (without being plugged in) will display OOS,AINS for PST and SST. After the card is plugged in and has gone through its initialization sequence, the card automatically goes to IS state (PST).

- The CARDMODE parameter is displayed for ML-Series Ethernet, FC_MR-4, DS1/E1-56, and DWDM xponder cards.
- The RETIME parameter is only displayed for the DS1/E1-56 card.
- The TRANSMODE parameter is only displayed for the DS1/E1-56 card.

Error conditions:

- The NE will generate an error when the equipment is not provisioned.

Category
Equipment

Security
Retrieve

Input Format
RTRV-EQPT:[<TID>]:<AID>:<CTAG>[::::];

Input Example
RTRV-EQPT::SLOT-4:444;

Input Parameters

<AID>	Access identifier from the "28.15 EQPT" section on page 28-39.

Output Format
SID DATE TIME

M CTAG COMPLD

"<AID>:<AIDTYPE>,<EQUIP>,[<ROLE>],[<STATUS>]:[<PROTID>],[<PRTYPE>],[<RVRTV>],[<RVTM>],[<CARD-NAME>],[<IOSCFG>],[<CARDMODE>],[<PEERID>],[<REGENNAME>],[<PEERNAME>],[<TRANS-MODE>],[<RETIME>],[<SHELFROLE>],[<FRPROLE>],[<FRPSTATE>],[<FRPHOLDOFFTIME>],[<ADMINCVLAN>],[<AD-MINSVLAN>],[<CFMSTATE>],[<CCTIMER>],[<SWITCHWITHCRCALARM>],[<CRC-THR>],[<CRCPOLLINTRVL>],[<CRCSOAKCOUNT>],[<USB>],[<CLOCKTYPE>],[<LPBKTYPE>],[<ALMSUPPRESS>],[< ACTU-ALCARDNAME>],[< PUNITNUM>],[<KERNELVERSION>],[<BOOTVERSION>] :<PST>,[<SST>]";

Output Example
M 321 COMPLD

"SLOT-1:TNC,EQUIP,,ACT:CARDNAME=TNC,:IS-NR,"

"SLOT-3:AR-XP,EQUIP,,STBY:CARDNAME=ROCCIA NERA 7,:OOS-AU,FLT"

"SLOT-4:AR-XP,UNEQUIP,,NA::OOS-AU,AINS&UEQ"

"SLOT-6:TXP-MR-10E,EQUIP,,STBY:CARDNAME=15454-10E-L1-C 1529.55,CARDMODE=DWDM-TRANS-SQUELCH,:IS-NR,"

"PPM-3-1:PPM-1,EQUIP,,NA:CARDNAME=SD-SDI/HD-SDI/SDI3G-TX-1310NM,:IS-NR,"

"PPM-3-5:PPM-1,UNEQUIP,,NA::OOS-AU,AINS&UEQ"

"PPM-3-6:PPM-1,UNEQUIP,,NA::OOS-AU,AINS&UEQ"

"PPM-3-7:PPM-1,EQUIP,,NA:CARDNAME=ESCON/ETR-CLO-1310NM,:IS-NR,"

;

Output Parameters

<AID>	Access identifier from the "28.15 EQPT" section on page 28-39.
<AIDTYPE>	The type of facility, link or other addressable entity targeted by the message. The parameter type is EQUIPMENT-TYPE (equipment type).
• 10GE-XP	2 x 10 Gbps. muxponder/L2 ethernet switch card
• 32-DMX	32 channel optical demultiplexer
• 32-DMX-L	32 channel optical demultiplexer for L-band
• 32-MUX-O	32 channel unidirectional optical multiplexer This overrides the old equipment type MUX-32 present in the 4.6 and earlier releases.
• 32-WSS	32 channel optical wavelength selective switch for C Band
• 40-DMX-C	40 channel optical demultiplexer for C Band
• 40-MUX-C	40 channel optical multiplexer for C Band
• 40-WSS-C	40 channel optical wavelength switch selector for C Band
• 40-WXC-C	40 channel optical wavelength cross-connect/wavelength router for C Band
• 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
• ADM-10G	16 x OC3/OC12/OC48/GIGE and OC192/Trunk ADM 10 Gbps card
• AIC	AIC card
• AICI	AICI Card
• CE-1000-4	Modena mapper card
• CE-100T-8	Exige/Elise mapper card
• CE-MR-10	(, SDH) Lotus20g ce2 card
• DS1-E1-56	DS1-E1-56 card
• DS1I	DS1I card
• DS3I	DS3I card
• DS3IN	DS3IN card
• E1-42	42 port E1 card
• E1000T	E1000T card
• E100T	E100T card
• E3	E3 card
• FC-MR-4	FC-MR-4 card
• FILLER-CARD	Blank filler card
• G1000-4	A 4-port G1000 card
• GE-XP	20 x 1 Gbps muxponder/L2 ethernet switch card
• MD-4	Four channel optical multiplexer/demultiplexer
• ML-100T-8	Exige/Elise mapper card
• ML1000-2	Daytona 2-port GigE
• ML100T-12	Daytona 12-port FSTE
• ML100X-8	8-port 100T card with optical interface

• MRC-12	Humvee - 12-port multirate optical card
• MRC-2.5G-4	4-port MRC 2.5G (Hummer 4 15454-ANSI card)
• MRC-2.5G-12	12-port MRC 2.5G (Hummer 12 15454-ETSI card)
• MXP-2.5G-10E	Monviso 10G (4 * 2.5G) muxponder card with enhanced FEC
• MXP-2.5G-10EX	Cengalo 10G (4 * 2.5G) muxponder with enhanced FEC card
• MXP-2.5G-10G	Skane 10G (4 * 2.5G) muxponder card
• MXP-MR-2.5G	Bernina multirate 2.5G muxponder unprotected
• MXPP-MR-2.5G	Bernina multirate 2.5G muxponder protected
• MXPP-MR-10DME	Multirate 10Gbps datamux
• MXPP-MR-10DMEX	Multirate 10Gbps datamux with enhanced dispersion
• ML-MR-10	
• OPT-AMP-17-C	Optical booster/pre-amplifier for C band 17 dBm
• OPT-AMP-23-C	Optical booster/pre-amplifier for C band 23 dBm
• OPT-AMP-L	Optical booster/pre-amplifier for L band
• OPT-AMP-C	Optical booster/pre-amplifier for C band
• OPT-BST	Optical booster amplifier
• OPT-BST-E	Optical booster enhanced amplifier for C band
• OPT-BST-L	Optical booster amplifier for L band
• OPT-PRE	Optical pre-amplifier
• OSC-CSM	Optical service channel (OSC) with combiner/separator module (SCM)
• OSCM	Optical service channel (OSC) module
• PPM-1	Pluggable port module with one SFP port
• STM1E-12	STM1E-12 card

• TCC	TCC card
• TXP-MR-10E	Skane 10G multirate transponder card with enhanced FEC
• TXP-MR-10G	Skane 10G multirate transponder card
• TXP-MR-2.5G	Rockwell multirate 2.5G unprotected
• TXPP-MR-2.5G	Rockwell multirate 2.5G protected
• XC	XC card
• XC10G	XC10G card
• XCVT	XCVT card
• XCVXC-10G	XCVXC-10G card
• XCVXC-2.5G	XCVXC-2.5G card
• XCVXL-10G	XCVXL-10G card
• XCVXL-2.5G	XCVXL-2.5G card
<EQUIP>	Indicates if the equipment is physically present. The parameter type is EQUIP, which is the presence of a plug-in unit.
• EQUIP	The unit is equipped—present.
• UNEQUIP	The unit is unequipped—absent.
• <ROLE>	Identifies the port role in a Y-cable protection scheme. The parameter type is SIDE, which is the role the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	(Optional) Indicates a status. SONET card status is shown on its card level. The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit on the shelf.
• <PROTID>	(Optional) Protection group name. PROTID is a string.
<PRTYPE>	Identifies the protection group type values.

• 1-1	1 to 1 protection
• 1-N	1 to N protection
<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. Only applies to SNCP. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. RVTM is not allowed to be set while RVRTV is N. Only applies to SNCP. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<CARDNAME>	(Optional) Contains the manufacturing name of the card when it is different from the EQUIPMENT_TYPE.
<IOSCFG>	(Optional) Displays the information about startup IOS config file for the ML series card. A 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: 1) Where the config file is from: TL1, or CTC/CTM/CLI/TCC; 2) The host (IP address)/directory/file name, if the config file is downloaded from the network; 3) When the startup config file is created (by copying from the network, for example). This field only applies to ML series card. IOSCFG is a string.
<CARDMODE>	(Optional) Card mode. The parameter type is CARDMODE (card mode). Card mode is applicable to cards that have multiple capabilities, for example, the ML-Series card can operate in two distinct modes: Linear Mapper mode and L2/L3 mode.
• 10GLANWAN-LINE-SQUELCH	Changes the card mode from LAN to WAN.
• AMPL-BST	The optical amplifier is working as an optical booster.
• AMPL-PRE	The optical amplifier is working as an optical preamplifier.
• CEMR-AUTO	CE-MR-10 (Only) cards supports auto-allocation of back-end channels.

• CEMR-MANUAL	CE-MR-10 (Only) cards supports manual-allocation of back-end channels.
• CE-MR-10	Lotus20g ce2 card
• CE-MR-6	(, SDH) Lotus20g ce2 card
• DS1E1-DS1ONLY	DS1 mode on DS1/E1 card
• DS1E1-E1ONLY	E1 mode on DS1/E1 card
• DWDM-LINE	Line terminating mode
• DWDM-SECTION	Section terminating mode
• DWDM-TRANS-AIS	Transparent mode AIS
• DWDM-TRANS-SQUELCH	Transparent mode SQUELCH
• FCMR-DISTEXTN	FC_MR-4 card with distance extension support
• FCMR-LINERATE	FC_MR-4 card without distance extension support
• ML-GFP	ML-Series card in DOS FPGA using GFP framing type
• ML-HDLC	ML-Series card in DOS FPGA using HDLC framing type
• ML-IEEE-RPR	ML-Series card in DOS FPGA which supports Resilient Packet Ring (RPR).
• MXPMR10DME-4GFC	4-Gbps Fibre Channel/FICON mode for the SDH MXP_MR_10DME_C or MXP_MR_10DME_L card supported on Ports 1 and 5
• MXPMR10DME-4GFC-FCGEISC	4-Gbps Fibre Channel/FICON supported on port one and Fibre Channel, GIGE and ISC modes for the SDH MXP_MR_10DME_C or MXP_MR_10DME_L card supported on Ports 5 to 8
• MXPMR10DME-FCGEISC	Fibre Channel, GIGE, and ISC modes for the 1MXP_MR_10DME_C or MXP_MR_10DME_L card supported on all eight ports
• MXPMR10DME-FCGEISC-4GFC	Fibre Channel, GIGE, and ISC modes for the MXP_MR_10DME_C or MXP_MR_10DME_L card supported on Ports 1 to 4 and 4 Gbps Fibre Channel/FICON supported on Port 5
• MXPMR10G-FCGEISC	Fibre Channel, GIGE, and ISC modes for the MXP_MR_10DME_C or MXP_MR_10DME_L card supported on all eight ports

• MXPMR10G-4GFC	4-Gbps Fibre Channel/FICON mode for the MXP_MR_10DME_C or MXP_MR_10DME_L card supported on Ports 1 and 5
• MXPMR10G-FCGEISC-4GFC	Fibre Channel, GIGE, and ISC modes for the MXP_MR_10DME_C or MXP_MR_10DME_L card supported on Ports 1 to 4 and 4-Gbps Fibre Channel/FICON supported on Port 5
• MXPMR10G-4GFC-FCGEISC	4-Gbps Fibre Channel/FICON supported on Port 1 and Fibre Channel, GIGE and ISC modes for the MXP_MR_10DME_C or MXP_MR_10DME_L card supported on Ports 5 to 8
• MXPMR25G-ESCON	ESCON mode for the MXP_2.5G_10G card
• MXPMR25G-FCGE	Fibre channel or GIGE mode for the MXP_2.5G_10G card
• MXPMR25G-MIXED	Mixed Fibre Channel, GIGE and ESCON modes for the MXP_2.5G_10G card
• PSM-NORMAL	PSM working in classic configuration.
• PSM-STANDALONE	PSM working in stand-alone mode.
• WXC80-BIDI	80-WXC-C working in bidirectional mode.
• WXC80-DMX	80-WXC-C working as demultiplexer.
• WXC80-MUX	80-WXC-C working as multiplexer.
• 40G-MXP-MUXPONDER	40G-MXP-MUXPONDER working as multiplexer.
• 40G-MXP-UNIDIR-REGEN	40G-MXP-UNIDIR-REGEN working as regenerator.
<PEERID>	Indicates the peer trunk facility of the regeneration group on the OTU2-XP card. Accessed using the CHAN AID.
<REGENNAME>	Indicates the name of a regeneration group. Applicable only to DWDM flavored cards, which support regeneration group. Regenname is a string. The default value is "NULL".
<PEERNAME>	Indicates the name of a peer group.
<TRANSMODE>	Transition Mode.
• AU3	Au3 mode.
• AU4	Au4 mode.
• SONET	Sonnet mode.

<RETIME>	(Optional) Indicates the RETIME function for all the facilities on this card. Applies only to the DS1/E1-56 card. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<SHELFROLE>	The role of the shelf in the context of the node. When it is omitted it defaults to SC. The parameter is SHELF_ROLE.
<FRPROLE>	Indicates the fast ring protection enable mode for GE-XP/10GE-XP units involved in a protection scheme.
• MASTER	Role is of card primary of the ring.
• SLAVE	Role is of card subordinate of the ring.
<FRPSTATE>	Indicates the fast ring protection enable state.
• DISABLED	Disabled protection
• ENABLED	Enabled protection
• FORCED	Forced protection
<FRPHOLDOFFTIME>	Indicates the hold off timer value. The protection do not start until the hold off expire.
• 100-MSEC	Indicates the hold off timer value as 100 milliseconds.
• 1-MSEC	Indicates the hold off timer value as 1milisecond.
• 200-MSEC	Indicates the hold off timer value as 200 milliseconds.
• 2-MSEC	Indicates the hold off timer value as 2 milliseconds.
• 500-MSEC	Indicates the hold off timer value as 500 milliseconds.
• 50-MSEC	Indicates the hold off timer value as 50 milliseconds.
• 5-MSEC	Indicates the hold off timer value as 50 milliseconds.
• DISABLED	Indicates that the hold off timer is disabled.
<ADMINCVLAN>	Customer VLAN identifier for REP. ADMINCVLAN is a number between 1 and 4096. The value 0 is reserved to untagged VLAN.
<ADMINSVLAN>	Service provider VLAN identifier for REP. ADMINSVLAN is a number between 1 and 4096. The value 0 is reserved to untagged VLAN.

<CFMSTATE>	Link Integrity status.
• Y	Enabled
• N	Disabled
<CCTIMER>	Indicates continuity check message timer.
• ONE-MIN	1 minute.
• ONE-SEC	1 second.
• TEN-SEC	10 seconds.
<PROTOPMODE>	PROTOPMODE
<SWITCHWITHCRCALARM>	Switch the GZ card with CRC Alarms
<CRCTHR>	CRC threshold values beyond which alarms are raised. The available threshold values are 10E-2, 10E-3, and 10E-4.
<CRCPOLLINTRVL>	Interval of time after which the polling starts.
<CRCSOAKCNT>	Number of poll cycles during which defect is integrated. The value ranges from 3 to 10.
<USB>	Identifies the USB Port where a passive unit is connected.
<CLOCKTYPE>	The parameter type is CLOCKTYPE. Sets the clock type.
• INTERNAL	Clock type set to INTERNAL.
• TNC	Clock type set to TNC.
<LPBKTYPE>	
• FAC-DROP	
• TER-DROP	
• BACKPLANE-TER-DROP	
• BACKPLANE-FAC-DROP	
<PST>	(Optional) Primary state of the entity. The parameter type is PST, which indicates the current overall service condition of an entity.
• Unlocked	In Service
• Locked	Out of Service

<ALARMSUPPRESS>	It is an enum which has the values:

• Y	Activate alarm suppress
• N	Deactivate alarm suppress
<SST>	Secondary state of the entity. SST is listable. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AutomaticInService	Automatic in service
• Disabled	Disabled
• Loopback	Loopback
• MismatchofEquipmentAlarm	Mismatch of equipment and attributes
• Maintenance	Maintenance mode
• OutOfGroup	Out of group
• SoftwareDownload	Software downloading
• Unassigned	Unassigned
• NotInstalled	Unequipped

RTRV-ESCON

The Retrieve Enterprise System Connection (RTRV-ESCON) command retrieves the Fibre Channel-specific settings for ports that have been configured to carry ESCON traffic using the ENT-ESCON command.

Usage Guidelines

None

Category

Ports

Security

Retrieve

Input Format

RTRV-ESCON:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-ESCON::CISCO:FAC-1-1:123;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:,,[<ROLE>],[<STATUS>]:[ENCAP=<ENCAP>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"FAC-1-1:,,WORK,ACT:ENCAP=GFP-T"
;

Output Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<ROLE>	(Optional) The port role in Y-cable protection (WORK or PROT). The parameter type is SIDE, which is the role the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	(Optional) A port status in Y-cable protection (ACT or STBY). The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<ENCAP>	(Optional) Encapsulation frame type. The parameter type is ENCAP, which is the frame encapsulation type.

• GFP_F	GFP Frame Mode
• GFP_T	GFP Transparent Mode
• HDLC	HDLC Frame Mode
• HDLC_LEX	HDLC LAN Extension Frame Mode
• HDLC_X86	HDLC X.86 Frame Mode

RTRV-ETH

The Retrieve Ethernet (RTRV-ETH) command retrieves the front-end port information of an Ethernet card.

Usage Guidelines

This command retrieves the front-end port information of 10/100/1000 Mbps Ethernet cards. However, RTRV-POS will display the MTU, which is common for front and backend ports.

The SELECTIVEAUTO parameter is applicable only when EXPSPEED and EXPDUPLEX are not set to AUTO mode.

Note This command is available in Software Release 8.0.1 and later. It is not available in R8.0.0 and later.

Category

Ethernet

Security

Provisioning

Input Format

RTRV-ETH:[<TID>]:<AID>:<CTAG>[:::];

Input Example

RTRV-ETH:TID:FAC-1-1:CTAG;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "28.16 ETH" section on page 28-41.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[<ADMINSTATE>],[<LINKSTATE>],[<MTU>],[<FLOWCTRL>],[<OPTICS>],[<DUPLEX>],[<SPEED>],[<FLOW>],[<EXPDUPLEX>],[<EXPSPEED>],[<VLANCOSTHRESHOLD>],[<IPTOSTHRESHOLD>],[<NAME>],[<SUPPRESS>],[<SOAK>],[<SOAKLEFT>],[<SELECTIVEAUTO>],[<LIENABLE>],[<LITIMER>],[<LPBKTYPE>],<PST>,[<SST>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"FAC-1-1::LINKSTATE=DOWN,FLOWCTRL=SYMMETRIC,
DUPLEX=AUTO,SPEED=AUTO,FLOW=FLOW,EXPDUPLEX=AUTO,
EXPSPEED=AUTO,VLANCOS=7,IPTOS=255,OPTICS=1000-BASE-LX,
NAME=\"ETH PORT\",SOAK=32,SOAKLEFT=\"12-25\", SELECTIVEAUTO=N,LIENABLE=Y,LITIMER=200:OOS-AU,
AINS";

Output Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "28.16 ETH" section on page 28-41.
<LINKSTATE>	Link state. The parameter type is UP_DOWN, which indicates an up or down value.
• DOWN	Down
• UP	Up
<FLOWCTRL>	Flow control. The parameter is FLOW, which indicates the type of flow control that has been negotiated for an Ethernet port. Defaults to NONE.
• ASYMMETRIC	Asymmetric flow control
• ASYMMETRIC_LOCAL	Asymmetric local flow control
• NONE	No flow control
• PASSTHRU	Pass-through flow control
• SYMMETRIC	Symmetric flow control
<DUPLEX>	The parameter is ETHER_DUPLEX, which indicates duplex mode. Defaults to AUTO.
• AUTO	Auto mode

• FULL	Full mode
• HALF	Half mode
<SPEED>	The parameter type is ETHER_SPEED which indicates Ethernet speed. Defaults to AUTO.
• 100_MBPS	100 Megabits per seconds
• 10_GBPS	10 Gigabits per second
• 10_MBPS	10 Megabits per second
• 1_GBPS	1 Gigabit per second
• 40_GBPS	40 Gigabit per second
• AUTO_FDX	Enable auto negotiation with full duplex
• AUTO	Automatic
<FLOW>	(Optional) Flow. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<EXPDUPLEX>	(Optional) Ethernet duplex mode. The parameter type is ETHER_DUPLEX, which is the duplex mode.
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode
<EXPSPEED>	(Optional) Expected speed. Due to the auto-negotiation feature, actual speed may differ from expected speed. The parameter type is ETHER_SPEED, which is the Ethernet speed.
• 100_MBPS	100 Megabits per second
• 10_GBPS	10 Gigabits per second
• 10_MBPS	10 Megabits per second
• 1_GBPS	1 Gigabit per second
• AUTO	Auto
<SELECTIVEAUTO>	(Optional) Selective auto-negotiation. The parameter is Y or N (enable or disable auto-negotiation) This indicates selective auto-negotiation of EXPSPEED and EXPDUPLEX only.

• Y	Enable selective auto-negotiation.
• N	Disable selective auto-negotiation. The default value is N.
<VLANCOS>	(Optional) Priority queing threshold based on VLAN class of service for incoming Ethernet packets. VLANCOS is an integer.
<IPTOS>	(Optional) Priority queing threshold based on IP type of service for incoming Ethernet packets. IPTOS is an integer.
<OPTICS>	(Optional) Optics. The parameter type is OPTICS, which is the type of Gigabit Ethernet optics being used.
• 1000_BASE_CX	1000BaseCX
• 1000_BASE_LX	1000BaseLX
• 1000_BASE_SX	1000BaseSX
• 1000_BASE_ZX	1000BaseZX
• 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
• 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
<NAME>	(Optional) Name. NAME is a string.
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer. Default value is 32. It can be set through ED command.

<SOAKLEFT>	(Optional) Time remaining for the transition from Locked-AutomaticInService to Unlocked measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. Rules for SOAKLEFT are as follows: • When the port is in Locked;Locked,Maintenance; or Unlocked state, the parameter is not displayed. • When the port is in Locked,AutomaticInService state but the countdown has not started due to a fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in Locked,AutomaticInService state and the countdown has started, the value will be shown in HH-MM format.
<LIENABLE>	(Optional) Enable or Disable link integrity timer. Takes either Y or N. Value Y enables the LITIMER and value N disables LITIMER. By default LITIMER is enabled. **Note** The LIENABLE parameter is supported on only CE-1000-4 and CE-1000T-8 cards.
<LITIMER>	(Optional) Link integrity timer duration in the range between 200 ms and 10000 ms in multiples on 100 ms. **Note** The LITIMER parameter is supported on only CE-1000-4 and CE-1000T-8 cards on the 15454.
<PSTPSTQ>	Administrative state in the PST_PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the PST and the PSTQ.
• Unlocked-Enabled	In service and normal
• Unlocked-Disabled	Out of service and autonomous
• Locked-Disabled	Out of service, autonomous and management
• Locked-Enabled	Out of service and management
<SSTQ>	(Optional) Secondary state of the entity. the parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AutomaticInService	Automatic in service
• Disabled	Disabled
• Loopback	Loopback
• MismatchofEquipmentAlarm	Mismatch of equipment and attributes

• Maintenance	Maintenance mode
• OutOfGroup	Out of group
• SoftwareDownload	Software downloading
• Unassigned	Unassigned
• NotInstalled	Unequipped

RTRV-EXT-CONT

The Retrieve External Control (RTRV-EXT-CONT) 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.

Usage Guidelines

- If the CONTTYPE is null, the existing CONTTYPE on this AID will be returned.
- The duration is not supported. It defaults to CONTS.

Category

Environment

Security

Retrieve

Input Format

RTRV-EXT-CONT:[<TID>]:<AID>:<CTAG>[::<CONTTYPE>];

Input Example

RTRV-EXT-CONT:CISCO:ENV-OUT-2:123::AIRCOND;

Input Parameters

<AID>	Access identifier from the "28.14 ENV" section on page 28-39. The only valid AID for RTRV-EXT-CONT is ENV-OUT-{1-2}.
<CONTTYPE>	Environmental control type. A null value is equivalent to ALL. The parameter type is CONTTYPE, which is the environmental control type.
• AIRCOND	Air conditioning
• ENGINE	Engine

• FAN	Fan
• GEN	Generator
• HEAT	Heat
• LIGHT	Light
• MISC	Miscellaneous
• SPKLR	Sprinkler

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:[<CONTTYPE>],<DUR>,[<CONTSTATE>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"ENV-OUT-2:AIRCOND,CONTS,OPEN"
;

Output Parameters

<AID>	Access identifier from the "28.14 ENV" section on page 28-39. Identifies the external control for which the control state is being retrieved.
<CONTTYPE>	(Optional) Environmental control type. The parameter type is CONTTYPE, which is the environmental control type.
• AIRCOND	Air conditioning
• ENGINE	Engine
• FAN	Fan
• GEN	Generator
• HEAT	Heat
• LIGHT	Light
• MISC	Miscellaneous

• SPKLR	Sprinkler
<DUR>	Duration of operation. The duration for which the external control can be operated. The parameter type is Duration.
• CONTS	Continuous duration
<CONTSTATE>	(Optional) Control state of the external control. The parameter type is CONT_MODE, which is the current state of the environmental control.
• NA	Not applicable (for example, duration is MNTRY).
• OPER	The environmental control state is CLOSE.
• RLS	The environmental control state is OPEN.

RTRV-FAC

The Retrieve Facility (RTRV-FAC) command retrieves the payload type of the facility. It can also dump all the facilities on a given card and is applicable to all cards.

Usage Guidelines

None

Category

Ports

Security

Retrieve

Input Format

RTRV-FAC:[<TID>]:<SRC>:<CTAG>[::::];

Input Example

RTRV-FAC:CISCO:FAC-2-9:2223;

Input Parameters

<SRC>	Source access identifier from the "28.17 FACILITY" section on page 28-42.

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    "<SRC>::PAYLOAD=<PAYLOAD>:<PST_PSTQ>,[<SSTQ>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001 COMPLD
    "FAC-2-9::PAYLOAD=E4-FRAMED:OOS-AU,AINS"
;
```

Output Parameters

<SRC>	Source access identifier from the "28.17 FACILITY" section on page 28-42.
<PAYLOAD>	(Optional) Payload type of the facility. The parameter type is PAYLOAD, which identifies payload type.
• 100GIGE	100 Gigabit Ethernet.
• 10GFC	10-Gigabit Fibre Channel payload
• 10GIGE	10-Gigabit Ethernet
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 3GVIDEO	3G-SDI video payload.
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• 40GIGE	40-Gigabit Ethernet
• AUTO	Auto
• DS3	DS3 mode
• DS3XM	DS3XM payload mode for DS3XM card
• DV6000	Video mode

• DVBASI	DVBASI payload
• EC1	EC1 mode
• ESCON	ESCON mode
• ETRCLO	ETR_CLO payload mode
• GIGE	Gigabit Ethernet Payload
• HDLC	High-level data link control (HDLC) frame mode.
• HDSDI	1.5G HD-SDI video payload.
• HDTV	HDTV mode
• ISC1	ISC1 Mode
• ISC3	ISC3 Mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• OC12	SONET OC12 mode
• OC3	SONET OC3 mode
• OC48	SONET OC48 mode
• OC768	SONET OC768 mode
• OTL	Optical Channel Transport Lane.
• OTU1	Optical Transport Unit Level 1
• OTU2	Optical Transport Unit Level 2
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• PASS-THROUGH	Pass through mode
• SDI-D1-VIDEO	SDI-D1-Video mode
• SONET	SONET Payload Mode
• SDSDI	270M SDI video payload.
<PST_PSTQ>	Administrative state in the PST-PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the PST and PSTQ.
• IS-NR	In Service and Normal

• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state. SSTQ is a string.

RTRV-FIBERATTR

Description

Retrieves Fiber Attributes of a WDMSIDE

Usage Guidelines

- None

Category

NCS

Security

Maintenance

Input Format

RTRV-FIBERATTR:[<TID>]:<aid>:<CTAG>[::::];

Input Parameters

Parameter	Description
AID	The AID used to access the WDM side of a Multiservice Transport Platform (MSTP) node.

Output Format

SID DATE TIME
M CTAG COMPLD
AID:FIBERTYPE=<fibertype>,LENGTH=<fiberlth>,PMD=<pmd>,INATTEN=<inatten>[OUTATTEN=<outatten>,CHSPAC-ING=<chspacing>,CHNUM=<chnum>,DOMAIN=<domain>,SPANVALIDATION=<spanval>[:];

Output Example

```
>rtrv-fiberattr::all:a;

    NE123 2014-07-08 02:27:02
M   a COMPLD
    "WDMSIDE-A:FIBERTYPE=G652-SMF-28E,LENGTH=200.0,PMD=0.00,INATTEN=0.0,OUTATTEN=0.0,CHSPAC-
ING=50.0,CHNUM=80.0,DOMAIN=LOGO,SPANVALIDATION=TRUE"
```

Output Parameters

Parameter	Description
AID	The AID used to access the WDM side of a Multiservice Transport Platform (MSTP) node.
• WDMSIDE-{UN-KNOWN,A,B,C,D,E,F,G,H}	MSTP side identifier.
FIBERTYPE	FiberType.This parameter is of type FiberTypeEnum. It can take the values-
• G652-SMF	
• ELEAF	
• True-Wave-RS	
• Dispersion-Shifted	
• Metro-Core	
• True-Wave-Plus	
• True-Wave-Minus	
• True-Wave-Classic	
• Free-Light	
• LS	
• Tera-Light	
• True-Wave-Reach	
• G652-SMF-28E	
LENGTH	Fiber Length(Kms)- Float Type parameter. Range of the parameter is 0 to 998
PMD	PMD Coeff of the Fiber(ps/sqrt(km)). Float Type parameter. Range of the parameter is 0 to 100

INATTEN	Input Attentuation(dB). Float Type parameter. Range of the parameter is 0 to 100
OUTATTEN	Output Attentuation(dB). Float Type parameter. Range of the parameter is 0 to 100
CHSPACING	Channel Spacing(GHz). Float Type parameter. Can take values as 50 and 100 only
CHNUM	Channel Number. Float Type parameter. Range from 0 to 96
DOMAIN	Domain. This parameter is of DOMAIN ENUM type which can take the values-
• LEGACY	
• LOGO	
SPANVALIDATION	SpanValidation. Is of type TRU_FALSE. Can take the value –
• TRUE	
• FALSE	

RTRV-FFP

The Retrieve Facility Protection Group (RTRV-FFP) command retrieves all optical 1+1 protection groups.

Usage Guidelines

None

Category

Protection

Security

Retrieve

Input Format

RTRV-FFP:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-FFP:HERNDON:FAC-1-1:1;

Input Parameters

AID	Optical facility access identifier from the "28.17 FACILITY" section on page 28-42.

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    "<WORK>,<PROTECT>:<LEVEL>:[PROTID=<PROTID>],[RVRTV=<RVRTV>],
    [RVTM=<RVTM>],[PSDIRN=<PSDIRN>],[VRGRDTM=<VRGRDTM>],
    [DTGRDTM=<DTGRDTM>],[RCGRDTM=<RCGRDTM>],[OPOTYPE=<OPOTYPE>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001 COMPLD
    "FAC-2-1,FAC-1-1:OC48:PROTID="PROT_NAME",RVRTV=Y,RVTM=1.0,PSDIRN=BI,
    VRGRDTM=0.5,DTGRDTM=1.0,RCGRDTM=1.0,OPOTYPE=OPTIMIZED"
;
```

Output Parameters

<WORK>	The working port access identifier from the "28.17 FACILITY" section on page 28-42.
<PROTECT>	The protected port access identifier from the "28.17 FACILITY" section on page 28-42.
<PROTTYPE>	(Optional) Protection group type. PROTTYPE is a string.
<LEVEL>	Optical rate the protection group was defined against. The parameter type is OCN_TYPE, which is the modifier used to differentiate various levels of OC-N.
• OC12	Optical Carrier level 12 (622 Mbps)
• OC192	Optical Carrier level 192 (10 Gbps)
• OC3	Optical Carrier level 3 (155 Mbps)
• OC48	Optical Carrier level 48 (2.4 Gbps)
<PROTID>	(Optional) Protection group name. PROTID is a string.

<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Defaults to N, non-revertive.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	(Optional) Protection switch operation. Direction of reversion. The parameter type is UNI_BI, which is the unidirectional and bidirectional switch operations.
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching
<VRGRDTM>	(Optional) Verification guard timer. Only applies to optimized 1+1. The parameter type is VERIFICATION_GUARD_TIMER, which is the optimized 1+1 verification guard timer.
• 0.5	500 ms
• 1.0	1 second
<DTGRDTM>	(Optional) Detection guard timer. Only applies to optimized 1+1. The parameter type is DETECTION_GUARD_TIMER, which is the optimized 1+1 detection guard timer.
• 0.0	0 seconds
• 0.05	50 ms
• 0.1	100 ms
• 0.5	500 ms
• 1.0	1 second
• 2.0	2 seconds
• 3.0	3 seconds
• 4.0	4 seconds
• 5.0	5 seconds

<RCGRDTM>	(Optional) Recovery guard timer. Only applies to optimized 1+1. The parameter type is RECOVERY_GUARD_TIMER, which is the optimized 1+1 recovery guard timer.
• 0.0	0 seconds
• 0.05	50 ms
• 0.1	100 ms
• 0.5	500 ms
• 1.0	1 second
• 2.0	2 seconds
• 3.0	3 seconds
• 4.0	4 seconds
• 5.0	5 seconds
• 6.0	6 seconds
• 7.0	7 seconds
• 8.0	8 seconds
• 9.0	9 seconds
• 10.0	10 seconds
<OPOTYPE>	(Optional) 1+1 protection type. The parameter type is ONE_PLUS_ONE, which is the 1+1 protection type.
• OPTIMIZED	Optimized 1+1
• STANDARD	Standard 1+1

RTRV-FFP-<MOD2DWDMPAYLOAD>

The Retrieve Facility Protection Group for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 5GIB, 8GFC, D1VIDEO, DV6000, DVBASI, ETRCLO, FSTE, GIGE, HDTV, ISC1, ISC3, OTU2, OTU3, OTU4, PASSTHRU, OTU1, OTU4C2, ISC3STP1G, or ISC3STP2G (RTRV-FFP-<MOD2DWDMPAYLOAD>) command retrieves the values facility protection that exists on that port.

Usage Guidelines

The command does not support 3GVIDEO, SDSDI, HDSDI, and AUTO payloads on AR-MXP, AR-XP, and AR-XPE cards.

Category
Performance

Security
Retrieve

Input Format
RTRV-FFP-<MOD2DWDMPAYLOAD>:[<TID>]:<SRC>:<CTAG>[::::];

Input Example
RTRV-FFP-GIGE:CISCO:VFAC-3-1-1:1;

Input Parameters

<SRC>	Source access identifier from the "28.17 FACILITY" section on page 28-42. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.

Output Format
SID DATE TIME M CTAG COMPLD "<AID>,[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],[<OCRTM>],[<LOCN>],[<DIRN>]:[<DESC>]"

;

Output Example
TID-000 1998-06-20 14:30:00

M 001 COMPLD

"VFAC-1-1-1,VFAC-2-1-1::PROTTYPE=Y-CABLE,PROTID=\"DC-METRO\", RVRTV=N,RVTM=1.0,PSDIRN=BI"

;

Output Parameters

<AIDUNIONID>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<AIDUNIONID1>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<PROTTYPE>	(Optional) The type of facility protection. The parameter type is PROTTYPE, which is the protection type for DWDM client facilities.
• Y-CABLE	Y-cable protection for the client ports on TXP_MR_10G, MXP_2.5G_10G, TXP_MR_2.5G, and TXPP_MR_2.5G cards.

<PROTID>	(Optional) Y-cable protection group identifier. PROTID is a string.
<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. Defaults to 5.0 minutes. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	(Optional) Protection switch operation. Identifies the switching mode. Defaults to UNI. The parameter type is UNI_BI, which is the unidirectional and bidirectional switch operations.
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching

RTRV-FFP-<OCN_TYPE>

The Retrieve Facility Protection Group for OC3, OC12, OC48, OC192, or OC768 (RTRV-FFP-<OCN_TYPE>) command retrieves the optical facility protection information.

Usage Guidelines

See Table 30-1 on page 30-1 for supported modifiers by platform.

Note Optimized 1+1 and related attributes only apply to the .

Category

Protection

Security

Retrieve

Input Format

RTRV-FFP-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-FFP-OC3:PETALUMA:OC3-1-1:1;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

Output Format

SID DATE TIME
M CTAG COMPLD
"<WORK>,<PROTECT>::[PROTTYPE=<PROTTYPE>],[PROTID=<PROTID>],
[RVRTV=<RVRTV>],[RVTM=<RVTM>],[PSDIRN=<PSDIRN>],[VRGRDTM=<VRGRDTM>],
[DTGRDTM=<DTGRDTM>],[RCGRDTM=<RCGRDTM>],[OPOTYPE=<OPOTYPE>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"FAC-2-1,FAC-1-1::PROTTYPE=Y-CABLE,PROTID="PROT_NAME",RVRTV=Y,RVTM=1.0,
PSDIRN=BI,VRGRDTM=0.5,DTGRDTM=1.0,RCGRDTM=1.0,OPOTYPE=OPTIMIZED"
;

Output Parameters

<WORK>	Access identifier from the "28.17 FACILITY" section on page 28-42. Identifies the working port.
<PROTECT>	Access identifier from the "28.17 FACILITY" section on page 28-42. Identifies the protection port.
<PROTTYPE>	(Optional) Protection group type. Applicable only to DWDM cards. The parameter type is PROTTYPE, which is the protection type for DWDM client facilities.
• Y-CABLE	Y-cable protection for the client ports on TXP_MR_10G, MXP_2.5G_10G, TXP_MR_2.5G, and TXPP_MR_2.5G cards.
<PROTID>	(Optional) Free-form text string name given to the 1+1 protection group. PROTID is a string.

<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Defaults to N, non-revertive.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. Defaults to 5.0 minutes. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	(Optional) Protection switch operation. Identifies the switching mode. Defaults to UNI. The parameter type is TRANS_MODE, which is the G1000 transponder mode.
• BI	Bidirectional
• NONE	Not in transponder mode
• UNI	Unidirectional
<VRGRDTM>	(Optional) Verification guard timer. Only applies to optimized 1+1. The parameter type is VERIFICATION_GUARD_TIMER, which is the optimized 1+1 verification guard timer.
• 0.5	500 ms
• 1.0	1 second
<DTGRDTM>	(Optional) Detection guard timer. Only applies to optimized 1+1. The parameter type is DETECTION_GUARD_TIMER, which is the optimized 1+1 detection guard timer.
• 0.0	0 seconds
• 0.05	50 ms
• 0.1	100 ms
• 0.5	500 ms
• 1.0	1 second
• 2.0	2 seconds
• 3.0	3 seconds
• 4.0	4 seconds
• 5.0	5 seconds

<RCGRDTM>	(Optional) Recovery guard timer. Only applies to optimized 1+1. The parameter type is RECOVERY_GUARD_TIMER, which is the optimized 1+1 recovery guard timer.
• 0.0	0 seconds
• 0.05	50 ms
• 0.1	100 ms
• 0.5	500 ms
• 1.0	1 second
• 2.0	2 seconds
• 3.0	3 seconds
• 4.0	4 seconds
• 5.0	5 seconds
• 6.0	6 seconds
• 7.0	7 seconds
• 8.0	8 seconds
• 9.0	9 seconds
• 10.0	10 seconds
<OPOTYPE>	(Optional) 1+1 protection type. The parameter type is ONE_PLUS_ONE, which is the 1+1 protection type.
• OPTIMIZED	Optimized 1+1
• STANDARD	Standard 1+1

RTRV-FFP-OCH

The Retrieve Facility Protection Group Optical Channel (RTRV-FFP-OCH) command retrieves the protection group information for the TXP_MR_2.5G and TXPP_MR_2.5G card trunk port.

Usage Guidelines

None

Category

DWDM

Security
Retrieve

Input Format
RTRV-FFP-OCH:[<TID>]:<AID>:<CTAG>[::::];

Input Example
RTRV-FFP-OCH:VA454-22:CHAN-2-2:100;

Input Parameters

<AID>	Access identifier from the "28.8 CHANNEL" section on page 28-23.

Output Format

SID DATE TIME
M CTAG COMPLD
"<WORK>,<PROTECT>::[PROTTYPE=<PROTTYPE>],[PROTID=<PROTID>],
[RVRTV=<RVRTV>],[RVTM=<RVTM>,[,PSDIRN=<PSDIRN>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"CHAN-2-2,CHAN-2-3::PROTTYPE=SPLITTER,PROTID=\"TRUNK PROT\",RVRTV=Y,
RVTM=1.0,PSDIRN=UNI"
;

Output Parameters

<WORK>	The working port access identifier from the "28.8 CHANNEL" section on page 28-23.
<PROTECT>	The protected port access identifier from the "28.8 CHANNEL" section on page 28-23.
<PROTTYPE>	(Optional) Protection group type. PROTTYPE is a string.
<PROTID>	(Optional) Protection group name. PROTID is a string.

<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Defaults to N. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	(Optional) Protection switch operation. Direction of reversion. The parameter type is UNI_BI, which is the unidirectional and bidirectional switch operations.
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching

RTRV-FFP-OTS

The Retrieve Facility Protection Group OTS (RTRV-FFP-OTS) command retrieves the protection group information for the TXP_MR_2.5G and TXPP_MR_2.5G card trunk port and OTU2-XP and optical protection switching unit.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-FFP-OTS:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-FFP-OTS:VA454-22:CHAN-2-2:100;

Input Parameters

<AID>	Access identifier from the "28.8 CHANNEL" section on page 28-23.

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    "<WORK>,<PROTECT>::[PROTTYPE=<PROTTYPE>],[PROTID=<PROTID>],
    [RVRTV=<RVRTV>],[RVTM=<RVTM>,[,PSDIRN=<PSDIRN>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001 COMPLD
    "CHAN-2-2,CHAN-2-3::PROTTYPE=SPLITTER,PROTID=\"TRUNK PROT\",RVRTV=Y,
    RVTM=1.0,PSDIRN=UNI"
;
```

Output Parameters

<WORK>	The working port access identifier from the "28.8 CHANNEL" section on page 28-23.
<PROTECT>	The protected port access identifier from the "28.8 CHANNEL" section on page 28-23.
<PROTTYPE>	(Optional) Protection group type. PROTTYPE is a string.
<PROTID>	(Optional) Protection group name. PROTID is a string.
<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Defaults to N. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.

<PSDIRN>	(Optional) Protection switch operation. Direction of reversion. The parameter type is UNI_BI, which is the unidirectional and bidirectional switch operations.
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching

RTRV-FOG

The Retrieve Fan-Out-Group (ENT-FOG) command retrieves Fan-Out-Groups.

Usage Guidelines

- This command is applicable to PTSYS.
- Retrieves the CPT 50 panel provisioning information.
- Retrieves all the provisioned FOGs or specific FOG with the “ALL” AID.

Category

Equipment

Security

Retrieve

Input Format

RTRV-FOG:[<TID>]:<AID>:<CTAG>;

Input Examples

RTRV-FOG::ALL:1;

Input Parameters

<AID>	Access identifier from the “28.15 EQPT” section on page 28-39.

Output Format

SID DATE TIME
M CTAG COMPLD
“<AID>:[PTSYSID=<PTSYSID>],[FOGID=<FOGID>],[FOMEM=<FOMEM>],
[<PEERMEM=<PEERMEM>],[STATE=<STATE>],[QUEUEMODE=<QUEUEMODE>],[PBNAME=<PBNAME>]”;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
“FOG-1-36:PTSYSID=1,FOGID=36,FOMEM=FAC-2-2-1,STATE=UNKNOWN”

Output Parameters

Parameter	Description
<AID>	AID of the FOG to be retrieved.
<PTSYSID>	PTSYS number or ID.
<FOGID>	This is AID of the provisioned FOG. The valid range is [-{1}]-{36-55}.
<FOMEM>	Ports of line and fabric cards.
<PEERMEM>	Ports of CPT 50 panel.
<STATE>	FOG state.
• Discovered	Discovered sate.
• Invalid	Not discovered.
• UNKNOWN	Not known
<QUEUEMODE>	QUEUEMODE
• NOPRI	NOPRI
• STRICT	STRICT
<PBNAME>	PBNAME

RTRV-FSTE

The Retrieve Fast Ethernet (RTRV-FSTE) command retrieves the front-end port information of a Fast Ethernet (10/100 Mbps) card. MTU is not displayed for the ML-100T-8 and CE-100T-8 cards.

Usage Guidelines

This command retrieves the front-end port information of Fast Ethernet (10/100 Mbps) cards. MTU is not displayed for CE-100T-8 and ML-100T-8. However, RTRV-POS will display the MTU, which is common for front and backend ports.

The SELECTIVEAUTO parameter is applicable only when EXPSPEED and EXPDUPLEX are not set to AUTO mode.

Category

Ports

Security
Retrieve

Input Format
RTRV-FSTE:[<TID>]:<AID>:<CTAG>;

Input Example
RTRV-FSTE:TID:FAC-1-1:CTAG;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

Output Format
SID DATE TIME M CTAG COMPLD
"<AID>:[<ROLE>],[<STATUS>]:[<ADMINSTATE>],[<LINKSTATE>],[<MTU>],[<FLOWCTRL>],[<OPTICS>],[<DUPLEX>],[<SPEED>],[<FLOW>],[<EXPDUPLEX>],[<EXPSPEED>],[<VLANCOSTHRESHOLD>],[<IPTOSTHRESHOLD>],[<NAME>],[<SUPPRESS>],[<SOAK>],[<SOAKLEFT>],[<SELECTIVEAUTO>],[<LIENABLE>],[<LITIMER>],[<LBCL>],[<OPT>],[<OPR>],[<FREQ>],[<LOSSB>],[<ACTFLOW>],[<ACTDUPLEX>],[<ACTSPEED>],[<CIR>],[<CBS>],[<EBS>],[<OSC>],[<AUTONEG>],[<SQUELCHMODE>],[<LPBKTYPE>],[<ALMSUPPRESS>]:<PST>,[<SST>]"
;

Output Example
TCC2 2002-02-07 05:37:40
M 1 COMPLD
"VFAC-4-1-1:WORK,STBY:MTU=9700,DUPLEX=FULL,SPEED=100_MBPS,SOAK=32,FREQ=USE-TWL1,LOSSB=AUTOPROV,AUTONEG=Y,SQUELCHMODE=SQUELCH:OOS-MA,DSBLD"
;

Output Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<ROLE>	Identifies the port role in a Y-cable protection scheme. The parameter type is SIDE, which is the role the unit is playing in the protection group.

<STATUS>	Identifies a port status in a Y-cable protection scheme. The parameter type is STATUS, which is the status of the unit in the protection pair.
<ADMINSTATE>	(Optional) Administration type. The parameter type is UP_DOWN (up or down).
• DOWN	Down
• UP	Up
<LINKSTATE>	(Optional) Link protocol. The parameter type is UP_DOWN (up or down).
• DOWN	Down
• UP	Up
<MTU>	(Optional) Maximum transmission unit. MTU is an integer.
<FLOWCTRL>	(Optional) Flow control. The parameter type is FLOW, which is the type of flow control that has been negotiated for an Ethernet port.
• ASYMMETRIC	Asymmetric flow control
• ASYMMETRIC_LOCAL	Asymmetric local flow control
• NONE	No flow control
• PASSTHRU	Passthrough flow control
• SYMMETRIC	Symmetric flow control
<OPTICS>	(Optional) Optics. The parameter type is OPTICS, which is the type of Gigabit Ethernet optics being used.
• 1000_BASE_CX	1000BaseCX
• 1000_BASE_LX	1000BaseLX
• 1000_BASE_SX	1000BaseSX
• 1000_BASE_ZX	1000BaseZX
• 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
• 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
<FREQ>	(Optional) The parameter type is OPTICAL_WLEN, which is the optical wavelength.
• 1529.16	Wavelength 1529.16
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05
• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27
• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50
• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
<DUPLEX>	(Optional) Duplex mode. The parameter type is ETHER_DUPLEX (duplex mode).
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode

<SPEED>	(Optional) Speed. The parameter type is ETHER_SPEED, which is the Ethernet speed.
• 100_MBPS	100 Mbps
• 10_GBPS	10 Gbps
• 10_MBPS	10 Mbps
• 1_GBPS	1 Gbps
• 40_GBPS	40 Gigabit per second
• AUTO_FDX	Enable auto negotiation with full duplex
• AUTO	Auto
<FLOW>	(Optional) Flow. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<EXPDUPLEX>	(Optional) Ethernet duplex mode. The parameter type is ETHER_DUPLEX, which is the duplex mode.
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode
<EXPSPEED>	(Optional) Expected speed. Due to the auto-negotiation feature, actual speed may differ from expected speed. The parameter type is ETHER_SPEED, which is the Ethernet speed.
• 100_MBPS	100 Mbps
• 10_GBPS	10 Gbps
• 10_MBPS	10 Mbps
• 1_GBPS	1 Gbps
• AUTO	Auto
<SELECTIVEAUTO>	(Optional) Selective auto-negotiation. The parameter is Y or N (enable or disable auto-negotiation) This indicates selective auto-negotiation of EXPSPEED and EXPDUPLEX only.
• Y	Enable selective auto-negotiation.
• N	Disable selective auto-negotiation. The default value is N.

<VLANCOS>	(Optional) Priority queuing threshold based on VLAN class of service of incoming Ethernet packets. VLANCOS is an integer in the range 0 to 7. Defaults to 7.
<IPTOS>	(Optional) Priority queuing threshold based on IP type of service of incoming Ethernet packets. IPTOS is an integer in the range 0 to 255. Defaults to 255.
<NAME>	(Optional) Facility name. NAME is a string.
<SUPPRESS>	Pre-service alarm flag for data ports.
• ON	Enable suppress.
• OFF	Disable suppress. Default is Off.
<SOAK>	(Optional) Locked-AutomaticInService to Unlocked transition soak time as measured in 15-minute intervals. SOAK is an integer. Default value is 32. It can be set through ED command.
<SOAKLEFT>	(Optional) Time remaining for the transition from Locked-AutomaticInService to Unlocked measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. Rules for SOAKLEFT are as follows: • When the port is in Locked, Locked_Maintenance or Unlocked state, the parameter will not appear. • When the port is in Locked_AutomaticInService but the countdown has not started due to a fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in Locked_AutomaticInService state and the countdown has started, the value will be shown in HH-MM format.
<LIENABLE>	(Optional) Enable or Disable link integrity timer. Takes either Y or N. Value Y enables the LITIMER and value N disables LITIMER. By default LITIMER is enabled. **Note** The LIENABLE parameter is supported on only CE-1000-4 and CE-1000T-8 cards on the 15454.
<LITIMER>	(Optional) Link integrity timer duration in the range between 200 ms and 10000 ms in multiples on 100 ms. **Note** The LITIMER parameter is supported on only CE-1000-4 and CE-1000T-8 cards on the 15454.
<CIR>	Ingress committed information rate. The value ranges from 0.0 to 100.0. The default value is 100.0.
<SQUELCHMODE>	Shuts down the far-end laser in response to certain defects

• NONE	Transparent
• SQUELCH	Squelch is enabled
<PSTPSTQ>	Administrative state in the PST_PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the PST and the PSTQ.
• Unlocked-Enabled	In service and normal
• Unlocked-Disabled	Out of service and autonomous
• Locked-Disabled	Out of service, autonomous and management
• Locked-Enabled	Out of service and management
<ALARMSUPPRESS>	It is an enum which has the values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress
<SSTQ>	(Optional) Secondary state of the entity. the parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AutomaticInService	Automatic in service
• Disabled	Disabled
• Loopback	Loopback
• MismatchofEquipmentAlarm	Mismatch of equipment and attributes
• Maintenance	Maintenance mode
• OutOfGroup	Out of group
• SoftwareDownload	Software downloading
• Unassigned	Unassigned
• NotInstalled	Unequipped

RTRV-FTPSERVER

The Retrieve FTP Server (RTRV-FTPSERVER) command retrieves FTP server entries.

Usage Guidelines

FTP server entries cannot be retrieved using the TIMER filter.

Category

ENE

Security

Retrieve

Input Format

RTRV-FTPSERVER:[<TID>]::<CTAG>:::[IPADDR=<IPADDR>],[IPMASK=<IPMASK>],
[ENABLE=<ENABLE>];

Input Example

RTRV-FTPSERVER:::A:::IPADDR=10.20.30.40

Input Parameters

<IPADDR>	Specifies the IP address of the FTP server.
<IPMASK>	Specifies the subnet mask of the FTP server.
<ENABLE>	Specifies the enable/disable option of the FTP server. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.

Output Format

SID DATE TIME
M CTAG COMPLD
",:IPADDR=<IPADDR>,IPMASK=<IPMASK>, ENABLE=<ENABLE>,TIMER=<TIMER>"
;

Output Example

SID DATE TIME
M CTAG COMPLD
",:IPADDR=10.20.30.40,IPMASK=255.0.0.0, ENABLE=Y,TIMER=10"
;

Output Parameters

<IPADDR>	Specifies the IP address of the FTP Server.
<IPMASK>	Specifies the subnet mask of the FTP Server.
<ENABLE>	Specifies the enable/disable option of the FTP Server. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<TIMER>	Specifies the timeout value of the FTP Server in minutes.

RTRV-G1000

The Retrieve G1000 Facility (RTRV-G1000) command retrieves the G1000 facilities configuration.

Usage Guidelines

None

Category

Ports

Security

Retrieve

Input Format

RTRV-G1000:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-G1000:TID:FAC-1-1:CTAG;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
“<AID>::[<MFS>],[<FLOW>],[<LAN>],[<OP-
TICS>],[<SOAK>],[<TRANS>],[<TPORT>],<LOWMRK>,<HIWMRK>,[<BUFF>],[<SOAKLEFT>],[<AU-
TONEG>],[<NAME>],[<ENCAP>],[<LIENABLE>],[<LITIMER>],[<LPBKTYPE>]:<PST>,[<SST>]”
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001 COMPLD
    “FAC-1-1::MFS=9032,FLOW=N,LAN=ASYMMETRIC,OPTICS=UNKNOWN,TRANS=NONE,
    TPORT=FAC-5-1,LOWMRK=20,HIWMRK=492,AUTONEG=Y,ENCAP=GFP_T,
    NAME=\“G1000 PORT\”,SOAK=32,SOAKLEFT=\"12-25\", LIENABLE=Y,
LITIMER=300:OOS-AU,AINS”
;
```

Output Parameters

<AID>	Access identifier from the “28.17 FACILITY” section on page 28-42.
<MFS>	Maximum frame size. The parameter type is MFS_TYPE, which is the maximum frame size used by an Ethernet card.
• 1548	Normal frame size
• JUMBO	Jumbo frame size
<FLOW>	Flow control. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<LAN>	(Optional) Local-area network. The parameter type is FLOW, which is the type of flow control that has been negotiated for an Ethernet port.
• ASYMMETRIC	Asymmetric flow control
• ASYMMETRIC_LOCAL	Asymmetric local flow control
• NONE	No flow control
• PASSTHRU	Passthrough flow control
• SYMMETRIC	Symmetric flow control

<OPTICS>	(Optional) GBIC type. The parameter type is OPTICS, which is the type of Gigabit Ethernet optics being used.
• 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
• 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
<TRANS>	(Optional) Transponder mode. The parameter type is TRANS_MODE, which is the G1000 transponder mode.
• BI	Bidirectional
• NONE	Not in transponder mode
• UNI	Unidirectional
<TPORT>	(Optional) Transponding port access identifier from the “28.17 FACILITY” section on page 28-42.
<LOWMRK>	(Optional) Low watermark value. LOWMRK is an integer.
<HIWMRK>	(Optional) High watermark value. HIWMRK is an integer.
<AUTONEG>	(Optional) Automatic negotiation. The parameter type is ON_OFF (disable or enable an attribute).

• N	Disable an attribute.
• Y	Enable an attribute.
<ENCAP>	(Optional) Frame encapsulation type. The parameter type is ENCAP, which is the frame encapsulation type.
• GFP_F	GFP frame mode
• GFP_T	GFP transparent mode
• HDLC	HDLC frame mode
• HDLC_LEX	HDLC LAN extension frame mode
• HDLC_X86	HDLC X.86 frame mode
• CBR	CBR mapping mode.
• GFP	GFP mapping mode.
• GMP	GMP mapping mode is supported only on 8GFC on 10x10G-LC card.
• TRP	Transparent mapping mode.
• HO_ODU4_V1	
• HO_ODU4_V2	
<NAME>	(Optional) Facility name. NAME is a string.
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer. Default value is 32. It can be set through ED command.
<SOAKLEFT>	(Optional) 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. Rules for SOAKLEFT are as follows: • When the port is in OOS, OOS_MT or IS state, the parameter will not appear. • When the port is in OOS_AINS state but the countdown has not started due to a fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in OOS_AINS state and the countdown has started, the value will be shown in HH-MM format.

<LIENABLE>	(Optional) Enable or Disable link integrity timer. Takes either Y or N. Value Y enables the LITIMER and value N disables LITIMER. By default LITIMER is enabled. **Note** The LIENABLE parameter is supported on only CE-1000-4 and CE-1000T-8 cards on the 15454.
<LITIMER>	(Optional) Link integrity timer duration in the range between 200 ms and 10000 ms in multiples on 100 ms. **Note** The LITIMER parameter is supported on only CE-1000-4 and CE-1000T-8 cards on the 15454.
<PSTPSTQ>	Administrative state in the PST-PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the PST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RTRV-GENERICMIB

Description
Retrieves Value of Generic MIB

Usage Guidelines
- None

Category
NCS

Security
Maintenance

Input Format
RST-NE-DEFAULT:[<TID>]::<CTAG>;

Output Format

SID DATE TIME
M CTAG COMPLD
GENERICMIB;

Output Example
> RTRV-GENERICMIB:::1;

nms163 2000-06-04 06:54:14
M 1 COMPLD
  "Y"
;

Output Parameters

Parameter	Description
GENERICMIB	Generic MIB Value

RTRV-GFP

The Retrieve Generic Framing Protocol (RTRV-GFP) command retrieves GFP information for the CE-100T-8 and CE-1000-4 cards.

Usage Guidelines

None

Category

Ports

Security

Retrieve

Input Format

RTRV-GFP:[<TID>]:<SRC>:<CTAG>;

Input Example

RTRV-GFP:CISCO:FAC-1-1:123;

Input Parameters

<SRC>	Source access identifier from the "28.17 FACILITY" section on page 28-42. **Note** VFAC AID is used for the CE-100T-8 cards on 15454. ML-100T-8 GFP management is done by the Cisco IOS CLI and not by the TL1 interface. FAC AID is used for FC_MR-4

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[FCS=<FCS>],[AUTOTHGFPBUF=<AUTOTHGFPBUF>],
[GFPBUF=<GFPBUF>],[FILTER=<FILTER>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD

"FAC-1-1::FCS=FCS-32,AUTOTHGFPBUF=Y,GFPBUF=16,FILTER=EGRESS"
;

Output Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<FCS>	(Optional) Payload frame check sequence. The parameter type is FCS, which is the frame check sequence.
• FCS-16	Frame check sequencing using 16 bits
• FCS-32	Frame check sequencing using 32 bits
• NONE	No frame check sequence
<AUTOTHGFPBUF>	(Optional) Flag used to indicate whether PDI-P should be generated on the outgoing VT-structured STSs. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<GFPBUF>	(Optional) GFPBUF is an integer.
<FILTER>	(Optional) Parameter type is GFP_FILTER, which is the filter.
• EGRESS	Activate filter on egress port.
• NONE	Turn off filter.

RTRV-GIGE

The Retrieve Gigabit (GIGE/10GIGE) Ethernet command retrieves the attributes and state of Gigabit Ethernet facilities.

Usage Guidelines

None

Category

Ports

Security

Retrieve

Input Format

RTRV-GIGE:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-GIGE:TID:FAC-1-1:CTAG;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

Output Format

SID DATE TIME M CTAG COMPLD

"<AID>:,,[<ROLE>],[<STATUS>]:[<ADMINSTATE>],[<LINKSTATE>],[<MTU>],[<MFS>],[<FLOW>],[<FLOWCTRL>],[<AUTONEG>],[<HIWMRK>],[<LOWMRK>],[<OPTICS>],[<DUPLEX>],[<SPEED>],[<NAME>],[<MACADDR>],[<LBCL>],[<OPT>],[<OPR>],[<FREQ>],[<LOSSB>],[<SUPPRESS>],[<SOAK>],[<SOAKLEFT>],[<SQUELCH>],[<CIR>],[<CBS>],[<EBS>],[<LIENABLE>],[<LITIMER>],[<ACTFLOW>],[<ACTDUPLEX>],[<ACTSPEED>],[<OSC>],[<ENCAP>],[<PAUSEFRAME>],[<CLNTDST>],[<SYNCMSG>],[<SENDDUS>],[<ADMSSM>],[<PROVIDESYNC>],[<ESMC>],[<EXPSPEED>],[<EXPDUPLEX>],[<SELECTIVEAUTO>],[<INTERCONMODE>],[<SQUELCHMODE>],[<PORTMODE>],[<NUMOFLANES>],[<LPBKTYPE>],[<ALMSUPPRESS>],<SQUELCHTIMER>,[<IFINDEX>]:<OPTINDEX>,[ALARMPROFILENAME=<alarmprofilename>][<PST>]"

;

Output Example

TCC2 2002-02-07 05:35:58

M 1 COMPLD

"VFAC-4-1-1:,,WORK,STBY:MTU=9700,,AUTONEG=Y,DUPLEX=FULL,SPEED=1_GBPS,MACADDR=08-E5-78-6C-02-7F,FREQ=USE-TWL1,LOSSB=AUTOPROV,SOAK=32,ACTDUPLEX=AUTO,ACTSPEED=AUTO,SYNCMSG=Y,SENDDUS=N,ADMSSM=STU,PROVIDESYNC=N,ESMC=N,SQUELCHMODE=SQUELCH:OOS-MA,DSBLD"

;

Output Parameters

Parameter	Description
<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<ROLE>	Identifies the port role in a Y-cable protection scheme. The parameter type is SIDE, which is the role the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.

• WORK	The entity is a working unit in the protection group.
<STATUS>	Identifies a port status in a Y-cable protection scheme. The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<ADMINSTATE>	(Optional) Administration type. The parameter type is UP_DOWN (up or down).
• DOWN	Down
• UP	Up
<LINKSTATE>	(Optional) Link protocol. The parameter type is UP_DOWN (up or down).
• DOWN	Down
• UP	Up
<MTU>	(Optional) Maximum transmission unit. MTU is an integer.
<MFS>	The max frame size used by an Ethernet card.
<ENCAP>	(Optional) Encapsulation frame type. The parameter type is ENCAP, which is the frame encapsulation type.
• GFP_F	GFP Frame mode.
• GFP_T	GFP Transparent mode.
• HDLC	HDLC Frame mode.
• HDLC_LEX	HDLC LAN Extension Frame mode.
• HDLC_X86	HDLC X.86 Frame mode.
• GMP	GMP mapping mode. Supported only on 8GFC on 10x10G-LC card.
<FLOWCTRL>	(Optional) Flow control. The parameter type is FLOW, which is the type of flow control that has been negotiated for an Ethernet port.
• ASYMMETRIC	Asymmetric flow control
• ASYMMETRIC_LOCAL	Asymmetric local flow control

• NONE	No flow control
• PASSTHRU	Passthrough flow control
• SYMMETRIC	Symmetric flow control
<AUTONEG>	(Optional) Automatic negotiation. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<LOWMRK>	(Optional) Low watermark value. LOWMRK is an integer.
<HIWMRK>	(Optional) High watermark value. HIWMRK is an integer.
<OPTICS>	(Optional) Optics type. The parameter type is OPTICS, which is the type of Gigabit Ethernet optics being used.
• 1000_BASE_CX	1000BaseCX
• 1000_BASE_LX	1000BaseLX
• 1000_BASE_SX	1000BaseSX
• 1000_BASE_T	1000BaseT
• 1000_BASE_ZX	1000BaseZX
• 100_BASE_BX_D	100BaseBX_D
• 100_BASE_BX_U	100BaseBX_U
• 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
• 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
<DUPLEX>	(Optional) Duplex mode. The parameter type is ETHER_DUPLEX, which is the duplex mode.
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode
<SPEED>	(Optional) Speed. The parameter type is ALS_MODE, which is the automatic laser shutdown mode.
• AUTO	Automatic
• DISABLED	Disabled
• MAN	Manual
• MAN-RESTART	Manual restart for test
<NAME>	(Optional) Facility name. NAME is a string.
<FREQ>	(Optional) The parameter type is OPTICAL_WLEN, which is the optical wavelength.
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.16	Wavelength 1529.16
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51

• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35

• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93

• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05
• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27

• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50
• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10

• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41

• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17

• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	(Optional) The parameter type is REACH, which is the reach value.
• 100GBASE-LR4	100GBASE-LR4
• 100GBASE-SR10	100GBASE-SR10
• 40GBASE-FR	40GBASE-FR
• 40GBASE-LR4	40GBASE-LR4
• 40GBASE-SR4	Reach supported on 40GIGE payload on CFP-LC card.
• 4I1-9D1F	4I1-9D1F
• C4S1-2D1	C4S1-2D1
• FE-BX	FE-BX
• FX	FX
• GE-BX	GE-BX
• GE-EX	GE-EX
• LX-10	LX-10
• TEN-GE-LRM	TEN-GE-LRM
• TEN-GE-ZR	TEN-GE-ZR
• VSR2000-3R2	VSR2000-3R2
• AUTOPROV	Autoprovisioning
• CWDM-40KM	CWDM 40 kilometers.
• CX	Reach CX
• CX1	Reach CX1
• DX	Reach DX
• HX	Reach HX
• pI1	Reach I1

• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• P1I1-2D1	Long haul 10G Ethernet with 1310 nm wavelength
• P1L1-1D2	Longhaul 2.5G Ethernet with 1550 nm wavelength
• P1L1-2D2	Long haul 10G Ethernet with 1550 nm wavelength
• P1S1-1D1	Shorthaul 2.5G Ethernet with 1310 nm wavelength
• P1S1-2D1	Short haul 10G Ethernet in 1310 nm wavelength
• SC	Reach SC
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• TEN-GE-ER	10 GE extended range
• TEN-GE-LR	10 GE long range
• TEN-GE-SR	10 GE short range
• ULH	Reach ULH
• VSR	Reach VSR
• VX	Reach VX
• ZX	Reach ZX

<SOAK>	(Optional) Locked-AutomaticInService to Unlocked transition soak time as measured in 15-minute intervals. SOAK is an integer. Default value is 32. It can be set through ED command.
<LIENABLE>	(Optional) Enable or disable link integrity timer. Takes either Y or N. Value Y enables the LITIMER and value N disables LITIMER. By default LITIMER is enabled. **Note** The LIENABLE parameter is supported on only CE-1000-4 and CE-1000T-8 cards on the 15454.
<LITIMER>	(Optional) Link integrity timer duration in the range between 200 ms and 10000 ms in multiples of 100 ms. **Note** The LITIMER parameter is supported on only CE-1000-4 and CE-1000T-8 cards on the 15454.
<ACTFLOW>	The type of flow control.
• ASYMMETRIC	Asymmetric flow control
• ASYMMETRIC_LOCAL	Asymmetric local flow control.
• NONE	No flow control
• PASSTHRU	Pass-through flow control
• SYMMETRIC	Symmetric flow control
<ACTDUPLEX>	Ethernet duplex mode. Default value is -AUTO.
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode
<ACTSPEED>	Ethernet speed.
• 100_MBPS	100 MBPS
• 10_GBPS	10 GBPS
• 10_MBPS	10 MBPS
• 1_GBPS	1 GBPS
• 40_GBPS	40 Gigabit per second
• AUTO_FDX	Enable auto negotiation with full duplex

• AUTO	AUTO
<SOAKLEFT>	(Optional) Time remaining for the transition from Locked-AutomaticInService to Unlocked measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. Rules for SOAKLEFT are as follows: • When the port is in Locked, Locked_Maintenance or Unlocked state, the parameter will not appear. • When the port is in Locked_AutomaticInService but the countdown has not started due to a fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in Locked_AutomaticInService state and the countdown has started, the value will be shown in HH-MM format.
<ENCAP>	(Optional) Frame encapsulation type. The parameter type is ENCAP, which is the frame encapsulation type.
• GFP_F	GFP frame mode.
• GFP_T	GFP transparent mode.
• HDLC	HDLC frame mode.
• HDLC_LEX	HDLC LAN extension frame mode.
• HDLC_X86	HDLC X.86 frame mode.
<OSC>	(Optional) Facility AID from the "28.17 FACILITY" section on page 28-42
<PAUSEFRAME>	To Enable or Disable the Pause Frame.
• Y	Enable
• N	Disable
<EXPSPEED>	(Optional) Expected speed. Due to the auto-negotiation feature, actual speed may differ from expected speed. The parameter type is ETHER_SPEED, which is the Ethernet speed.
• 100_MBPS	100 Mbps
• 10_GBPS	10 Gbps
• 10_MBPS	10 Mbps
• 1_GBPS	1 Gbps
• 40_GBPS	40 Gigabit per second

• AUTO	Automatic
• AUTO_FDX	Enable auto negotiation with full duplex.
<EXPDUPLEX>	(Optional) Ethernet duplex mode. The parameter type is ETHER_DUPLEX, which is the duplex mode.
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode
<SELECTIVEAUTO>	(Optional) Selective auto-negotiation. The parameter is Y or N (enable or disable auto-negotiation) This indicates selective auto-negotiation of EXPSPEED and EXPDUPLEX only.
• Y	Enable selective auto-negotiation.
• N	Disable selective auto-negotiation. The default value is N.
<INTERCONMODE>	Inter connect mode.
<CLNTDST>	Client distance in kilometers.
• 10KM	10 kilometers.
• 30KM	30 kilometers.
<CIR>	Ingress committed information rate. The value ranges from 0.0 to 100.0. The default value is 100.0.
<LPBKTYPE>	
• FAC-DROP	
• TER-DROP	
• BACKPLANE-TER-DROP	
• BACKPLANE-FAC-DROP	
<SQUELCHMODE>	Shuts down the far-end laser in response to certain defects
• NONE	Transparent
• SQUELCH	Squelch is enabled
• LF	
<PST>	Primary state. The parameter type is PST, which is the current overall service condition of an entity.
• Unlocked	In service

• Locked	Out of service
<ALARMSUPPRESS>	It is an enum which has the values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress
<ALARMPROFILENAME>	Name of the profile created using the command ENT-ALMPROFILE
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AutomaticInService	Automatic in service
• Disabled	Disabled
• Loopback	Loopback
• MismatchofEquipmentAlarm	Mismatch of equipment and attributes
• Maintenance	Maintenance mode
• OutOfGroup	Out of group
• SoftwareDownload	Software downloading
• Unassigned	Unassigned
• NotInstalled	Unequipped

RTRV-HDLC

The Retrieve High-Level Data Link Control (RTRV-HDLC) command retrieves HDLC-related attributes.

Usage Guidelines

None

Category

Ports

Security

Retrieve

Input Format

RTRV-HDLC:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-HDLC:TID:VFAC-1-1-1:123;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[FCS=<FCS>],[CRC=<CRS>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"VFAC-1-1-1::FCS=FCS-16,CRC=CRC-16"
;

Output Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<FCS>	(Optional) Payload frame check sequence. The parameter type is FCS, which is the frame check sequence.
• FCS-16	Frame check sequencing using 16 bits
• FCS-32	Frame check sequencing using 32 bits
• NONE	No frame check sequence
<CRC>	Cyclic Redundancy Check.
• CRC-16	Cyclic Redundancy Check using 16 bits.
• CRC-32	Cyclic Redundancy Check using 32 bits.

RTRV-HDR

The Retrieve Header (RTRV-HDR) command retrieves the header of a TL1 response message. It is used by TL1 clients to determine if the link to the NE is still active and if the NE is responding to commands.

Usage Guidelines

None

Category

System

Security

Retrieve

Input Format

RTRV-HDR:[<TID>]::<CTAG>;

Input Example

RTRV-HDR:SONOMA::232;

Input Parameters

None that require description

RTRV-INV

The Retrieve Inventory (RTRV-INV) command retrieves a list of the equipment inventory. For each unit in the system, the list identifies the unit's firmware numbers and Common Language Equipment Identifier (CLEI) codes, and the system's product ID and version ID. This command also retrieves the inventory information from pluggable modules using the AID PPM-SLOT-PORT format. For multishelf nodes, the inventory parameters are retrieved by using RTRV-INV command with the BP AID. Because there is more that one shelf, the SHELFID is specified in the BP AID.

Usage Guidelines

None

Category

System

Security

Retrieve

Input Format

RTRV-INV:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-INV:OCCIDENTAL:SLOT-15:301;

Input Parameters

<AID>	Access identifier from the "28.15 EQPT" section on page 28-39 or ALL.

Output Format

SID DATE TIME
M CTAG COMPLD

<AID>,<AIDTYPE>::[<PN>],[<HWREV>],[<FWREV>],[<SN>],[<CLEI>],[<TWL>],[<PLUGINVENDORID>],[<PLUGINPN>],[<PLUGINHWREV>],[<PLUGINFWREV>],[<PLUGINSN>],[<ILOSSREF>],[<PRODUCTID>],[<VERSIONID>],[<FPGAVERSION>],[<VENDORID>],[<MODULETYPE>],[<ACTUALCARDNAME>]

Output Example

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,MODULETYPE=101"
;

Output Parameters

<AID>	Access identifier from the "28.15 EQPT" section on page 28-39
<AIDTYPE>	Specifies the type of (AID) facility, link or other addressable entity targeted by the message. AIDTYPE is a string.
<PLUGTYPE>	(Optional) Describes the type of plug-in. PLUGTYPE is a string.
<PN>	(Optional) Hardware part number. PN is a string.

<HWREV>	(Optional) Hardware revision. HWREV is a string.
<FWREV>	(Optional) Firmware revision. It is also known as Bootrom revision. FWREV is a string.
<SN>	(Optional) Serial number. SN is a string.
<CLEI>	(Optional) Common language equipment identifier code for the equipment. CLEI is a string.
<TWL1>	(Optional) Tunable wavelength 1.
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82

• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52

• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36

• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03

• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73

• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03

• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<PLUGINVENDORID>	(Optional) Plugin vendor ID. Integer.
<PLUGINPN>	(Optional) Third-party plug-in module HW part number. Applicable only to optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexer and demultiplexer cards, and OADM cards. PLUGINPN is a string.
<PLUGINHWREV>	(Optional) Third-party plug-in module hardware revision. Applicable only to optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexer and demultiplexer cards, and OADM cards. PLUGINHWREV is a string.
<PLUGINFWREV>	(Optional) Third-party plug-in module firmware. Applicable only to optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexer and demultiplexer cards, and OADM cards. PLUGINFWREV is a string.
<PLUGINSN>	(Optional) Third-party plug-in module serial number. Applicable only to optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexer and demultiplexer cards, and OADM cards. PLUGINSW is a string.
<ILOSSREF>	(Optional) The insertion loss reference calculated by the unit as worst insertion loss of all the unit. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
<PID>	(Optional) Product ID of the module. PID is a string.
<VID>	(Optional) Vendor ID. VID is a string.
<FPGA>	(Optional) FPGA version. FPGA is a string.
<MODULETYPE>	(Optional) Describes the type of embedded plugin module. String.

Note If the SFP contains manufacturing information or data that is not compliant with Telcordia GR-831 (Appendix A), the system automatically adds quotes (\"\") around the invalid characters in the TL1 response. TL1 is Telcordia GR-831 compliant after Software Release 7.0.4.

RTRV-L2-ETH

The Retrieve Layer 2 Ethernet (RTRV-L2-ETH) command retrieves the Layer 2 port information of the Ethernet card.

Usage Guidelines

None

Category

Ethernet

Security

Retrieve

Input Format

RTRV-L2-ETH:[<TID>]:<AID>:<CTAG>[:::];

Input Example

RTRV-L2-ETH:PETALUMA:FAC-1-1:CTAG;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "28.16 ETH" section on page 28-41.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[<NIMODE>],[<MACLEARNING>],[<INGRESSCOS>],[<ETHERCETYPE>],[<ETHERSTYPE>],[<ALWMACADDR>],[<INHMACADDR>],[<BPDU>],[<BRIDGESTATE>],[<ACTBRIDGESTATE>],[<QNQMODE>],[<TRNSPSVLAN>],[<NAME>],[<IGMPROUTER>],[<AISACTION>],[<PROTACTION>],[<IGMPONCVLAN>],[<IGMPCVLAN>],[<DLF>],[<DLFTHRES>],[<MCAST>],[<MCASTTHRES>],[<BCAST>],[<BCASTTHRES>],[<CLRCRCALM>]:"

;

Output Example

MS-55- 2010-11-09 01:26:55

M c COMPLD

"ETH-5-1-22-1::NIMODE=NNI,MACLEARNING=Y,INGRESSCOS=0,ETHERCETYPE=8100,ETHERSTYPE=8100,BPDU=Y,BRIDGESTATE=FORWARDING,ACTBRIDGESTATE=FORWARDING,QNQMODE=SELECTIVE,IGMPROUTER=NONE,AISACTION=AIS-NONE,PROTACTION=PROT-SQUELCH,IGMPONCVLAN=N,DLF=N,DLFTHRES=0,MCAST=N,MCASTTHRES=0,BCAST=N,BCASTTHRES=0,CLRCRCALM=N:"

Output Parameters

<ETHERNET>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "28.16 ETH" section on page 28-41.
<NIMODE>	Identifies the Ethernet network interface mode.
• NNI	(Default) Network-network interface mode
• UNI	User-network interface mode
<MACLEARNING>	MAC address learning mode. This activates MAC address learning on the interface to avoid packet broadcasting.
• Y	Enables MAC learning
• N	Disable MAC learning
<INGRESSCOS>	Identifies the CoS value set in the service provider VLAN (S-VLAN) tag.
<ETHERCETYPE>	Identifies a customer specific Ethernet type. If the customer uses a non-standard Ethernet type, the incoming packets will be accepted only if the customer VLAN (CE-VLAN) Ethernet type matches this parameter.
<ETHERSTYPE>	Identifies a customer specific Ethernet type. If the customer uses a non-standard Ethernet type, the incoming packets will be accepted only if the CE-VLAN Ethernet type matches this parameter.
<ALWMACADDR>	Identifies the allowed MAC addresses filtered out by the L2 Ethernet port. Every single MAC address is in the format of aa-bb-cc-dd-ee-ff, where every digit is in a hexadecimal form.
<INHMACADDR>	Identifies the inhibited MAC addresses filtered out by the L2 Ethernet port. Every single MAC address is in the format of aa-bb-cc-dd-ee-ff, where every digit is in a hexadecimal form.

<BPDU>	Bridge Protocol Data Unit (BPDU) management mode; Drop/Passthrough BPDU tagged packets.
• Y	Enables the BPDU tag.
• N	Disables the BPDU tag.
<BRIDGESTATE>	Defines if the traffic is blocked on the port.
• UNKNOWN	Unknown state
• DISABLED	Disabled state
• BLOCKING	Blocking state
• LISTENING	Listening state
• LEARNING	Learning state
• FORWARDING	Forwarding state
• BROKEN	Broken state
<ACTBRIDGESTATE>	Defines if the traffic is blocked on the port.
• UNKNOWN	Unknown state
• DISABLED	Disabled state
• BLOCKING	Blocking state
• LISTENING	Listening state
• LEARNING	Learning state
• FORWARDING	Forwarding state
• BROKEN	Broken state
<QNQMODE>	This is used to represent the IEEE 802.1Q tunneling (QinQ) mode operations.
• SELECTIVE	The S-VLAN tag is added only on specified CE-VLANs. The other packets are dropped.
• TRANSPARENT	The S-VLAN tag is always added where all packets having the S-VLAN-ID identified by the TRNSPSVLAN parameter are allowed.
<TRNSPSVLAN>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<NAME>	(Optional) Facility name. NAME is a string.

<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped
<IGMPCVLAN>	Indicates the customer VLAN value for IGMP on CVLAN.
<DLF>	To enable or disable storm control on DLFPC packet.
<DLFTHRES>	Indicates the DLFPC packet threshold value for storm control.
<MCAST>	To enable or disable the storm control on multicast packet.
<MCASTTHRES>	Indicates the multicast packet threshold value for storm control.
<BCAST>	To enable or disable the storm control on broadcast packet.

<BCASTTHRES>	Indicates the broadcast packet threshold value for storm control.
<CLRCRCALM>	Clears the DATA-CRC alarm.

RTRV-L2-TOPO

The Retrieve Layer 2 topology (RTRV-L2-TOPO) command retrieves the LACP, REP, and EFM topology configuration.

Usage Guidelines

The RTRV-L2-TOPO command retrieves the normal and detailed logs of a port that is configured with LACP, REP, or EFM topology.

Category

Ports

Security

Retrieve

Input Format

RTRV-L2-TOPO:[<TID>]:<AID>:<CTAG>:::PROTOCOL=<PROTOCOL>,[LOGLEVEL=<LOGLEVEL>],[IDENTIFIER=<IDENTIFIER>];

Input Example

RTRV-L2-TOPO::SLOT-16:1:::PROTOCOL=REP-INTERFACES,IDENTIFIER=2;

Input Parameters

Input Parameters	Description
<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<PROTOCOL>	Protocol for which L2 topology details are displayed.
• ETH-OAM-DISCOVERY	Topology information of the Ethernet OAM Discovery.
• ETH-OAM-STATS	Topology information of the Ethernet OAM Statistics.
• ETH-OAM-STATUS	Topology information of the Ethernet OAM Status.
• ETH-OAM-SUMMARY	Summary of the Ethernet OAM protocol.

• LACP	Link Aggregation Control Protocol.
• LACP-PARTNER	LACP partner.
• REP-INTERFACES	REP interface.
• REP-TOPOLOGY	REP topology.
• REP-TOPOLOGY-ARCHIVE	REP archive.
<LOGLEVEL>	The parameter type is LOGLEVEL.
• DETAILED	Detailed.
• NORMAL	Normal.
<IDENTIFIER>	Identifier.

Output Format

SID DATE TIME
M   CTAG COMPLD
   "TOPODETAIL"
;

Output Example

TID-000 1998-06-20 14:30:00
M   001 COMPLD
   "Interface Seg-id Type LinkOp Role
--------------------- ------ -------------- ----------- ----
Phy0 2 Primary Edge INIT_DOWN Fail
Phy1 2 Pref Edge   INIT_DOWN Fail
UUßß
ßßß
ßßß"
;

;

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

Output Parameters

RTRV-LM-EFM

The Retrieve Link Monitoring Edit Ethernet in the First Mile (RTRV-LM-EFM) command retrieves the Edit Ethernet in the First Mile (EFM) link monitoring parameters and the action associated with each of the parameters.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Ports

Security

Retrieve

Input Format

RTRV-LM-EFM:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-LM-EFM::ETH-12-1-1:1;

Input Parameters

<AID>	Access identifier from the "28.16 ETH" section on page 28-41.

Output Format

SID DATE TIME
M CTAG COMPLD
"AID>:[IMPARAM=<IMPARAM>], [HIGHTH=<HIGHTH>],
[LOWTH=<LOWTH>],[ACTION=<ACTION>],[WINDOW=<WINDOW>];"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"ETH-7-1-1,LMPARAM=ERR-FRAME,LOWTH=1,HIGHTH=0,ACTION=NONE,WINDOW=10;"
;

Output Parameters

Parameter	Description
<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<LMPARAM>	Name of the link monitoring parameter.
• ERR-FRAME	Error frames.
• ERR-FRAME-PRD	Error frame period.
• ERR-FRAME-SEC	Error frames second.
<LOWTH>	The lowest value of the link monitoring parameter. It is an integer.
<HIGHTH>	The highest value of the link monitoring parameter. It is an integer.
<ACTION>	Action to be taken when the link monitoring parameter crosses the HIGH value, which is set by the user. The value can be NONE or DISABLED.
<WINDOW>	This indicates the window associated with each of the link monitoring parameter (number of packets, number of frames or the timer). It is an integer.

RTRV-LMP

The Retrieve Link Management Protocol (RTRV-LMP) command retrieves the global LMP protocol attributes.

Usage Guidelines

This command is only available on platforms that support the LMP protocol.

Category

LMP

Security

Provisioning

Input Format

RTRV-LMP:[<TID>]::<CTAG>;

Input Example

RTRV-LMP:PETALUMA::704;

Input Parameters

None.

Output Format

SID DATE TIME

M CTAG COMPLD

"::ENABLE=<ENABLE>,[WDM=<WDM>],[ROLE=<ROLE>],[NODEID=<NODEID>],
[OPSTATE=<OPSTATE>]"

;

Output Example

TID-000 1998-06-20 14:30:00

M 001 COMPLD

"::ENABLE=Y,WDM=Y,ROLE=PEER,NODEID=198.133.219.25,OPSTATE=UP"

;

Output Parameters

<ENABLE>	LMP protocol status
• Y	Protocol is enabled.
• N	Protocol is disabled.
<WDM>	Determines if the LMP WDM extensions are in effect.
• Y	The LMP WDM extensions are in effect.
• N	The LMP WDM extensions are not in effect.
<ROLE>	The role the LMP protocol is configured to play.
• OLS	The LMP protocol is configured to respond as a Optical Line System.
• PEER	The LMP protocol is configured to respond as a peer node.
<NODEID>	LMP Node ID. NODEID is a stable IP address that is always reachable if there is any connectivity to it. The default LMP node ID value is the IP address of the node.
<OPSTATE>	Indicates the operational status of the LMP protocol stack.
• UP	LMP protocol is active.
• DOWN	LMP protocol is not active.

RTRV-LMP-CTRL

The Retrieve Link Management Protocol Control Channel (RTRV-LMP-CTRL) command retrieves the attributes of an LMP control channel.

Usage Guidelines

This command is only available on platforms that support the LMP protocol.

Category

LMP

Security

Provisioning

Input Format

RTRV-LMP-CTRL:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-LMP-CTRL:PETALUMA:CC-123:704;

Input Parameters

<SRC>	The LMP control channel AID.
• CTRL-ALL	Specifies all the control channels.
• CTRL-{1-4}	Specifies an individual control channel.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::REMOTEID=<REMOTEID>,LOCALPORT=<LOCALPORT>,REMOTEIP=<REMOTEIP>,
[HELLO=<HELLO>],[HELLOMIN=<HELLOMIN>],[HELLOMAX=<HELLOMAX>],
[DEAD=<DEAD>],[DEADMIN=<DEADMIN>],[DEADMAX=<DEADMAX>],
[OPSTATE=<OPSTATE>]:[<PST>[,<SST>]]
;

Output Example

TID-000 1998-06-20 14:30:0
M 001 COMPLD

"CTRL-2::REMOTEID=15.15.15.115,LOCALPORT=FAC-1-1-1,REMOTEIP=126.0.0.1,HELLO=50,
HELLOMIN=300,HELLOMAX=5000,DEAD=12000,DEADMIN=2000,DEADMAX=20000,
OPSTATE=UP:OOS,DSBLD"
;

Output Parameters

<REMOTEID>	Distinguishes the LMP control channel messages that are using the same local port to send messages.
<LOCALPORT>	The pathway that the LMP control channel will use to send and receive messages.
<REMOTEIP>	Remote IP address with which the LMP control channel sends and receives messages.
<HELLO>	The time interval within which the LMP protocol sends HELLO messages.
<HELLOMIN>	Minimum hello time the LMP control channels can send out HELLO messages to the remote node.
<HELLOMAX>	The maximum amount of time the LMP control channel can wait between HELLO messages.
<DEAD>	Time interval an LMP control channel will wait for a HELLO message from the remote side before listing the control channel as down.
<DEADMIN>	The minimum amount of time that an LMP control channel can wait before listing the control channel status as down.
<DEADMAX>	The maximum amount of time that an LMP control channel can wait before listing the control channel status as down.
<OPSTATE>	Indicates the operational status of the LMP protocol stack.
• UP	The control channel is communicating with its counterpart on the remote node.
• DOWN	The control channel is not communicating with its counterpart on the remote node.
• GOING DOWN	The LMP stack sets the ControlChannelDown bit in all the messages it sends. This is mainly because of administrative action.
• GOING UP	The control channel is in the process of transitioning to the UP state.

• CFG-SND	The control channel is in the parameter negotiation state. In this state, the node periodically sends a Config message, and is expecting the other side to reply with either a ConfigAck or ConfigNack message. The control channel Finite State Machine (FSM) does not transition into the ACTIVE state until the remote side positively acknowledges the parameters.
• CFG-RCV	The control channel is in the parameter negotiation state. In this state, the node is waiting for acceptable configuration parameters from the remote side. After these parameters are received and acknowledged, the FSM can transition to the ACTIVE state response.
• ACTIVE	In this state, the node periodically sends a Hello message and is waiting to receive a valid Hello message. After a valid Hello message is received, it can transition to the UP state.
• ACT-FAILED	Activation of the control channel failed.
• UNKNOWN	Unknown or unexpected state.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In Service
• OOS	Out of Service
<SST>	Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RTRV-LMP-TLINK

The Retrieve Link Management Protocol (RTRV-LMP-TLINK) command retrieves the attributes of an LMP Traffic Engineering (TE) link.

Usage Guidelines

This command is limited to nodes where the LMP protocol is supported and has been enabled.

Category

LMP

Security

Provisioning

Input Format

RTRV-LMP-TLINK:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-LMP-TLINK:PETALUMA:TLINK-123:704;

Input Parameters

<SRC>	LMP TE link AID values.
• TLINK-ALL	Specifies all the TE links.
• TLINK-{1-256}	Specifies an individual TE link.

Output Format

SID DATE TIME
M CTAG COMPLD "<SRC>::[REMOTEID=<REMOTEID>],[DWDM=<DWDM>],[REMOTETE=<REMOTETE>],[MUXCAP=<MUXCAP>],[OPSTATE=<OPSTATE>]:[<PST>[,<SST>]]"
;

Output Example

TID-000 1998-06-20 14:30:0
M CTAG COMPLD "TLINK-2::REMOTEID=15.15.15.115,DWDM=Y,REMOTETE=3,MUXCAP=LAMBDA,OPSTATE=UP:IS"
;

Output Parameters

<SRC>	LMP TE link AID values.
• TLINK-ALL	Specifies all the TE links.

• TLINK-{1-256}	Specifies an individual TE link.
<REMOTEID>	Remote node ID associated with the LMP TE link.
<DWDM>	Indicates whether or not the LMP TE link supports DWDM.
• Y	The LMP TE link supports DWDM.
• N	The LMP TE link does not support DWDM.
<REMOTETE>	Remote ID used by the far-end LMP TE link.
<MUXCAP>	The muxponder capability of the LMP TE link.
• PKTSWITCH1	Packet Switching 1
• PKTSWITCH2	Packet Switching 2
• PKTSWITCH3	Packet Switching 3
• PKTSWITCH4	Packet Switching 4
• LAYER2	Layer 2 switching
• TDM	Time-division multiplexing (TDM) switching
• LAMBDA	Lambda switching
• FIBER	Fiber switching
<OPSTATE>	Indicates the operational status of a TE link.
• DEGRADED	In this state, all LMP control channels are down, but the TE link still includes some data links that are allocated to user traffic.
• INIT	Data links have been allocated to the TE link, but the configuration has not yet been synchronized with the LMP neighbor. A LinkSummary message is periodically transmitted to the LMP neighbor.
• UP	The TE link is communicating with its counterpart on the remote node.
• DOWN	The TE link is not communicating with its counterpart on the remote node.
• UNKNOWN	Unknown or unexpected state.
<PST>	Primary state. This parameter indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. This parameter provides additional information pertaining to PST and PSTQ.

• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RTRV-LMP-DLINK

The Retrieve Link Management Protocol (RTRV-LMP-DLINK) command retrieves the attributes of an LMP data link.

Usage Guidelines

This command is only applicable on a node where the LMP protocol is supported and enabled.

Category

LMP

Security

Provisioning

Input Format

RTRVD-LMP-DLINK:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-LMP-DLINK:PETALUMA:FAC-14-1-1:704;

Input Parameters

<SRC>	Access identifier from the "28.17 FACILITY" section on page 28-42.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[LINKTYPE=<LINKTYPE>],[REMOTEID=<REMOTEID>],[TELINK=<TELINK>],
[OPSTATE=<OPSTATE>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"FAC-14-1-1::LINKTYPE=PORT,REMOTEID=45,TELINK=TLINK-4,OPSTATE=UP-ALLOC"
;

Output Parameters

<SRC>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<LINKTYPE>	The type of LMP data link.
• PORT	Port data link.
• COMPONENT	Component data link.
<REMOTEID>	The remote LMP data link ID.
<TELINK>	Used to map LMP data links to LMP TE links.
<OPSTATE>	Indicates the operational status of an LMP data link.
• TESTING	The data link is being tested. An LMP test message is periodically sent through the link.
• DOWN	The data link is not communicating with its counterpart on the remote node.
• UP-ALLOC	The link is up and has been allocated for data traffic.
• UP-FREE	The link has been successfully tested and is now put in the pool of resources (in-service). The link has not yet been allocated to data traffic.

RTRV-LNK

The Retrieve Link (RTRV-LNK) command retrieves the (optical) links created in the NE. The end information is returned along with the type of (optical) link.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-LNK:[<TID>]:<AID>:<CTAG>[::::]

Input Example

RTRV-LNK::ALL:114;

Input Parameters

<AID>	AID=ALL, you can retrieve information for all the connections.
<AID>	AID= AID of a single port, you can retrieve connection verification result for the single connection at starting or ending on the port specified.

Output Format

SID DATE TIME
M CTAG COMPLD
"<FROM>,<TO>::[OLNKT=<OLNKT>],[CTYPE=<CTYPE>],[RDIRN=<RDIRN>],
[BAND=<BAND>],[WLEN=<WLEN>]:<PSTPSTQ>,[<SST>]"
;

Output Example

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=1530.32-1532.68,WLEN=1530.32:OOS-AU,AINS"
;

Output Parameters

<FROM>	Access identifier from the "28.1 ALL" section on page 28-1. Identifies an entity at one end of the optical link.
<TO>	Access identifier from the "28.1 ALL" section on page 28-1. Identifies an entity at the other end of the optical link.

<OLNKT>	(Optional) Optical link type. The parameter type is OPTICAL_LINK_TYPE, which is the type of optical link between two optical facilities.
• ADD-DROP	Link between two points that results in an add/drop connection from a drop point to an add point
• HITLESS	Link between two OMS points that results in a hitless connection from a drop point to an add point of a consecutive band/channel filter
• MPO	MPO connector
• OTS	Link between two OTS points
• OTS-INTLEAV	Link between two OTS points interrupted by an interleaver card that the system does not monitor.
<CTYPE>	(Optional) The type of cross-connection. Indicates if the optical link is provisioned by the user or automatically created by the NE. The parameter type is CREATION_TYPE, which is the optical link creation type.
• AUTO	Automatically created by the NE
• PROV	Provisioned by the user
<RDIRN>	(Optional) Ring directionality of the optical line. The parameter type is RDIRN_MODE, which is the optical ring directionality.
• E-W	The direction of the signal is from east to west (clockwise).
• W-E	The direction of the signal is from west to east (counterclockwise).
<BAND>	(Optional) The optical band (group of four contiguous wavelengths) for this optical link. BAND is present only when there is a link between two OMS entities. The parameter type is OPTICAL_BAND.
• 1530.33 to 1532.68	Band 1
• 1534.25 to 1536.61	Band 2
• 1538.19 to 1540.56	Band 3
• 1542.14 to 1544.53	Band 4
• 1546.12 to 1548.51	Band 5
• 1550.12 to 1552.52	Band 6
• 1554.13 to 1556.55	Band 7
• 1558.17 to 1560.61	Band 8

• USE-DEFAULT	This band is not yet configured/retrieved from the unit.
<WLEN>	(Optional) Optical wavelength for this optical link. WLEN is present only when there is a link between two OCH entities. The parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1528.77	Wavelength 1528.77
• 1529.16	Wavelength 1529.16
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.72	Wavelength 1530.72
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22

• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92

• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.11	Wavelength 1548.11
• 1548.51	Wavelength 1548.51
• 1548.91	Wavelength 1548.91
• 1549.32	Wavelength 1549.32
• 1549.72	Wavelength 1549.72
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77

• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05
• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27
• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50
• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48

• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11

• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49

• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<PST_PSTQ>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by the SST and PSTQ.
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SST>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.

• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RTRV-LNKTERM

The Retrieve Provisionable Patchcord Termination (RTRV-LNKTERM) command retrieves information about one or more provisionable patchcord (PP) terminations.

Usage Guidelines

- All the terminations can be retrieved using ALL or LNKTERM-ALL as the AID.
- If the PP termination does not exist, an error message will be returned.

Category

Provisionable Patchcords

Security

Retrieve

Input Format

RTRV-LNKTERM:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-LNKTERM::LNKTERM-2:CTAG;

Input Parameters

<AID>	Access identifier from the "28.22 LNKTERM" section on page 28-54.

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    "<AID>::PORT=<PORT>,[REMOTENODE=<REMOTENODE>],
    [REMOTELNKTERMID=<REMOTELNKTERMID>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001 COMPLD
    "LNKTERM-2::PORT=FAC-3-1,REMOTENODE=172.20.221.225,REMOTELNKTERMID=21"
;
```

Output Parameters

<AID>	Access identifier from the "28.22 LNKTERM" section on page 28-54.
<PORT>	Access identifier from the "28.2 AidUnionId" section on page 28-13.
<REMOTENODE>	(Optional) Remote node. REMOTENODE is a string.
<REMOTELNKTERMID>	(Optional) Remote link term ID. REMOTELNKTERMID is a string.

RTRV-LOG

The Retrieve Log (RTRV-LOG) command retrieves the alarm log of the NE.

Usage Guidelines

The only option reported for LOGNM is ALARM.

Category

Log

Security

Retrieve

Input Format

RTRV-LOG:[<TID>]::<CTAG>::<LOGNM>;

Input Example

RTRV-LOG:CERENT::123::ALARM;

Input Parameters

<LOGNM>	Log to be retrieved. The log name is ALARM. String.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>,<ALMNUMBER>:CURRENT=<CURRENT>,[PREVIOUS=<PREVIOUS>],
<CONDITION>,<SRVEFF>,[TIME=<OCRTIME>],[DATE=<OCRDAT>]:<ALMDESCR>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"FAC-3-1,18:CURRENT=MJ,PREVIOUS=CL,EOC,NSA,TIME=16-33-04,
DATE=1971-02-03:\"SDCC TERMINATION FAILURE\""
;

Output Parameters

<AID>	Access identifier from the "28.1 ALL" section on page 28-1.
<ALMNUMBER>	Alarm number of the log. ALMNUMBER is an integer.
<CURRENT>	Current severity. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<PREVIOUS>	(Optional) Previous severity. The parameter type is COND_EFF, which is the state of the condition upon the affected unit.

• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
<CONDITION>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an shelf, whether or not the problem is reported (that is, whether or not it generates a trouble notification). Reported conditions include alarms, NA conditions, and NR conditions. See Chapter 29, "Conditions" for a list of conditions.
<OCRTIME>	(Optional) Time when the specific event or violation occurred, HH-MM-SS. Time when alarm was triggered.
<OCRDAT>	(Optional) Date when the specific event or violation occurred, MM-DD. Date when alarm was triggered.
<ALMDESCR>	Alarm description. ALMDESCR is a string.

RTRV-MA-CFM

The Retrieve Maintenance Association Connectivity Fault Management (RTRV-MA-CFM) command retrieves the maintenance association present on the card.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Equipment

Security

Retrieve

Input Format

RTRV-MA-CFM:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-MA-CFM::SLOT-1:1;

Input Parameters

Input Parameters	Description
<AID>	Access identifier from the “28.16 ETH” section on page 28-41.

Output Format

SID DATE TIME
M CTAG COMPLD
“AID>:MANAME=<MANAME>, SVLANID=<SVLANID>,
CCENABLE=<CCENABLE>[:];”
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
“SLOT-7,MANAME=CISCO,SVLANID=1,CCENABLE=Y”
;

Output Parameters

Parameter	Description
<AID>	Access identifier from the “28.17 FACILITY” section on page 28-42.
<MANAME>	Maintenance Association Name. It is a string. The MA name length should not exceed more than 43 characters.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<CCENABLE>	Enable or disable Continuos Check messaging
• Y	Enable
• N	Disable

RTRV-MACTABLE

The RTRV-MACTABLE command retrieves all the MAC addresses stored in the card, as well as the internal MAC addresses associated with each port of the card.

Usage Guidelines

- This command is supported on GZ 1.0 and GZ 1.5 TXP/MXP cards.
- The card should be in Layer2 over DMDM mode to retrieve the MAC address.
- VLANID is applicable to the command only during the retrieval of learned MAC address.
- During the retrieval of Card MAC address, port 5 of 10GEXP card and port 23 of GEXP card stands for CPU port.

Input Format

RTRV-MACTABLE:<TID>:<AID>:<CTAG>:::ADDRTYPE=<addrtype>,[VLANIDFROM=<vlanidfrom>],[VLANIDTO=<vlanidto];

Input Example

RTRV-MACTABLE::SLOT-12:1:::ADDRTYPE=LEARNED-MAC, VLANIDFROM=10, VLANIDTO=20;

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>,<ADDRTYPE>,<PORT>,<VLANID>,<MACADDRESS>"
;

Output Example

SID DATE TIME
M CTAG COMPLD
"SLOT-1,ADDRTYPE=LEARNED-MAC,PORT=4,VLANID=199,MACADDRESS=10:10:10:10:10:10";

Table 23-6 RTRV-MACTABLE command - Parameter Support

Parameter	Description
<AID>	"ALL" AID is NOT supported for this operation.
<ADDRTYPE>	Indicates whether the address shown is card MAC address OR dynamically learned MAC address.
• CARD-MAC	Internal MAC Address of the card.
• LEARNED-MAC	Dynamically learnt MAC Address.
<VLANIDFROM>	VLAN range. It is the start of the VLANID. Valid range is from 1 to 4096. It is an optional parameter.
<VLANIDTO>	VLAN range. It is the end of the VLANID. Valid range is from 1 to 4096. It is an optional parameter.

RTRV-MAP-NETWORK

The Retrieve Map Network (RTRV-MAP-NETWORK) command retrieves all the NE attributes which are accessible 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).

Usage Guidelines

The product type field in the response will appear as “unknown” for nodes that are not running the same version of software.

Category

System

Security

Retrieve

Input Format

RTRV-MAP-NETWORK:[<TID>]::<CTAG>;

Input Example

RTRV-MAP-NETWORK:CISCO::123;

Input Parameters

None that require description

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    “<IPADDR>,<NODENAME>,<PRODUCT>”
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001 COMPLD
    “172.20.222.225,TID-000,15454”
;
```

<IPADDR>	Node IP address. IPADDR is a string.
<NODENAME>	Node name (TID). NODENAME is a string.

<PRODUCT>	Product type of the NE. The parameter type is PRODUCT_TYPE, which is the product (NE) type.
• ONS15454	
• ONS15454SDH	SDH
• ONS15454-M2	M2
• ONS15454-M6	M6
• ONSNCS2K-M2	M2 product type for NCS 2002 package
• ONSNCS2K-M6	M6 product type for NCS 2006 packag
• ONSNCS2K-M15	M15 product type for NCS package
• UNKNOWN	Unknown product type

Output Parameters

RTRV-MCAST

The Retrieve the Multicast attributes command retrieves the Multicast VLAN Registration attributes.

Usage Guidelines

None

Category

Ethernet

Security

Retrieve

Input Format

RTRV-MCAST:[<TID>]:<AID>:<CTAG>::[::];

Input Example

RTRV-MCAST:TID:SLOT-1-5:CTAG;

Input Parameters

<AID>	Equipment aids are used to access specific cards.

ALL	It is only used for RTRV-INV, RTRV-EQPT, RTRV-ALM/COND-EQPT commands.
SLOT-ALL	The NE equipment AIDs.
SLOT[-{1-50}]-{1-6,12-17}	Individual equipment AID of the I/O card units or slots in a 15454.

Output Format

SID DATE TIME

M CTAG COMPLD

"<AID>::[<MVRSTATE>],[<MVRSVLAN>],[<MVRSTARTIP>],[<MVRIPRANGE>],[<IGMPONCVLAN>]:";

Output Example

TID-000 1998-06-20 14:30:00

M 001 COMPLD
"SLOT-1-12::MVRSTATE=Y,MVRSVLAN=132,MVRSTARTIP=230.64.38.55,
MVRIPRANGE=60:"
;

Output Parameters

<AID>	Equipment aids used to access specific cards.
• ALL	It is only used for RTRV-INV, RTRV-EQPT, RTRV-ALM/COND-EQPT commands.
• SLOT-ALL	All the NE equipment AIDs.
• SLOT[-{1-50}]-{1-6,12-17}	Individual equipment AID of the I/O card units or slots.
<MVRSTATE>	Multicast VLAN Registration status values.
• Y	Enabled
• N	Disabled
<MVRSVLAN>	Define the SVLAN used to distribute the Multicast stream inside the Network. It is a value in the range 1-4096.
<MVRSTARTIP>	The first IP Address of the Multicast IP Group.
<MVRIPRANGE>	MVR IP Range. Indicate the number of IP address starting from mvrStartIp used to identified the multicast IP group. It is a number in the range 1..255.

RTRV-MD-CFM

The Retrieve Maintenance Domain Connectivity Fault Management (RTRV-MD-CFM) command retrieves the maintenance domain on the card.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Equipment

Security

Retrieve

Input Format

RTRV-MD-CFM:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-MD-CFM:454-156:SLOT-1:1;

Input Parameters

Input Parameters	Description
<AID>	Access identifier from the "28.15 EQPT" section on page 28-39.

Output Format

SID DATE TIME
M CTAG COMPLD
"AID>:[MDNAME=<MDNAME>],[LEVEL=<LEVEL>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"SLOT-7,MDNAME=MD1,LEVEL=4"
;

Parameter	Description
<AID>	Access identifier from the "28.15 EQPT" section on page 28-39.
<MDNAME>	Maintenance Domain Name. It is a string. The MD name length should not exceed more than 43 characters.
<LEVEL>	This indicates the level of the maintenance domain. The value ranges from 0 to 7.

Output Parameters

RTRV-MDMAMAP-CFM

The Retrieve Maintenance Domain and Maintenance Association mapping Connectivity Fault Management (RTRV-MDMAMAP-CFM) command retrieves the maintenance domain and maintenance association mapping.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Equipment

Security

Retrieve

Input Format

RTRV-MDMAMAP-CFM:[<TID>]:<AID>:<CTAG>:::MDNAME=<MDNAME>;

Input Example

RRTRV-MDMAMAP-CFM::SLOT-4:A;

Input Parameters

<AID>	Access identifier from the "28.15 EQPT" section on page 28-39.

Output Format

SID DATE TIME
M CTAG COMPLD

“<AID>:[MANAME=<MANAME>],[SVLANID=<SVLANID>],[CCENABLE=<CCENABLE>];”
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
“SLOT-17,MDNAME=MD1,SVLANID=7,MANAME=MA3:”
;

<AID>	Access identifier from the “28.15 EQPT” section on page 28-39.
<MANAME>	Maintenance Association Name. It is a string. The MA name length should not exceed more than 43 characters.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<CCENABLE>	Enable or disable Continuos Check messaging
• Y	Enable
• N	Disable

Output Parameters

RTRV-MEP-CFM

The Retrieve Maintenance End Point Connectivity Fault Management (RTRV-MEP-CFM) command retrieves the maintenance end points on the port.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Ports

Security

Retrieve

Input Format

RTRV-MEP-CFM:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-MEP-CFM::ETH-1-1-1:1;

Input Parameters

Input Parameters	Description
<AID>	Access identifier from the "28.16 ETH" section on page 28-41.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:[SVLANID=<SVLANID>],[MDNAME=<MDNAME>],
[LEVEL=<LEVEL>],[MPID=<MPID>];"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"ETH-3-4-1,SVLANID=200,MDNAME=D4,LEVEL=4,MPID=314"
;

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<MDNAME>	Maintenance Domain Name. It is a string. The MD name length should not exceed more than 43 characters.
<LEVEL>	This indicates the level of the maintenance domain. The value ranges from 0 to 7.
<MPID>	Maintenance Point Identifier. It is an integer.

Output Parameters

RTRV-MEPCCDB-CFM

The Retrieve Maintenance End Point Continuity Check Message Data Base Connectivity Fault Management (RTRV-MEPCCDB-CFM) command retrieves the maintenance end point continuity check message data base on a given slot.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Equipment

Security

Retrieve

Input Format

RTRV-MEPCCDB-CFM:[<TID>]:<AID>:<CTAG>:::[MDNAME=<MDNAME>],[VLANIDFROM=<VLANIDFROM>],[VLANIDTO=<VLANIDTO>];

Input Example

RTRV-MEPCCDB-CFM::SLOT-1:1:::MDNAME=D2,VLANIDFROM=99,VLANIDTO=100;

Input Parameters

Input Parameters	Description
<AID>	Access identifier from the "28.15 EQPT" section on page 28-39.
<MDNAME>	Maintenance Domain Name. It is a string. The MD name length should not exceed more than 43 characters.
<VLANIDFROM>	VLAN range. It is the start of the VLANID. Valid range is from 1 to 4096. It is an optional parameter.
<VLANIDTO>	VLAN range. It is the end of the VLANID. Valid range is from 1 to 4096. It is an optional parameter.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:[MPID=<MPID>],[MACADDR=<MACADDR>],[MDNAME=<MDNAME>],[LEVEL=<LEVEL>],[MANAME=<MANAME>],[INPORT=<INPORT>],[CCLIFETIME=<CCLIFETIME>],[AGEOFLASTCC=<AGEOFLASTCC>],[RMTPORSTATE=<RMTPORTSTATE>];"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
“SLOT-1,MPID=301,MACADDR=00:19:07:6C:B7:7A,MDNAME=D2,MANAME=M1,SVLANID=100,INPORT=0,CCLIFETIME=0,AGEOFLASTCC=0:”
;

Output Parameters

Parameter	Description
<AID>	Access identifier from the “28.15 EQPT” section on page 28-39.
<MPID>	Maintenance Point Identifier. It is an integer.
<MACADDR>	(Optional) The MAC address for the 10 Gigabit Ethernet payload. MACADDR is a string.
<MDNAME>	Maintenance Domain Name. It is a string. The MD name length should not exceed more than 43 characters.
<LEVEL>	This indicates the level of the maintenance domain. The value ranges from 0 to 7.
<MANAME>	Maintenance Association Name. It is a string. The MA name length should not exceed more than 43 characters.
<INPORT>	Ingress port.
<CCLIFETIME>	Indicates the Continuity Check Message Timer Life Time on the receiving end. It indicates how long the interface has to wait for the CC message expiry. It is 3 times the CCTIMER.
<AGEOFLASTCC>	Age of the last CC timer. This indicates the time interval between the present time and the last time CC message received.
<RMTPORSTATE>	Indicates the state of the remote port.
• RMTPORT-INVALID	Invalid state.
• RMTPORT-UP	Up.
• RMTPORT-DOWN	Down.
• RMTPORT-TEST	Test.
• RMTPORT-UNKNOWN	Unknown port.
• RMTPORT-DORMANT	In active.

• RMTPORT-NOT-PRESENT	Port does not exist.
• LOWER-LAYER-DOWN	Lower layer is down.
• ADMIN-DOWN	Admin is down.
• REMOTE-EXCESSIVE-ERR	Excessive errors on the remote port.
• LOCAL-EXCESSIVE-ERR	Excessive errors on the local port.

RTRV-MEPSTATS-CFM

The Retrieve Maintenance End Point Statistics Connectivity Fault Management (RTRV-MEPSTATS-CFM) command retrieves the maintenance end point statistics.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Equipment

Security

Retrieve

Input Format

RTRV-MEPSTATS-CFM:[<TID>]:<AID>:<CTAG>:::[MDNAME=<MDNAME>],[VLANIDFROM=<VLANIDFROM>],[VLANIDTO=<VLANIDTO>];

Input Example

RTRV-MEPSTATS-CFM::SLOT-4:a;

Input Example

RTRV-MEPCCDB-CFM::SLOT-1:1:::MDNAME=D2,VLANIDFROM=99,VLANIDTO=100;

Input Parameters

Input Parameters	Description
<AID>	Access identifier from the “28.15 EQPT” section on page 28-39.

<MDNAME>	Maintenance Domain Name. It is a string. The MD name length should not exceed more than 43 characters.
<VLANIDFROM>	VLAN range. It is the start of the VLANID. Valid range is from 1 to 4096. It is an optional parameter.
<VLANIDTO>	VLAN range. It is the end of the VLANID. Valid range is from 1 to 4096. It is an optional parameter.

Output Format

SID DATE TIME
M CTAG COMPLD
"M CTAG COMPLD; "<AID>,<MDNAME>,<SVLANID>,<MPID>,<CCMTRANSMITTED>,<CCMRCVD>,
<CCRCVDSEQERROR>,<LTRUNEXPTDRCVD>,<LBRTRANSMITTED>,
<LBRRCVDINORDER>,<LBRRCVDSEQERROR>,<LBRRCVDBADMSDU>";

;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"SLOT-
3,MDNAME=Domain_6,SVLANID=30,MPID=600,CCMTRANSMTD=801,CCMRCVDSEQERR=0,CCRCVDSEQERR=0,
LTRUNEXPDRCVD=0,LBRTRANSMTD=0,LBRRCVDINORDER=0,LBRRCVDSEQERR=0,LBRRCVDBADMSDU=0"
;

Output Parameters

<AID>	Access identifier from the "28.15 EQPT" section on page 28-39.
<MDNAME >	Maintenance Domain Name. It is a string. The MD name length should not exceed more than 43 characters.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<MPID>	Maintenance Point Identifier. It is an integer.
<CCMTRANSMTD>	Indicates the transmission of continuity check messages.
<CCMRCVD>	Continuity check messages received.
<CCRCVDSEQERR>	Continuity check received with sequence errors.

<LTRUNEXPDRCVD>	Link trace reply received unexpectedly.
<LBRTRANSMTD>	Loopback reply transmitted.
<LBRRCVDINORDER>	Loopback reply received in order.
<LBRRCVDSEQERR>	Loopback reply received with sequence error.
<LBRRCVDBADMSDU>	Loopback reply received with bad MSDU.

RTRV-MIP-CFM

The Retrieve Maintenance Intermediate Point Connectivity Fault Management (RTRV-MIP-CFM) command retrieves the maintenance intermediate points on the port.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Ports

Security

Retrieve

Input Format

RTRV-MIP-CFM:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-MIP-CFM::ETH-1-1-1:1;

Input Parameters

<AID>	Access identifier from the "28.16 ETH" section on page 28-41.

Output Format

SID DATE TIME
M CTAG COMPLD

“M CTAG COMPLD; “<<AID>,<VLANID>,<LEVEL>”
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
“ETH-17-1-1,VLANID=6,LEVEL=7”
;

Output Parameters

Parameter	Description
<AID>	Access identifier from the “28.17 FACILITY” section on page 28-42.
<VLANID >	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<LEVEL>	This indicates the level of the maintenance domain. The value ranges from 0 to 7.

RTRV-MIPCCDB-CFM

The Retrieve Maintenance Intermediate Point Continuity Check Message Data Base Connectivity Fault Management (RTRV-MIPCCDB-CFM) command retrieves the continuity check message database (CCDB) of the maintenance intermediate points.

Usage Guidelines

- This command is applicable only to GE_XP and 10GE_XP cards.
- The card should be in Layer2 over DMDM mode.

Category

Equipment

Security

Retrieve

Input Format

RTRV-MIPCCDB-CFM:[<TID>]:<AID>:<CTAG>:::[LEVEL=<LEVEL>],[VLANIDFROM=<VLANIDFROM>],[VLANIDTO=<VLANIDTO>];

Input Example

RTRV-MIPCCDB-CFM::SLOT-1:1:::MDNAME=D2,VLANIDFROM=10,VLANIDTO=100;

Input Parameters

<AID>	Access identifier from the "28.15 EQPT" section on page 28-39.
<LEVEL>	This indicates the level of the maintenance domain. The value ranges from 0 to 7.
<VLANIDFROM>	VLAN range. It is the start of the VLANID. Valid range is from 1 to 4096. It is an optional parameter.
<VLANIDTO>	VLAN range. It is the end of the VLANID. Valid range is from 1 to 4096. It is an optional parameter.

Output Format

SID DATE TIME
M CTAG COMPLD
"M CTAG COMPLD;
"<<AID>,<MACADDR>,<SVLANID>,<LEVEL>,<INGRESSPORT>,<MPID>,<ARCHIVETIMER"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"SLOT-4,MACADDR=00:00:00:00:00:00,SVLANID=100,LEVEL=1,INGRESSPORT=0,MPID=300,ARCHIVETIMER=0"
;

Output Parameters

Parameter	Description
<AID>	Access identifier from the "28.15 EQPT" section on page 28-39.
<MACADDR>	(Optional) The MAC address for the 10 Gigabit Ethernet payload. MACADDR is a string.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

<LEVEL>	This indicates the level of the maintenance domain. The value ranges from 0 to 7.
<INGRESSPORT>	Identifies the ingress port.
<MPID>	Maintenance Point Identifier. It is an integer.
<ARCHIVETIMER>	Archive Timer for CCDB. The default value is 0.

RTRV-NE-APC

The Retrieve Network Amplification Power Control (RTRV-NE-APC) command retrieves the APC application ports involved in node set-up regulation.

Usage Guidelines

None

Category

System

Security

Maintenance

Input Format

RTRV-NE-APC:[<TID>]:[<AID>]:<CTAG>;

Input Example

RTRV-NE-APC:PENNGROVE:CHAN-16-1-RX:114;

Input Parameters

<AID>	Access identifier from the "28.8 CHANNEL" section on page 28-23. A null value is equivalent to ALL.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>,<MOD>::[MODIFDAT=<MODIFDAT>],[MODIFTM=<MODIFTM>],

[CHECKDAT=<CHECKDAT>],[CHECKTM=<CHECKTM>]”
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
“CHAN-16-1-RX,OCH::MODIFDAT=04-11-02,MODIFTM=12-35-00,
CHECKDAT=04-11-02,CHECKTM=12-55-00”
;

Output Parameters

<AID>	Access identifier from the “28.8 CHANNEL” section on page 28-23.
<MOD>	AID type. The parameter type is MOD2O, which is the 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.
• 100GIGE	100 Gigabit Ethernet.
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• HDSDI	1.5G HD-SDI video payload.
• ISC3PEER1G	1 Gbps ISC3 peer
• ISC3PEER2G	2 Gbps ISC3 peer
• ISC3PEER2R	1 Gbps ISC1, ISC2, and ISC3 compatibility
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• OCH	Optical channel
• ODU0	Optical Data Unit Level 0
• OMS	Optical multiplexer section
• OTS	Optical trace section

• OTU1	Optical Transport Unit Level 1
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• SDSDI	270M SDI video payload.
<MODIFDAT>	(Optional) The last date when the APC application modified this port. The format of MODIFDAT is MM-DD, where MM (month of year) ranges from 1 to 12 and DD (day of month) ranges from 1 to 31.
<MODIFTM>	(Optional) The last time when the APC application modified this port. The format of MODIFTM is HH-MM, where HH (hour of day) ranges from 0 to 23 and MM (minute of hour) ranges from 0 to 59.
<CHECKDAT>	(Optional) The last date when the APC application controlled and validated this port. The format of CHECKDAT is MM-DD, where MM (month of year) ranges from 1 to 12 and DD (day of month) ranges from 1 to 31.
<CHECKTM>	(Optional) The last time when the APC application controlled and validated this port. The format of CHECKTM is HH-MM, where HH (hour of day) ranges from 0 to 23 and MM (minute of hour) ranges from 0 to 59.

RTRV-NE-GEN

The Retrieve Network Element General (RTRV-NE-GEN) command retrieves the general NE attributes.

Usage Guidelines

ETHIPADDR and ETHIPMASK are disabled in this command. ETHIPADDR and ETHIPMASK are used to show the Ethernet interface address and mask. Both default to the nodes' IP address and masks.

Category

Equipment

Security

Retrieve

Input Format

RTRV-NE-GEN:[<TID>]::<CTAG>;

Input Example

RTRV-NE-GEN:CISCO::123;

Input Parameters

None that require description

Output Format

SID DATE TIME
M CTAG COMPLD
“[<IPADDR>],[<IPMASK>],[<DEFRTR>],[<IPV6ADDR>],[<IPV6PREFLEN>],[<IPV6DEFRTR>],[<IPV6ENABLE>],[<IIOPPORT>],[<NTP>],[<NAME>],[<SWVER>],[<LOAD>],[<PROTSWVER>],[<PROTLOAD>],[<DEFDESC>],[<PLATFORM>],[<SECUMODE>],[<SUPPRESSIP>],[<MODE>],[<MSPUBVLANID>],[<MSINTLVLANID>],[<AUTOPM>],[<SERIALPORTECHO>],[<OSIROUTINGMODE>],[<OSIL1BUFSIZE>],[<OSIL2BUFSIZE>],[<NET>],[<BKUPNTP>],[<SYSTEMMODE>],[<ALMSUPPRESS>],[<nodealias>],[<contact>],[<latitude>],[<longitude>],[<lcdsetting>],[<nodeid>],[<enablesocksproxy>],[<proxytype>],[<degilthr>],[<faililthr>],[<cvstatus>],[<nodecvstatus>],[<enablesockproxy>],[<proxytype>],[<proxyport>]”

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
IPADDR=192.168.100.52,IPMASK=255.255.255.0,DEFRTR=192.168.100.1,
IPV6ADDR=“[3ffe:0501:0008:0000:0260:97ff:fe40:efab]”,IPV6PREFLEN=64,IPV6DEFRTR=“[3ffe:0501:0008:0000:0260:97ff:fe40:e000]”,IPV6ENABLE=NO IIOPPORT=57970,NTP=192.168.100.52,NAME="NODENAME",SWVER=2.01.03,
LOAD=02.13-E09A-08.15,PROTSWVER=2.01.02,PROTLOAD=02.12-E09A-09.25,DEFDESC=\"NE DEFAULTS FEATURE\",PLATFORM=15454-ANSI,SECUMODE=NORMAL,
SUPPRESSIP=YES,PROXYSRV=N,FIREWALL=N,MSPUBVLANID=1,MSINTLVLANID=2,AUTOPM=NO,SERIALPORTECHO=Y,OSIROUTINGMODE=ES,OSIL1BUFSIZE=512,OSIL2BUFSIZE=512”
;

rtrv-ne-gen:::1;
vxTarget 2017-06-29 05:23:09
M 1 COMPLD
"IPADDR=10.65.187.117,IPMASK=255.255.255.0,DEFRTR=10.65.187.1,IPV6ENABLE=N,IIOPPORT=57790,NAME=\"vxTarget\",SWVER=10.05.12,LOAD=10.512-015-K0516-F-SPA,PROTSWVER=10.05.20,PROTLOAD=10.52-015J-24.05-F-SPA,DEFDESC=\"Factory Defaults\",PLATFORM=NCS2KFLEX-M6,SECUMODE=NORMAL,SUPPRESSIP=NO,MODE=SINGLESHELF,AUTOPM=NO,SERIALPORTECHO=Y,OSIROUTINGMODE=IS1,OSIL1BUFSIZE=512,NET=39840F80000000000000000000000059B31046000,SYSTEMMODE=SONET,ALARMSUPPRESS=N,CVSTATUS=VERIFICATION_IDLE,DEGILTHR=1.0,FAILILTHR=3.0,NODECVSTATUS=TRUE,ENABLESOCKSPROXY=TRUE,PROXYTYPE=SOCKS-PROXY,PROXYPORT=1080"

;

Output Parameters

<IPADDR>	(Optional) Node IP address. IPADDR is a string.
<IPMASK>	(Optional) Node IP mask. IPMASK is a string.

<DEFRTR>	(Optional) Node default router. DEFRTR is a string.
<IPV6ADDR>	Specifies the IPv6 address of the NE. IPV6ADDR is a string. **Note** IPV6ADDR parameter can be set only if IPV6ENABLE parameter is set to Y
<IPV6PREFLEN>	Specifies the prefix length for the IPv6 address of the NE. IPV6PREFLEN is an integer.
<IPV6DEFRTR>	Specifies the IPv6 default router address for the NE. IPV6DEFRTR is a string.
<IPV6ENABLE>	Specifies if the IPv6 enable mode for the NE is enabled or disabled.
• Y	Indicates that IPV6 mode is enabled.
• N	Indicates that IPV6 mode is disabled.
<IIOPPORT>	(Optional) Node IIOP port. IIPOOPRT is an integer.
<NTP>	(Optional) Node Network Timing Protocol (NTP) timing source address. NTP is a string.
<ETHIPADDR>	Not supported in this release.
<ETHIPMASK>	Not supported in this release.
<NAME>	(Optional) Facility name. NAME is a string.
<SWVER>	(Optional) Software version. SWVER is a string.
<LOAD>	(Optional) Load. LOAD is a string.
<PROTSWVER>	(Optional) Protect software version. PROTSWVER is a string.
<PROTLOAD >	(Optional) Protect load. PROTLOAD is a string.
<DEFDESC>	(Optional) Provides a default description for the NE. DEFDESC is a string.
<PLATFORM>	(Optional) Platform. PLATFORM is a string.
<SECUMODE>	(Optional) Security mode of the NE. The parameter type is NE_SECURE_MODE, which is the security mode of the NE. This enum has the following values:
• NORMAL	The front port and backplane are sharing the same IP network.

• SECURE	The front port and backplane are independent and IN different IP subnetworks.
<SUPPRESSIP>	(Optional) The parameter type is YES_NO, which is whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes
<MODE>	(Optional) Indicates the AID mode to access shelf identifier objects. Defaults to SINGLESHELF. This field is always set to MULTISHELF in the case of DWDM nodes with more than one shelf managed. Parameter type is SHELF_MODE which is the NE mode.
• SINGLESHELF	The NE contains only one shelf and the AID representation does not consider the shelf identifier for command requests/response and autonomous reports.
• MULTISHELF	The AID representation considers the shelf identifier for command requests/response and autonomous reports. This means the NE has more than one shelf configured or the user wants to use the new AID style.
• MULTISHELFETH	The AID representation considers the shelf identifier for command requests/response and autonomous reports. This means the NE has more than one shelf configured or the user wants to use the new AID style. The shelves are connected by means of an external Ethernet switch.
<PROXYSRV>	(Optional) Indicates if the proxy server is enabled or disabled.
• Y	Proxy server is enabled.
• N	Proxy server is disabled.
<FIREWALL>	(Optional) Indicates if the firewall is enabled or disabled.
• Y	Firewall is enabled.
• N	Firewall is disabled.
<AUTOPM>	(Optional) AUTOPM is a flag to indicate if autonomous PM reporting to TL1 clients is enabled or disabled.
• Y	Auto PM reporting is enabled.
• N	Auto PM reporting is disabled.
<SERIALPORTECHO>	(Optional) Indicates if the echo is turned on for TL1 serial port sessions.

• Y	Echo is turned on.
• N	Echo is turned off.
<OSIROUTINGMODE>	Indicates the routing mode of the node.
• ES	Provisions the node as an OSI ES. The ONS node performs all ES functions and relies upon an IS for communication with other IS nodes inside and outside the ES OSI area.
• IS1	Provisions the node as an OSI IS. The ONS node performs all IS functions including routing data between ISs and ESs, between networks, and between parts of a network.
• IS2	The ONS node performs all IS functions. It communicates with other IS and ES nodes within an OSI area. It also broadcasts ISHs to IS nodes in other areas to which it is connected.
<OSIL1BUFSIZE>	Level 1 Link State Protocol Data Unit (LSP) buffer size. The default is 512.
<OSIL2BUFSIZE>	Level 2 Link State Protocol Data Unit (LSP) buffer size. The default is 512.
<NET>	Network Entity Title of the node. The NET is used in OSI networks to identify the node to end system (ES) or intermediate system (IS) NEs. NETs are allocated from the same name space as the Network Service Address Point (NSAP) address. Whether an address is an NSAP or NET depends on the NSAP Selector value.
<ENABLESOCKSPROXY>	Indicates whether the sock proxy is enabled or not.
• True	Yes
• False	No
<PROXYTYPE>	Indicates type of sock proxy and it shows only if ENABLESOCKSPROXY is TRUE.
<PROXYPORT>	It is a read only value and the value is always 1080.
<DEGILTHR>	Degrade Insertion Loss (IL) threshold value. If there is at least one patch cord that has an extra IL higher than this threshold, the IPC-VERIFICATION-DEGRADE alarm is raised.
<FAILILTHR>	Fail IL threshold value. If there is at least one patch cord that has an extra IL higher than this threshold, the IPC-VERIFICATION-FAIL alarm is raised.

<NODECVSTATUS>	Enable or disable connection verification on the node. The available options are: • TRUE—Enable CV • FALSE—Disable CV
<CVSTATUS>	Status of the connection verification on the node. The different values of this parameter are: • CONNVERF_RUNNING—Connection verification is running on the node. • IL_RUNNING—IL verification is running on the node. • VERIFICATION_IDLE—Connection verification is not running on the node.
<SYSTEMMODE>	It is an enum which has the values: • SONET • SDH
<ALARMSUPPRESS>	It is an enum which has the values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress
<ALARMPROFILENAME>	Name of the profile created using the command ENT-ALMPROFILE
<POSITIONDESC>	The description of position like latitude & Longitude
<COOLINGPROFILECTRL>	This is an enum whose values are :
• AUTO	By setting this value, TL1 will not allow to modify cooling profile using SET-COOLINGPROFILE
• MANUAL	Allow to modify cooling profile using SET-COOLINGPROFILE
<FORWARDDHCPENABLE>	This is an enum whose values are:
• Y	Enable to modify the FORWARDDHCPIP
• N	Not allowed to modify FORWARDDHCPIP

<FORWARDDHCPIP>	DHCP IP Address
<SUBNETMASKLEN>	Displays the Subnet mask length. This length is associated with subnet mask.
<MACADDR>	(Optional) MACADDR is a string. Defaults to NULL. Maximum length is 18 characters.

RTRV-NE-IMGSIGN

Note The RTRV-NE-IMGSIGN command does not apply to the platform.

The Retrieve Network Image Signature (RTRV-NE-IMGSIGN) command retrieves the signature details of a given shelf.

Usage Guidelines

None

Category

System

Security

Maintenance

Input Format

RTRV-NE-IMGSIGN:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-NE-IMGSIGN:PENNGROVE:SHELF-1:CTAG;

Input Parameters

<AID>	Shelf access identifier. AID can be ignored if the command is executed on a single shelf. For a multi-shelf configuration, AID can take a shelf value from 1 to 50 (SHELF-{1-50}).

Output Format

SID DATE TIME
M CTAG COMPLD

“[<AID>],[PKGTYPE=<PKGTYPE>],[IMGTYPE=<IMGTYPE>],
[CMNNAME=<CMNNAME>,[ORGUNIT=<ORGUNIT>],[ORGNAME=<ORGNAME>],[CERTSN=<CERTSN>],[HASH=<HASH>],[SIGNALGO=<SIGNALALGO>],[KEYVER=<KEYVER>]”
;

Output Example

SID DATE TIME
M CTAG COMPLD
“SHELF-1,PKGTYPE=WORKING,IMGTYPE=DEVELOPMENT,CMNNAME=UTS
TNC,ORGUNIT=OTBU,ORGNAME=CISCO,CERTSN=10000,HASH=SHA-512,SIGNALGO=RSA-2048,KEYVER=A”;

Output Parameters

<AID>	Shelf access identifier. AID can be ignored if the command is executed on a single shelf. For a multi-shelf configuration, AID can take a shelf value from 1to 30 (SHELF-{1-50}).
<PKGTYPE>	Indicates the Package Type. The parameter type is PKGTYPE.
• INVALID	Indicates that the package type is invalid.
• PROTECT	Indicates that the package type is a protect package.
• WORKING	Indicates that the package type is a working package.
<IMGTYPE>	Indicates the Image Type. The parameter type is IMGTYPE.
• DEVELOPMENT	Indicates that the IMGTYPE is a DEVELOPMENT Image.
• PRODUCTION	Indicates that the IMGTYPE is a PRODUCTION Image.
• REVOCATION	Indicates that the IMGTYPE is a REVOCATION Image.
• UNKNOWN	Indicates that the IMGTYPE is an UNKNOWN Image.
<CMNNAME>	Indicates the Common Name.
<ORGUNIT>	Indicates the Organization Unit.
<ORGNAME>	Indicates the Organization Name.
<CERTSN>	Indicates the Certificate Serial Number.
<HASH>	Indicates the hashing Algorithm. The parameter type is HASH_ALGO.
SHA-256	Hashing Algorithm is SHA-256.
SHA-512	Hashing Algorithm is SHA-512.
UNKNOWN	Hashing Algorithm is Unknown.

<SIGNALGO>	Indicates the signature Algorithm. The parameter type is SIGN_ALGO.
• DSA	Signature Algorithm is DSA.
• ECDSA	Signature Algorithm is ECDSA.
• RSA-2048	Signature Algorithm is RSA-2048.
• UNKNOWN	Signature Algorithm is Unknown.
<KEYVER>	Indicates the key Version.

RTRV-NE-IPMAP

The Retrieve Network Element Internet Protocol Map (RTRV-NE-IPMAP) command retrieves the IP address and node name of the NEs that have a DCC connection with this NE.

Usage Guidelines

This command only reports the discovered DCC link. If there is no discovered DCC link on the port (or the node), the command will return COMPLD without IPMAP information.

Category

Network

Security

Retrieve

Input Format

RTRV-NE-IPMAP:[<TID>]:[<AID>]:<CTAG>;

Input Example

RTRV-NE-IPMAP:CISCO:FAC-12-1:123;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42. The port of an NE carrying the DCC connection. A null value defaults to the whole NE. A null value is equivalent to ALL.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:<IPADDR>,<NODENAME>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"FAC-12-1:172.20.208.225,NODENAME2"
;

Output Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42. Port of an NE carrying the DCC connection.
<IPADDR>	Node IP address. IPADDR is a string.
<NODENAME>	Network element name. NODENAME is a string.

RTRV-NE-KEYINFO

Note The RTRV-NE-KEYINFO command does not apply to the platform.

The Retrieve Network Key Information (RTRV-NE-KEYINFO) command retrieves the details of the keys that are stored in a given shelf.

Usage Guidelines

None

Category

System

Security

Maintenance

Input Format

RTRV-NE-KEYINFO:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-NE-KEYINFO:PENNGROVE:SHELF-5:CTAG;

Input Parameters

<AID>	Shelf access identifier. AID can be ignored if the command is executed on a single shelf. For a multi-shelf configuration, AID can take a shelf value from 1 to 50 (SHELF-{1-50}).

Output Format

SID DATE TIME
M CTAG COMPLD
"[<AID>],[KEYTYPE=<KEYTYPE>],[PUBKEY=<PUBKEY>,[EXPN=<EXPN>],
[KEYVER=<KEYVER>],[MOD=<MOD>]"
;

Output Example

SID DATE TIME
M CTAG COMPLD
"SHELF-5,KEYTYPE=DEVELOPMENT,PUBKEY=RSA-
2048,EXPN=1000,KEYVER=A,MOD=\"0:1:2:3:4:5:6:7:8:9:a:b:c:d:e:f:10:11:12:13:14:15:16:17:18:19:1a:1b:1c:1d:1e:1f:20
:21:22:23:24:25:26:27:28:29:2a:2b:2c:2d:2e:2f:30:31:32:33:34:35:36:37:38:39:3a:3b:3c:3d:3e:3f:40:41:42:43:44:45:46:47:4
8:49:4a:4b:4c:4d:4e:4f:50:51:52:53:54:55:56:57:58:59:5a:5b:5c:5d:5e:5f:60:61:62:63:64:65:66:67:68:69:6a:6b:6c:6d:6e:6f:7
0:71:72:73:74:75:76:77:78:79:7a:7b:7c:7d:7e:7f:80:81:82:83:84:85:86:87:88:89:8a:8b:8c:8d:8e:8f:90:91:92:93:94:95:96:97:
98:99:9a:9b:9c:9d:9e:9f:a0:a1:a2:a3:a4:a5:a6:a7:a8:a9:aa:ab:ac:ad:ae:af:b0:b1:b2:b3:b4:b5:b6:b7:b8:b9:ba:bb:bc:bd:be:bf:c
0:c1:c2:c3:c4:c5:c6:c7:c8:c9:ca:cb:cc:cd:ce:cf:d0:d1:d2:d3:d4:d5:d6:d7:d8:d9:da:db:dc:dd:de:df:e0:e1:e2:e3:e4:e5:e6:e7:e8:
e9:ea:eb:ec:ed:ee:ef:f0:f1:f2:f3:f4:f5:f6:f7:f8:f9:fa:fb:fc:fd:fe:ff";

Output Parameters

<AID>	Shelf access identifier. AID can be ignored if the command is executed on a single shelf. For a multi-shelf configuration, AID can take a shelf value from 1to 30 (SHELF-{1-50}).
<KEYTYPE>	Indicates the Key Type. Displays the public key available on the system for verification. The parameter type is KEYTYPE.
• DEVELOPMENT	Indicates that the key type is DEVELOPMENT.
• RELEASE	Indicates that the key type is RELEASE.
• ROLLOVER	Indicates that the key type is ROLLOVER.
• UNKNOWN	Indicates that the key type is Unknown.

<PUBKEY>	Indicates the Public Key. Displays the name of the algorithm used for public key cryptography.
<EXPN>	Indicates the Exponential. Displays the exponent of the public key algorithm—release or development keys.
<KEYVER>	Indicates the Key version. Indicates the key version used to digitally sign the image. A key version is identified with an alphabetical character that ranges from A to Z.
<MOD>	Indicates the Modulus. Displays the modulus of the public key algorithm with a size of 2048 bits.

RTRV-NE-PATH

The Retrieve Network Element Path (RTRV-NE-PATH) command retrieves the path-level attributes on an NE.

Usage Guidelines

None

Category

System

Security

Retrieve

Input Format

RTRV-NE-PATH:[<TID>]::<CTAG>[::::];

Input Example

RTRV-NE-PATH:::CTAG;

Input Parameters

None that require description

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    "[PDIP=<PDIP>],[XCMODE=<XCMODE>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001 COMPLD
    “PDIP=Y,XCMODE=MIXED”
;
```

Output Parameters

<PDIP>	(Optional) Flag used to indicate whether PDI-P should be generated on the outgoing VT-structured STSs. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<XCMODE>	(Optional) Cross-connect mode. The parameter type is XCMODE, which is applicable only to a node with cross-connect cards that support cross-connect mode change.
• MIXED	Both VT1 and VT2 cross-connects can be provisioned on the node.
• VT1	Only VT1 cross-connects can be provisioned on the node.
• VT2	Only VT2 cross-connects can be provisioned on the node.

RTRV-NE-SYNCN

The Retrieve Network Element Synchronization (RTRV-NE-SYNCN) command retrieves the synchronization attributes of the NE.

Usage Guidelines

- Although mixed mode timing is supported in this release, it is not recommended. Refer to the *Cisco ONS SDH and Cisco ONS 15600 SONET TL1 Reference Guide* for more information.
- The timing modes are:
  - 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.

Category

Synchronization

Security

Retrieve

Input Format

RTRV-NE-SYNCN:[<TID>]:[<AID>]:<CTAG>[::::];

Input Example

RTRV-NE-SYNCN:CISCO:SHELF-2:123;

Input Parameters

<AID>	The node or shelf access identifier from the "28.27 SHELF" section on page 28-55. If omitted it addresses the node or first shelf of the node.

Output Format

SID DATE TIME
M CTAG COMPLD
"[<AID>]::[TMMD=<TMMD>],[SSMGEN=<SSMGEN>],[QRES=<QRES>],
[RVRTV=<RVRTV>],[RVTM=<RVTM>],[SYSTMN=<SYSTMN>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"SHELF-2::TMMD=LINE,SSMGEN=GEN1,QRES=ABOVE-G811,RVRTV=Y,RVTM=8.0,
SYSTMN=SONET"
;

Note: The parameter [SYSTMN=<SYSTMN>] will display information only for SONET.

Output Parameters

<AID>	The node or shelf access identifier from the "28.27 SHELF" section on page 28-55. If omitted it addresses the node or first shelf of the node. Must not be null
<TMMD>	(Optional) Timing mode. The parameter type is TIMING_MODE, which is the timing mode for the current node.
• 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.

<SSMGEN>	(Optional) Synchronization status message generator. The parameter type is SYNC_GENERATION, which is the synchronization status message set generation.
• GEN1	First generation SSM set
• GEN2	Second generation SSM set
<QRES>	(Optional) Quality of the RES. The parameter type is SYNC_QUALITY_LEVEL, which is the network synchronization quality level.
• ABOVE-G811	Better than G811
• ABOVE-STU	Between STU and G811 (default setting)
• ABOVE-G812T	Between G812T and STU
• ABOVE-G812L	Between G812L and G812T
• ABOVE-SETS	Between SETS and G812L
• BELOW-SETS	Below SETS but still usable
• SAME-AS-DUS	Disable the RES message by equating to DUS
<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<SYSTMN>	(only) Identifies the system timing standard used by the node.
• SONET	SONET timing standard
• SDH	SDH timing standard

RTRV-NE-WDMANS

The Retrieve Network Element Wavelength Division Multiplexing Automatic Node Setup (RTRV-NE-WDMANS) command retrieves the optical node setup (WDMANS) application ports involved in node setup regulation.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-NE-WDMANS:[<TID>]:[<AID>]:<CTAG>;

Input Example

RTRV-NE-WDMANS:PENNGROVE:ALL:114;

Input Parameters

<AID>	The access identifier from the "28.1 ALL" section on page 28-1. A null value is equivalent to ALL.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>,<AIDTYPE>::[REGULATED=<REGULATED>],[PARAM=<PARAM>],[<VALUE>],[<ACTOR>],[<DATE>],[<TIME>]:"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"CHAN-16-1-RX,OCH::REGULATED=OUT-OF-RANGE,PARAM=VOAATTN"
;

Output Parameters	
<AID>	Access identifier from the "28.1 ALL" section on page 28-1. AID is port regulated.
<AIDTYPE>	Specifies the type of facility, link, or other addressable entity targeted by the message. A type of access identifier. The parameter type is MOD2, which is the line/path modifier.
• 100GIGE	100 Gigabit Ethernet.
• 10GFC	10-Gigabit Fibre Channel payload
• 10GFICON	10-Gigabit fiber connectivity payload
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 1GISC3	1-Gigabit ISC3 compatible
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 2GISC3	2-Gigabit ISC3 compatible
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• CHGRP	Channel group
• D1VIDEO	D1 video
• DS1	DS1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETR_CLO
• FSTE	FSTE facility
• G1000	G1000 facility

• GFPOS	GFP over POS. Virtual ports partitioned using GFP's multiplexing capability.
• GIGE	Gigabit Ethernet
• HDLC	High-level data link control (HDLC) frame mode.
• HDTV	HDTV
• HDSDI	1.5G HD-SDI video payload.
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• MSISC	MSISC
• OC3	OC-3 facility
• OC12	OC-12 facility
• OC48	OC-48 facility
• OC192	OC-192 facility
• OCH	Optical Channel
• OCHCC	OCH client connection
• OCHNC	OCH network connection
• OCHTERM	OCH termination
• ODU0	Optical Data Unit Level 0
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTU1	Optical Transport Unit Level 1
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• POS	POS port
• REP	Resilient Ethernet Protocol

• SDSDI	270M SDI video payload.
• STS1	STS1 path
• STS3C	STS3c path
• STS6C	STS6c path
• STS9C	STS9c path
• STS18C	STS18c path
• STS12C	STS12c path
• STS24C	STS24c path
• STS36C	STS36c path
• STS48C	STS48c path
• STS192C	STS192c path
• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 path
• VT2	VT2 path
<REGULATED>	(Optional) The status of the port after a node setup regulation. The parameter type is REGULATED_PORT_TYPE, which is the optical configuration types for NEs.
• FAILED	WDM-ANS encountered a failure while regulating this port.
• MISSING-INPUT-PWR-PARAM	Missing input power parameter
• MISSING-OUTPUT-PWR-PARAM	Missing output power parameter
• NOT-APPLICABLE	WDM-ANS does not foresee any algorithm or does not have any value to set for the parameter.
• OUT-OF-RANGE	WDM-ANS cannot modify the set point because the calculated value is out of the allowed range.
• PORT-IN-SERVICE	WDM-ANS cannot modify the set point because the ports are in IS state.
• REGULATED	WDM-ANS has successfully regulated this port.
• AMPLIGAINRANGE	Gain in Amplitude Range

• UNCHANGED	WDM-ANS has not changed this port.
<ACTOR>	Regulator Actor is the name of the Network Element application that regulates the WDM-ANS parameter. The parameter type is REGULATED_ACTOR.
• ANS	Parameter regulated by the ANS application.
• APC	Parameter regulated by the APC application.
• OCHNC	Parameter regulated by the OCHNC application.
• RAMAN-WIZARD	Parameter regulated by the RAMAN Wizard application.
• UNKNOWN	The parameter that has been regulated by an unknown application.
<PARAM>	(Optional) The regulated parameter inside of the specified port. The parameter type is REGULATED_PARAM_NAME, which is the name of the parameter regulated by the WDMANS application.
• AMPLMODE	WDM-ANS has regulated the amplifier control mode parameter.
• CHPOWER	WDM-ANS has regulated the amplifier per the channel power parameter.
• GAIN	WDM-ANS has regulated the amplifier gain parameter.
• OPWR-LFAIL	WDM-ANS has regulated the OPWR-LFAIL threshold parameter.
• REFTILT	WDM-ANS has regulated the amplifier tilt reference parameter.
• VOAREFATTN	WDM-ANS has regulated the variable optical attenuator (VOA) attenuation reference parameter.
• VOAREFPWR	WDM-ANS has regulated the VOA power reference parameter.
• DARK-POWER	WDM-ANS has regulated the port P-Dark power.
• VOA-STARTUP	WDM-ANS regulated the port VOA startup.
• TOTALPWR-DBM	Node setup port attribute. Total power in dBm.
• TOTPWR-MILLIW	Node setup port attribute. Total power in mW.
• CHPWROFFSET	Optical power setting, channel power setting.
• LOWTHDBM	Optical power setting, low threshold in dBm.
• LOWTHMILLIW	Optical power setting, low threshold in mW.
• RATIO	Optical power setting ratio.
• TOTALPWRDBM	Optical power setting in dBm.

• TOTALPWRMILLIW	Optical power setting in mW.
<DATE>	Identifies the date. Date is a string. Default value is - current date.
<TIME>	Identifies the time. Time is a string. Default value is - current time.

RTRV-NETYPE

The Retrieve Network Element Type (RTRV-NETYPE) command retrieves the NE's equipment-related information.

Usage Guidelines

None

Category

System

Security

Retrieve

Input Format

RTRV-NETYPE:[<TID>]::<CTAG>;

Input Example

RTRV-NETYPE:GAUR1::1;

Input Parameters

None that require description

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    "<VENDOR>,<MODEL>,<NETYPE>,<SW_ISSUE>"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001 COMPLD
    "CISCO,ONS15454,ADM&MSPP&MSTP,5.00.00"
;
```

Output Parameters	
<VENDOR>	NE equipment vendor name. VENDOR is a string.
<MODEL>	NE equipment model. The parameter type is PRODUCT_TYPE, which is the product (NE) type.
• ONS15454	
• UNKNOWN	Unknown product type
<NETYPE>	NE equipment type. Abbreviation of NE type can be used. The grouping sign "&" can be used to indicate multifunction NE type, for example, ADM&MSPP means Add-Drop Multiplexers and Multiservice Provisioning Platform. Listable. The parameter type is NETYPE, which is the NE equipment type.
• ADM	Add-Drop Multiplexers
• DCS	Digital Cross-Connect System
• MSPP	Multiservice Provisioning Platform
• MSSP	Multiservice Switching Platform
• MSTP	Multiservice Transport Platform
<SW_ISSUE>	The software release issue of the NE. SW_ISSUE is a string.

RTRV-NNI-CHGRP

The Retrieve Network-to-Network Interface Channel Group (RTRV-NNI-CHGRP) command retrieves the NNI selective S-VLAN-ID table associated to a channel group.

Usage Guidelines

This command accepts the ALL AID.

Category

Channel Group

Security

Retrieve

Input Format

RTRV-NNI-CHGRP:[<TID>]:<AID>:<CTAG>::[<SVLANID>][::];

Input Example

RTRV-NNI-CHGRP:TID:CHGRP-1-1:1::110;

Input Parameters

<AID>	Access identifier from the "28.9 CHGRP" section on page 28-26.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    "<AID>:<SVLANID>[::]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001 COMPLD
    "ETH-1-1-1:110::"
;
```

Output Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "28.16 ETH" section on page 28-41.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

RTRV-NNI-ETH

The Retrieve Network-to-Network Interface Ethernet (RTRV-NNI-ETH) command retrieves the NNI selective S-VLAN-ID table associated to an L2 Ethernet port.

Usage Guidelines

This command accepts the ALL AID.

Category
Ethernet

Security
Retrieve

Input Format
RTRV-NNI-ETH:[<TID>]:<AID>:<CTAG>::[<SVLANID>][::];

Input Example
RTRV-NNI-ETH:TID:ETH-1-1-1:CTAG::110;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "28.16 ETH" section on page 28-41.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

Output Format
SID DATE TIME
M CTAG COMPLD
"<AID>:<S_VLAN_ID>[::]"
;

Output Example
TID-000 1998-06-20 14:30:00
M 001 COMPLD
"ETH-1-1-1:110::"
;

Output Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "28.16 ETH" section on page 28-41.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

RTRV-OCM

The Retrieve Optical Channel Monitoring (RTRV-OCM) command retrieves the optical channel monitoring parameters present at OCH layer in a ROADM node.

Usage Guidelines

- Primary=Locked and secondary=AutomaticInService states do not apply to Ethernet mode.

Category

DWDM

Security

Retrieve

Input Format

RTRV-OCM:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-OCM::OCM-1-16-1-RX-1530.33:12;

Input Parameters

<AID>	Access identifier from the "28.8 CHANNEL" section on page 28-23.

Output Format

SID DATE TIME
M CTAG COMPLD
"[<AID>]::[CHPOWER=<CHPOWER>]:"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
" TID-000 1998-06-20 14:30:00M 001 COMPLD "OCM-1-16-1-RX-1530.33::CHPOWER=9.0";

Table 23-7 Output Parameter Support

Parameter	Description

<AID>	Access identifier from the "28.8 CHANNEL" section on page 28-23.
<CHPOWER>	(Optional) The per channel optical power. Applicable only to amplified OTS ports.

RTRV-OCH

The Retrieve Optical Channel (RTRV-OCH) command retrieves the attributes (service parameters) and state of an OCH facility.

Usage Guidelines

Refer to the *Cisco ONS SDH and Cisco ONS 15600 SONET TL1 Reference Guide* for specific card provisioning rules. SQUELCHMODE, FREQ, LOSSB and PORTMODE are the parameters supported on RTRV-OCH command while retrieving the attributes and state of an OCH facility on 10x10G-LC, 100G-LC-C and CFP-LC Cards.

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

Category

DWDM

Security

Retrieve

Input Format

RTRV-OCH:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-OCH:PENNGROVE:CHAN-6-2:236;

Input Parameters

<AID>	Access identifier from the "28.8 CHANNEL" section on page 28-23.

Output Format

SID DATE TIME
M CTAG COMPLD

;

<AID>:,,[<ROLE>],[<STATUS>]:[<OPTICAL-PORTTYPE>],[<POWER>],[<EXPWLEN>],[<ACTWLEN>],[<ILOSS>],[<VOAMODE>],[<VOAATTN>],[<VOAPWR>],

[<VOAREFATTN>],[<VOAREFPWR>],[<REFOPWR>],[<CALOPWR>],[<CHPOWER>],[<CHPOWERFLG>],[<ADDOPWR>],[<PORTNAME>],[<GCC>],[<GCCRATE>],[<DWRAP>],[<FEC>],[<PAYLOADMAP>],[<LBCLCURR>],[<OPTCURR>],[<OPRCURR>],[<OSFBER>],[<OSDBER>],[<SOAK>],[<SOAKLEFT>],[<LOSSB>],[<PEERID>],[<REGENNAME>],[<PORTMODE>],[<ODUTRANSMODE>],[<ERRORDECORRELATOR>],[<FCS>],[<PROACTPROTECTION>],[<TRIGGERTH>],[<REVERTTH>],[<TRIGWINDOW>],[<RVRTWINDOW>],[<ENCAP>],[<OVRCLK>],[<RXWLEN>],[<OSNR>],[<PMD>],[<CHROMDISP>],[<SYNCMSG>],[<SENDDUS>],[<ADMSSM>],[<PROVIDESYNC>],[<SQUELCHMODE>],[<FECALARMSUPRESS>],[<CDLOW>],[<CDHIGH>],[<SOPMDCURR>],[<PCRCURR>],[<PDLCURR>],[<VOATXPOWER>],[<TXLASERSHUTDN>],[<LPBKTYPE>]:<ALMSUPPRESS>,[<PSM>]

The response for the flex
<AID>:,,[<ROLE>],[<STATUS>]:[<OPTICALPORTTYPE>],[<POWER>],[<EXPWLEN>],[<ACTWLEN>],[<ILOSS>],[<VOAMODE>],[<VOAATTN>],[<VOAPWR>],[<VOAREFATTN>],[<VOAREFPWR>],[<REFOPWR>],[<CALOPWR>],[<CHPOWER>],[<CHPOWERFLG>],[<ADDOPWR>],[<PORTNAME>],[<GCC>],[<GCCRATE>],[<DWRAP>],[<FEC>],[<PAYLOADMAP>],[<LBCLCURR>],[<OPTCURR>],[<OPRCURR>],[<OSFBER>],[<OSDBER>],[<SOAK>],[<SOAKLEFT>],[<LOSSB>],[<PEERID>],[<REGENNAME>],[<PORTMODE>],[<ODUTRANSMODE>],[<ERRORDECORRELATOR>],[<FCS>],[<PROACTPROTECTION>],[<TRIGGERTH>],[<REVERTTH>],[<TRIGWINDOW>],[<RVRTWINDOW>],[<OVRCLK>],[<RXWLEN>],[<OSNR>],[<PMD>],[<CHROMDISP>],[<SYNCMSG>],[<SENDDUS>],[<ADMSSM>],[<PROVIDESYNC>],[<SQUELCHMODE>],[<FECALARMSUPRESS>],[<CDLOW>],[<CDHIGH>],[<SOPMDCURR>],[<PCRCURR>],[<PDLCURR>],[<VOATXPOWER>],[<TXLASERSHUTDN>],[GRIDLESS=<GRIDLESS>],[FREQ=<FREQ>],[<LPBKTYPE>,[<ALMSUPPRESS>]:
;

Output Example

100g 2012-05-22 12:31:55

M 1 COMPLD
“CHAN-3-2:,,WORK,STBY:EXPWLEN=USE-TWL1,GCC=N,DWRAP=Y,FEC=STD,OSFBER=1E-5,OSDBER=1E-7,SOAK=32,PORTMODE=DWDM-TRANS-AIS,RXWLEN=USE-TWL1,SYNCMSG=N,SENDDUS=N,ADMSSM=STU,SQUELCHMODE=ODU-AIS,,CDLOW=-70000.0,CDHIGH=70000.0,VOATXPOWER=0.25,TXLASERSHUTDN=N:OOS-MA,DSBLD”

Output Parameters

Parameter	Description
<AID>	Access identifier from the “28.8 CHANNEL” section on page 28-23.
<ROLE>	(Optional) Identifies an OCH port role. The parameter type is SIDE, which is the role the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	(Optional) The port status. The parameter type is STATUS, which is the status of the unit in the protection pair.

• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<OPTICALPORTTYPE>	The optical port type. The parameter type is OPTICAL_PORT_TYPE, which qualifies the optical port of a card.
• ADD	The signal is added to the port.
• COM	Common Port
• DROP	The signal is dropped from the port.
• EAD	Express/Add/Drop port
• IN-ASE	Logical port on Raman CTP card.
• IN-COM	COM channels (without OSC) that continue the signal from the previous card
• IN-DC	Input DCU port
• IN-DEG	IN-DEG optical port type
• IN-DFB	Rx managed port on Raman CTP card used for span continuity check.
• IN-EXP	The express channel that continues the signal from the previous card
• IN-LINE	All the channels that continue the signal from the previous card
• IN-OSC	OSC channel that continues the signal from the previous card
• IN-UPG	IN-UPG optical port type
• OUT-COM	COM channels (without OSC) that continue the signal to the next card
• OUT-DC	Output DCU port
• OUT-DEG	OUT-DEG optical port type
• OUT-DFB	Tx managed port on Raman CTP card used for span continuity check.
• OUT-EXP	Express channel that continues the signal to the next card
• OUT-LINE	All the channels that continue the signal to the next card
• OUT-EDRA-PUMP	OUT-EDRA-PUMP optical port type

• OUT-UPG	OUT-UPG optical port type
• PORT	PORT optical port type
• IN-VEXP	
• OUT-VEXP	
<ACTWLEN>	(Optional) The manufacturing optical wavelength for this port. Applicable only to the following cards: OSCM, OSC-CSM, OPT-PRE, OPT-BST, 4MD-xx.x, 32MUX, 32DMX, AD-1C-xx.x, AD-2C-xx.x, AD-4C-xx.x, AD-1B-xx.x, and AD-4B-xx.x. The parameter type is OPTICAL_WLEN, which is the optical wavelength.
<EXPWLEN>	(Optional) Optical wavelength for this port. Applicable only to the following types of cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexer and demultiplexer cards, and optical add/drop multiplexing (OADM) cards. The parameter type is OPTICAL_WLEN, which is the optical wavelength.
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1528.77	Wavelength 1528.77
• 1529.16	Wavelength 1529.16
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.72	Wavelength 1530.72
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68

• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33

• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.11	Wavelength 1548.11
• 1548.51	Wavelength 1548.51
• 1548.91	Wavelength 1548.91
• 1549.32	Wavelength 1549.32
• 1549.72	Wavelength 1549.72
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13

• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05
• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27
• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50

• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35

• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68

• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610

• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	The parameter type is REACH, which indicates the reach values.
• 100GBASE-LR4	100GBASE-LR4
• 100GBASE-SR10	100GBASE-SR10
• 40GBASE-FR	40GBASE-FR
• 40GBASE-LR4	40GBASE-LR4
• 40GBASE-SR4	Reach supported on 40GIGE payload on CFP-LC card.
• 4I1-9D1F	4I1-9D1F
• C4S1-2D1	C4S1-2D1
• FE-BX	FE-BX
• FX	FX
• GE-BX	GE-BX
• GE-EX	GE-EX
• LX-10	LX-10
• TEN-GE-LRM	TEN-GE-LRM
• TEN-GE-ZR	TEN-GE-ZR
• VSR2000-3R2	VSR2000-3R2
• AUTOPROV	Autoprovisioning
• CWDM-40KM	CWDM 40 kilometers.
• CX	Reach CX
• CX1	Reach CX1
• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2

• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• P1I1-2D1	Long haul 10G Ethernet with 1310 nm wavelength
• P1L1-1D2	Longhaul 2.5G Ethernet with 1550 nm wavelength
• P1L1-2D2	Long haul 10G Ethernet with 1550 nm wavelength
• P1S1-1D1	Shorthaul 2.5G Ethernet with 1310 nm wavelength
• P1S1-2D1	Short haul 10G Ethernet in 1310 nm wavelength
• SC	Reach SC
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• TEN-GE-ER	10 GE extended range
• TEN-GE-LR	10 GE long range
• TEN-GE-SR	10 GE short range
• ULH	Reach ULH
• VSR	Reach VSR
• VX	Reach VX
• ZX	Reach ZX
<ILOSS>	(Optional) Insertion loss expressed in dBm. ILOSS applies to output ports only on the following cards: OSCM, OSC-CSM, OPT-PRE, OPT-BST, 4MD-xx.x, 32MUX, 32DMX, AD-1C-xx.x, AD-2C-xx.x, AD-4C-xx.x, AD-1B-xx.x, and AD-4B-xx.x. ILOSS is a string.

<VOAATTN>	(Optional) The transit power attenuation for the VOA expressed in dBm. The range is –24.0 to +2.0 dBm for the MXP_2.5G_10G and TXP_MR_10G cards. VOAATTN is a string.
<VOAPWR>	(Optional) The value of calibrated output power that the VOA is going to set as a result of its attenuation. Applicable only to the following cards: OSCM, OSC-CSM, OPT-PRE, OPT-BST, 4MD-xx.x, 32MUX, 32DMX, AD-1C-xx.x, AD-2C-xx.x, AD-4C-xx.x, AD-1B-xx.x, and AD-4B-xx.x. VOAPWR is a float and a string.
<VOAREFATTN>	(Optional) The value of reference attenuation for the VOA. Applicable only to the following cards: OSCM, OSC-CSM, OPT-PRE, OPT-BST, 4MD-xx.x, 32MUX, 32DMX, AD-1C-xx.x, AD-2C-xx.x, AD-4C-xx.x, AD-1B-xx.x, and AD-4B-xx.x. VOAREFATTN is a float and a string.
<VOAREFPWR>	(Optional) The value of reference output power that the VOA is going to set as a result of its attenuation. Applicable only to the following cards: OSCM, OSC-CSM, OPT-PRE, OPT-BST, 4MD-xx.x, 32MUX, 32DMX, AD-1C-xx.x, AD-2C-xx.x, AD-4C-xx.x, AD-1B-xx.x, and AD-4B-xx.x. VOAREFPWR is a float and a string.
<REFOPWR>	(Optional) The value of the calculated optical power expected for the output line added to the calibration value which equals the total expected output power. Applicable only to the following cards: OSCM, OSC-CSM, OPT-PRE, OPT-BST, 4MD-xx.x, 32MUX, 32DMX, AD-1C-xx.x, AD-2C-xx.x, AD-4C-xx.x, AD-1B-xx.x, and AD-4B-xx.x. REFOPWR is a float and a string.
<PORTNAME>	(Optional) Port name. PORTNAME is a string.
<FCS>	(Optional) First Circuit Startup. An automatic channel startup that operates the VOA when the light is detected on the ingress port.
• Y	Automatic Channel startup enabled.
• N	Automatic Channel startup disabled.
<PROACTPROTECTION>	To enable or disable the protective protection on the card.
<TRIGGERTH>	Specifies the trigger threshold value for Proactive Protection Regen. The parameter type is TRIGGER_THRESHOLD.
• 1E-2	Trigger threshold is 1E-2.
• 1E-3	Trigger threshold is 1E-3.
• 1E-4	Trigger threshold is 1E-4.
• 1E-5	Trigger threshold is 1E-5

• 1E-6	Trigger threshold is 1E-6.
• 1E-7	Trigger threshold is 1E-7.
• 2E-2	Trigger threshold is 2E-2.
• 2E-3	Trigger threshold is 2E-3.
• 2E-4	Trigger threshold is 2E-4
• 2E-5	Trigger threshold is 2E-5
• 2E-6	Trigger threshold is 2E-6.
• 2E-7	Trigger threshold is 2E-7.
• 3E-2	Trigger threshold is 3E-2.
• 3E-3	Trigger threshold is 3E-3.
• 3E-4	Trigger threshold is 3E-4.
• 3E-5	Trigger threshold is 3E-5.
• 3E-6	Trigger threshold is 3E-6.
• 3E-7	Trigger threshold is 4E-7.
• 4E-2	Trigger threshold is 4E-2.
• 4E-3	Trigger threshold is 4E-3.
• 4E-4	Trigger threshold is 4E-4.
• 4E-5	Trigger threshold is 4E-5.
• 4E-6	Trigger threshold is 4E-6.
• 4E-7	Trigger threshold is 4E-7.
• 5E-2	Trigger threshold is 5E-2.
• 5E-3	Trigger threshold is 5E-3.
• 5E-4	Trigger threshold is 5E-4.
• 5E-5	Trigger threshold is 5E-5.
• 5E-6	Trigger threshold is 5E-6.
• 5E-7	Trigger threshold is 5E-7.
• 6E-2	Trigger threshold is 6E-2.
• 6E-3	Trigger threshold is 6E-3.

• 6E-4	Trigger threshold is 6E-4.
• 6E-5	Trigger threshold is 6E-5
• 6E-6	Trigger threshold is 6E-6.
• 6E-7	Trigger threshold is 6E-7.
• 7E-2	Trigger threshold is 7E-2.
• 7E-3	Trigger threshold is 7E-3.
• 7E-4	Trigger threshold is 7E-4.
• 7E-5	Trigger threshold is 7E-5
• 7E-6	Trigger threshold is 7E-6.
• 7E-7	Trigger threshold is 7E-7.
• 8E-2	Trigger threshold is 8E-2.
• 8E-3	Trigger threshold is 8E-3.
• 8E-4	Trigger threshold is 8E-4.
• 8E-5	Trigger threshold is 8E-5
• 8E-6	Trigger threshold is 8E-6.
• 8E-7	Trigger threshold is 8E-7.
• 9E-2	Trigger threshold is 9E-2.
• 9E-3	Trigger threshold is 9E-3.
• 9E-4	Trigger threshold is 9E-4.
• 9E-5	Trigger threshold is 9E-5
• 9E-6	Trigger threshold is 9E-6.
• 9E-7	Trigger threshold is 9E-7.
<REVERTTH>	Specifies the revert threshold for Proactive Protection Regen. The parameter type is RVRTTH.
• 1E-3	Revert threshold is 1E-3.
• 1E-4	Revert threshold is 1E-4.
• 1E-5	Revert threshold is 1E-5
• 1E-6	Revert threshold is 1E-6.

• 1E-7	Revert threshold is 1E-7.
• 2E-3	Revert threshold is 2E-3.
• 2E-4	Revert threshold is 2E-4.
• 2E-5	Revert threshold is 2E-5
• 2E-6	Revert threshold is 2E-6.
• 2E-7	Revert threshold is 2E-7.
• 3E-3	Revert threshold is 3E-3.
• 3E-4	Revert threshold is 3E-4.
• 3E-6	Revert threshold is 3E-6
• 3E-7	Revert threshold is 4E-7.
• 4E-3	Revert threshold is 4E-4.
• 4E-4	Revert threshold is 4E-4.
• 4E-5	Revert threshold is 4E-5
• 4E-6	Revert threshold is 4E-6.
• 4E-7	Revert threshold is 4E-7.
• 5E-3	Revert threshold is 5E-3.
• 5E-4	Revert threshold is 5E-4.
• 5E-5	Revert threshold is 5E-5
• 5E-6	Revert threshold is 5E-6.
• 5E-7	Revert threshold is 5E-7.
• 5E-8	Revert threshold is 5E-8.
• 6E-3	Revert threshold is 6E-3.
• 6E-4	Revert threshold is 6E-4.
• 6E-5	Revert threshold is 6E-5
• 6E-6	Revert threshold is 6E-6.
• 6E-7	Revert threshold is 6E-7.
• 6E-8	Revert threshold is 6E-8.
• 7E-3	Revert threshold is 7E-3.

• 7E-4	Revert threshold is 7E-4.
• 7E-5	Revert threshold is 7E-5
• 7E-6	Revert threshold is 7E-6.
• 7E-7	Revert threshold is 7E-7.
• 7E-8	Revert threshold is 7E-8.
• 8E-3	Revert threshold is 8E-3.
• 8E-4	Revert threshold is 8E-4.
• 8E-5	Revert threshold is 8E-5
• 8E-6	Revert threshold is 8E-6.
• 8E-7	Revert threshold is 8E-7.
• 8E-8	Revert threshold is 8E-8.
• 9E-3	Revert threshold is 9E-3.
• 9E-4	Revert threshold is 9E-4.
• 9E-5	Revert threshold is 9E-5
• 9E-6	Revert threshold is 9E-6.
• 9E-7	Revert threshold is 9E-7.
• 9E-8	Revert threshold is 9E-8.
<CALOPWR>	(Optional) The value of the calibrated optical power expected for the line added to the calculated value, which equals the total expected output power. Expressed in dBm. Defaults to 0 dBm. CALOPWR is a float.
<CHPOWERFLG>	(Optional) Parameter status flag indicating the state of the channel power.
<ADDOPWR>	(Optional) The value of the ADD optical power to an ADD port of the WSS card. The ADDOPWR is a float.
<GCC>	Identifies the generic communication channel (GCC) connection of the port.
• Y	GCC can be utilized.
• N	GCC cannot be utilized.

<GCCRATE>	(Optional) The data rate of the GCC traffic. The default is 192 Kbps. For MXP_2.5G_10G and TXP_MR_10G cards, this applies only to the DWDM port. The parameter type is GCCRATE, which is the data rate of the GCC traffic.
• 192K	192 Kbps
• 400K	400 Kbps
• 576K	576 Kbps
<DWRAP>	(Optional) The ITU-T G.709 monitoring digital wrapper. It is either on or off. The system default is ON. For MXP_2.5G_10G and TXP_MR_10G cards, this applies only to the DWDM port. The parameter type is ON_OFF (disable or enable an attribute). To enable ITU-T G.709 monitoring, there should be no GCC on the DWDM port and the payload (in which the card is configured) should not be UNFRAMED. To disable ITU-T G.709 monitoring, there should be no GCC on the DWDM port, the FEC should be turned to off, there should be no overhead circuit created on the DWDM port, and none of the client ports on the card should be part of a Y-cable protection group (muxponder only).
• N	Disable an attribute.
• Y	Enable an attribute.
<PAYLOADMAP>	(Optional) The type of payload mapping. It can be enabled only if ITU-T G.709 monitoring is turned ON and FEC is enabled. The parameter type is PAYLOAD_MAPPING, which is the payload mapping mode.
• ASYNCH	Asynchronous mapping mode
• ODU	ODU multiplex structure mode
• SYNCH	Synchronous mapping mode
• NOOPU2FIXEDSTUFF	Mapping with no FIXEDSTUFF
<FEC>	(Optional) Forward error correction. It can be enabled only if ITU-T G.709 monitoring is turned ON. It is either off or enabled in standard or enhanced mode. The system default is standard FEC enabled. The FEC level PM and thresholds apply if the FEC is turned ON. The parameter type is FEC_MODE, which specifies the type of forward error correction.
• ENH	Enhanced FEC is enabled.
• ENH-I4	Enhanced FEC 1.4 is enabled.
• ENH-I7	Enhanced FEC 1.7 is enabled.

• ENH-20	20 % Enhanced FEC supported on fixed trunk port of 100G-LC-C card.
• HG-7	High Gain 7% FEC.
• OFF	FEC is disabled.
• STD	Standard FEC is enabled.
• SD-20	
• SD-7	
<PEERID>	Indicates the peer trunk facility of the regeneration group on the OTU2-XP card. Accessed using the CHAN AID.
<REGENNAME>	Indicates the name of a regeneration group. Applicable only to DWDM flavored cards, which support regeneration group. Regenname is a string. The default value is "NULL".
<PORTMODE>	Describes the termination mode of each interface on the OTU2-XP card.
• DWDM-LINE	Line terminating mode.
• DWDM-SECTION	Section terminating mode.
• DWDM-TRANS-AIS	Transparent mode AIS.
• DWDM-TRANS-SQUELCH	Transparent mode squelch.
• 10GLANWAN-SQUELCH	10G LAN to WAN Squelch.
<ODUTRANSMODE>	To configure the "ODUk OH" transparency on the OTU2-XP card.
• CISCO-EXT	Cisco Extended. When the Cisco Extended configuration is selected, two bytes of the ODU layer is terminated to guarantee the interoperability with the older Transponder/Muxponder cards.
• TRANS-STD	Transparent Standard Use. The transponder, behaving as a regenerator, terminates the OUT layer and is transparent to the ODU layer. Also in this case the FEC-MISM (FEC Mismatch) alarm is not generated.
<ERRORDECORRELATOR>	Indicates the presence of the MLSE modules on the card. This applies only to TXP_MR_10EX_C, MXP_2.5G_10EX_C, and MXP_MR_10DMEX_C cards
• Y	Indicates that the MLSE module is enabled on the card.
• N	Indicates that the MLSE module is disabled on the card.

<OVRCLK>	Indicates whether the optical trunk is over-clocked or not. It can be Y or N. The default is N.
• Y	On
• N	Off
OTU1F	
OTU2F	
OTU3E1	
OTU3E2	
• DQPSK	Indicates the D-QPSK modulation format.
• QPSK	Indicates the QPSK modulation format.
<RXWLEN>	The RX wavelength. It is applicable in unidirectional regeneration mode of a muxponder card. In this case the RX wavelength can be different from the nominal TX wavelength (EXPWLEN). It can be any valid DWDM wavelength value. The default value is USE-TWL1.
<OSNR>	Measure of the optical signal to noise ration
<PMD>	Measure of the polarization mode value, an average of the 2 polarization modes.
<CHROMDISP>	Alarm raised when receiver fails in compensating the excessive PMD.
<PST_PSTQ>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by the PST and PSTQ.
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SQUELCHMODE>	Shuts down the far-end laser in response to certain defects.

• DISABLE	Squelch is disabled.
• AIS	AIS
• SQUELCH	Squelch is enabled.
• NONE	No Squelch.
• ODU-AIS	ODU AIS.
• G-AIS	G-AIS
• NOS	NOS
• LF	
<FECALARMSUPRESS>	FECALARMSUPRESS
<CDLOW>	(Optional) Lower limit of CD working range.
<CDHIGH>	(Optional) Upper limit of CD working range.
<SOPMDCURR>	(Optional) Indicates the current value of second order polarization dispersion mode on the fixed trunk of 10x10G-LC card.
<PCRCURR>	(Optional) Indicates the current value of polarization change rate on fixed trunk of 10x10G-LC card.
<PDLCURR>	(Optional) Indicates the current value of polarization dependent loss on the fixed trunk of 10x10G-LC card.
<VOATXPOWER>	(Optional) VOA Transmit Power. The parameter type is VOATXPOWER, indicates the VOA transmit power on the fixed trunk.
<TXLASERSHUTDN>	(Optional) Transmit Laser Shut down. The parameter type is TXLASERSHUTDN indicates the transmit laser shut down status as Y or N.
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance

• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped
<LPBKTYPE>	
• FAC-DROP	
• TER-DROP	
• BACKPLANE-TER-DROP	
• BACKPLANE-FAC-DROP	
<ALARMSUPPRESS>	It is an enum which has the values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress
<PSM>	
• ENABLE	Enable PSM Value
• DISABLE	Disable PSM Value
• NA	Not Applicable

RTRV-OCHCC

The Retrieve Optical Channel Client Connection (RTRV-OCHCC) command retrieves the OCH client connection provisioning information.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-OCHCC:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-OCHCC:VA454-22:FAC-2-1-1:116;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity. The default is IS.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ. The default is AINS.
• AINS	Automatic in-service

Output Format

SID DATE TIME
M CTAG COMPLD

"<AID>::[<PAYLOAD>],[<CKTID>],[<ODU1START>],[<ODU1END>],[<TSSTART>],[<TSEND>],[<ODU0START>],[<ODU0END>], [<SERVICEID>], [NODEID]:<PST>,[<SST>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"VFAC-3-1-1::PAYLOAD=GIGE,ODU1START=1,ODU1END=1,ODU0START=1,ODU0END=1:IS-NR,"
;

Output Parameters

<AID>	Access identifier from the "28.8 CHANNEL" section on page 28-23.

<PAYLOAD>	Indicates the payload of the connection which is equivalent to the type of the payload configured on the facility port where the connection is originated or terminated. Parameter type is MOD1PAYLOAD.
• 100GIGE	100 Gigabit Ethernet.
• 10GFC	10-Gigabit Fibre Channel payload
• 10GFICON	10-Gigabit fiber connectivity payload
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 1GISC3	1-Gigabit ISC3 compatible
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 2GISC3	2-Gigabit ISC3 compatible
• 3GVIDEO	3G-SDI Video payload
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• D1VIDEO	D1Video payload
• DV6000	DV6000 payload
• EC1	EC1 payload
• ESCON	ESCON payload
• ETRCLO	ETRCLO payload
• GIGE	1G Ethernet payload
• HDSDI	1.5G HD-SDI video payload
• HDTV	HDTV payload
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload

• ISC3STP2G	ISC-3 STP 2G video payload
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC12	OC12 payload
• OC192	OC192 payload
• OC3	OC3 payload
• OC48	OC48 payload
• OC768	OC768 payload
• ODU0	Optical Data Unit Level 0
• OTU1	Optical Transport Unit Level 1
• OTU2	Optical Transport Unit Level 2
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• SDSDI	270M SDI video payload.
• T3	DS3 payload
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null the CKTID field will not be displayed.
<ODU1START>	ODU1 Start
<ODU1END>	ODU1 End
<TSSTART>	Time Slot Start
<TSEND>	Time Slot End
<ODU0START>	(Optional) ODU0 Start
<ODU0END>	(Optional) ODU0 End
<PSTPSTQ>	Service state. The parameter is PST_PSTQ, which provides the service state of the entity described by the PST and PSTQ.
• Unlocked-Enabled	In service and normal
• Unlocked-Disabled	Out of service and autonomous
• Locked-Disabled	Out of service, autonomous and management
• Locked-Enabled	Out of service and management

RTRV-OCHNC

The Retrieve Optical Channel Network Connection (RTRV-OCHNC) command retrieves the OCH wavelength connection provisioning information.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-OCHNC:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-OCHNC:VA454-22:CHANWL-1-3-TX-1530.33:116;

Input Parameters

<AID>	Access identifier from the "28.8 CHANNEL" section on page 28-23.

Output Format

(For legacy package)

SID DATE TIME
M CTAG COMPLD
"<SRC>,<DST>:<WCT>:[CKTID=<CKTID>]::<PSTPSTQ>"
;

(For flex package)

SID DATE TIME
M CTAG COMPLD

"<AIDSRC>,<AIDDST>:<WCT>:[<CKTID>],[<WLOPWR>],[<OPWR>],[<VOAATTN>],[<SERVICEID>],[<NODEID>]
:<PST>,[<SST>]" ;

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001 COMPLD
    “CHANWL-1-3-TX-1530.33,LINEWL-4-1-RX-1530.33:1WAY:CKTID=\"OCHNC-1\":IS-NR”
;
```

Output Parameters

<SRC>	Source access identifier from the “28.8 CHANNEL” section on page 28-23. In 2-way wavelength connection sources both directions need to be indicated.
<DST>	Destination access identifier from the “28.21 LINEWL” section on page 28-50. In 2-way wavelength connection sources both directions need to be indicated.
<WCT>	Wavelength connection type. The parameter type is WCT. The default is 1WAY.
• 1WAY	A unidirectional wavelength connection for one specified ring direction.
• 2WAY	A bidirectional wavelength connection for both the ring directions.
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null the CKTID field will not be displayed.
<WLOPWR>	The value of calibrated output power that the VOA is going to set as a result of its attenuation. WLOPWR is a float.
<OPWR>	Optical power.
<VOAATTN>	The value of calibrated attenuation for the VOA expressed in dBm. The range is 0.0 to +30.0. VOAATTN is a float.
<FREQ>	Optical wavelength
<WIDTH>	Width
<DSPWROFS>	Down stream power offset.
<USPWROFS>	Up stream power offset.
<PSTPSTQ>	Service state. The parameter is PST_PSTQ, which provides the service state of the entity described by the PST and PSTQ.
• Unlocked-Enabled	In service and normal
• Unlocked-Disabled	Out of service and autonomous
• Locked-Disabled	Out of service, autonomous and management
• Locked-Enabled	Out of service and management

RTRV-ODU

The Retrieve Optical Data Unit (RTRV-ODU) command retrieves the list of ODU entities.

Usage Guidelines

-

Category

DWDM

Security

Retrieve

Input Format

RTRV-ODU::<AID>:<CTAG>:::BANDWIDTH=<bandwidth>

Input Example

Input Parameters

<AID>	AID of the ODU2. ALL AID is also supported. AID is Mandatory.
BANDWIDTH	ODU Level (ODU2E). ENUM is Mandatory.

Output Format

Output Example

Output Parameters

<AID>	ODU0 from the "28.1 ALL" section on page 28-1.

RTRV-ODU0

The Retrieve Optical Data Unit Level 0 (RTRV-ODU0) command retrieves the list of ODU0 entities on the AR-XPE card.

Usage Guidelines

- This command is applicable only for AR-XPE card.
- When a static operational mode is created on the AR-XPE card, and if the port is provisioned with GIGE or 1GFC facility, ODU0's will be retrieved by RTRV-ODU0 command even when the OCHCC circuit is not created.
- When a dynamic operational mode is created on the AR-XPE card, the ODU0's are retrieved only when the OCHCC circuits are created on GIGE or 1GFC facility.

Category

DWDM

Security

Retrieve

Input Format

RTRV-ODU0:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-ODU0::ODU0-2-2-1-1-1:1;

Input Parameters

<AID>	ODU0 from the "28.1 ALL" section on page 28-1.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "ODU0-2-2-1-1-1"
;
```

Output Parameters

<AID>	ODU0 from the "28.1 ALL" section on page 28-1.

RTRV-OMS

The Retrieve Optical Multiplex Section (RTRV-OMS) command retrieves the attributes (service parameters) and state of an OMS facility.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-OMS:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-OMS:PENNGROVE:BAND-6-1-RX:236;

Input Parameters

	<AID>	Access identifier from the "28.4 BAND" section on page 28-21.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::RDIRN=<RDIRN>,OPTYPE=<OPTICALPORTTYPE>,[OPWR=<POWER>],
EXPBAND=<EXPBAND>,[ACTBAND=<ACTBAND>],[ILOSS=<ILOSS>],
[VOAMODE=<VOAMODE>],[VOAATTN=<VOAATTN>],[VOAPWR=<VOAPWR>],
[VOAREFATTN=<VOAREFATTN>],[VOAREFPWR=<VOAREFPWR>],
[REFOPWR=<REFOPWR>],[CALOPWR=<CALOPWR>],[CHPOWER=<CHPOWER>],
[NAME=<NAME>]:<PST_PSTQ>,[<SSTQ>]"
;

Output Example

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,NAME=\“OMS PORT\”:OOS-AU,AINS”
;

Output Parameters

<AID>	Access identifier from the “28.8 CHANNEL” section on page 28-23.
<RDIRN>	Ring directionality of the optical line. The parameter type is RDIRN_MODE, which is the optical ring directionality.
• E-W	The direction of the signal is from east to west (clockwise).
• W-E	The direction of the signal is from west to east (counterclockwise).
<OPTICALPORTTYPE>	The optical port type. The parameter type is OPTICAL_PORT_TYPE, which qualifies the optical port of a card.
• ADD	The signal is added to the port.
• COM	Common Port
• DROP	The signal is dropped from the port.
• EAD	Express/Add/Drop port
• IN-ASE	Logical port on Raman CTP card.
• IN-COM	COM channels (without an OSC) that continue the signal from the previous card.
• IN-DC	Input dispersion compensation unit (DCU) port.
• IN-DEG	IN-DEG optical port type
• IN-DFB	Rx managed port on Raman CTP card used for span continuity check.
• IN-EXP	Express channel that continues the signal from the previous card.
• IN-LINE	All the channels that continue the signal from the previous card.
• IN-OSC	OSC channel that continues the signal from the previous card.
• IN-UPG	IN-UPG optical port type
• OUT-COM	COM channels (without an OSC) that continue the signal to the next card.

• OUT-DC	Output DCU port.
• OUT-DEG	OUT-DEG optical port type
• OUT-DFB	Tx managed port on Raman CTP card used for span continuity check.
• OUT-EXP	Express channel that continues the signal to the next card.
• OUT-LINE	All the channels that continue the signal to the next card.
• OUT-OSC	OSC channel that continue the signal to the next card.
• OUT-EDRA-PUMP	OUT-EDRA-PUMP optical port type
• OUT-UPG	OUT-UPG optical port type
• PORT	PORT optical port type
• IN-VEXP	
• OUT-VEXP	
<POWER>	(Optional) The optical power measured at this port. It can be the input or output power according to port type. POWER is a string.
<EXPBAND>	The expected value of the band for this port. The parameter type is OPTICAL_BAND (optical band).
• 1530.33 to 1532.68	Band 1
• 1534.25 to 1536.61	Band 2
• 1538.19 to 1540.56	Band 3
• 1542.14 to 1544.53	Band 4
• 1546.12 to 1548.51	Band 5
• 1550.12 to 1552.52	Band 6
• 1554.13 to 1556.55	Band 7
• 1558.17 to 1560.61	Band 8
• USE-DEFAULT	This band is not yet configured/retrieved from unit.
<ACTBAND>	(Optional) Identifies the manufacturing optical band (group of four contiguous wavelengths) for this port. The parameter type is OPTICAL_BAND (optical band).
• 1530.33 to 1532.68	Band 1
• 1534.25 to 1536.61	Band 2

• 1538.19 to 1540.56	Band 3
• 1542.14 to 1544.53	Band 4
• 1546.12 to 1548.51	Band 5
• 1550.12 to 1552.52	Band 6
• 1554.13 to 1556.55	Band 7
• 1558.17 to 1560.61	Band 8
• USE-DEFAULT	This band is not yet configured/retrieved from unit.
<ILOSS>	(Optional) Insertion loss expressed in dBm. ILOSS applies to output ports only.
<VOAMODE>	(Optional) The working control mode of the VOA. The parameter type is VOA_CNTR_MODE, which defines the VOA control mode.
• ATTN	VOA has a fixed attenuation.
• POWER	VOA controls the attenuation to obtain a fixed output power.
<VOAATTN>	(Optional) The value of calibrated attenuation for the VOA. VOAATTN is a float and a string.
<VOAPWR>	(Optional) The value of calibrated output power that the VOA is going to set as a result of its attenuation. VOAPWR is a float and a string.
<VOAREFATTN>	(Optional) The value of reference attenuation for the VOA. VOAREFATTN is a float and a string.
<VOAREFPWR>	(Optional) The value of reference output power that the VOA is going to set as a result of its attenuation. VOAREFPWR is a float and a string.
<REFOPWR>	(Optional) The value of the calculated optical power expected for the output line added to the calibration value which equals the total expected output power. REFOPWR is a float and a string.
<CALOPWR>	(Optional) The value of the calibrated optical power expected for the output added to the calculated value, which equals the total expected output power. Expressed in dBm. Defaults to 0 dBm. CALOPWR is a float and a string.
<CHPOWER>	(Optional) The per-channel optical power. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<NAME>	(Optional) Facility name. NAME is a string.

<PST_PSTQ>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ).
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RTRV-OPM

The Retrieve Optical Monitoring Parameter (RTRV-OPM) command retrieves the optical power monitoring parameters present at the OCH layer in a reconfigurable optical add/drop multiplexing (ROADM) node.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-OPM:[<TID>]:[<AID>]:<CTAG>[::::];

Input Example

RTRV-OPM:VA454-22:OPM-5-1530.33:116;

Input Parameters

<AID>	Access identifier from the "28.23 OPM" section on page 28-54.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[POWEROUT=<POWEROUT>],[POWERADD=<POWERADD>],
[POWERPT=<POWERPT>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"OPM-5-1530.33::POWEROUT=9.0,POWERADD=10.0,POWERPT=11.0:"
;

Output Parameters

<AID>	Access identifier from the "28.23 OPM" section on page 28-54.
<POWEROUT>	(Optional) The value of the output power associated to the add or pass-through channel port of a 32WSS card. POWEROUT is a float.
<POWERADD>	(Optional) The value of the input power associated to the add channel port of a 32WSS card. POWERADD is mutually exclusive with the POWERPT parameter. POWERADD is a float.
<POWERRPT>	(Optional) The value of the input power associated to the pass-through channel port of a 32WSS card. POWERPT is mutually exclusive with the POWERADD parameter. POWERPT is a float.

RTRV-OPMODE

The Retrieve Operation Mode (RTRV-OPMODE) command retrieves the operation modes created on that node. In Trunkport list, the first port number indicates the working port and second port number indicates the protect port number.

Usage Guidelines

- In Low-latency and RGN-10G modes, one of the port is represented as Client and the other as Trunk while both are represented as trunks on CTC.
- OPMODE parameter will be retrieved in the command response for all the opmodes on AR-MXP, AR-XP, AR-XPE, 10x10G-LC, 100G-LC-C and CFP-LC Cards.
- PEERSLOTS parameter will be retrieved in the command response for dual card operating modes on only 10x10G-LC, 100G-LC-C, and CFP-LC cards. PEERSLOTS parameter is of syntax SLOT-<SLOTNO>.
- Following are the mandatory parameters for the operating modes on the 10x10G-LC, 100G-LC-C and CFP-LC cards:
  - OPMODE and TRUNKPORT parameters for TXP-10G, RGN-10G, and LOW-LATENCY operating modes on the 10x10G-LC card.
  - OPMODE parameter for TXP-100G and RGN-100G operating modes on the 100G-LC-C card; CFP-MXP and CFP-TXP operating modes on the CFP-LC; MXP-10X10G card mode on the 10x10G-LC card.

Category

DWDM

Security

Provisioning

Input Format

RTRV-OPMODE:[<TID>]:<aid>:<CTAG>;

Input Example

RTRV-OPMODE::SLOT-2:1;

Input Parameters

<AID>	Access identifier from the “28.15 EQPT” section on page 28-39.

Output Format

SID DATE TIME

M CTAG COMPLD

;

<AID>,[<OPMODE>],[<PEERSLOTS>],[<TRUNKPORTS>],[<CLIENTPORTS>],[<PEER-TRUNKS>],[<PEERCLIENTS>],[<SUBOPMODE>],[<RATE>],[<CTMAP>]

Output Example

100g 2012-05-22 12:39:49

M 1 COMPLD

"SLOT-2,OPMODE=CFP-TXP,PEERSLOTS=SLOT-3,"

"SLOT-3,OPMODE=CFP-TXP,PEERSLOTS=SLOT-5&SLOT-2,CLIENTPORTS=1&2,"

"SLOT-5,OPMODE=CFP-TXP,PEERSLOTS=SLOT-3,"

Parameter	Description
<AID>	SLOT Access Identifier
<OPMODE>	Specifies the oprating mode that exists on CLIENTPORTS and TRUNKPORTS on that RATE and CTMAP
• MXP-10x10G	Muxponder mode between 10X10G-LC and 100G-LC-C card.
• RGN-100G	Regenator mode between two 100G-LC-C cards.
• RGN-10G	Ginsu regerator mode among SFP+ ports on 10X10G-LC card.
• CFP-MXP	Muxponder mode between one CFP-LC and one 100G-LC-C cards.
• CFP-TXP	Transponder mode among SFP+ ports on 10X10G-LC card.
• TXP-10G	Transponder mode among SFP+ ports on 10X10G-LC card.
• TXP-MR	Unprotected Multi-rate transponder
• TXPP-MR	Protected Muti-rate Transponder
• MXP-DME	Unprotected Data Muxponder
• MXPP-DME	Protected Data Muxponder
• MXP-MR-2.5G	Unprotected Multi-Rate Muxponder
• MXPP-MR-2.5G	Protected Multi-Rate Muxponder
• MXP-4x2.5-10G	OC48/OTU1 Unprotected Muxponder
• MXPP-4x2.5-10G	OC48/OTU1 Protected Muxponder
• MXP-VDC-10G	Video Muxponder (without Drop & Continue)

• LOW-LATENCY	Low latency opmode is supported only on 10x10G-LC card.
• MXPP-MR-S	Operating mode on AR-MXP, AR-XP, or AR-XPE card.
• MXP-MR-S	Operating mode on AR-MXP, AR-XP, or AR-XPE card.
• MXP-2x40G	Operating mode on AR-MXP, AR-XP, or AR-XPE card.
• TXPP-10G	
• MXP-1S-HIGH	
<PEERSLOTS>	The slot number of the peer card (100G-LC-C) of the CFP-LC card, which is part of the CFP-TXP and CFP-MXP modes, specified by the SLOT<SLOTNO>.
<TRUNKPORTS>	Specifies the trunk port(s) which are part of that operating mode
<CLIENTPORTS>	Specifies the client port(s) which are part of that operating mode
<CTMAP>	The client to trunk mapping that exists on the ports in that operating mode.
<RATE>	The rate on which the operating mode is created
• HIGH	High rate (>5G)
• LOW	Low rate (<5G)
• <SUBOPMODE>	
• OPM-100G	
• OPM-10x10G	
• OPM-1x40G-6x10G	
• OPM-2x40G	
• OPM-2x40G-2x10G	
• OPM-NO-SUBMODE	

Output Parameters

RTRV-OPMOD-PTSYS

The Retrieve Operation Mode Packet Transport System (RTRV-OPMOD-PTSYS) command retrieves the operation mode of the CPT 50 panel.

Usage Guidelines

This command is valid for PTSYS. Retrieves the operation mode of the PTSYS.

Category

Equipment

Security

Retrieve

Input Format

RTRV-OPMOD-PTSYS:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-OPMOD-PTSYS::ALL:1;

Input Parameters

<AID>	PTSYS AID. Access identifier from the "28.15 EQPT" section on page 28-39.

Output Format

SID DATE TIME
M CTAG COMPLD
"<PTSYS AID>:<MODE>";

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"PTSYS-1:NMS";

Parameter	Description
<AID>	AID of the CPT 50 panel for which the operation mode is to be retrieved.
<OPMODE>	Operation mode of the PTSYSTEM.
• NMS	TCP IPC mode.
• IOS	IPC mode.

RTRV-OPMPWR

Description

The Retrieve Optical Monitoring Parameter (RTRV-OPM) command retrieves the optical powermonitoring parameters present at the OTS layer in a reconfigurable OADM (ROADM) node.
This command is applicable only for FLEX platform

Usage Guidelines

- None

Category

NCS

Security

Maintenance

Input Format

RTRV-OPMPWR:[<TID>]:<aid>:<CTAG>[::::];

Input Parameters

Parameter	Description
AID	AID used to identify OTS port for a FLEX equipment

Output Format

SID DATE TIME
M CTAG COMPLD
AID:[WLEN=<wlen>],[OPMPWR=<OPMPWR>] [:];

Output Example

>rtrv-opmpwr::all:a;

NE123 2014-08-22 03:17:16
M a COMPLD
"LINE-2-1-RX:WLEN=195800.00- 0.50 (WV_1531_12),OPMPWR=10.0"

"LINE-2-1-RX:WLEN=195900.00- 0.50 (WV_1530_33),OPMPWR=20.0"
"LINE-2-1-RX:WLEN=195800.00- 0.50 (WV_1531_12),OPMPWR=10.0"

Output Parameters

Parameter	Description
AID	AID used to identify OTS port for a FLEX equipment
WLEN	Wavelength of the port
OPMPWR	Value of the OPM Power for a OTS Port for a FLEX Equipment

RTRV-OTS

The Retrieve Optical Transport System (RTRV-OTS) command retrieves the attributes (service parameters) and state of an OTS facility.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-OTS:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-OTS:PENNGROVE:LINE-6-1-RX:236;

Input Parameters

<AID>	Access identifier from the "28.20 LINE" section on page 28-46.

Output Format

SID DATE TIME
M CTAG COMPLD

<AID>:,,[<ROLE>],[<STATUS>]:<OPTICALPORTTYPE>,[<POWER>],[<OSCPOWER>],[<ILOSS>],[<VOAMODE>],[<VOAATTN>],[<VOAPWR>],[<VOAREFATTN>],[<VOAREFPWR>],[<OSRI>],[<AMPLMODE>],[<AMPLMODEFLG>],[<CHPOWER>],[<CHPOWERFLG>],[<GAIN>],[<EXPGAIN>],[<EXPGAINFLG>],[<REFOPWR>],[<OFFSET>],[<REFTILT>],[<REFTILTFLG>],[<CALTILT>],[<ASEOPWR>],[<DCULOSS>],[<AWGST>],[<HEATST>],[<NAME>],[<SOAK>],[<SOAKLEFT>],[<WRKCHANNELS>],[<RATIO>],[<RAMAN_STATUS>],[<RAMAN_QUALITY>],[<TIME>],[<DATE>],[<RAMAN_RESTORE_FC>],[<TIME_FC>],[<DATE_FC>],[<TDCU_FG>],[<TDCU_CG>],[<SWSTATE>],[<EXPWLEN>],[<PWRTHRESHOLD>],[<SWITCHPORT>],[<ALARMPROFILENAME>],[<ALARMSUPPRESS>], [<RPDURATION>],[<IFINDEX>][<ATTENUATION>]:<PST>,[<SST>]

Output Example

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,OSRI=Y,
AMPLMODE=GAIN,CHPOWER=-10.0,GAIN=3.0,EXPGAIN=3.0,REFOPWR=10.0,
OFFSET=0.0,REFTILT=3.0,CALTILT=0.0,ASEOPWR=5.0,DCULOSS=1.2,
AWGST=WARM-UP,HEATST=ON,NAME=\"OTS PORT\":OOS-AU,AINS"
;

Output Parameters

<AID>	Access identifier from the "28.20 LINE" section on page 28-46.
<RDIRN>	Ring direction of the optical line. The parameter type is RDIRN_MODE, which is the optical ring direction.
• E-W	The direction of the signal is from east to west (clockwise).
• W-E	The direction of the signal is from west to east (counterclockwise).
<ROLE>	The role the unit is playing in the protection group.
• PROT	The entity is the protection unit in the protection group.
• WORK	The entity is the working unit in the protection group.
<STATUS>	The status of the unit in the protection pair.
• ACT	The entity is the active unit on the shelf

• STBY	The entity is the standby unit on the shelf
<OPTICALPORTTYPE>	The optical port type. The parameter type is OPTICAL_PORT_TYPE, which qualifies the optical port of a card.
• ADD	The signal is added to the port.
• COM	Common port
• DROP	The signal is dropped from the port.
• EAD	Express/Add/Drop port
• IN-ASE	Logical port on Raman CTP card.
• IN-COM	COM channels (without OSC) that continue the signal from the previous card
• IN-DC	Input DCU port
• IN-DEG	IN-DEG optical port type
• IN-DFB	Rx managed port on Raman CTP card used for span continuity check.
• IN-EXP	The express channel that continues the signal from the previous card
• IN-LINE	All the channels that continue the signal from the previous card
• IN-OSC	OSC channel that continues the signal from the previous card
• IN-RAMAN	Input RAMAN line facility
• IN-UPG	IN-UPG optical port type
• OUT-COM	COM channels (without OSC) that continue the signal to the next card
• OUT-DC	Output DCU port.
• OUT-DEG	OUT-DEG optical port type
• OUT-DFB	Tx managed port on Raman CTP card used for span continuity check.
• OUT-EXP	Express channel that continues the signal to the next card
• OUT-LINE	All the channels that continue the signal to the next card
• OUT-OSC	OSC channel that continue the signal to the next card
• OUT-RAMAN	Output RAMAN line facility

• OUT-EDRA-PUMP	OUT-EDRA-PUMP optical port type
• OUT-UPG	OUT-UPG optical port type
• PORT	PORT optical port type
• IN-VEXP	
• OUT-VEXP	
<POWER>	(Optional) The optical power measured at this port. It can be the input or output power according to port type. POWER is a float.
<OSCPWR>	(Optional) The optical power of the OSC channel inside the OTS port.
<ILOSS>	(Optional) Insertion loss.
<VOAMODE>	(Optional) The working control mode of the VOA. The parameter type is VOA_CNTR_MODE, which defines the VOA control mode.
• ATTN	VOA has a fixed attenuation.
• POWER	VOA controls the attenuation to obtain a fixed output power.
<VOAATTN>	(Optional) The value of calibrated attenuation for the VOA. VOAATTN is a float.
<VOAPWR>	(Optional) The value of calibrated output power that the VOA is going to set as a result of its attenuation. VOAPWR is a float.
<VOAREFATTN>	(Optional) The value of reference attenuation for the VOA. VOAREFATTN is a float.
<VOAREFPWR>	(Optional) The value of reference output power that the VOA is going to set as a result of its attenuation. VOAREFPWR is a float.
<OSRI>	(Optional) OSRI enabled or disabled. Present only on a port where the safety is supported. Defaults to off. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<AMPLMODE>	(Optional) The optical amplification control mode. The parameter type is AMPL_MODE, which defines amplifier control mode.
• GAIN	The amplifier always maintains a fixed gain.
• POWER	The amplifier maintains the output power to a fixed value.

<AMPLMODEFLG>	(Optional) Parameter status flag indicating the state of the amplifier control mode.
<CHPOWER>	(Optional) The per channel optical power. Applicable only to amplified OTS ports.
<CHPOWERFLG>	(Optional) Parameter status flag indicating the state of the channel power.
<GAIN>	(Optional) The value of the gain of the amplifier. Defaults to 21 dB for a preamplifier and 20 dB for a booster amplifier.
<EXPGAIN>	(Optional) The expected gain value to be reached from an amplifier when the node is in a DWDM access network. EXPGAIN is a float.
<EXPGAINFLG>	Parameter status flag indicating the state of the expected gain.
<REFOPWR>	(Optional) The value of the calculated optical power expected for the output line added to the calibration value, which equals the total expected output power. REFOPWR is a float.
<OFFSET>	(Optional) The value of the calibrated optical power expected for the output line, which is added to the calculated value to have the total expected output power. OFFSET is a float.
<REFTILT>	(Optional) The calculated tilt value to be added to the user provided calibration value. REFTILT is a float.
<REFTILTFLG>	Parameter status flag indicating the state of the calculated tilt.
<CALTILT>	(Optional) The amplifier calibration tilt offset to be added to the calculated reference value. CALTILT is a float.
<ASEOPWR>	(Optional) The value of the calibrated optical power expected for the output line which is provided by the user, added to the calculated value to have the total expected output power. ASEOPWR is a float.
<DCULOSS>	(Optional) The value of insertion loss associated to DCU in between the two stages of a preamplifier unit. DCULOSS is a float.
<AWGST>	(Optional) The status assumed by arrayed waveguide grating (AWG). The parameter value is AWG_STATUS, which is the AWG status list.
• ON	The AWG is on.
• WARM-UP	The AWG is warming up.
<HEATST>	(Optional) The status assumed by the heater. The parameter type is HEATER_STATUS, which is the heater status list.

• OFF	The heater is off.
• ON	The heater is on.
<NAME>	(Optional) Port name. NAME is a string.
<SOAK>	(Optional) Locked-Automatic In Service to Unlocked transition soak time as measured in 15-minute intervals. SOAK is an integer. Default value is 32. It can be set through ED command.
<SOAKLEFT>	(Optional) Time remaining for the transition from Locked-AutomaticInService to Unlocked measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. Rules for SOAKLEFT are as follows: • When the port is in Locked;Locked,Maintenance; or Unlocked state, the parameter is not displayed. • When the port is in Locked,AutomaticInService state but the countdown has not started due to a fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in Locked,AutomaticInService state and the countdown has started, the value will be shown in HH-MM format.
<WRKCHANNELS>	Number of working OCHNC channels carried by the facility.
<RATIO>	Indicates the Raman Pump Power ratio.
<RAMAN_STATUS>	Indicates the Raman setup state.
• NOT-TUNED	Raman is not tuned. Default values are set.
• TUNING	Raman is tuning.
• TUNED	Raman is tuned but not verified.
• FORCE-TUNED	Raman is tuned with values not measured but calculated.
• ACCEPTED-TUNED	Raman setup has been accepted by the user.
• TUNED-VERIFIED	Raman is tuned and verified.
<RAMAN_QUALITY>	Indicates the Raman quality setup results.
• SETUP-GOOD	Setup good
• SETUP-NEED-ACCEPT	Setup needs acceptance
• SETUP-UNACCEPT	Setup unaccepted
• SETUP-FORCED	Setup forced

<TIME>	Identifies the time. Time is a string. Default value is - current time.
<DATE>	Identifies the date. Date is a string. Default value is - current date.
<RAMAN_RESTORE_FC>	Restores Raman after fiber cut.
• FAILED	Restores Raman after fiber cut fails.
• NOTEXEC	Restores Raman after fiber cut is not executed.
• OK	Restores Raman after fiber cut is OK.
• PENDING	Restores Raman after fiber cut is PENDING.
<CG>	TDCU coarse grain value
• 0	TDCU coarse grain value
• 110	TDCU coarse grain value
• -1100	TDCU coarse grain value
• -1210	TDCU coarse grain value
• -1320	TDCU coarse grain value
• -1430	TDCU coarse grain value
• -1540	TDCU coarse grain value
• -1650	TDCU coarse grain value
• -220	TDCU coarse grain value
• -330	TDCU coarse grain value
• -440	TDCU coarse grain value
• -550	TDCU coarse grain value
• -660	TDCU coarse grain value
• -770	TDCU coarse grain value
• -880	TDCU coarse grain value
• -990	TDCU coarse grain value
<FG>	TDCU fine grain value
• 0	TDCU fine grain value
• -45	TDCU fine grain value

• -450	TDCU fine grain value
• -495	TDCU fine grain value
• -540	TDCU fine grain value
• -585	TDCU fine grain value
• -630	TDCU fine grain value
• -675	TDCU fine grain value
• -90	TDCU fine grain value
• -135	TDCU fine grain value
• -180	TDCU fine grain value
• -225	TDCU fine grain value
• -270	TDCU fine grain value
• -315	TDCU fine grain value
• -360	TDCU fine grain value
• -405	TDCU fine grain value
<SWSTATE>	Software switch state.
• AUTO	Auto
• LOGO	Logo
<PST>	(Optional) Primary state of the entity. The parameter type is PST, which indicates the current overall service condition of an entity.
• Unlocked-Enabled	In service and normal
• Unlocked-Disabled	Out of service and autonomous
• Locked-Disabled	Out of service, autonomous and management
• Locked-Enabled	Out of service and management
<ALARMSUPPRESS>	It is an enum which has the values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress

<ALARMPROFILENAME>	Name of the profile created using the command ENT-ALMPROFILE
<IFINDEX>	Index of a particular port
<RPDURATION>	Indicates recovery and duration
<SST>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AutomaticInService	Automatic in service
• Disabled	Disabled
• Loopback	Loopback
• MismatchofEquipmentAlarm	Mismatch of equipment and attributes
• Maintenance	Maintenance mode
• OutOfGroup	Out of group
• SoftwareDownload	Software downloading
• Unassigned	Unassigned
• NotInstalled	Unequipped

RTRV-OTU

The Retrieve Optical Transport Unit Level (RTRV-OTU) command for OTU2 and OTU4C2 retrieves the attributes (service parameters) and state of an OTU2 facility.

Usage Guidelines

The OVRCLK is the new parameter added and applicable for RTRV-OTU command on 10x10G-LC SFP+ ports only.

The RTRV-OTU4 is modified by adding a new parameter NUMOFLANES, which describes the number of sublanes provisioned on Aggregate ports of CFP-LC cards.

Category

DWDM

Security

Retrieve

Input Format

RTRV-<OTU>:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-OTU2:PENNGROVE:FAN-6-1-1:236;

Input Parameters

<AID>	Access identifier from the "28.20 LINE" section on page 28-46 and "28.17 FACILITY" section on page 28-42.

Output Format

SID DATE TIME

M CTAG COMPLD

"<AID>:,,[<ROLE>],[<STATUS>]:[NAME=<PORTNAME>],[GCC=<GCC>],[DWRAP=<DWRAP>],[FEC=<FEC>],
[PAYLOADMAP=<PAYLOADMAP>],[OSDBER=<OSDBER>],[PMMODE=<PMMODE>],[OSFBER=<OSFBER>],
[LBCL=<LBCL>],[OPT=<OPT>],[OPR=<OPR>],[NUMOFLANES=<NUMOFLANES>],[LOSSB=<LOSSB>],
[SOAK=<SOAK>],[SOAKLEFT=<SOAKLEFT>],[GCCRATE=<GCCRATE>],[SQUELCHMODE=<SQUELCHMODE>],
[OTNTRMAP=<OTNTRMAP>],[SYNCMSG=<SYNCMSG>],[SENDDUS=<SENDDUS>],[ADMSSM=<ADMSSM>],
[PROVIDESYNC=<PROVIDESYNC>],[ODUTRANSMODE=<ODUTRANSMODE>],[PORTMODE=<PORTMODE>],

[PPR=<PPR>],[TRIGTH=<TRIGTH>],[RVRTTH=<RVRTTH>],[TRIGWINDOW=<TRIGWINDOW>],
[RVRTWINDOW=<RVRTWINDOW>],[OVRCLK=<OVRCLK>],[FECALMSUPRESS=<FECALMSUPRESS>],
[EGRESSFRR=< EGRESSFRR>],[ENCAP=< ENCAP>],[LPBKTYPE=<LPBKTYPE>],
[ALARMSUPPRESS=<ALARMSUPPRESS>],[SQUELCHHOLDOFFTIMER=<SQUELCHHOLDOFFTIMER>],
[IFINDEX=< IFINDEX>],[GRIDLESS=<GRIDLESS>],[GRIDLESSFREQ=<GRIDLESSFREQ>],[CDLOW=<DLOW>],
[CDHIGH=<CDHIGH>],[VOATXPOWER=<VOATXPOWER>],[TXLASERSHUTDN=<TXLASERSHUTDN>],
[OSNR=<OSNR>],[PMD=<PMD>],[CD=<CD>],[SOPMD=<SOPMD>],[PCR=<PCR>],[PDL=<PDl>],
[ALARMPROFILENAME=< ALARMPROFILENAME>:<PST_PSTQ>,[<SSTQ>]";

Output Example

100g 2012-05-22 13:52:07

M 1 COMPLD

"VFAC-3-1-1:,,WORK,STBY:GCC=N,FREQ=USE-TWL1,LOSSB=AUTOPROV,SOAK=32,,SQUELCHMODE=ODU-AIS,ADMSSM=STU,NUMOFLANES=10:OOS-MA,DSBLD

Output Parameters

Parameter	Description
<AID>	Access identifier from the "28.20 LINE" section on page 28-46.
<ROLE>	The role the unit is playing in the protection group.

• PROT	The entity is the protection unit in the protection group.
• WORK	The entity is the working unit in the protection group.
<STATUS>	The status of the unit in the protection pair.
• ACT	The entity is the active unit on the shelf.
• STBY	The entity is the standby unit on the shelf.
<OSDBER>	OTN SDBER. Can only be provisioned on the working port. Defaults to 1E-7. Parameter type is SD_BER—the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5
• 1E-6	SDBER is 1E-6
• 1E-7	SDBER is 1E-7
• 1E-8	SDBER is 1E-8
• 1E-9	SDBER is 1E-9
<GCC>	Identifies the generic communication channel (GCC) connection of the port.
• Y	GCC can be utilized.
• N	GCC cannot be utilized.
<DWRAP>	(Optional) The ITU-T G.709 monitoring digital wrapper. It is either on or off. The system default is ON. For MXP_2.5G_10G and TXP_MR_10G cards, this applies only to the DWDM port. The parameter type is ON_OFF (disable or enable an attribute). To enable ITU-T G.709 monitoring, there should be no GCC on the DWDM port and the payload (in which the card is configured) should not be UNFRAMED. To disable ITU-T G.709 monitoring, there should be no GCC on the DWDM port, the FEC should be turned to off, there should be no overhead circuit created on the DWDM port, and none of the client ports on the card should be part of a Y-cable protection group (muxponder only).
• N	Disable an attribute.
• Y	Enable an attribute.
<FEC>	(Optional) Forward error correction. It can be enabled only if ITU-T G.709 monitoring is turned ON. It is either off or enabled in standard or enhanced mode. The system default is standard FEC enabled. The FEC level PM and thresholds apply if the FEC is turned ON. The parameter type is FEC_MODE, which specifies the type of forward error correction.
• ENH	Enhanced FEC is enabled.
• HG-7	High Gain 7% FEC.

• ENH-20	20 % Enhanced FEC supported on fixed trunk port of 100G-LC-C card.
• OFF	FEC is disabled.
• STD	Standard FEC is enabled.
• SD-20	
• SD-7	
<PAYLOADMAP>	(Optional) The type of payload mapping. It can be enabled only if ITU-T G.709 monitoring is turned ON and FEC is enabled. The parameter type is PAYLOAD_MAPPING, which is the payload mapping mode.
• ASYNCH	Asynchronous mapping mode
• ODU	ODU multiplex structure mode
• SYNCH	Synchronous mapping mode
• NOOPU2FIXEDSTUFF	Mapping with no FIXEDSTUFF
<FREQ>	(Optional) The parameter type is OPTICAL_WLEN, which indicates the optical wavelength.
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1528.77	Wavelength 1528.77
• 1529.16	Wavelength 1529.16
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29

• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94

• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73

• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05
• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27
• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09

• 1565.50	Wavelength 1565.50
• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93

• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26

• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03

• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	(Optional) The parameter type is REACH, which indicates the reach values.
• 100GBASE-LR4	100GBASE-LR4
• 100GBASE-SR10	100GBASE-SR10
• 40GBASE-FR	40GBASE-FR
• 40GBASE-LR4	40GBASE-LR4
• 40GBASE-SR4	Reach supported on 40GIGE payload on CFP-LC card.
• 4I1-9D1F	4I1-9D1F
• C4S1-2D1	C4S1-2D1
• FE-BX	FE-BX
• FX	FX
• GE-BX	GE-BX
• GE-EX	GE-EX
• LX-10	LX-10
• TEN-GE-LRM	TEN-GE-LRM
• TEN-GE-ZR	TEN-GE-ZR
• VSR2000-3R2	VSR2000-3R2
• AUTOPROV	Autoprovisioning
• CX	Reach CX
• CX1	Reach CX1
• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1

• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• P1I1-2D1	Long haul 10G Ethernet with 1310 nm wavelength
• P1L1-1D2	Longhaul 2.5G Ethernet with 1550 nm wavelength
• P1L1-2D2	Long haul 10G Ethernet with 1550 nm wavelength
• P1S1-1D1	Shorthaul 2.5G Ethernet with 1310 nm wavelength
• P1S1-2D1	Short haul 10G Ethernet in 1310 nm wavelength
• SC	Reach SC
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• VX	Reach VX
• ZX	Reach ZX
<OVRCLK>	Indicates whether the optical trunk is over-clocked or not. It can be Y or N. The default is N.
• Y	On
• N	Off
• OTU1F	
• OTU2F	

• OTU3E1	
• OTU3E2	
<SQUELCHMODE>	Shuts down the far-end laser in response to certain defects.
• SQUELCH	Squelch is enabled
• NONE	No Squelch
• NOS	Squelch is disabled
• LF	
<ADMSSM>	(Optional) SSM selectable. Only applicable to BITS-IN when SSM is disabled. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not 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
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<PORTNAME>	(Optional) Port name. PORTNAME is a string.
<LPBKTYPE>	
• FAC-DROP	
• TER-DROP	
• BACKPLANE-TER-DROP	
• BACKPLANE-FAC-DROP	

<CMDMDE>	(Optional) Command mode. Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in Unlocked-Enabled or Locked-Disabled, AutomaticInService service states.
<NUMOFLANES>	Indentifies the Number of sublanes on the Aggregate port with values 1 or 4.
<PST_PSTQ>	Primary state. The parameter type is PST_PSTQ, which is the service state of the entity described by the PST and PSTQ.
• Unlocked-Enabled	In service and normal
• Unlocked-Disabled	Out of service and autonomous
• Locked-Disabled	Out of service, autonomous and management
• Locked-Enabled	Out of service and management
<ALARMSUPPRESS>	It is an enum which has the values:
• Y	Activate alarm suppress
• N	Deactivate alarm suppress
<SSTQ>	(Optional) Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AutomaticInService	Automatic in service
• Disabled	Disabled
• Loopback	Loopback
• MismatchofEquipmentAlarm	Mismatch of equipment and attributes
• Maintenance	Maintenance mode
• OutOfGroup	Out of group
• SoftwareDownload	Software downloading
• Unassigned	Unassigned
• NotInstalled	Unequipped

<OSFBER>	Bit error rate level at which we declare signal fail. SF is cleared only after the ber level is measured to be 10 times better.
<LBCL>	Normalized laser bias current lower bound [0 - 255].
<OPT>	Optical power transmitted
<OPR>	Optical power received
<SOAK>	(Optional) Locked-Automatic In Service to Unlocked transition soak time as measured in 15-minute intervals. SOAK is an integer. Default value is 32. It can be set through ED command.
<SOAKLEFT>	(Optional) Time remaining for the transition from Locked-AutomaticInService to Unlocked measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. Rules for SOAKLEFT are as follows: • When the port is in Locked;Locked,Maintenance; or Unlocked state, the parameter is not displayed. • When the port is in Locked,AutomaticInService state but the countdown has not started due to a fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in Locked,AutomaticInService state and the countdown has started, the value will be shown in HH-MM format.

<GCCRATE>	(Optional) The data rate of the GCC traffic. The default is 192 Kbps. For MXP_2.5G_10G and TXP_MR_10G cards, this applies only to the DWDM port. The parameter type is GCCRATE, which is the data rate of the GCC traffic.
• 192K	192 Kbps
• 400K	400 Kbps
• 1200K	1200 Kbps
<OTNTRMAP>	OTN Traffic Mapping
<SYNCMSG>	Synchronization status messaging is enabled or disabled on the T1 facility.
• N	Disable an attribute.
• Y	Enable an attribute.
<SENDDUS>	The facility will send the DUS value as the sync status message for that facility.
• N	Disable an attribute.
• Y	Enable an attribute.

<PROVIDESYNC>	(Optional) Indicates whether the facility provides synchronization. Only supported on. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
< ODUTRANSMODE>	To configure the "ODUk OH" transparency on the OTU2-XP card.
• TRANS-STD	Transparent Standard Use. The transponder, behaving as a regenerator, terminates the OUT layer and is transparent to the ODU layer. Also in this case the FEC-MISM (FEC Mismatch) alarm is not generated.
• CISCO-EXT	Cisco Extended. When the Cisco Extended configuration is selected, two bytes of the ODU layer is terminated to guarantee the interoperability with the older Transpon-der/Muxponder cards.
<PORTMODE>	Describes the termination mode of each interface on the card.
• DWDM-LINE	Line terminating mode.
• DWDM-SECTION	Section terminating mode.
• DWDM-TRANS-AIS	Transparent mode AIS.
• DWDM-TRANS-SQUELCH	Transparent mode Squelch
• 10GLANWAN-SQUELCH	10G LAN to WAN Squelch.
<PPR>	(Optional) To enable or disable the Proactive Protection Regen (PPR) in the OTU2 Card in Regen Mode.
• Y	Proactive protection is enabled.
• N	Proactive protection is disabled.
<TRIGTH>	Specifies the trigger threshold value for Proactive Protection Regen. The parameter type is TRIGGER_THRESHOLD.
• 1E-2	Trigger threshold is 1E-2.
• 1E-3	Trigger threshold is 1E-3.
• 1E-4	Trigger threshold is 1E-4.
• 1E-5	Trigger threshold is 1E-5
• 1E-6	Trigger threshold is 1E-6.
• 1E-7	Trigger threshold is 1E-7.

• 2E-2	Trigger threshold is 2E-2.
• 2E-3	Trigger threshold is 2E-3.
• 2E-4	Trigger threshold is 2E-4
• 2E-5	Trigger threshold is 2E-5
• 2E-6	Trigger threshold is 2E-6.
• 2E-7	Trigger threshold is 2E-7.
• 3E-2	Trigger threshold is 3E-2.
• 3E-3	Trigger threshold is 3E-3.
• 3E-4	Trigger threshold is 3E-4.
• 3E-5	Trigger threshold is 3E-5.
• 3E-6	Trigger threshold is 3E-6.
• 3E-7	Trigger threshold is 4E-7.
• 4E-2	Trigger threshold is 4E-2.
• 4E-3	Trigger threshold is 4E-3.
• 4E-4	Trigger threshold is 4E-4.
• 4E-5	Trigger threshold is 4E-5.
• 4E-6	Trigger threshold is 4E-6.
• 4E-7	Trigger threshold is 4E-7.
• 5E-2	Trigger threshold is 5E-2.
• 5E-3	Trigger threshold is 5E-3.
• 5E-4	Trigger threshold is 5E-4.
• 5E-5	Trigger threshold is 5E-5.
• 5E-6	Trigger threshold is 5E-6.
• 5E-7	Trigger threshold is 5E-7.
• 6E-2	Trigger threshold is 6E-2.
• 6E-3	Trigger threshold is 6E-3.
• 6E-4	Trigger threshold is 6E-4.
• 6E-5	Trigger threshold is 6E-5

• 6E-6	Trigger threshold is 6E-6.
• 6E-7	Trigger threshold is 6E-7.
• 7E-2	Trigger threshold is 7E-2.
• 7E-3	Trigger threshold is 7E-3.
• 7E-4	Trigger threshold is 7E-4.
• 7E-5	Trigger threshold is 7E-5
• 7E-6	Trigger threshold is 7E-6.
• 7E-7	Trigger threshold is 7E-7.
• 8E-2	Trigger threshold is 8E-2.
• 8E-3	Trigger threshold is 8E-3.
• 8E-4	Trigger threshold is 8E-4.
• 8E-5	Trigger threshold is 8E-5
• 8E-6	Trigger threshold is 8E-6.
• 8E-7	Trigger threshold is 8E-7.
• 9E-2	Trigger threshold is 9E-2.
• 9E-3	Trigger threshold is 9E-3.
• 9E-4	Trigger threshold is 9E-4.
• 9E-5	Trigger threshold is 9E-5
• 9E-6	Trigger threshold is 9E-6.
• 9E-7	Trigger threshold is 9E-7.
<RVRTTH>	Specifies the revert threshold for Proactive Protection Regen. The parameter type is RVRTTH.
• 1E-3	Revert threshold is 1E-3.
• 1E-4	Revert threshold is 1E-4.
• 1E-5	Revert threshold is 1E-5
• 1E-6	Revert threshold is 1E-6.
• 1E-7	Revert threshold is 1E-7.
• 2E-3	Revert threshold is 2E-3.

• 2E-4	Revert threshold is 2E-4.
• 2E-5	Revert threshold is 2E-5
• 2E-6	Revert threshold is 2E-6.
• 2E-7	Revert threshold is 2E-7.
• 3E-3	Revert threshold is 3E-3.
• 3E-4	Revert threshold is 3E-4.
• 3E-6	Revert threshold is 3E-6
• 3E-7	Revert threshold is 4E-7.
• 4E-3	Revert threshold is 4E-4.
• 4E-4	Revert threshold is 4E-4.
• 4E-5	Revert threshold is 4E-5
• 4E-6	Revert threshold is 4E-6.
• 4E-7	Revert threshold is 4E-7.
• 5E-3	Revert threshold is 5E-3.
• 5E-4	Revert threshold is 5E-4.
• 5E-5	Revert threshold is 5E-5
• 5E-6	Revert threshold is 5E-6.
• 5E-7	Revert threshold is 5E-7.
• 5E-8	Revert threshold is 5E-8.
• 6E-3	Revert threshold is 6E-3.
• 6E-4	Revert threshold is 6E-4.
• 6E-5	Revert threshold is 6E-5
• 6E-6	Revert threshold is 6E-6.
• 6E-7	Revert threshold is 6E-7.
• 6E-8	Revert threshold is 6E-8.
• 7E-3	Revert threshold is 7E-3.
• 7E-4	Revert threshold is 7E-4.
• 7E-5	Revert threshold is 7E-5

• 7E-6	Revert threshold is 7E-6.
• 7E-7	Revert threshold is 7E-7.
• 7E-8	Revert threshold is 7E-8.
• 8E-3	Revert threshold is 8E-3.
• 8E-4	Revert threshold is 8E-4.
• 8E-5	Revert threshold is 8E-5
• 8E-6	Revert threshold is 8E-6.
• 8E-7	Revert threshold is 8E-7.
• 8E-8	Revert threshold is 8E-8.
• 9E-3	Revert threshold is 9E-3.
• 9E-4	Revert threshold is 9E-4.
• 9E-5	Revert threshold is 9E-5
• 9E-6	Revert threshold is 9E-6.
• 9E-7	Revert threshold is 9E-7.
• 9E-8	Revert threshold is 9E-8.
<TRIGWINDOW>	Specifies the trigger window value for Proactive Protection Regen in milli seconds. It should always be a multiple of the sample slot value, derived from the trigger threshold value. The maximum TRIGWINDOW value is 10000.
<RVRTWINDOW>	Specifies the revert window value for Proactive Protection Regen in milli seconds. It should always be a multiple of the sample slot value, derived from the revert threshold value. The maximum RVRTWINDOW value is 10000 and minimum value is 2000.
<EGRESSFRR>	Egress FRR protection.
• Y	Egress FRR protection is enabled.
• N	Egress FRR protection is disabled.
<ENCAP>	(Optional) Frame encapsulation type. The parameter type is ENCAP, which is the frame encapsulation type.
• GFP	GFP frame mode.
• CBR	Contant Bit Rate mode.
• TRP	Transparent mode.

• GMP	GMP mapping mode.
<SQUELCHHOLDOFFTIMER>	Laser will be turned off, once this timer expire
<IFINDEX>	Index of a particular port
<CDLOW>	(Optional) Lower limit of CD working range.
<CDHIGH>	(Optional) Upper limit of CD working range.
<GRIDLESSFREQ>	Gridless Frequency
<GRIDLESS>	Gridless data transmission
<VOATXPOWER>	(Optional) VOA Transmit Power. The parameter type is VOATXPOWER, indicates the VOA transmit power on a fixed trunk.
<TXLASERSHUTDN>	(Optional) Transmit Laser Shut down. The parameter type is TXLASERSHUTDN indicates the transmit laser shut down status as Y or N.
<OSNR>	Measure of the optical signal to noise ration
<PMD>	Measure of the polarization mode value, an average of the 2 polarization modes.
<ALARMPROFILENAME>	Name of the profile created using the command ENT-ALMPROFILE

RTRV-PATH-OCH

The Retrieve Path Optical Channel (RTRV-PATH-OCH) command retrieves the OCH path inside a node. An OCH path is a list of access identifiers that addresses all the possible facility and internal optical channels that are all associated to the same wavelength.

Usage Guidelines

None

Category

DWDM

Security
Retrieve

Input Format
RTRV-PATH-OCH:[<TID>]:<AID>:<CTAG>[::::];

Input Example
RTRV-PATH-OCH:PENNGROVE:CHAN-6-2:236;

Input Parameters

<AID>	Access identifier from the "28.8 CHANNEL" section on page 28-23, "28.21 LINEWL" section on page 28-50, and "28.5 BANDWL" section on page 28-21.

Output Format
SID DATE TIME
M CTAG COMPLD
"<AID>::[WLEN=<WLEN>],[PATH=<PATH>]:"
;

Output Example
TID-000 1998-06-20 14:30:00
M 001 COMPLD
"CHAN-6-2::WLEN=1530.33,PATH=LINEWL-1-3-RX-1530.33&LINEWL-1-1-TX-1530.33&
LINEWL-3-1-RX-1530.33&CHAN-3-1-TX&CHAN-6-2:"
;

Output Parameters

<AID>	Access identifier from the "28.8 CHANNEL" section on page 28-23, "28.21 LINEWL" section on page 28-50, and "28.5 BANDWL" section on page 28-21.
<WLEN>	Defines the optical wavelength. The parameter type is OPTICAL_WLEN (optical wavelength).
• 1529.16	Wavelength 1529.16
• 1530.33	Wavelength C Band - 1/40
• 1530.72	Wavelength 1530.72

• 1531.12	Wavelength C Band - 2/40
• 1531.90	Wavelength C Band - 3/40
• 1532.68	Wavelength C Band - 4/40
• 1534.25	Wavelength C Band - 6/40
• 1535.04	Wavelength C Band - 7/40
• 1535.82	Wavelength C Band - 8/40
• 1536.61	Wavelength C Band - 9/40
• 1538.19	Wavelength C Band - 11/40
• 1538.98	Wavelength C Band - 12/40
• 1539.77	Wavelength C Band - 13/40
• 1540.56	Wavelength C Band - 14/40
• 1542.14	Wavelength C Band - 16/40
• 1542.94	Wavelength C Band - 17/40
• 1543.73	Wavelength C Band - 18/40
• 1544.53	Wavelength C Band - 19/40
• 1546.12	Wavelength C Band - 21/40
• 1546.92	Wavelength C Band - 22/40
• 1547.72	Wavelength C Band - 23/40
• 1548.11	Wavelength 1548.11
• 1548.51	Wavelength C Band - 24/40
• 1548.91	Wavelength 1548.91
• 1549.72	Wavelength 1549.72
• 1550.12	Wavelength C Band - 26/40
• 1550.92	Wavelength C Band - 27/40
• 1551.72	Wavelength C Band - 28/40
• 1552.52	Wavelength C Band - 29/40
• 1554.13	Wavelength C Band - 31/40
• 1554.94	Wavelength C Band - 32/40

• 1555.75	Wavelength C Band - 33/40
• 1556.55	Wavelength C Band - 34/40
• 1558.17	Wavelength C Band - 36/40
• 1558.98	Wavelength C Band - 37/40
• 1559.79	Wavelength C Band - 38/40
• 1560.61	Wavelength C Band - 39/40
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05
• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27
• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50
• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
• 1577.44	L-Band Wavelength 1577.44
• 1577.86	L-Band Wavelength 1577.86
• 1578.27	L-Band Wavelength 1578.27
• 1578.69	L-Band Wavelength 1578.69
• 1579.10	L-Band Wavelength 1579.10
• 1579.52	L-Band Wavelength 1579.52
• 1579.93	L-Band Wavelength 1579.93
• 1580.35	L-Band Wavelength 1580.35
• 1580.77	L-Band Wavelength 1580.77
• 1581.18	L-Band Wavelength 1581.18

• 1581.60	L-Band Wavelength 1581.60
• 1582.02	L-Band Wavelength 1582.02
• 1582.44	L-Band Wavelength 1582.44
• 1582.85	L-Band Wavelength 1582.85
• 1583.27	L-Band Wavelength 1583.27
• 1583.69	L-Band Wavelength 1583.69
• 1584.11	L-Band Wavelength 1584.11
• 1584.53	L-Band Wavelength 1584.53
• 1584.95	L-Band Wavelength 1584.95
• 1585.36	L-Band Wavelength 1585.36
• 1585.78	L-Band Wavelength 1585.78
• 1586.20	L-Band Wavelength 1586.20
• 1586.62	L-Band Wavelength 1586.62
• 1587.04	L-Band Wavelength 1587.04
• 1587.46	L-Band Wavelength 1587.46
• 1587.88	L-Band Wavelength 1587.88
• 1588.30	L-Band Wavelength 1588.30
• 1588.73	L-Band Wavelength 1588.73
• 1589.15	L-Band Wavelength 1589.15
• 1589.57	L-Band Wavelength 1589.57
• 1589.99	L-Band Wavelength 1589.99
• 1590.41	L-Band Wavelength 1590.41
• 1590.83	L-Band Wavelength 1590.83
• 1591.26	L-Band Wavelength 1591.26
• 1591.68	L-Band Wavelength 1591.68
• 1592.10	L-Band Wavelength 1592.10
• 1592.52	L-Band Wavelength 1592.52
• 1592.95	L-Band Wavelength 1592.95

• 1593.37	L-Band Wavelength 1593.37
• 1593.79	L-Band Wavelength 1593.79
<PATH>	Access identifier from the "28.8 CHANNEL" section on page 28-23 or the "28.21 LINEWL" section on page 28-50.

RTRV-PM-<MOD2>

The Retrieve Performance for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 5GIB, 8GFC, CHGRP, CLNT, AUTO, 3GVIDEO, D1VIDEO, DS1, DV6000, DVBASI, E1, E3, E4, EC1, ESCON, ETH, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDLC, HDSDI, HDTV, ISC1, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3STP1G, ISC3PEER2G, ISC3STP2G, OC12, OC192, OC3, OC48, OC768, OCH, OMS, OTS, OTL, OTU1, OTU2, OTU3, OTU4, OTU4C2, POS, SDSDI, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, or VT2 (RTRV-PM-<MOD2>) command retrieves the values of PM parameters for a specified card type.

Note	The RTRV-PM-<MOD2> command does not retrieve SEFS/RS-OFS PM counter for OC192/STM64 payloads on ADM-10G, 40G/40E (TXP/MXP), and OTU2-XP cards.

Usage Guidelines

- See Table 30-1 on page 30-1 for supported modifiers by platform.
- MONLEV is in the format of LEV-DIRN.
- The format of MONDAT is MM-DD, where MM (month of the year) ranges from 1 to 12 and DD (day of the month) ranges from 1 to 31.
- The format for MONTM is HH-MM, where HH (hour of the day) ranges from 0 to 23 and MM (minute of the hour) ranges from 0 to 59.
- If there are no errors to report, the response will be COMPLD (completed).
- If the TMPER is 1-DAY, MONTM is not applicable (null), and is treated as null if MONTM is not null.
- A null value for MONLEV defaults to 1-UP.
- A null value for MONDAT defaults to the current date (MM-DD).
- A null value for MONTM defaults to the current time (HH-MM).
- Unless otherwise stated, DS-1 cards are the only cards that support both the RCV and TRMT directions. All other cards only support the RCV direction.
- After 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.
- If there is a STS PCA on the protection path, during the BLSR switching, the PCA path is preemptive; sending this command on the protection path after a BLSR switch, the command returns the PMs from the protection path, not from the PCA path.
- Some MOD2 entities; for example, OCH, OTS, 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 PMs are applicable and will appear. If the card payload is in SONET mode, then SONET PMs will appear, provided the MONLEV criteria is met.

  - Trunk port Laser PMs are always available. Laser PMs are only for near end. If ITU-T G.709 is enabled, then the OTN PMs will appear. If ITU-T G.709 and FEC are enabled, then the FEC PMs will appear. If the card payload is in SONET mode, then SONET PMs will appear. All PM MONVALUEs should pass the MONLEV filter criteria.

- For DWDM cards, the MONLEV filter criteria will not support a floating point. It will be returned and interpreted as an integer.
- If the DS-1 mode of the DS3XM-12 card is FDL, the DS-1 path can retrieve FDL/T.403 FEND PM counts up to 32 15-minute intervals in the RTRV-PM-DS1 command.
- This command can also be used to retrieve the RMON-managed PM data.
- RTRV-PM-OTL retrieves Optical Thresholds only. This command is denied on sublanes of CFP-LC as optical thresholds are retrieved on CFP-LC's aggregate port.
- This command retrieves only OTN/FEC stats on Virtual ports of 100G-LC-C. This command does not retrieve any Optical statistics as they are retrieved on Aggregate ports on CFP-LC.
- This command retrieves optical stats on sublanes on 100G-LC-C only. The command is denied for Aggregate port on CFP-LC.
- RTRV-PM-OCH on Fixed Trunk on 100G-LC-C also retrieves OSNR and PM stats.
- With TMPER=1-MIN and TMPER=1-HR, the command is denied when DATE and TIME are not specified.
- With TMPER=1-MIN and TMPER=1-HR, RMON PMs are retrieved when DATE and TIME are specified.
- With TMPER=15-MIN and TMPER=1-DAY, All PMs except RMON PMs are retrieved without DATE and TIME specified.
- With TMPER=15-MIN and TMPER=1-DAY, All PMs are retrieved with DATE and TIME specified.

Category

Performance

Security

Retrieve

Input Format

RTRV-PM-<MOD2>:[<TID>]:<AID>:<CTAG>::[<MONTYPE>],[<MONLEV>],[<LOCN>],
[<DIRECTION>],[<TMPER>],[<DATE>],[<TIME>];

Input Example

RTRV-PM-T1:TID:FAC-2-1:123::CVL,10-UP,NEND,RCV,15-MIN,04-11,12-45;

Input Parameters

<AID>	Access identifier from the "28.1 ALL" section on page 28-1. All of the STS, VT1, Facility, and DS1 AIDs are supported.
<MONTYPE>	Monitored type. A null value defaults to all montypes applicable to the modifier. The parameter type is ALL_MONTYPE, which is the monitoring type list.

• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• 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 one tenth of a percentage
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage
• BIEC	FEC—Bit Errors Corrected
• BIT-EC	The number of bit errors corrected by the FEC algorithm
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage

• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• dot3StatsFCSErrors	A count of frames received on a particular interface that are an integral number of octets in length but do not pass the FCS check.
• dot3StatsFrameTooLong	A count of frames received on a particular interface that exceed the maximum permitted frame size.
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second

• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High-Order Path Negative Pointer Justification Count, Path Detected
• HP-NPJC-PGEN	High-Order Path, Negative Pointer Justification Count, Path Generated
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count, Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset

• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias Current in microA
• LBCL-MAX	Maximum Laser Bias Current in microA
• LBCL-MIN	Minimum Laser Bias Current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Normalized Laser Bias Current—Higher Threshold
• LBCN-LWT	Normalized Laser Bias Current—Lower Threshold
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order Positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period

• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt
• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt
• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• PRE-FECBER	Enum to hold PRE-FECBER value
• 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
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point

• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
• OSNR-MIN	Minimum Optical Signal To Noise Ratio.
• OSNR-MAX	Maximum Optical Signal To Noise Ratio.
• OSNR-AVG	Average Optical Signal To Noise Ratio.
• PMD-MIN	Minimum Polarization Mode Dispersion.
• PMD-MAX	Maximum Polarization Mode Dispersion.
• PMD-AVG	Average Polarization Mode Dispersion.
<MONLEV>	The discriminating level of the requested monitored parameter in the format of LEVEL-DIRN, where LEVEL is the measured value of the monitored parameter (MONVAL) and DIRN is the type of direction. A null value defaults to 1-UP. MONLEV is a string.
<LOCN>	Location associated with a particular command in reference to the entity identified by the AID. A null value defaults to NEND. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility
• NEND	Action occurs on the near end of the facility
<DIRECTION>	Type of direction. The parameter type is DIRECTION (transmit and receive directions).
• RCV	Receive direction only.
• TRMT	Transmit direction only.
<TMPER>	Accumulation time period for performance counters. If TMPER is 1-DAY, MONTM is not applicable (null), and is treated as null. A null value defaults to 15-MIN. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24-hours. For SONET PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.

• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.
<DATE>	The beginning date of the PM or storage register period specified in TMPER. The format of DATE is MM-DD, where MM (month of year) ranges from 1 to 12 and DD (day of month) ranges from 1 to 31. A null value defaults to current date.
<TIME>	The beginning time of day of the PM or storage register period specified in TMPER. The format of TIME is HH-MM, where HH (hour of day) ranges from 0 to 23 and MM (minute of hour) ranges from 0 to 59. A null value defaults to current time.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>,[<AIDTYPE>]:<MONTYPE>,<MONVAL>,[<VLDTY>],[<LOCN>],
[<DIRECTION>],[<TMPER>],[<MONDAT>],[<MONTM>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"FAC-2-1,DS1-14:CVL,21,COMPL,NEND,RCV,15-MIN,04-11,12-45"
;

ABC 2012-05-15 02:59:20

M 1 RTRV

"CHAN-1-7-2,OCH:,93899775.1,COMPL,NEND,RCV,15-MIN,05-15,02-45"

Output Parameters

<AID>	Access identifier from the "28.1 ALL" section on page 28-1.
<AIDTYPE>	(Optional) Type of facility, link, or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.

• 100GIGE	100 Gigabit Ethernet.
• 10GIGE	10 Gigabit Ethernet.
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 10GFC	10-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 3GVIDEO	3G-SDI video payload.
• Auto	Auto
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 40-GIGE	40-Gigabit ethernet
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• BITS	BITS alarm
• CHGRP	Channel group
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• DVBASI	Digital Video Broadband Asynchronous Serial Interface (DVBASI) payload
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm

• GIGE	Gigabit Ethernet port alarm
• HDLC	Resilient Ethernet Protocol
• HDSDI	1.5G HD-SDI video payload
• ISC1	InterSystem Channel, a protocol defined by IBM (ISC1) payload
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• MSISC	MSISC
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OC768	OC768 alarm
• OCH	Optical channel
• ODU0	Optical Data Unit Level 0
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTL	Optical Channel Transport Lane.
• OTU1	Optical Transport Unit Level 1
• OTU2	Optical Transport Unit Level 2
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• POS	POS port alarm
• REP	Resilient Ethernet Protocol
• SDSDI	270M SDI video payload.

• STS1	STS1 alarm
• STS3C	STS3c alarm
• STS6C	STS6c alarm
• STS9C	STS9c alarm
• STS18C	STS18c alarm
• STS12C	STS12c alarm
• STS24C	STS24c alarm
• STS36C	STS36c alarm
• STS48C	STS48c alarm
• STS192C	STS192c alarm
• SYNCN	SYNCN alarm
• T1	T1 alarm
• T3	T3 alarm
• TCC	TCC alarm
• VT1	VT1 alarm
• VT2	VT2 alarm
<MONTYPE>	Monitored type. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• 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 one tenth of a percentage
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage
• BIEC	FEC—Bit Errors Corrected
• BIT-EC	The number of bit errors corrected by the FEC algorithm
• CGV	8B10B—Code Group Violations

• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• dot3StatsFCSErrors	A count of frames received on a particular interface that are an integral number of octets in length but do not pass the FCS check.
• dot3StatsFrameTooLong	A count of frames received on a particular interface that exceed the maximum permitted frame size.
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions

• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High-Order Path Negative Pointer Justification Count, Path Detected
• HP-NPJC-PGEN	High-Order Path, Negative Pointer Justification Count, Path Generated
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference

• HP-PJCS-PDET	High-Order Path Pointer Justification Count seconds, Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count

• LBCL-AVG	Average Laser Bias Current in microA
• LBCL-MAX	Maximum Laser Bias Current in microA
• LBCL-MIN	Minimum Laser Bias Current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Normalized Laser Bias Current—Higher Threshold
• LBCN-LWT	Normalized Laser Bias Current—Lower Threshold
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated

• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt
• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt
• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• 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
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds

• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count

• OSNR-MIN	Minimum Optical Signal To Noise Ratio.
• OSNR-MAX	Maximum Optical Signal To Noise Ratio.
• OSNR-AVG	Average Optical Signal To Noise Ratio.
• PMD-MIN	Minimum Polarization Mode Dispersion.
• PMD-MAX	Maximum Polarization Mode Dispersion.
• PMD-AVG	Average Polarization Mode Dispersion.

<MONVAL>	The value to which the register identified by MONTYPE is to be initialized to or the measured value of a monitored parameter. The value is in the form of numeric counts or rates. MOVAL is a string.
<VLDTY>	(Optional) Indicates whether the information for the specified time period was accumulated over the entire time period or some portion thereof. Validity indicator for the reported PM data. The parameter type is VALIDITY, which is the response validity.
• COMPL	Complete response
• PRTL	Partial response
<LOCN>	(Optional) Location associated with a particular command. The parameter type is LOCATION, which is the location where the action is to take place
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRECTION>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
• TRMT	Transmit direction only
<TMPER>	(Optional) Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24-hours. For SONET PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.

• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.
<MONDAT>	(Optional) The beginning date of the PM or storage register period specified in TMPER. The format of MONDAT is MM-DD, where MM (month of year) ranges from 1 to 12 and DD (day of month) ranges from 1 to 31. MONDAT is a string.
<MONTM>	(Optional) The beginning time of day of the PM or storage register period specified in TMPER. The format of MONTM is HH-MM, where HH (hour of day) ranges from 0 to 23 and MM (minute of hour) ranges from 0 to 59. MONTM is a string.

RTRV-PM-ALL

The Retrieve Performance Monitoring All (RTRV-PM-ALL) command retrieves the values of all the performance monitoring parameters for the specified AID. When the ALL AID is used, the response will include the PM parameters for all cards and ports in the chassis.

Usage Guidelines

- The format of MONLEV is LEV-DIRN.
- The format of MONDAT is MM-DD, where MM (month of the year) ranges from 1 to 12 and DD (day of the month) ranges from 1 to 31.
- The format for MONTM is HH-MM, where HH (hour of the day) ranges from 0 to 23 and MM (minute of the hour) ranges from 0 to 59.
- If the TMPER is 1-DAY, MONTM is not applicable (null), and is treated as null if MONTM is not null.
- A null value for MONLEV defaults to 1-UP.
- A null value for MONDAT defaults to the current date (MM-DD).
- A null value for MONTM defaults to the current time (HH-MM).
- Unless otherwise stated, DS-1 cards are the only cards that support both the RCV and TRMT directions. All other cards only support the RCV direction.
- After 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.
- If there is a STS PCA on the protection path, during the BLSR switching, the PCA path is preemptive; sending this command on the protection path after a BLSR switch, the command returns the PMs from the protection path, not from the PCA path.
- 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 PMs are applicable and will appear. If the card payload is in SONET mode, then SONET PMs will appear, provided the MONLEV criteria is met.

  - Trunk port Laser PMs are always available. Laser PMs are only for near end. If ITU-T G.709 is enabled, then the OTN PMs will appear. If ITU-T G.709 and FEC are enabled, then the FEC PMs will appear. If the card payload is in SONET mode, then SONET PMs will appear. All PM MONVALUEs should pass the MONLEV filter criteria.
- For DWDM cards, the MONLEV filter criteria will not support a floating point. It will be returned and interpreted as an integer.
- If the DS-1 mode of the DS3XM-12 card is FDL, the DS-1 path can retrieve FDL/T.403 FEND PM counts up to 32 15-minute intervals in the RTRV-PM-DS1 command.
- BTH is not supported for the direction. A null value for direction should take care of TRMT and RCV.
- RTRV-PM-ALL command can also be used to retrieve the RMON managed PM data.
- With TMPER=1-MIN and TMPER=1-HR, RMON PMs are retrieved when DATE and TIME are specified.
- With TMPER=15-MIN and TMPER=1-DAY, All PMs except RMON PMs are retrieved without DATE and TIME specified.
- With TMPER=15-MIN and TMPER=1-DAY, All PMs are retrieved with DATE and TIME specified.

Category
Performance

Security
Retrieve

Input Format
RTRV-PM-ALL:[<TID>]:<AID>:<CTAG>::[<MONTYPE>],[<MONLEV>],[<LOCN>],
[<DIRECTION>],[<TMPER>],[<DATE>],[<TIME>];

Input Example
RTRV-PM-ALL:TID:FAC-2-1:123::CVL,10-UP,NEND,RCV,15-MIN,04-11,12-45;

RTRV-PM-ALL::ALL:C3::ALL,-40-UP,,,RAW-DATA;

Input Parameters

<AID>	The DS1 AID is used access DS1 frame layer of the DS3XM. Format is DS1-[SLOT]-[DS3PORT]-[DS1PORT].
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• CLNT	Client facility
• DS1	DS1 line of a DS3XM card

• DS3I	DS3I line
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETR_CLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over POS. Virtual ports partitioned using GFP's multiplexing capability.
• GIGE	Gigabit Ethernet
• HDTV	HDTV
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 facility
• OC12	OC12 facility
• OC48	OC48 facility
• OC192	OC192 facility
• OCH	Optical channel
• OCHCC	OCH client connection
• OCHNC	OCH network connection
• OCHTERM	OCH termination
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS port
• STS1	STS1 path

• STS3C	STS3c path
• STS6C	STS6c path
• STS9C	STS9c path
• STS18C	STS18c path
• STS12C	STS12c path
• STS24C	STS24c path
• STS36C	STS36c path
• STS48C	STS48c path
• STS192C	STS192c path
• T1	T1/DS1 facility/line
• T3	T3/DS1 facility/line
• VT1	VT1 path
• VT2	VT2 path
<MONTYPE>	Monitoring type. A null value defaults to all montypes applicable to the modifier. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• 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 one tenth of a percentage
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage
• BIEC	FEC—Bit Errors Corrected
• BIT-EC	The number of bit errors corrected by the FEC algorithm
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line

• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data

• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High-Order Path Negative Pointer Justification Count, Path Detected
• HP-NPJC-PGEN	High-Order Path Negative Pointer Justification Count, Path Generated
• HP-OI	High-Order Path, Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count Seconds, Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio

• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias Current in microA
• LBCL-MAX	Maximum Laser Bias Current in microA
• LBCL-MIN	Minimum Laser Bias Current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Normalized Laser Bias Current—Higher Threshold
• LBCN-LWT	Normalized Laser Bias Current—Lower Threshold
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio

• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt
• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt
• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt

• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• 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
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage

• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
• OSNR-MIN	Minimum Optical Signal To Noise Ratio.
• OSNR-MAX	Maximum Optical Signal To Noise Ratio.
• OSNR-AVG	Average Optical Signal To Noise Ratio.
• PMD-MIN	Minimum Polarization Mode Dispersion.
• PMD-MAX	Maximum Polarization Mode Dispersion.
• PMD-AVG	Average Polarization Mode Dispersion.
<MONLEV>	The discriminating level of the requested monitored parameter in the format of LEVEL-DIRN, where LEVEL is the measured value of the monitored parameter (MONVAL) and DIRN is the type of direction. A null value defaults to 1-UP. MONLEV is a string.
<LOCN>	Location associated with a particular command in reference to the entity identified by the AID. A null value defaults to NEND. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility
• NEND	Action occurs on the near end of the facility
<DIRECTION>	Type of direction. Must not be null. The parameter type is DIRECTION (transmit and receive directions).

• BTH	Both transmit and receive directions.
• RCV	Receive direction only.
• TRMT	Transmit direction only.
<TMPER>	Accumulation time period for performance counters. If TMPER is 1-DAY, MONTM is not applicable (null), and is treated as null. A null value defaults to 15-MIN. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24-hours. For SONET PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs. In case of OSC, RAW-DATA is used as one of the parameters at the end to get the payload PM.
<DATE>	The beginning date of the PM or storage register period specified in TMPER. The format of DATE is MM-DD, where MM (month of year) ranges from 1 to 12 and DD (day of month) ranges from 1 to 31. A null value defaults to current date.
<TIME>	The beginning time of day of the PM or storage register period specified in TMPER. The format of TIME is HH-MM, where HH (hour of day) ranges from 0 to 23 and MM (minute of hour) ranges from 0 to 59. A null value defaults to current time.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>,[<AIDTYPE>]:<MONTYPE>,<MONVAL>,[<VLDTY>],[<LOCN>],[<DIRECTION>],

[<TMPER>],[<MONDAT>],[<MONTM>]”
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
“FAC-2-1,DS1-14:CVL,21,COMPL,NEND,RCV,15-MIN,04-11,12-45”
;

Output Parameters

<AID>	The DS1 AID is used access DS1 frame layer of the DS3XM. Format is DS1-[SLOT]-[DS3PORT]-[DS1PORT].
<AIDTYPE>	(Optional) Type of facility, link, or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.
• 100GIGE	100 Gigabit Ethernet
• 10GIGE	10 Gigabit Ethernet
• 40GIGE	40 Gigabit Ethernet
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 10GFC	10-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 8GFC	8-Gigabit Fibre Channel payload
• 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
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	Gigabit Ethernet port alarm
• HDSDI	1.5G HD-SDI video payload
• ISC3PEER1G	1-Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTL	Optical Channel Transport Lane.
• OTU1	Optical Transports Unit Level 1
• OTU2	Optical Transports Unit Level 2
• OTU3	Optical Transports Unit Level 3
• OTU4	Optical Transports Unit Level 4
• POS	POS port alarm
• SDSDI	270M SDI video payload.

• STS1	STS1 alarm
• STS3C	STS3c alarm
• STS6C	STS6c alarm
• STS9C	STS9c alarm
• STS18C	STS18c alarm
• STS12C	STS12c alarm
• STS24C	STS24c alarm
• STS36C	STS36c alarm
• STS48C	STS48c alarm
• STS192C	STS192c alarm
• SYNCN	SYNCN alarm
• T1	T1 alarm
• T3	T3 alarm
• TCC	TCC alarm
• VT1	VT1 alarm
• VT2	VT2 alarm
<MONTYPE>	Monitored type. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• 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 one tenth of a percentage
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage
• BIEC	FEC—Bit Errors Corrected
• BIT-EC	The number of bit errors corrected by the FEC algorithm
• CGV	8B10B—Code Group Violations

• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets

• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High-Order Path Negative Pointer Justification Count, Path Detected
• HP-NPJC-PGEN	High Order Path, Negative Pointer Justification Count, Path Generated
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count Seconds, Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected

• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias Current in microA
• LBCL-MAX	Maximum Laser Bias Current in microA
• LBCL-MIN	Minimum Laser Bias Current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Normalized Laser Bias Current—Higher Threshold

• LBCN-LWT	Normalized Laser Bias Current—Lower Threshold
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN

• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt
• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt
• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• 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
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)

• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
• OSNR-MIN	Minimum Optical Signal To Noise Ratio.
• OSNR-MAX	Maximum Optical Signal To Noise Ratio.
• OSNR-AVG	Average Optical Signal To Noise Ratio.
• PMD-MIN	Minimum Polarization Mode Dispersion.
• PMD-MAX	Maximum Polarization Mode Dispersion.
• PMD-AVG	Average Polarization Mode Dispersion.
<MONVAL>	The value to which the register identified by MONTYPE is to be initialized to or the measured value of a monitored parameter. The value is in the form of numeric counts or rates. MONVAL is a string.
<VLDTY>	(Optional) Indicates whether the information for the specified time period was accumulated over the entire time period or some portion thereof. Validity indicator for the reported PM data. The parameter type is VALIDITY, which is the response validity.

• COMPL	Complete response
• PRTL	Partial response
<LOCN>	(Optional) Location associated with a particular command. The parameter type is LOCATION, which is the location where the action is to take place
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRECTION>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
• TRMT	Transmit direction only
<TMPER>	(Optional) Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24-hours. For SONET PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.
<MONDAT>	(Optional) The beginning date of the PM or storage register period specified in TMPER. The format of MONDAT is MM-DD, where MM (month of year) ranges from 1 to 12 and DD (day of month) ranges from 1 to 31. MONDAT is a string.

<MONTM>	(Optional) The beginning time of day of the PM or storage register period specified in TMPER. The format of MONTM is HH-MM, where HH (hour of day) ranges from 0 to 23 and MM (minute of hour) ranges from 0 to 59. MONTM is a string.

RTRV- PM-ODU

This command retrieves ODU PM.

Usage Guidelines

Category
System

Security
Retrieve

Input Format
RTRV-PM-ODU:[<TID>]:<aid>:<CTAG>::[<montype>],[<monlev>],[<locn>],[<dirn>],[<tmper>],[<date>],[<time>]:[BANDWIDTH=<bandwidth>];

Input Example
> RTRV-PM-ODU::ODU-1-5-12-1-1-20:a::BBE-PM,,FEND,,15-MIN,,:BANDWIDTH=ODU2E;

node60 2016-12-10 22:46:29
M a COMPLD
"ODU-1-5-12-1-1-20,ODU:BBE-PM,0,PRTL,FEND,RCV,15-MIN,12-10,22-45"
;

Input Parameter

< AID >	AID of the ODU2. ALL AID is also supported. AID is Mandatory.
< DIRN (DIRECTION)>	ODU Level (ODU2E). ENUM Mandatory.

Montype	ES-SM, ES-PM, SES-SM, SES-PM, UAS-SM, UAS-PM, BBE-SM, BBE-PM, FC-SM and FC-PM. ENUM Mandatory.
Locn	ENUM (optional). FEND or NEND.Location associated with a particular command. The parameter type is LOCATION, which is the location where the action is to take place.
Tmper	ENUM (optional). 15 min or 1 day. Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.
Dirn	ENUM (optional). RCV : Receive direction only TRMT: Transmit direction only
Date	The beginning date of the PM or storage register period specified in TMPER. The format of DATE is MM-DD, where MM (month of year) ranges from 1 to 12 and DD (day of month) ranges from 1 to 31. A null value defaults to current date.
Time	The beginning time of day of the PM or storage register period specified in TMPER. The format of TIME is HH-MM, where HH (hour of day) ranges from 0 to 23 and MM (minute of hour) rangesfrom 0 to 59. A null value defaults to current time.

Output Format

Output Example

Output Parameters

RTRV- PMSCHED-ODU

This command retrieves Schedule Performance Monitoring.

Usage Guidelines

Category
System

Security
Retrieve

Input Format
RTRV-PMSCHED-ODU:[<TID>]:<aid>:<CTAG>:::BANDWIDTH=<bandwidth>

Input Example

> RTRV-PMSCHED-ODU::all:a:::bandwidth=odu2e;

vxTarget168 2016-10-19 10:58:09
M a COMPLD
"ODU-1-2-11-1-1-1,ODU:5-MIN,10-19,11-2,9997,,-40-UP,NEND,,15-MIN,0-0-0,ALW"
;

Input Parameter

< AID >	AID of the ODU2. ALL AID is also supported. AID is Mandatory.
< BANDWIDTH>	ODU Level (ODU2E). ENUM Mandatory.

Output Format

Output Example

Output Parameters

RTRV- PROTNSW-ODU

This command retrieves protection switch for ODU.

Usage Guidelines

Category
System

Security
Retrieve

Input Format
RTRV-PROTNSW-ODU:[<TID>]:<aid>:<CTAG>:::[BANDWIDTH=<bandwidth>];

Input-Example
RTRV-PROTNSW-ODU::ODU-1-3-1-1-1-1:a:::BANDWIDTH=ODU2E;

vxTarget35 2017-07-21 12:50:40
M a COMPLD
"ODU-1-3-1-1-1-1:LOCKOUT-OF-PROTECTION"

Input Parameter

< AID >	AID of the ODU2. ALL AID is also supported. AID is Mandatory.
< BANDWIDTH>	ODU Level (ODU2E). ENUM Mandatory.

Output Format

Output Example

Output Parameters

RTRV-PMMODE-<STS_PATH>

The Retrieve Performance Mode of PM Data Collection for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, or STS9C (RTRV-PMMODE-<STS_PATH>) 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 PMs are being collected by the NE.

Usage Guidelines

- See Table 30-1 on page 30-1 for supported modifiers by platform.
- The PM mode and state of an entity is set by using the SET-PMMODE command.
- This command returns the categories that are enabled only.
- This near-end monitoring of the intermediate-path performance monitoring (IPPM) only supports OC3, OC12, OC48, OC192, and EC1 on the STS Path.
- The far-end IPPM data collection is supported by MRC-12 and ADM-10G cards only.
- 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) mosde types. Note that the PM monitoring for Line (L) and Section (S) are supported by the , and the storing PM data is always performed.
- This command only returns the categories that are enabled (pmstate is ON), and does not return the categories that are disabled (pmstate is OFF).

Category

Performance

Security

Retrieve

Input Format

RTRV-PMMODE-<STS_PATH>:[<TID>]:<SRC>:<CTAG>::<LOCN>;

Input Example

RTRV-PMMODE-STS1:CISCO:STS-4-1-2:123::NEND;

Input Parameters

<SRC>	Source access identifier from the "28.11 CrossConnectId" section on page 28-27.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. Must not be null. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    "<CROSSCONNECTID>:[<LOCN>],<MODETYPE>"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001   COMPLD
    "STS-4-1-2:NEND,P"
;
```

Output Parameters

<CROSSCONNECTID>	Access identifier from the "28.11 CrossConnectId" section on page 28-27.
<LOCN>	(Optional) Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<MODETYPE>	The type of PM parameters that the entity or the subentity is to store as a result of an attribute change. The parameter type is PM_MODE, which is the type of PM parameters.
• P	Transport Path PM parameters.

RTRV-PMMODE-<VT_PATH>

The Retrieve Performance Mode of PM Data Collection for VT1 and VT2 (RTRV-PMMODE-<VT_PATH>) 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 PMs are being collected by the NE.

Usage Guidelines

- The PM mode and state of an entity is set by using the SET-PMMODE command.
- This command returns the categories that are enabled (pmstate is ON) only. It does not return the categories that are disabled (pmstate is OFF).
- 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.

Category
Performance

Security
Retrieve

Input Format
RTRV-PMMODE-<VT_PATH>:[<TID>]:<SRC>:<CTAG>::<LOCN>;

Input Example
RTRV-PMMODE-VT1:CISCO:VT-1-1-2-2:1::NEND;

Input Parameters

<SRC>	Source access identifier from the "28.11 CrossConnectId" section on page 28-27.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. Must not be null. The parameter type is LOCATION, which is the location where the action is to take place. Must not be null.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.

Output Format

SID DATE TIME
M CTAG COMPLD
"<CROSSCONNECTID>:<LOCN>,<MODETYPE>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"VT1-1-1-2-2:NEND,P"
;

Output Parameters

<CROSSCONNECTID>	Access identifier from the "28.12 CrossConnectId1" section on page 28-31.

<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<MODETYPE>	The type of PM parameters that the entity or the subentity is to store as a result of an attribute change. The parameter type is PM_MODE, which is the type of PM parameters.
• P	Transport Path PM parameters.

RTRV-PMSCHED-<MOD2>

The Retrieve Performance Monitoring Schedule for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 5GIB, 8GFC, CHGRP, CLNT, D1VIDEO, DS1, DV6000, DVBASI, E1, E3, E4, EC1, ESCON, ETRCLO, ETH, FSTE, G1000, GFPOS, GIGE, HDLC, HDTV, ISC1, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OC12, OC192, OC3, OC48, OC768, OCH, OMS, OTS, OTU2, OTU3, OTU4, OTU4C2, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, VT2, 3GVIDEO, HDSDI, ISC3STP1G, ISC3STP2G, OTU1, or SDSDI (RTRV-PMSCHED-<MOD2>) command retrieves the PM reporting schedule that was set for the NE by the SCHED-PMREPT command.

Usage Guidelines

The command supports the modifier 3GVIDEO, SDSDI, HDSDI, AUTO, OTU1, ISC3STP1G, and ISC3STP2G.

See Table 30-1 on page 30-1 for supported modifiers by platform.

Category

Performance

Security

Retrieve

Input Format

RTRV-PMSCHED-<MOD2>:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-PMSCHED-ISC3STP2G::VFAC-13-5-7-1:777;

Input Parameters	
<AID>	Access identifier from the “28.1 ALL” section on page 28-1. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.

Output Format

SID DATE TIME M CTAG COMPLD "<AID>,[<AIDTYPE>]:<REPTINVL>,<REPTDAT>,<REPTTM>,[<NUMINVL>],,[<MONLEV>],<LOCN>,,[<TMPER>],[<TMOFST>],[<INHMODE>]"

;

Output Example

TID-000 1998-06-20 14:30:00

M 001 COMPLD

"VFAC-3-1-1,ISC3STP2G:30-MIN,5-25,14-46,100,,1-UP,NEND,,15-MIN,0-0-15,ALW"

;

Output Parameters	
<AID>	Access identifier from the “28.1 ALL” section on page 28-1.
<AIDTYPE>	(Optional) Type of facility, link or other addressable entity targeted by the message. The parameter type is MOD2, which is the line/path modifier.
• 100GIGE	100 Gigabit Ethernet.
• 10GFC	10-Gigabit Fibre Channel payload
• 10GIGE	10-Gigabit Ethernet
• 40GIGE	40-Gigabit Ethernet
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload

• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• D1VIDEO	D1 Video
• DS1	DS1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• DVBASI	Digital Video Broadband Asynchronous Serial Interface (DVBASI) payload
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETR_CLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over POS. Virtual ports partitioned using GFP's multiplexing capability.
• GIGE	Gigabit Ethernet
• HDTV	HDTV
• HDSDI	1.5G HD-SDI video payload.
• ISC1	InterSystem Channel, a protocol defined by IBM (ISC1) payload
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 facility
• OC12	OC12 facility
• OC48	OC48 facility
• OC192	OC192 facility

• OC768	OC768 facility
• OCH	Optical channel
• OCHCC	OCH client connection
• OCHNC	OCH network connection
• OCHTERM	OCH termination
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTU1	Optical Transport Unit Level 1
• OTU2	Optical Transport Unit Level 2
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• POS	POS port
• SDSDI	270M SDI video payload.
• STS1	STS1 path
• STS3C	STS3c path
• STS6C	STS6c path
• STS9C	STS9c path
• STS18C	STS18c path
• STS12C	STS12c path
• STS24C	STS24c path
• STS36C	STS36c path
• STS48C	STS48c path
• STS192C	STS192c path
• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 path
• VT2	VT2 path
<REPTINVL>	Reporting interval. How often a report is to be generated and sent to the appropriate NE. REPTINVL is a string.

<REPTDAT>	Report date. Date for the next report. REPTDAT is a string.
<REPTTM>	Report time. The time of day for the next PM report. REPTTM is a string. **Note** PM schedule processing is performed every 5 minutes. Therefore, specifying a REPTINVL of 5-MIN or less would be processed at the earliest every 5 minutes.
<NUMINVL>	(Optional) The remaining number of intervals over which the PM will be reported. NUMINVL is an integer.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode will be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<TMPER>	(Optional) Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24 hours. For SONET PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.
<TMOFST>	(Optional) Time offset between reporting/diagnostics/exercises; from the end of the last complete accumulation time period to the beginning of the accumulation time period specified by TMPER. TMOFST is a string.

<INHMODE>	(Optional) Indicates whether a function is inhibited by an INH command. Indicates whether the reporting of PM data is inhibited (by the INH-PMREPT-ALL command) or is allowed (by the ALW-PMREPT-ALL command). The parameter type is INH_MODE, which indicates whether the function is inhibited.
• ALW	Function is allowed.
• INH	Function is inhibited.

RTRV-PMSCHED-ALL

The Retrieve Performance Schedule All (RTRV-PMSCHED-ALL) command retrieves all the PM reporting schedules that were set for the NE by the SCHED-PMREPT command.

Usage Guidelines

None

Category

Performance

Security

Retrieve

Input Format

RTRV-PMSCHED-ALL:[<TID>]::<CTAG>;

Input Example

RTRV-PMSCHED-ALL:CISCO-NODE::123;

Input Parameters

None that require description

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    "<AID>,[<AIDTYPE>]:<REPTINVL>,<REPTDAT>,<REPTTM>,[<NUMINVL>],,
    [<MONLEV>],<LOCN>,,[<TMPER>],<TMOFST>,[<INHMODE>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001   COMPLD
    “FAC-3-1,OC3:30-MIN,5-25,14-46,100,,1-UP,NEND,,15-MIN,0-0-15,ALW”
;
```

Output Parameters

<AID>	Access identifier from the “28.1 ALL” section on page 28-1.
<AIDTYPE>	(Optional) Type of facility, link or other addressable entity targeted by the message. The parameter type is MOD2, which is the line/path modifier.
• 100GIGE	100 Gigabit Ethernet.
• 10GFC	10-Gigabit Fibre Channel payload
• 10GIGE	10-Gigabit Ethernet
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 40GIGE	40-Gigabit Ethernet
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• CHGRP	Channel group
• D1VIDEO	D1 Video
• DVBASI	Digital Video Broadband Asynchronous Serial Interface (DVBASI) payload
• DS1	DS-1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• EC1	EC1 facility

• ESCON	ESCON
• ETRCLO	ETR_CLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over POS. Virtual ports partitioned using GFP's multiplexing capability.
• GIGE	Gigabit Ethernet
• HDLC	High-level data link control (HDLC) frame mode.
• HDSDI	1.5G HD-SDI video payload.
• HDTV	HDTV
• ISC1	InterSystem Channel, a protocol defined by IBM (ISC1) payload
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• MSISC	MSISC
• OC3	OC-3 facility
• OC12	OC-12 facility
• OC48	OC-48 facility
• OC192	OC-192 facility
• OCH	Optical channel
• OCHCC	OCH client connection
• OCHNC	OCH network connection
• OCHTERM	OCH termination
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTU1	Optical Transport Unit Level 1

• OTU2	Optical Transport Unit Level 2
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• POS	POS port
• REP	Resilient Ethernet Protocol
• SDSDI	270M SDI video payload.
• STS1	STS1 path
• STS3C	STS3c path
• STS6C	STS6c path
• STS9C	STS9c path
• STS18C	STS18c path
• STS12C	STS12c path
• STS24C	STS24c path
• STS36C	STS36c path
• STS48C	STS48c path
• STS192C	STS192c path
• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 path
• VT2	VT2 path
<REPTINVL>	Reporting interval. How often a report is to be generated and sent to the appropriate NE. REPTINVL is a string.
<REPTDAT>	Report date. Date for the next report. REPTDAT is a string.
<REPTTM>	Report time. The time of day for the next PM report. REPTTM is a string.
<NUMINVL>	(Optional) The remaining number of intervals over which PM is to be reported. NUMINVL is an integer.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.

• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<TMPER>	(Optional) Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24 hours. For SONET PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.
<TMOFST>	(Optional) Time offset between reporting/diagnostics/exercises; from the end of the last complete accumulation time period to the beginning of the accumulation time period specified by TMPER. TMOFST is a string.
<INHMODE>	(Optional) Indicates whether a function is inhibited by an INH command. Indicates whether the reporting of PM data is inhibited (by the INH-PMREPT-ALL command) or is allowed (by the ALW-PMREPT-ALL command). The parameter type is INH_MODE, which indicates whether the function is inhibited.
• ALW	Function is allowed.
• INH	Function is inhibited.

RTRV-POS

The Retrieve Packet Over SONET (RTRV-POS) command retrieves the back-end port information for the Ethernet card when the back-end port is working in POS mode.

Usage Guidelines

- This command is supported for the ML-Series cards.
- For the ML-Series card, the EDGE, RPRSPAN, JUMBO, ADMINSTATE, ENCAP, and NAME parameters are valid when the card mode is ML-IEEE-RPR. Other parameters, including PST and SST, are not valid in this mode.
- This command is supported for the ASAP card, but ADMINSTATE information will not appear.
- Because the back-end port is virtual, the Virtual Facility (VFAC) AID should be used when issuing the command.

Category

Ports

Security

Retrieve

Input Format

RTRV-POS:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-POS:TID:VFAC-1-1:CTAG;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[ADMINSTATE=<ADMINSTATE>],[JUMBO=<MTU>],[ENCAP=<ENCAP>],
[RPRSPAN=<RPRSPAN>],[EDGE=<EDGE>],[NAME=<NAME>]:";
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"VFAC-1-1::ADMINSTATE=DOWN,JUMBO=N,ENCAP=RPR-GFP-F,RPRSPAN=EAST,
EDGE=Y,NAME=\"RPR\":"
;

Output Parameters	
<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<ADMINSTATE>	(Optional) Administration type. The parameter type is UP_DOWN (up or down).
• DOWN	Down
• UP	Up
<ENCAP>	Frame encapsulation
• RPR-GFP-F	RPR-over-GFP frame mode
• CBR	CBR mapping mode.
• GFP	GFP mapping mode.
• GMP	GMP mapping mode is supported only on 8GFC on 10x10G-LC card.
• TRP	Transparent mapping mode.
• HO_ODU4_V1	
• HO_ODU4_V2	
<JUMBO>	Jumbo frame values
• Y	Yes
• N	No
<RPRSPAN>	RPR span values
• EAST	East direction
• WEST	West direction
<EDGE>	RPR edge values
• Y	Yes
• N	No
<NAME>	Port name, facility name, or VCAT group name

RTRV-PROTNSW-<MOD2DWDMPAYLOAD>

The Retrieve Protection Switch for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 8GFC, D1VIDEO, DV6000, DVBASI, ETRCLO, FSTE, GIGE, HDTV, ISC1, ISC3, OTU3, OTU4, PASSTHRU, 3GVIDEO,

SDSDI, HDSDI, AUTO, OTU1, OTU4C2, ISC3STP1G, or ISC3STP2G (RTRV-PROTNSW-<MOD2DWDMPAYLOAD>) command retrieves the protection switch status of client facilities.

Usage Guidelines

The command supports the modifier 3GVIDEO, SDSDI, HDSDI, AUTO, OTU1, ISC3STP1G, and ISC3STP2G.

Category

Performance

Security

Retrieve

Input Format

RTRV-PROTNSW-<MOD2DWDMPAYLOAD>:[<TID>]:<SRC>:<CTAG>[::::];

Input Example

RTRV-PROTNSW-ISC3STP1G:CISCO:VFAC-13-5-7-1:007;

Input Parameters

<SRC>	Source access identifier from the "28.17 FACILITY" section on page 28-42. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AIDUNIONID>:<SC>,[<SWITCHTYPE>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "FAC-1-1-1:FRCD,MANWKSWBK"
;
```

Output Parameters	
<AIDUNIONID>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<SC>	Switch command to be initiated on the paths. The parameter type is SW, which is the type of switch to be initiated.
• 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. CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.
<SWITCHTYPE>	(Optional) Switch type. The parameter type is SWITCH_TYPE, which is the 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. RING and SPAN are the only allowed values for BLSR protection.
• FRCDWKSWBK	Working unit is forced to switch back to working.
• FRCDWKSWPR	Working unit is 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.

RTRV-PROTNSW-<OCN_TYPE>

The Retrieve Protection Switch for OC3, OC12, OC48, OC192, OC768 (RTRV-PROTNSW-<OCN_TYPE>) command retrieves the switching state of a SONET line specified in the AID.

Usage Guidelines

See Table 30-1 on page 30-1 for supported modifiers by platform.

Category

Protection

Security

Retrieve

Input Format

RTRV-PROTNSW-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-PROTNSW-OC48:CISCO:FAC-5-1:123;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:<SC>,[<SWITCHTYPE>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"FAC-5-1:MAN,MANWKSWBK"
;

Output Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<SC>	Switch command to be initiated on the paths. The parameter type is SW, which is the type of switch to be initiated.

• 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. CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.
<SWITCHTYPE>	(Optional) Switch type. The parameter type is SWITCH_TYPE, which is the 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. RING and SPAN are the only allowed values for BLSR protection.
• FRCDWKSWBK	Working unit is forced to switch back to working.
• FRCDWKSWPR	Working unit is 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.

RTRV-PROTNSW-<PATH>

The Retrieve Protection Switch for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, VT1, or VT2 (RTRV-PROTNSW-<PATH>) command retrieves the switching state of a SONET path protection STS path specified in the AID. Because Telcordia GR-1400 does not allow LOCKOUT_OF_WORKING on the path protection WORKING path/AID, the “AID:LOCKOUT,LOCKOUTOFWK” does not appear in this protection switch retrieval result.

Usage Guidelines

See Table 30-1 on page 30-1 for supported modifiers by platform.

Note RTRV-PROTNSW-VT1 accepts STS-1 AID when STS-1 cross connection is made using the DS1 card. This will allow the user to retrieve all the VT1 conditions/alarms that are raised by DS-1 card when STS-1 cross connect is created.

Category
Protection

Security
Retrieve

Input Format
RTRV-PROTNSW-<PATH>:[<TID>]:<SRC>:<CTAG>[::::];

Input Example
RTRV-PROTNSW-STS1:CISCO:STS-5-1-1:123;

Input Parameters

<SRC>	Source access identifier from the "28.11 CrossConnectId" section on page 28-27.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<CROSSCONNECTID>:<SC>,[<SWITCHTYPE>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "STS-5-1-1:MAN,MANWKSWBK"
;
```

Output Parameters

<CROSSCONNECTID>	Access identifier from the "28.11 CrossConnectId" section on page 28-27.
<SC>	Switch command that is to be initiated on the paths. The parameter type is SW, which is the type of switch to be initiated.

• 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. CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.
<SWITCHTYPE>	(Optional) Switch type. The parameter type is SWITCH_TYPE, which is the 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. RING and SPAN are the only allowed values for BLSR protection.
• FRCDWKSWBK	Working unit is forced to switch back to working.
• FRCDWKSWPR	Working unit is 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.

RTRV-PROTNSW-OCH

The Retrieve Protection Switch Optical Channel (RTRV-PROTNSW-OCH) command retrieves the protection switch status of the TXPP_MR_2.5G and MXPP_MR_2.5G card's splitter protection group (of its working and protected trunk ports).

Usage Guidelines

None

Category

DWDM

Security
Retrieve

Input Format
RTRV-PROTNSW-OCH:[<TID>]:<AID>:<CTAG>;

Input Example
RTRV-PROTNSW-OCH:VA454-22:CHAN-2-2:100;

Input Parameters

<AID>	Access identifier from the "28.8 CHANNEL" section on page 28-23.

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    "<AID>:<SW>,<SWTYPE>"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001   COMPLD
    "CHAN-2-2:FRCD,FRCDWKSWBK"
;
```

Output Parameters

<AID>	Access identifier from the "28.8 CHANNEL" section on page 28-23.
<SW>	Indicates the switch operation. The parameter type is SW, which is the type of switch to be initiated.
• 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. CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.

• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.
<SWITCHTYPE>	Indicates the switch type operation. The parameter type is SWITCH_TYPE, which is the 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. RING and SPAN are the only allowed values for BLSR protection.
• FRCDWKSWBK	Working unit is forced to switch back to working.
• FRCDWKSWPR	Working unit is 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.

RTRV-PROTNSW-OTS

The Retrieve Protection Switch OTS (RTRV-PROTNSW-OTS) command retrieves the protection switch status of the PSM splitter protection group (of its working and protected OTS RX ports).

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-PROTNSW-OTS:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-PROTNSW-OTS:VA454-22:CHAN-2-2:100;

Input Parameters

<AID>	Access identifier from the "28.8 CHANNEL" section on page 28-23.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:<SW>,<SWTYPE>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"CHAN-2-2:FRCD,FRCDWKSWBK"
;

Output Parameters

<AID>	Access identifier from the "28.8 CHANNEL" section on page 28-23.
<SW>	Indicates the switch operation. The parameter type is SW, which is the type of switch to be initiated.
• 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. CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.

<SWITCHTYPE>	Indicates the switch type operation. The parameter type is SWITCH_TYPE, which is the 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. RING and SPAN are the only allowed values for BLSR protection.
• FRCDWKSWBK	Working unit is forced to switch back to working.
• FRCDWKSWPR	Working unit is 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.

RTRV-PROTOCOL

The Retrieve Protocol (RTRV-PROTOCOL) command retrieves the status of a protocol or service supported in the NE. Valid protocols include SHELL, EMS, TL1, and SNMP. If the AID is not specified, the status of all the protocols is retrieved.

Usage Guidelines

If the AID is TL1, the status can be retrieved to show if the protocol is in SECURE or UNSECURE mode.

Category

Security

Security

Retrieve

Input Format

RTRV-PROTOCOL:[<TID>]:[<AID>]:<CTAG>;

Input Example

RTRV-PROTOCOL::EMS:123;

Input Parameters

<AID>	(Optional) Identifies the protocol or service to which the command pertains. Defaults to ALL. A null value is equivalent to ALL. The parameter type is PROTOCOLAID, which is the AID for the protocol/service.
• EMS	CTC/CTM protocol/service
• SHELL	Shell/file system access protocol
• SNMP	SNMP protocol/service
• TL1	TL1 protocol service

Output Format

```
   SID DATE TIME
M   CTAG COMPLD
   "<PROTOCOLAID>:<PROTOCOLSTAT>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M   001   COMPLD
   "EMS:UNSECURE"
;
```

Output Parameters

PROTOCOLAID	Identifies the protocol or service to which the command pertains. The parameter type is PROTOCOLAID, which is the AID for the protocol/service.
• EMS	CTC/CTM protocol/service
• SHELL	Shell/file system access protocol
• SNMP	SNMP protocol/service
• TL1	TL1 protocol/service
PROTOCOLSTAT	Identifies the status of the protocol or service. The parameter type is PROTOCOLSTAT, which is the status of the protocol.
• DISABLED	The protocol cannot be used.

• SECURE	The protocol is enabled and communications using the protocol are sure, for example, through SSH. Not applicable for SNMP protocols.
• UNSECURE	The protocol is enabled but communication is not secure, for example, through Telnet.

RTRV-PRBS

The Retrieve PseudoRandom Binary Sequence (RTRV-PRBS) is used to retrieve the PRBS configuration.

Usage Guidelines

- 100G-LC-C and 100G-CK-C trunk supports the PRBS generation.
- PRBS can be configured at the port level.
- PRBS is not dependent on the card operating mode.
- Enabling or disabling PRBS is possible when the port is in OOS-DSBLD state.
- After the PRBS is set to ON or OFF, the port states can be moved to other states without any issues.

Category

Ports

Security

Maintenance

Input Format

RTRV-PRBS:[<TID>]:<aid>:<CTAG>[::::];

Input Example

RTRV-PRBS::CHAN-7-2-1:1;

Table 23-8 RTRV-PRBS Command - Parameter Support

Input Parameters	Description
<AID>	Access Identifier.

Output Format

SID DATE TIME
M CTAG COMPLD

“<AID>,[<AIDTYPE>]:[PRBSGENPATTERN=<PRBSGENPATTERN>],[PRBSDETPATTERN=<PRBSDETPATTERN>]
,[PATTERNSYNCSTATUS=<PATTERNSYNCSTATUS>];”

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
“CHAN-7-2,OCH:PRBSGENPATTERN=NONE,PRBSDETPATTERN=NONE,PATTERNSYNCSTATUS=PATTERN-NONE”
;

Table 23-9 Output Parameter Support

Parameter	Description
<AID>	Access Identifier.
• EMS	CTC or CTM protocol/service
• SHELL	Shell/file system access protocol
• SNMP	SNMP protocol/service
• TL1	TL1 protocol service
<PRBSGENPATTERN>	PRBSGENPATTERN. The PRBS generator pattern. It can be any of the following: • NONE • PRBS-11 • PRBS-23 • PRBS-31
<PRBSDETPATTERN>	PRBS detection pattern. It can be any of the following: • NONE • PRBS-11 • PRBS-23 • PRBS-31
<PATTERNSYNCSTATUS>	Pattern sync status. It can be any of the following: • PATTERN-NONE • PATTERN-OK • PATTERN-ERROR

RTRV-PTHTRC-<PATH>

The Retrieve Path Trace for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, VT1, or VT2 (RTRV-PTHTRC-<PATJ>) command retrieves the contents of the SONET path trace message.

Usage Guidelines

See Table 30-1 on page 30-1 for supported modifiers by platform.

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.

Note • A null value for the MSGTYPE defaults to INCTRC.

- Only the NEND location value is supported. A null value of the location defaults to NEND.
- Sending a FEND of the location with this command will return an “unsupported locn value” error message.
- J1 (EXPTRC/INCTRC) is implemented on the DS1/DS1N, DS3E/DS3NE, DS3XM, EC1, OC3, OC48A, OC192, OC192-XFP, and MRC-12 cards.
- TRC is supported only on DS1(N), DS3(N)E, and DS3XM cards.
- The VCAF AID is only valid on slots holding ML-Series cards.
- 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.
- If there is an STS PCA on the protection path during the BLSR switch, the PCA path is preemptive. 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.
- The J2 path trace on the VT1.5 is supported on the VT1.5 cross-connection of the DS3XM-12 card in Software R5.0 and later.
- The VT2 modifier is not supported in this release.
- According to Telcordia GR-833, RTRV-PTHTRC-<PATH> can only have a single output row, therefore you cannot specify multiple AIDs using '&' with this command because each AID would require it's own output row. You also cannot use the AIDs that end in ALL because this might also result in multiple output rows.

Category

Troubleshooting and Test Access

Security

Retrieve

Input Format

RTRV-PTHTRC-<PATH>:[<TID>]:<SRC>:<CTAG>::[<MSGTYPE>][:<LOCN>];

Input Example

RTRV-PTHTRC-STS1:CISCO:STS-2-1-1:123::EXPTRC:NEND;

Input Parameters

<SRC>	Source access identifier from the "28.11 CrossConnectId" section on page 28-27.
<MSGTYPE>	Type of autonomous message to be retrieved. A null value defaults to INCTRC. The parameter type is MSGTYPE, which is the type of trace message.
• EXPTRC	Expected incoming path trace message
• INCTRC	Incoming path trace message
• TRC	Outgoing path trace message
• DAPIEXPTRC	
• DAPIINCTRC	
• DAPITRC	
• EXPTRC-ALL	
• INCTRC-ALL	
• SAPIEXPTRC	
• SAPIINCTRC	
• SAPITRC	
• TRC-ALL	
• USEREXPTRC	
• USERINCTRC	
• USERTRC	
<LOCN>	Location associated with a particular command in reference to the entity identified by the AID. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.

Output Format

SID DATE TIME
M CTAG COMPLD
"<TRACMSG>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"TRACMSG"
;

Output Parameters

<TRACMSG>	The path trace message returned to the requester. The message can be up to 64 characters in length with the last two characters reserved for the CR (carriage return) and the LF (line feed). TRACMSG is a string.

RTRV-PTSYS

The Retrieve Packet Transport System (RTRV-PTSYS) command retrieves the provisioned information of the CPT 50 panel.

Usage Guidelines

This command is valid for CPT 50 panel. Retrieves the PTSYS information provisioned on the Node.

Category

Equipment

Security

Retrieve

Input Format

RTRV-PTSYS:[<TID>]:<AID>:<CTAG>;

Input Example

PTSYS-1:PTSYSID=1,OPMODE=NMS,MEMLIST=\"SLOT-3-36&SLOT-2&PTSA;

Input Parameters

<AID>	AID of the PTSYS.

Output Format

SID DATE TIME
M CTAG COMPLD
"<PTSYS AID>:<MODE>,<MEMLIST>,<FOGLIST>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"PTSYS-1:PTSYSID=1,OPMODE=NMS,MEMLIST=\"SLOT-3&PTSA-37\",FOGLIST=\"FOG-1-36";

Output Parameters

Parameter	Description
<AID>	AID of the CPT 50 panel to be retrieved.
<PTSYSID>	PTSYS number or ID.
<OPMODE>	Operation mode of the PTSYSTEM.
• NMS	TCP IPC mode.
• IOS	IPC mode.
<MEMLIST>	Defines the slot of the PT systme.
<FOGLIST>	Defines the FOG members.

RTRV-QNQ-CHGRP

The Retrieve QinQ Channel Group (RTRV-QNQ-CHGRP) command retrieves the IEEE 802.1Q tunneling (QinQ) relationship between the CE-VLAN and the S-VLAN for Gigabit Ethernet uniport provisioning associated to a channel group.

Usage Guidelines

None

Category
Channel Group

Security
Retrieve

Input Format
RTRV-QNQ-CHGRP:[<TID>]:<AID>:<CTAG>::<FIRSTCEVLANID>,<LASTCEVLANID>,
<SVLANID>[:];

Input Example
RTRV-QNQ-CHGRP::CHGRP-1-1:1::110,110,1208;

Input Parameters

<AID>	Access identifier from the "28.9 CHGRP" section on page 28-26.
<FIRSTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<LASTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<INGRESSCOS>	Identifies the COS value set in the S-VLAN tag.
• 0 to 7	Set a Cos value
• DSCP	The COS is set according to DSCP to COS mapping table.
• TRUST	Use the Customer COS
• VLAN	The COS will be provisioned on CVLAN basis (QinQ selective mode)

Output Format
SID DATE TIME
M CTAG COMPLD

“<AID>:<FIRSTCEVLANID>,<LASTCEVLANID>,<SVLANID>:RULE=<RULE>,[INTERNALVLAN=<INTERNAL_VLAN_ID>],[INGRESSCOS=<INGRESSCOS>[:];

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001   COMPLD
    “CHGRP-1-1:110,111,1208:RULE=DOUBLE-ADD,INTERNALVLAN=18,INGRASSCOS=”
;
```

<AID>	Access identifier from the 28.9 CHGRP, page 28-26.
<FIRSTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<LASTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<RULE>	Used to represent the Rules allowed for VLAN tagging operations. Default is ADD.
• ADD	The S-VLAN tag is added to the CE-VLAN tag.
• XLTE	The S-VLAN tag substitutes the CE-VLAN tag (single Q).
• XLTE-ADD	XLTE and ADD rule applied together. This rule request to supply an internal S-VLAN. First the Internal VLAN substitutes the Customer VLAN, then Service Provider VLAN TAG (S-VLAN) is added
• DOUBLE-ADD	ADD rule applied two times. This rule request to supply an internal S-VLAN. First the Internal VLAN is added, then Service Provider VLAN TAG (S-VLAN) is added to have a double tag
<INTERNAL_VLAN_ID>	Internal VLAN ID
<INGRESSCOS>	Identifies the COS value set in the S-VLAN tag.
• 0 to 7	Set a Cos value
• DSCP	The COS is set according to DSCP to COS mapping table.
• TRUST	Use the Customer COS.

• VLAN	The COS provisioned on CVLAN basis (QinQ selective mode)

Output Parameters

RTRV-QNQ-ETH

The Retrieve QinQ Ethernet (RTRV-QNQ-ETH) command retrieves the IEEE 802.1Q tunneling (QinQ) relationship between the CE-VLAN and the S-VLAN for Gigabit Ethernet uniport provisioning associated to an L2 Ethernet port.

Usage Guidelines

None

Category

Ethernet

Security

Retrieve

Input Format

RTRV-QNQ-ETH:[<TID>]:<AID>:<CTAG>::<FIRSTCEVLANID>,<LASTCEVLANID>,<SVLANID>[:];

Input Example

RTRV-QNQ-ETH:PETALUMA:ETH-1-1-1:236::110,110,1208;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "28.16 ETH" section on page 28-41.
<FIRSTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The Access identifier from the "28.17 FACILITY" section on page 28-42. Value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<LASTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:<FIRSTCEVLANID>,<LASTCEVLANID>,<SVLANID>:RULE=<RULE>[:]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"ETH-1-1-1:110,111,1208:RULE=XLTE:"
;

Output Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "28.16 ETH" section on page 28-41.
<FIRSTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<LASTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<RULE>	Used to represent the Rules allowed for VLAN tagging operations. Default is ADD.
• ADD	The S-VLAN tag is added to the CE-VLAN tag.
• XLTE	The S-VLAN tag substitutes the CE-VLAN tag (single Q).

RTRV-RADIUSSERVER

This command is used to retrieve the `configured RADIUS servers`.

Usage Guidelines

- This command accept the ALL AID to retrieve the all the configured `RADIUS servers`.
- Use IP address as AID to retrieve a particular `RADIUS server`.

Category

System

Security

Provisioning

Input Format

RTRV-RADIUSSERVER:[<TID>]:<aid>:<CTAG>;

Input Example

RTRV-RADIUSSERVER::all:a;

Input Parameter

<AID>	AID can be ALL or a Node IP address.

Output Parameter

<AID>	Radius server IP address.
<POSITION>	It is a sequence number used as an AID during ED-RADIUSSERVER & DLT-RADIUSSERVER.
<SHAREDSECRET>	Shares secret
<AUTHPORT>	Authentication Port in the range of 0 to 65535.
<ACCNTPORT>	Account Port in the range of 0 to 65535.

RTRV-RAMAN

Retrieve RAMAN retrieves the attributes of a RAMAN measure.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-RAMAN:[<TID>]:<AID>:<CTAG>:::[MEASIDX=<measidx>];

Input Example

RTRV-RAMAN::LINE-1-3-all:a:::MEASIDX=1;

Input Parameter

<AID>	The LINE AID is used to access Optical Transport Section (OTS) layer of Optical Network units.
• LINE[-{1-12}]-{1-5,12-16}-{1-5}-{RX,TX}	The receive/transmit Lines (COM=1, OSC=2, LINE=3, DC=4, RAMAN=5) in a OPT-RAMP-C card.
• LINE[-{1-12}]-{1-5,12-16}-{1-5}-ALL	All the Lines (COM=1,OSC=2,LINE=3, DC=4, RAMAN=5) in a OPT-RAMP-C card.
• MEASIDX	Raman measuring index. When you configure this parameter, MINRAMANLEV and MAXRAMANLEV parameters appear in the output.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:<MEAS_INDEX>:<MINRAMANLEV>,<MAXRAMANLEV>,<TIME>,<DATE>,<DELTAPWR>";
;

Output Example

node113 2016-08-10 12:39:01
M a COMPLD
"LINE-1-3-2-RX:1:MINRAMANLEV=0.2,MAXRAMANLEV=413162.0,TIME=22-28-17,DATE=2106-02-05,"

"LINE-1-3-4-TX:1:MINRAMANLEV=0.0,MAXRAMANLEV=0.0,"

;

Output Parameters

<AID>	The LINE aid is used to access Optical Transport Section (OTS) layer of Optical Network units.
• LINE[-{1-12}]-{1-5,12-16}-{1-5}-{RX,TX}	The receive/transmit Lines (COM=1, OSC=2, LINE=3, DC=4, RAMAN=5) in a OPT-RAMP-C card.
• LINE[-{1-12}]-{1-5,12-16}-{1-5}-ALL	All the Lines (COM=1,OSC=2,LINE=3, DC=4, RAMAN=5) in a OPT-RAMP-C card.
<MEAS_INDEX >	Raman measure Index.
<MINRAMANLEV>	Power measured with MIN raman power level.
<MAXRAMANLEV >	Power measured with MAX raman power level.
<DATE>	Identifies the date. Date is a string. Default value is - “current date”.
<TIME>	Identifies the time. Time is a string. Default value is - “current time.”
<DELTAPWR>	DELTA RAMAN Power Value.

RTRV-REP

The Retrieve Resilient Ethernet Protocol (RTRV-REP) command retrieves the Resilient Ethernet Protocol (REP) configuration on the ethernet port of GE_XP or 10GE_XP card.

Usage Guidelines

- This command accept the ALL AID.
- This command is applicable only to GE_XP and 10GE_XP cards.

Category

Ethernet

Security

Retrieve

Input Format

RTRV-REP:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-REP:PENNGROVE:CHAN-16-1-RX:114;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "28.16 ETH" section on page 28-41.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[SEGMENTID=<SEGMENTID>],[EDGE=<EDGE>],[PORTROLE=<PORTROLE>],[PREFERRED=<PREFERRED>],[PREEMPTDELAY=<PREEMPTDELAY>][:]"
;

Output Example

SID DATE TIME
M CTAG COMPLD
ETH-16-1-1::SEGMENTID=1,EDGE=Y,PORTROLE=NO_NEIGHBOR,PREFERRED=N,
REEMPTDELAY=0"
;

Output Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "28.16 ETH" section on page 28-41.
<SEGMENTID>	Indicates the segment ID for REP segment. The valid range is from 0 to 1024.
<EDGE>	Configures the port as an edge port.
• Y	To configure the port as an edge port.
• N	Not to configure the port as an edge port.
<PORTROLE>	The parameter type is REP_PORT_ROLE, which indicates the port's role in a REP Segment for the ethernet ports.
• PRIMARY	Indicates that the port is a primary port.
• NO_NEIGHBOR	Indicates that the port has no neighbor port in the segment.

• NO_NEIGHBOR_PRIMARY	Indicates that the port is a primary port and has no neighbor port in the segment.
• REGULAR	Indicates that the port is a regular port.
• None	Indicates that the port is an edge port.
<PREFERRED>	Indicates that the port is the preferred alternate port. Or the preferred port for VLAN load balancing.
• Y	Yes
• N	No

RTRV-RGNCONSTRAINT-CPS

Description
Retrieve REGEN constraint for CPS.

Usage Guidelines
This command accepts ALL AID

Category
Ethernet

Security
Retrieve

Input Format

RTRV-RGNCONSTRAINT-CPS:[<TID>]:<src>:<CTAG>::[::];

Input Parameter

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "28.16 ETH" section on page 28-41.

Output Format

M 1 COMPLD

Output Example

RTRV-RGNCONSTRAINT-CPS::ALL:1;
M 1 COMPLD
"AGGR-1-6-1-1:10.10.1.72,AGGR-1-7-1-1,MAINCONSTRAINT,PRIMARY,10.10.1.73,0x0,ANY"
"CHAN-1-6-2:10.10.1.72,CHAN-1-7-2,MAINCONSTRAINT,PRIMARY,10.10.1.73,0x0,ANY"
;

Output Parameters

RTRV-RGNCONSTRAINT-CPS::CHAN-6-3-2:1;
M 1 COMPLD
CHAN-6-3-2:10.1.2.3,CHAN-6-3-2,MAINCONSTRAINT,PRIMARY,10.1.2.3,0x2002,EGRESS;

RTRV-RGNCONSTRAINT-MCH

Description

Retrieve REGEN constraint for MCH.

Usage Guidelines

This command accepts ALL AID.

Category

Ethernet

Security

Retrieve

Input Format

RTRV-RGNCONSTRAINT-MCH:[<TID>]:<src>:<CTAG>::[::];

Input Parameter

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "28.16 ETH" section on page 28-41.

Output Format

M 1 COMPLD

Output Example

M 1 COMPLD

CHAN-5-7-2:10.1.2.5,,MAINCONSTRAINT,PRIMARY,10.1.2.5,0x2002,EGRESS

;

RTRV-RGNCONSTRAINT-UNICFG

Description

Retrieve REGEN constraint for UNICFG.

Usage Guidelines

The command accepts ALL AID.

Category

Ethernet

Security

Retriever

Input Format

RTRV-RGNCONSTRAINT-UNICFG:[<TID>]:<src>:<CTAG>::[::];

Input Parameter

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "28.16 ETH" section on page 28-41.

Output Format

M 1 COMPLD

Output Example

RTRV-RGNCONSTRAINT-UNICFG::PLINE-14-2-RX:1;

M 1 COMPLD

"PLINE-14-2-RX:MAINCONSTRAINT,10.1.12.1,0x2002,EGRESS"

"PLINE-14-2-RX:RESTOREDCONSTRAINT,10.1.12.1,0x2002,EGRESS"

RTRV-RMONTH-<MOD2_RMON>

The Retrieve Remote Monitoring Threshold for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 4GFC, 4GFICON, 8GFC, CHGRP, FSTE, G1000, ETH, GFP, GFPOS, GIGE, HDLC, ISCCOMPAT, ISC3PEER1G, ISC3PEER2G, OCH, POS, 3GVIDEO, SDSDI , HDSDI, AUTO, OTU4C2, ISC3STP1G, or ISC3STP2G (RTRV-RMONTH-<MOD2_RMON>) command retrieves an entry in the remote monitoring (RMON) alarm table for the threshold of data statistics managed by the RMON engine.

Usage Guidelines

The command supports the modifier 3GVIDEO, SDSDI , HDSDI, AUTO, OTU1, ISC3STP1G, ISC3STP2G, and OTU2.

See Table 30-1 on page 30-1 for supported modifiers by platform.

Category

Performance

Security

Provisioning

Input Format

RTRV-RMONTH-<MOD2_RMON>:[<TID>]:<SRC>:<CTAG>::[<MONTYPE>],,,,[<INTVL>]:[RISE=<RISE>],[FALL=<FALL>],[SAMPLE=<SAMPLE>],[STARTUP=<STARTUP>][:];

Input Example

RTRV-RMONTH-ISC3STP1G::VFAC-4-1-1:1::MEDIAINDSTATSRXLCVERRORS,,,,10:RISE=10,FALL=1,SAMPLE=ABSOLUTE;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42. AID for the facility that the data statistic is managed by.
<MONTYPE>	Monitored type. Type of RMON monitored data statistic. A null value is equivalent to ALL. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• 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 one tenth of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• dot3StatsFCSErrors	A count of frames received on a particular interface that are an integral number of octets in length but do not pass the FCS check.

• dot3StatsFrameTooLong	A count of frames received on a particular interface that exceed the maximum permitted frame size.
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High-Order Path Negative Pointer Justification Count, Path Detected

• HP-NPJC-PGEN	High-Order Path, Negative Pointer Justification Count, Path Generated
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count Seconds, Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted

• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias Current in microA
• LBCL-MAX	Maximum Laser Bias Current in microA
• LBCL-MIN	Minimum Laser Bias Current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Normalized Laser Bias Current—Higher Threshold
• LBCN-LWT	Normalized Laser Bias Current—Lower Threshold
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order Positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count

• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt
• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt
• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• PRE-FECBER	Enum to hold PRE-FECBER value
• 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
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count

<INTVL>	The interval in seconds during which the data is sampled and compared with the rising and falling threshold. A valid value is any integer larger than or equal to 10 (seconds). A null value is equivalent to ALL.
<RISE>	The rising threshold for the sampled statistic. A valid value is any integer. A null value is equivalent to ALL
<FALL>	The falling threshold. A valid value is any integer smaller than the rising threshold. A null value is equivalent to ALL.
<SAMPLE>	The method of calculating the value to be compared to the thresholds. A null value is equivalent to ALL. The parameter type is SAMPLE_TYPE, which describes how the data will be calculated during the sampling period.
• ABSOLUTE	Comparing directly
• DELTA	Comparing with the current value of the selected variable subtracted by the last sample
<STARTUP>	Dictates whether an event will generate if the first valid sample is greater than or equal to the rising threshold, less than or equal to the falling threshold, or both. A null value is equivalent to ALL. The parameter type is STARTUP_TYPE, which indicates whether an event will be generated when the first valid sample is crossing the rising or falling threshold.
• FALLING	Generates the event when the sample is smaller than or equal to the falling threshold.
• RISING	Generates the event when the sample is greater than or equal to the rising threshold.
• RISING-OR-FALLING	Generates the event when the sample is crossing the rising threshold, or the falling threshold.

Output Format

RTRV-RMONTH-SDSDI:CISCO:VFAC-2-5-1:1234::MEDIAINDSTATSRXLCVERRORS,,,,100:RISE=1000, FALL=100,SAMPLE=DELTA,STARTUP=RISING;

Output Example

TID-000 1998-06-20 14:30:00

M 001 COMPLD

"VFAC-2-5-1,SDSDI: MEDIAINDSTATSRXLCVERRORS,,,,100:INDEX=2,RISE=1000,FALL=100, SAMPLE=DELTA,STARTUP=RISING"

;

Output Parameters

<AIDUNIONID>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<AIDTYPE>	The type of facility, link, or other addressable entity targeted by the message. The parameter type is MOD2_RMON, which is the line modifiers.
• 100GIGE	100 Gigabit Ethernet.
• 10GFC	10-Gigabit Fibre Channel payload
• 10GIGE	10-Gigabit Ethernet
• 40GIGE	40-Gigabit Ethernet
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 8GFC	8-Gigabit Fibre Channel payload
• FSTE	Fast Ethernet (10/100 Megabits per second)
• G1000	Gigabit Ethernet (used for G1000 ports)
• GFPOS	Generic framing protocol over SONET
• GIGE	Gigabit Ethernet (used for Non-G1000 ports)
• OCH	Optical channel
• OTU4	Optical Transport Unit Level 4
• POS	Packet over SONET
<MONTYPE>	Monitored type. Type of RMON monitored data statistic. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• 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 one tenth of a percentage
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• dot3StatsFCSErrors	A count of frames received on a particular interface that are an integral number of octets in length but do not pass the FCS check.

• dot3StatsFrameTooLong	A count of frames received on a particular interface that exceed the maximum permitted frame size.
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High-Order Path Negative Pointer Justification Count, Path Detected

• HP-NPJC-PGEN	High-Order Path, Negative Pointer Justification Count, Path Generated
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted

• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias Current in microA
• LBCL-MAX	Maximum Laser Bias Current in microA
• LBCL-MIN	Minimum Laser Bias Current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Normalized Laser Bias Current—Higher Threshold
• LBCN-LWT	Normalized Laser Bias Current—Lower Threshold
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order Positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets

• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt
• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt
• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• 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
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path

• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<INTVL>	The interval in seconds over which the data is sampled and compared with the rising and falling threshold. A valid value is any integer larger than or equal to 10 (seconds).
<INDEX>	The index for the threshold created by the system in the RMON threshold table. INDEX is an integer.

<RISE>	The rising threshold for the sampled statistic. A valid value is any integer.
<FALL>	The falling threshold. A valid value is any integer smaller than the rising threshold. AID is an integer
<SAMPLE>	The method of calculating the value to be compared to the thresholds. The parameter type is SAMPLE_TYPE, which describes how the data will be calculated during the sampling period
• ABSOLUTE	Comparing directly
• DELTA	Comparing with the current value of the selected variable subtracted from the last sample
<STARTUP>	Dictates whether an event will generate if the first valid sample is greater than or equal to the rising threshold, less than or equal to the falling threshold, or both. The parameter type is STARTUP_TYPE, which indicates whether an event will be generated when the first valid sample is crossing the rising or falling threshold.
• FALLING	Generates the event when the sample is smaller than or equal to the falling threshold.
• RISING	Generates the event when the sample is greater than or equal to the rising threshold.
• RISING-OR-FALLING	Generates the event when the sample is crossing the rising threshold or the falling threshold.

RTRV-ROLL-<MOD_PATH>

The Retrieve Roll for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, VC11, VC12, VC3, VT1, or VT2 (RTRV-ROLL-<MOD_PATH>) command retrieves roll data parameters.

Usage Guidelines

See Table 30-1 on page 30-1 for supported modifiers by platform.

Category

Bridge and Roll

Security

Retrieve

Input Format

RTRV-ROLL-<MOD_PATH>:[<TID>]:<SRC>:<CTAG>;

Input Example

RTRV-ROLL-STS1:CISCO:STS-1-1-1:6;

Input Parameters

<SRC>	Source access identifier from the "28.12 CrossConnectId1" section on page 28-31 (except VCM and FACILITY). Roll path (STS or VT).

Output Format

SID DATE TIME
M CTAG COMPLD
"<FROM>,<TO>:RFROM=<RFROM>,RTO=<RTO>,[RMODE=<RMODE>],
VLDSIG=<VLDSIG>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"STS-1-1-1,STS-2-1-1:RFROM=STS-2-1-1,RTO=STS-3-1-1,RMODE=AUTO,VLDSIG=N"
;

Output Parameters

<FROM>	One of the termination points (legs) of the existing cross-connection. AID from the "28.12 CrossConnectId1" section on page 28-31 (except VCM and FACILITY).
<TO>	One of the termination points (legs) of the existing cross-connection. AID from the "28.12 CrossConnectId1" section on page 28-31 (except VCM and FACILITY).
<RFROM>	The termination point of the existing cross-connect that is to be rolled. AID from the "28.12 CrossConnectId1" section on page 28-31 (except VCM and FACILITY).
<RTO>	The termination point that will become a leg of the new cross-connection. AID from the "28.12 CrossConnectId1" section on page 28-31 (except VCM and FACILITY).

<RMODE>	(Optional) The rolling mode of operation. The parameter type is RMODE, which specifies the roll mode.
• AUTO	Automatic. When a valid signal is available, the roll under AUTO mode will automatically delete the previous end-point.
• MAN	Manual. Enter the corresponding delete roll/bulkroll command to delete the previous end-point.
<VLDSIG>	Shows whether or not the roll has received a valid signal. VLDSIG is Y if the signal is valid and N if it is not. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.

RTRV-ROUTE

The Retrieve Route (RTRV-ROUTE) command retrieves static routes.

Usage Guidelines

- There is no DNS service available on the node. Only numeric IP addresses will be accepted.
- The optional parameters DESTIP, IPMASK, NXTHOP, and COST are used to filter the retrieved static routes. In the absence of any optional parameter, all the static routes on the node will be retrieved.

Category

System

Security

Retrieve

Input Format

RTRV-ROUTE:[<TID>]::<CTAG>::[<DESTIP>],[<IPMASK>],[<NXTHOP>],[<COST>];

Input Example

RTRV-ROUTE:CISCO::123::10.64.72.57,255.255.255.0,10.64.10.1,200;

Input Parameters

<DESTIP>	Destination tip. DESTIP is a string. A null value is equivalent to ALL.

<IPMASK>	IP mask. IPMASK is a string. A null value is equivalent to ALL.
<NXTHOP>	Next hop. NXTHOP is a string. A null value is equivalent to ALL.
<COST>	Unsigned integer. Valid range is from 1 to 32,797. A null value is equivalent to ALL.

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    ",:<DESTIP>,<IPMASK>,<NXTHOP>,<COST>"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001   COMPLD
    ",:\"10.64.72.57\",\"255.255.255.0\",\"10.64.10.1\",200"
;
```

Output Parameters

<DESTIP>	Destination tip. DESTIP is a string.
<IPMASK>	IP mask. IPMASK is a string.
<NXTHOP>	Next hop. NXTHOP is a string.
<COST>	Cost. COST is a string.

RTRV-ROUTE-GRE

The Retrieve Route Generic Routing Encapsulation (RTRV-ROUTE-GRE) command displays the existing GRE tunnels.

Usage Guidelines

None

Category

System

Security
Retrieve

Input Format
RTRV-ROUTE-GRE:[<TID>]::<CTAG>[::::];

Input Example
RTRV-ROUTE-GRE:CISCO::123;

Input Parameters
None that require description

Output Format
SID DATE TIME
M CTAG COMPLD
“,:IPADDR=<IPADDR>,IPMASK=<IPMASK>,NSAP=<NSAP>,COST=<COST>”
;

Output Example
TID-000 1998-06-20 14:30:00
M 001 COMPLD
“,:IPADDR=10.64.72.57,IPMASK=255.255.255.0,
NSAP=39840F80FFFFFF0000DDDDAA000010CFB4910200,COST=110”
;

Output Parameters

<IPADDR>	IP address of the tunnel endpoint. IPADDR is a string.
<IPMASK>	Subnet mask for the tunnel endpoint. IPMASK is a string.
<NSAP>	NSAP address for the tunnel endpoint. NSAP is a string.
<COST>	Routing cost associated with the tunnel. COST is an integer.

RTRV-SHELFSTAT

The RTRV-SHELFSTAT command retrieves and reports the temperature and voltage of the shelf.

Usage Guidelines
None

Category
Equipment

Security
Retrieve

Input Format
RTRV-SHELFSTAT:[<TID>]:<AID>:<CTAG>;

Input Example
RTRV-SHELFSTAT:CISCO454::1;

Output Format
SID DATE TIME
M CTAG COMPLD
"AID:AIDTYPE,TEMPERATURE= <TEMPERATURE>,VOLTAGEA= <VOLTAGEA>,VOLTAGEB= <VOLTAGEB>[,VOLTAGEC= <VOLTAGEC>,VOLTAGED= <VOLTAGED>]"
;

Output Example
TID-000 2008-07-19 18:57:00
M 001 COMPLD
":SHELF,TEMPERATURE=22C,VOLTAGEA=51760,VOLTAGEB=51783,VOLTAGEC=51760,VOLTAGED=51783"
;

Table 23-10 Output Parameter Support

Parameter	Description
<Temperature>	Temperature of the shelf (in degrees Celsius).
<VOLTAGEA>	Voltage of the shelf that corresponds to power supply A (in millivolts).
<VOLTAGEB>	Voltage of the shelf that corresponds to power supply B (in millivolts).
<VOLTAGEC>	Voltage of the shelf that corresponds to power supply C (in millivolts).
<VOLTAGED>	Voltage of the shelf that corresponds to power supply D (in millivolts).

RTRV-SLV-WDMANS

The Retrieve Span Loss Verification Wavelength Division Multiplexing Automatic Node Setup (RTRV-SLV-WDMANS) command retrieves the expected span loss verification provisioned by the ED-SLV-WDMANS command.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-SLV-WDMANS:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-SLV-WDMANS:VA454-22:WDMANS-E:116;

Input Parameters

<AID>	Access identifier from the "28.35 WDMANS" section on page 28-62.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[HIGHSLVEXP=<HIGHSLVEXP>],[LOWSLVEXP=<LOWSLVEXP>],
[SLVACT=<SLVACT>],[RESOLUTION=<RESOLUTION>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"WDMANS-E::HIGHSLVEXP=10.0,LOWSLVEXP=5.0,SLVACT=10.0,RESOLUTION=1.0:"
;

Output Parameters

<AID>	Access identifier from the "28.35 WDMANS" section on page 28-62.
<HIGHSLVEXP>	(Optional) The high range value of the expected span loss verification. HIGHSLVEXP is a float.

<LOWSLVEXP>	(Optional) The low range value of the expected span loss verification. LOWSLVEXP is a float.
<SLVACT>	(Optional) The value of the calculated span loss verification. SLVACT is a float.
<RESOLUTION>	(Optional) The value of the resolution applied to the calculated span loss verification. RESOLUTION is a float.

RTRV-STCN-REP

The RTRV Segment Topology Change Notification Resilient Ethernet Protocol (RTRV-STCN-REP) command retrieves the Segment Topology Change Notification (STCN) for REP Segment on the ethernet ports.

Usage Guidelines

- REP must be configured on the ethernet port.
- This command is applicable only to GE_XP and 10GE_XP cards.

Category

Ethernet

Security

Retrieve

Input Format

RTRV-STCN-REP:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-STCN-REP:CISCO:ETH-16-1-1:1;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[STCNENABLED=<STCNENABLED>],[SEGRANGE=<SEGRANGE>],[STCNPORT=<STCNPORT>]"
;

Output Example

SID DATE TIME
M CTAG COMPLD
“ETH-16-1-1::STCNENABLED=Y,SEGRANGE=\"1000-1020"\&1020-1021,
STCNPORT=ETH-16-2-1”

<AID>	Access identifier from the “28.17 FACILITY” section on page 28-42.
<STCNENABLED>	To enable or disable the Segment Topology Notification on ethernet entity for REP.
• Y	Enables STCN on the ethernet port.
• N	Disables STCN on the ethernet port.
<SEGRANGESTART>	Indicates the segment range start value for the STCN. The valid range is from 0 to 1024.
<SEGRANGEEND>	Indicates the segment range end value for the STCN. The valid range is from 0 to 1024.
<STCNPORT>	Determines on which ethernet port the STCN should be sent. STCNPORT is an AID, it takes ETH AID value. The default is NULL.

Output Parameters

RTRV-STS

The Retrieve Synchronous Transport Signal (RTRV-STS) command retrieves the attributes associated with an STS path based on the granularity level of NE/SLOT-specific STSs.

Usage Guidelines

- 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 that the contents of the expected incoming path trace are provisioned by the user in the ED-STS_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 compares the received string with the user entered expected string. The AUTO mode compares 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, DS3-EC1-48 OC3, OC12-4, OC48AS, OC192, OC192-XFP, and MRC-12 cards.
- TRC and INCTRC are supported on DS1(N), DS3(N)E, DS3-EC1-48, DS3XM, OC192-XFP and MRC-12 cards.
- In Software R5.0 and later, the ED-VT1 command is only supported to edit the J2 path trace on the VT1.5 cross-connection of the DS3XM-12 card.

Category
Paths

Security
Retrieve

Input Format
RTRV-STS:[<TID>]:<AID>:<CTAG>;

Input Example
RTRV-STS:TID:STS-2-1-1:1;

Input Parameters

<AID>	Access identifier from the "28.2 AidUnionId" section on page 28-13.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[LEVEL=<LEVEL>],[SFBER=<SFBER>],[SDBER=<SDBER>],[RVRTV=<RVRTV>],
[RVTM=<RVTM>],[SWPDIP=<SWPDIP>],[HOLDOFFTIMER=<HOLDOFFTIMER>],
[EXPTRC=<EXPTRC>],[TRC=<TRC>],[INCTRC=<INCTRC>],[TRCMODE=<TRCMODE>],
[TACC=<TACC>],[TAPTYPE=<TAPTYPE>],[UPSRPTHSTATE=<UPSRPTHSTATE>],
[C2=<C>],[BLSRPTHSTATE=<BLSRPTHSTATE>]:<PST_PSTQ>,[<SSTQ>]"
;

Output Example

```
    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=PROTPTHACT:OOS-AU,AINS"
;
```

Output Parameters

<AID>	Access identifier from the "28.2 AidUnionId" section on page 28-13.
<LEVEL>	(Optional) The rate of the cross-connect. Applicable only to STS paths in SONET. The parameter type is STS_PATH, which is the modifier for some STS commands.
• STS1	Synchronous Transport Signal level 1 (51 Mbps)
• STS12C	Synchronous Transport Signal level 12 Concatenated (622 Mbps)
• STS18C	Synchronous Transport Signal level 18 Concatenated (933 Mbps)
• STS192C	Synchronous Transport Signal level 192 (9952 Mbps)
• STS24C	Synchronous Transport Signal level 24 Concatenated (1240 Mbps)
• STS36C	Synchronous Transport Signal level 36 Concatenated (1866 Mbps)
• STS3C	Synchronous Transport Signal level 3 Concatenated (155 Mbps)
• STS48C	Synchronous Transport Signal level 48 Concatenated (2488 Mbps)
• STS6C	Synchronous Transport Signal level 3 Concatenated (310 Mbps)
• STS9C	Synchronous Transport Signal level 9 Concatenated (465 Mbps)
<SFBER>	(Optional) An STS path SFBER that applies only to path protection and only to STS-level paths in SONET. Defaults to 1E-4. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	(Optional) An STS path SDBER that applies only to path protection and only to STS-level paths in SONET. Defaults to 1E-6. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.

• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. Only applies to path protection. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. RVTM is not allowed to be set while RVRTV is N. Only applies to path protection. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<SWPDIP>	(Optional) Switch on PDI-P. Applicable only to STS-level paths in SONET (STSn). The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<HOLDOFFTIMER>	(Optional) Hold off timer. HOLDOFFTIMER is an integer.
<EXPTRC>	(Optional) Expected path trace content. A 64-character ASCII string including the terminating CR (carriage return) and LF (line feed). Indicates the expected path trace message (J1) contents. Applicable only to STS-Level Paths in SONET. Defaults to null when path protection path is created.
<TRC>	(Optional) The path trace message to be transmitted. The trace byte (J1) continuously transmits a 64-byte, fixed length ASCII string, one byte at a time. A null value defaults to the NE transmitting 62 null characters (hex 00) and CR and LF. A null value defaults to the NE transmitting null characters (Hex 00). Applicable to STS-level paths in SONET (STSn). TRC is a string.

<INCTRC>	(Optional) Identifies the incoming path trace message contents. Can be any combination of 64-characters. Applicable only to STS-level paths in SONET. Defaults to null when a path protection path is created. INCTRC is a string.
<TRCMODE>	(Optional) Path trace mode. Applicable only to STS-level Paths in SONET (STSn). Defaults to the OFF mode. The parameter type is TRCMODE (trace mode).
• 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 TIM-P is 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 TIM-P is detected.
• OFF	Turn off path trace capability. Nothing will be reported.
<TACC>	(Optional) Indicates whether the digroup being provisioned is to be used as a test access digroup. Default is N. TACC is an integer.
<TAPTYPE>	(Optional) TAP type. The parameter type is TAPTYPE, which is the test access point type.
• DUAL	Dual FAD
• SINGLE	Single FAD
<UPSRPTHSTATE>	(Optional) Indicates whether a given AID is the working or standby path of a path protection cross-connect. The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<C>	(Optional) The C2 byte hex code. Applicable only to STS-level paths in SONET (STSn). The parameter type is C2_BYTE, which is the C2 byte hex code.
• 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
• 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.
<BLSRPTHSTATE>	(Optional) The BLSR path state only if the port is on the BLSR. Applicable only to STS-level paths in SONET (STSn). The parameter type is BLSR_PTH_STATE, which is the BLSR path state only if the port is on the BLSR.
• PCAPTHACT	Indicates the BLSR is not switched and its PCA path is in the active state.
• PCAPTHSTB	Indicates the BLSR is switched and its PCA path is in the standby state.
• PROTPTHACT	Indicates the BLSR is switched and its protection path is in the active state.
• WKGPTHACT	Indicates the BLSR is not switched and its working path is in the active state.
• WKGPTHSTB	Indicates the BLSR is switched and its working path is in the standby state.
<PST_PSTQ>	Administrative state in the PST_PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the SST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service

• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RTRV-SRVTYPE

The Retrieve Service Type (RTRV-SRVTYPE) command retrieves the service type on the ports of the TNC card.

Category
Ports

Security
Retrieve

Input Format
RTRV-SRVTYPE:[<TID>]:<AID>:<CTAG>;

Input Example
RTRV-SRVTYPE::ALL:CTAG;

Input Parameters

<AID>	Supports only “ALL” AID.

Output Format
SID DATE TIME
M CTAG COMPLD
“<AID>:<SRVTYPE>;”
;

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001   COMPLD
    “FAC-1-1-1:UDC”
;
```

Output Parameters

<AID>	Supports only “ALL” AID.
<SRVTYPE>	Indicates the service type set on the TNC port.
• UDC	To set the service type to UDC.
• VOIP	To set the service type to VOIP
• NONE	To set the service type to NONE.

RTRV-SYNCN

The Retrieve Synchronization 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 can be specified (for example, PRIMARY, SECOND, THIRD).

Usage Guidelines

- To retrieve/set the timing mode, SSM message Set or Quality of RES information, use the RTRV-NE-SYNCN and ED-NE-SYNCN commands.
- The output example shown here is under line timing mode.

Category

Synchronization

Security

Retrieve

Input Format

RTRV-SYNCN:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-SYNCN:BOYES:SYNC-NE:234;

Input Parameters

<AID>	Access identifier from the "28.31 SYNC_REF" section on page 28-60.

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    "<AID>:<REF>,<REFVAL>,[<QREF>],[<STATUS>],[<PROTECTSTATUS>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001   COMPLD
    "SYNC-NE:PRI,FAC-1-2,WORK,ACT,PRS"
;
```

Output Parameters

<AID>	Access identifier from the "28.31 SYNC_REF" section on page 28-60.
<REF>	Rank of synchronization reference. Access identifier from the "28.32 SYNCSW" section on page 28-61.
<REFVAL>	Value of a synchronization reference. "28.30 SYN_SRC" section on page 28-60.
<QREF>	(Optional) 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. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not Use For Synchronization
• PRS	Primary Reference Source, Stratum 1 Traceable
• RES	Reserved For Network Synchronization Use
• SMC	SONET Minimum Clock Traceable
• SSM-FAILED	Incoming timing signal cannot be used for synchronization as it has an alarm like LOS, LOF, AIS-L.
• ST2	Stratum 2 Traceable

• ST3	Stratum 3 Traceable
• ST3E	Stratum 3E Traceable
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<STATUS>	(Optional) Status. The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<PROTECTSTATUS>	(Optional) Applicable to 1+1. Designates the role of the entity in the protection group. Either it is the working or the protect entity. The parameter type is SIDE, which is the role the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.

RTRV-T1

The Retrieve T1 Facility (RTRV-T1) command retrieves the DS-1 facilities configuration.

Usage Guidelines

- The parameters SYNCMAP, ADMSSM, VTMAP, INHFELPBK, AND PROVIDESYNC are only displayed on the DS1/E1-56 card .
- The parameters BERTMODE, BERTPATTERN, BERTERRCOUNT, BERTERRRATE, and BERTSYNCSTATUS apply only to DS1/E1-56 and DS3XM-12 cards.
- BERT is implemented on a single port.
- SENDDUS and RETIME are not supported on the .

Category

Ports

Security

Retrieve

Input Format

RTRV-T1:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-T1:TID:FAC-2-1:1223;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

Output Format

```
   SID DATE TIME
M CTAG COMPLD
"<AID>::[<CLKSRC>],[<FMT>],[<LINECDE>],[<LBO>],[<TACC>],[<TAPTYPE>],[<SOAK>],[<SOAK-
LEFT>],[<SFBER>],[<SDBER>],[<NAME>],[<SYNCMSG>],[<SENDDUS>],[<RETIME>],[<AI-
SONLPBK>],[<AISVONAIS>],[<AISONLOF>],[<MODE>],[<SYNCMAP>],[<ADMSSM>],[<PRO-
VIDESYNC>],[<VTMAP>],[<INHFELPBK>],[<INHFEBPLPBK>],[<BERTMODE>],[<BERTPATTERN>],[<BER-
TERRCOUNT>],[<BERTERRRATE>],[<BERTSYNCSTATUS>]:[<LPBKTYPE>],[<PST>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M 001 COMPLD
"FAC-2-1::LINECDE=AMI,FMT=ESF,LBO=0-131,TACC=8,TAPTYPE=DUAL,SOAK=52,
SOAKLEFT=12-25,SFBER=1E-4,SDBER=1E-7,NAME=\"T1 PORT",SYNCMSG=Y,
SENDDUS=Y,RETIME=Y,AISONLPBK=ALL,AISVONAIS=Y,AISONLOF=Y,
MODE=FDL,SYNCMAP=ASYNC,ADMSSM=STU,PROVIDESYNC=N,VTMAP=GR253,
INHFELPBK=N,BERTMODE=NONE,BERTPATTERN=NONE,
BERTERRCOUNT=,BERTERRRATE=NONE,BERTSYNCSTATUS=N:OOS-AU,AINS";
```

Output Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<CLKSRC>	<CLKSRC>
• INTERNAL	INTERNAL
• LOOPBACK TIMING	LOOPBACK TIMING
• SYNCE	SYNCE

• ADAPTIVE	ADAPTIVE
<LINECDE>	(Optional) Line code. The parameter type is LINE_CODE.
• AMI	Line code value is AMI.
• B3ZS	Bipolar with three-zero substitution
• B6ZS	Line code value is B6ZS.
• B8ZS	Line code value is B8ZS.
• JBZS	JBZS
• ZBTSI	ZBTSI
<FMT>	(Optional) Digital signal frame format. The parameter type is FRAME_FORMAT, which is the frame format for a T1 port.
• AUTOPROV	AUTOPROV
• CBIT	C-BIT line type applies to the DS3XM and DS3E cards.
• D4	Frame format is D4.
• DS2 FRAMED	DS2 FRAMED
• E2 FRAMED	E2 FRAMED
• E3-FRAME	E3-FRAME
• E3-PLCP	E3-PLCP
• ESF	Frame format is ESF.
• FRAMENA	FRAMENA
• G-751	G-751
• G-832	G-832
• M13	M13 line type applies to the DS3XM and DS3E cards.
• M23	M23
• SYNTRAN	SYNTRAN
• UNFRAMED	Frame format is unframed.
<LBO>	(Optional) Line buildout settings. LBP is an integer. The parameter type is LINE_BUILDOUT.
• 0-133	Line buildout range is 0-133
• 133-266	Line buildout range is 133-266

• 266-399	Line buildout range is 266-399
• 399-533	Line buildout range is 399-533
• 533-655	Line buildout range is 533-655
<TAP>	(Optional) Defines the STS as a test access port with a selected unique TAP number. The TAP number is within a range of 0, 1 to 999. When TACC is 0 (zero), the TAP is deleted. Default is N.
<TAPTYPE>	(Optional) TAP type. The parameter type is TAPTYPE, which is the test access point type.
• DUAL	Dual FAD
• SINGLE	Single FAD
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer. Default value is 32. It can be set through ED command.
<SOAKLEFT>	(Optional) 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. SOAKLEFT is a string. Rules for SOAKLEFT are as follows: • When the port is in OOS, OOS_MT, or IS state, the parameter will not appear. • When the port is in OOS_AINS but the countdown has not started due to fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in OOS_AINS state and the countdown has started, the value will be shown in HH-MM format.
<SFBER>	(Optional) The port signal failure threshold. Defaults to 1E-4. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	(Optional) Port signal degrade threshold. Defaults to 1E-7. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.

• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<NAME>	(Optional) Port name. NAME is a string.
<SYNCMSG>	Synchronization status messaging is enabled or disabled on the T1 facility.
• N	Disable an attribute.
• Y	Enable an attribute.
<SENDDUS>	The facility will send the DUS value as the sync status message for that facility.
• N	Disable an attribute.
• Y	Enable an attribute.
<RETIME>	(Optional) Indicates if retiming is needed. The parameter type is YES_NO, which is whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes
• FDL	Indicates the DS1 path of the DS3XM-12 is in FDL T1-403 mode.
<AISONLPBK>	(Optional) Defaults to AIS_ON_LPBK_ALL. The parameter type is AIS_ON_LPBK, which indicates if AIS is sent on a loopback
• AIS_ONLPBK_FACILITY	AIS is sent on facility loopbacks.
• AIS_ON_LPBK_ALL	AIS is sent on all loopbacks.
• AIS_ON_LPBK_OFF	AIS is not sent on loopbacks.
• AIS_ON_LPBK_TERMINAL	AIS is sent on terminal loopbacks.
<AISVONAIS>	(Optional) Defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<AISVONLOF>	(Optional) The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.

• Y	Enable an attribute.
<MODE>	(Optional) Mode. Default value is FDL. The parameter type is DS1MODE, which is the DS1 path mode of the DS3XM-12 card
• ATT	Indicates the DS1 path of the DS3XM-12 is in AT&T 54016 mode.
• FDL	Indicates the DS1 path of the DS3XM-12 is in FDL T1-403 mode.
<SYNCMAP>	(Optional) The synchronous mapping for the DS1 facility. Defaults to ASYNC. Only supported on . The parameter type is SYNCMAP, which is the synchronous mapping type.
• ASYNC	Asynchronous
• BYTE	Byte
• JBYTE	Jbyte
<ADMSSM>	(Optional) The administrative synchronization status message. Only supported on the . The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level.
• DUS	Do Not 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
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<PROVIDESYNC>	(Optional) Indicates whether the facility provides synchronization. Only supported on. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.

<VTMAP>	(Optional) The port to VT mapping type for that particular STS. Only supported on . Defaults to GR253. The parameter type is VTMAP, which is the VT mapping.
• GR253	Mapping based on Telcordia GR-253.
• INDUSTRY	Mapping based on industry standard.
<INHFELPBK>	(Optional) Indicates whether far end loopbacks are inhibited on the facility. Only supported on . The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<BERTMODE>	Specifies the mode [Test Pattern Generator (TPG) or Test Pattern Monitor (TPM)] of the port for BERT.
• NONE	BERT mode not enabled.
• TPGM-L	Test pattern generator and monitor on line side.
• TPGM-B	Test pattern generator and monitor on backplane.
• TPG-L	Test pattern generator on line side.
• TPM-L	Test pattern monitor on line side.
• TPG-B	Test pattern generator on backplane.
• TPM-B	Test pattern monitor on backplane.
<BERTPATTERN>	Specifies the error pattern to be injected for BERT.
• NONE	BERT pattern not enabled.
• PRBS15	PRBS15 test pattern.
• PRBS20	PRBS20 test pattern.
• PRBS23	PRBS23 test pattern.
• QRSS	QRSS test pattern.
• ALT-ONE-ALT-ZERO	Alternate one and zero pattern.
<BERTERRCOUNT>	Integer value. Value –1 indicates that BERT is disabled/not supported.
<BERTERRRATE>	Specifies the BERT error rate received.
• NONE	No bit errors.
• SINGLE	Single bit error.

• 1E-3	Bit errors in 1E-3 rate.
• 1E-4	Bit errors in 1E-4 rate.
• 1E-5	Bit errors in 1E-5 rate.
• 1E-6	Bit errors in 1E-6 rate.
<BERTSYNCSTATUS>	Synchronization status of BERT values. The parameter type is Y_N, which specifies if synchronization status is up or down.
Y	BERT synchronization status is up.
N	BERT synchronization status is down.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In Service
• OOS	Out of Service
<SST>	Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RTRV-T3

The Retrieve T3 (RTRV-T3) command retrieves the facility properties of a DS3 or a DS3XM card.

Usage Guidelines

- CTC can set the FMT attribute of a DS3NE line to AUTOPROVISION, to set the framing based on the incoming framing. This would result in the FMT field being blanked out for a few seconds or blanked out forever for a preprovisioned DS3NE card on CTC.

- 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).
- TL1 does not have the autoprovision mode according to Telcordia GR-199. TL1 maps/returns the autoprovision to be unframed.
- For the DS3XM-12 card, the DS3/T3 configurable attributes (PM, TH, alarm, etc.) only apply on the ported ports (1 to 12) and the DS3-mapped (even) portless ports in xxx-xxx-T3 commands. If you attempt to provision or retrieve DS3/T3 attributes on the VT-mapped (odd) portless port in xxx-xxx-T3 commands, an error message will be returned.
- For the DS3XM-12 card, if the administrative state is already set for a portless port the state setting operation over its associated ported port is an invalid operation.
- The parameters BERTMODE, BERTPATTERN, BERTERRCOUNT, BERTERRRATE, and BERTSYNCSTATUS apply only to DS1/E1-56 and DS3XM-12 cards.
- BERT is implemented on a single port.

Category
Ports

Security
Retrieve

Input Format
RTRV-T3:[<TID>]:<AID>:<CTAG>[::::];

Input Example
RTRV-T3:CERENT:FAC-1-2:123;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

Output Format
SID DATE TIME
M CTAG COMPLD
"<AID>::[<CLKSRC>],[<FMT>],[<LINECDE>],[<LBO>],[<INHFELPBK>],[<TACC>],[<TAPTYPE>],[<SOAK>],[<SOAKLEFT>],[<SFBER>],[<SDBER>],[<NAME>],[<AISONLPBK>],[<BERTMODE>],[<BERTPATTERN>],[<BERTERRCOUNT>],[<BERTERRRATE>],[<BERTSYNCSTATUS>],[<LPBKTYPE>]:<PST>,[<SST>]"
;

Output Example

```
    TID-000 1998-06-20 14:30:00
M 001 COMPLD
"FAC-1-2::FMT=C-BIT,LINECDE=B3ZS,LBO=0-225,INHFELPBK=N,TACC=8,
TAPTYPE=SINGLE,SOAK=52,SOAKLEFT=12-25,SFBER=1E-4,SDBER=1E-7,
NAME=\"T3 PORT\",AISONLPBK=ALL, BERTMODE=NONE,BERTPATTERN=NONE,
BERTERRCOUNT=0,BERTERRRATE=NONE,BERTSYNCSTATUS=N:OOS-AU,AINS"
;
```

Output Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.
<CLKSRC>	<CLKSRC>
• INTERNAL	INTERNAL
• LOOPBACK TIMING	LOOPBACK TIMING
• SYNCE	SYNCE
• ADAPTIVE	ADAPTIVE
<FMT>	(Optional) Digital signal format. The parameter type is DS_LINE_TYPE, which is the DS123 line type.
• AUTOPROV	AUTOPROV
• CBIT	C-BIT line type applies to the DS3XM and DS3E cards.
• DS2 FRAMED	DS2 FRAMED
• E2 FRAMED	E2 FRAMED
• E3-FRAME	E3-FRAME
• E3-PLCP	E3-PLCP
• FRAMENA	FRAMENA
• G-751	G-751
• G-832	G-832
• M13	M13 line type applies to the DS3XM and DS3E cards.
• M23	M23
• SYNTRAN	SYNTRAN
• UNFRAMED	Frame format is unframed.

<LINECDE>	(Optional) Line code. The parameter type is DS_LINE_CODE, which is the DS123 line code.
• B3ZS	Bipolar with three-zero substitution
• B6ZS	B6ZS
• JBZS	JBZS
• ZBTSI	ZBTSI
<LBO>	(Optional) Line buildout settings. LBO is an integer. The parameter type is E_LBO, which is the electrical signal line buildout.
• 0–225	Electrical signal line buildout range is 0–225.
• 226–450	Electrical signal line buildout range is 226–450.
<INHFELPBK>	(Optional) 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 N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<TAP>	(Optional) Defines the STS as a test access port with a selected unique TAP number. The TAP number is within a range of 0, 1 to 999. When TACC is 0 (zero), the TAP is deleted. Default is N.
<TAPTYPE>	(Optional) TAP type. The parameter type is TAPTYPE, which is the test access point type.
• DUAL	Dual FAD
• SINGLE	Single FAD
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer. Default value is 32. It can be set through ED command.

<SOAKLEFT>	(Optional) 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. SOAKLEFT is a string. Rules for <SOAKLEFT> are as follows: • When the port is in OOS, OOS_MT, or IS state, the parameter will not appear. • When the port is in OOS_AINS but the countdown has not started due to fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in OOS_AINS state and the countdown has started, the value will be shown in HH-MM format.
<SFBER>	(Optional) The port signal failure threshold. Defaults to 1E-4. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	(Optional) Port signal degrade threshold. Defaults to 1E-7. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<NAME>	(Optional) Port name. NAME is a string.
<AISONLPBK>	(Optional) AIS on loopback. The parameter type is AIS_ON_LPBK, which indicates if AIS is sent on a loopback.
• AIS_ONLPBK_FACILITY	AIS is sent on facility loopbacks.
• AIS_ON_LPBK_ALL	AIS is sent on all loopbacks.
• AIS_ON_LPBK_OFF	AIS is not sent on loopbacks.
• AIS_ON_LPBK_TERMINAL	AIS is sent on terminal loopbacks.
<BERTMODE>	Specifies the mode [Test Pattern Generator (TPG) and Test Pattern Monitor (TPM)] of the port for BERT.

• NONE	BERT mode not enabled.
• TPGM-L	Test pattern generator and monitor on line-side.
• TPGM-B	Test pattern generator and monitor on backplane.
• TPG-L	Test pattern generator on line-side.
• TPM-L	Test pattern monitor on line-side.
• TPG-B	Test pattern generator on backplane.
• TPM-B	Test pattern monitor on backplane.
<BERTPATTERN>	Specifies the error pattern to be injected for BERT.
• NONE	BERT pattern not enabled.
• PRBS15	PRBS15 test pattern.
• PRBS20	PRBS20 test pattern.
• PRBS23	PRBS23 test pattern.
• QRSS	QRSS test pattern.
• ALT-ONE-ALT-ZERO	Alternate one and zero pattern.
<BERTERRCOUNT>	Integer value. Value –1 indicates that BERT is disabled/not supported.
<BERTERRRATE>	Specifies the BERT error rate received.
• NONE	No bit errors.
• SINGLE	Single bit error.
• 1E-3	Bit errors in 1E-3 rate.
• 1E-4	Bit errors in 1E-4 rate.
• 1E-5	Bit errors in 1E-5 rate.
• 1E-6	Bit errors in 1E-6 rate.
<BERTSYNCSTATUS>	Synchronization status of BERT values. The parameter type is Y_N, which specifies if synchronization status is up or down.
Y	BERT synchronization status is up.
N	BERT synchronization status is down.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In Service

• OOS	Out of Service
<SST>	Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RTRV-TACC

The Retrieve Test Access (RTRV-TACC) 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.

Note The RTRV-TACC command displays the working path AID irrespective of whether TACC is connected to the working or protect path of the path protected circuit.

Usage Guidelines

None

Category

Troubleshooting and Test Access

Security

Retrieve

Input Format

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

Input Example

RTRV-TACC:CISCO:241:CTAG;

Input Parameters

<TAP>	The assigned number for AID being used as a test access point. TAP must be an integer within a range of 1 to 999. The ALL TAP value returns all the configured TACCs in this NE. TAP is a string.

Output Format

SID DATE TIME
M CTAG COMPLD
"<TAP>:<TACC_AIDA>,<TACC_AIDB>,[<MD>],[<CROSSCONNECTID1>],<AIDUNIONID>,<PATHWIDTH>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"241:STS-2-1-1,STS-2-1-2,MONE,STS-12-1-1,STS-13-1-1,STS1"
;

Output Parameters

<TAP>	The assigned number for the AID being used as a test access point. TAP is an integer.
<TACC_AIDA>	Access identifier from the "28.11 CrossConnectId" section on page 28-27. The A path of the test access point. The first STS/VT path of the TAP.
<TACC_AIDB>	Access identifier from the "28.11 CrossConnectId" section on page 28-27. The B path of the test access point. The second STS/VT path of the TAP. For single FAD TAP this path will be empty.
<MD>	(Optional) Test access mode. It identifies the mode of access between the TAP and the circuit connected to the TAP. The parameter type is TACC_MODE, which is the test access mode.
• 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 will have a QRS connected, and the line incoming from the F direction shall be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.

• 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. Intrusive test access mode.
• 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 from the odd pair of a FAP to the A transmission path and from FAD2 of the same DFAD, or from 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. Intrusive test access mode.
• 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. Intrusive test access mode.
• 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. Intrusive test access mode.
• 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. Intrusive test access mode.
• 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. Intrusive test access mode.
<CROSSCONNECTID1>	(Optional) Access identifier from the "28.11 CrossConnectId" section on page 28-27. The E path of the cross-connect.
<PATHWIDTH>	The cross-connection width. The parameter type is CRS_TYPE, which is the cross-connection type.
• 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
• STS18C	STS18C cross-connect
• STS24C	STS24C cross-connect
• STS36C	STS36C 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
<CROSSCONNECTID2>	(Optional) Access identifier from the "28.11 CrossConnectId" section on page 28-27. The F path of the cross-connect.

RTRV-TADRMAP

The Retrieve Target Identifier Address Mapping (RTRV-TADRMAP) command retrieves the contents of the TADRMAP table.

Usage Guidelines

When MODE is NSAP, TID name of the NODE can be specified to trigger TARP.

Category

System

Security

Retrieve

Input Format

RTRV-TADRMAP:[<TID>]:[<AID>]:<CTAG>[:::MODE=<MODE>];

Input Example

RTRV-TADRMAP:CISCO:AIP:100:::MODE=PROV;

Additional input examples:

1. To retrieve another node's NSAP (TID=NODE-1) while using a TL1 session on the local node (TID=NODE-2), follow this input example:

   RTRV-TADRMAP:NODE-2:NODE-1:1:::MODE=NSAP;

   Output example:

   NODE-2 2006-01-26 14:47:30

   M 1 COMPLD

   "TIDNAME=NODE-1,NSAP=TARP request has been initiated. Check again later."

   ;

   RTRV-TADRMAP:NODE-2::123;

   NODE-2 2006-01-26 14:47:38

   M 123 COMPLD

   "TIDNAME=NODE-2,IPADDR=10.92.24.146,"

   "TIDNAME=NODE-1,NSAP=39840F80000000000000000000010010CFCE5A0200"

   ;

2. To retrieve the NSAP address of a node (TID=NODE-2) itself, follow this input example:

   RTRV-TADRMAP:NODE-2:NODE-2:1:::MODE=NSAP;

   Output example:

   NODE-2 2006-01-26 14:48:07

   M 1 COMPLD

   "TIDNAME=NODE-2,NSAP=39840F80000000000000000000001000BFCF8A88500"

   ;

3. To retrieve the local TARP data cache (TDC) of a node (no AID required) follow this input example:

   RTRV-TADRMAP:NODE-2::123:::MODE=NSAP;

   Output example:

   NODE-2 2006-01-26 13:47:38

   M 123 COMPLD

   "TIDNAME=FOREIGN-NODE-1,NSAP=39840F80000000000000000000001000075DE520800"

   "TIDNAME=FOREIGN-NODE-2,NSAP=39840F80000000000000000000001000075D07A4A00"

   "TIDNAME=NODE-1,NSAP=39840F80000000000000000000010010CFCE5A0200"

;

Input Parameters

<AID>	AID is a target identifier from the "28.1 ALL" section on page 28-1. AID is a string. If AID is not null, MODE must be NSAP.

<MODE>	Must not be null. The parameter type is MODE, which determines the category of addresses to return.
• ALL	Discovered and provisioned addresses
• DISC	Discovered addresses
• IP	IP addresses
• NSAP	NSAP addresses
• PROV	Provisioned

Output Format

SID DATE TIME
M CTAG COMPLD
"[TID=<TID>],[IP ADDRESS =<IPADDRESS>],[NSAP=<NSAP>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"TID=RANGERS1,IP ADDRESS = 64.101.245.5,
NSAP=39840FFFFFFFOOOODDDDAA01D00F0400000700"
;

Output Parameters

<TID>	(Optional) Target identifier. TID is a string.
<IPADDRESS>	(Optional) IP address. IPADDRESS is a string.
<NSAP>	(Optional) NSAP address. NSAP is a string.

RTRV-TH-<MOD2>

The Retrieve Threshold for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 4GFC, 2GFICON, 5GIB, 8GFC, CLNT, D1VIDEO, DS1, DV6000, DVBASI, E1, E3, E4, EC1, ESCON, ETRCLO, ETH, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OC12, OC192, OC3, OC48, OC768, OCH, OMS, OTS, OTL, OTU2, OTU3, OTU4, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, T1, T3, VT1, VT2, 3GVIDEO, SDSDI , HDSDI, AUTO, OTU1, OTU4C2, ISC3STP1G, or ISC3STP2G (RTRV-TH-<MOD2>) command retrieves the threshold level of one or more monitored parameters.

Usage Guidelines

The command supports the modifier 3GVIDEO, SDSDI , HDSDI, AUTO, OTU1, ISC3STP1G, and ISC3STP2G.

See Table 30-1 on page 30-1 for supported modifiers by platform.

Note • After the BLSR switch, the working path is switched out, the traffic goes through the protection path, and the threshold can be retrieved from the protection path.

- If there is an STS PCA on the protection path during BLSR switching, the PCA path is preemptive; sending this command on the protection path after the 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 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 appear. Laser and alarm thresholds are only for near end. If the card payload is in SONET mode, then SONET thresholds will appear. The Receiver Temperature Montypes (RXT) are only applicable to the Trunk Port. The Transceiver Voltage Montypes (XCVR) are not applicable, though it might be displayed or handled.
  - Laser and Alarm thresholds are always available. Laser and alarm thresholds are only for near end. If ITU-T G.709 is enabled, then the OTN thresholds will appear. If ITU-T G.709 is enabled and FEC is enabled, then the FEC thresholds will appear. If the card payload is in SONET mode, then SONET thresholds will appear. The Transceiver Voltage Montypes (XCVR) are not applicable, though it is displayed or handled.
- Refer to the *Cisco ONS SDH and Cisco ONS 15600 SONET TL1 Reference Guide* for specific card provisioning rules.
- The RTRV-TH-OTL retrieves Optical Thresholds. This command is denied on sublanes of CFP-LC card, as optical thresholds are retrieved on aggregate port. The command retrieves optical thresholds on sublanes of 100G-LC-C card.
- The RTRV-TH-<MOD2> is denied when retrieving optical thresholds on Aggregate port of 100G-LC-C card.
- The RTRV-TH-<MOD2> is denied on virtual ports of 100G-LC-C as they are retrieved on Aggregate port of CFP-LC card.
- RTRV-TH-OCH on fixed trunk of the 100G-LC-C card also retrieves OSNR and PMD TCA thresholds.

Category

Performance

Security

Retrieve

Input Format

RTRV-TH-<MOD2>:[<TID>]:<AID>:<CTAG>::[<MONTYPE>],[<LOCN>],[<TMPER>][::];

Input Example

RTRV-TH-OCH:100G-LC-C:CHAN-7-2:1::OSNR-MIN,NEND,15-MIN;

Input Parameters	
<AID>	Access identifier from the "28.1 ALL" section on page 28-1. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.
<MONTYPE>	Monitored type. **Note** MONTYPE defaults to CVL for OCN/EC1/DSN, to ESP for STSp, to UASV for VT1, and to AISSP for the DS1 layer of the DS3XM card. A null value is equivalent to ALL. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• 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 one tenth of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage.
• BIEC	FEC—Bit Errors Corrected
• BIT-EC	The number of bit errors corrected by the FEC algorithm
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line

• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error

• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High Order Path Negative Pointer Justification Count
• HP-NPJC-PGEN	High Order Path, Negative Pointer Justification Count
• HP-OI	Outage Intensity
• HP-PJCDIFF	High Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High Order Path Pointer Justification Count
• HP-PJCS-PGEN	High Order Path Pointer Justification Count Seconds
• HP-PPJC-PDET	High Order Path Positive Pointer Justification Count
• HP-PPJC-PGEN	High Order Path, Positive Pointer Justification Count
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset

• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias Current in microA
• LBCL-MAX	Maximum Laser Bias Current in microA
• LBCL-MIN	Minimum Laser Bias Current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Normalized Laser Bias Current—Higher Threshold
• LBCN-LWT	Normalized Laser Bias Current—Lower Threshold
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period

• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt
• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt
• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• PRE-FECBER	Enum to hold PRE-FECBER value
• 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
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point

• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
• OSNR-MIN	Minimum Optical Signal To Noise Ratio.
• OSNR-MAX	Maximum Optical Signal To Noise Ratio.
• OSNR-AVG	Average Optical Signal To Noise Ratio.
• PMD-MIN	Minimum Polarization Mode Dispersion.
• PMD-MAX	Maximum Polarization Mode Dispersion.
• PMD-AVG	Average Polarization Mode Dispersion.
<LOCN>	Location associated with a particular command in reference to the entity identified by the AID. LOCN defaults to NEND (near end). A null value is equivalent to ALL. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<TMPER>	Accumulation time period for performance counters. Defaults to 15-MIN. Must not be null. The parameter type is TMPER, which is the accumulation time period for the performance management center
• 1-DAY	Performance parameter accumulation interval length; every 24-hours. For SONET PM data only one day of history data is available. For RMON managed PM data seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.

Output Format

SID DATE TIME

M CTAG COMPLD

"<AID>,[<AIDTYPE>]:<MONTYPE>,[<LOCN>],,<THLEV>,[<TMPER>]"

;

Output Example

100g 2012-05-15 14:28:19

M 1 COMPLD

"CHAN-2-2,OCH:OSNR-MAX,NEND,,40.0,15-MIN"

;

Output Parameters

<AID>	Access identifier from the "28.1 ALL" section on page 28-1.
<AIDTYPE>	(Optional) Type of facility, link, or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.
• 100GIGE	100 Gigabit Ethernet.
• 10GIGE	10 Gigabit Ethernet.
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 10GFC	10-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 40GIGE	40-Gigabit Ethernet
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• BITS	BITS alarm

• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• DVBASI	Digital Video Broadband Asynchronous Serial Interface (DVBASI) payload
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	Gigabit Ethernet port alarm
• HDSDI	1.5G HD-SDI video payload
• ISC1	InterSystem Channel, a protocol defined by IBM (ISC1) payload
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OC768	OC768 alarm
• OCH	Optical channel
• ODU0	Optical Data Unit Level 0

• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTL	Optical Channel Transport Lane.
• OTU1	Optical Transport Unit Level 1
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• POS	POS port alarm
• SDSDI	270M SDI video payload
• STS1	STS1 alarm
• STS3C	STS3c alarm
• STS6C	STS6c alarm
• STS9C	STS9c alarm
• STS18C	STS18c alarm
• STS12C	STS12c alarm
• STS24C	STS24c alarm
• STS36C	STS36c alarm
• STS48C	STS48c alarm
• STS192C	STS192c alarm
• SYNCN	SYNCN alarm
• T1	T1 alarm
• T3	T3 alarm
• TCC	TCC alarm
• VT1	VT1 alarm
• VT2	VT2 alarm
<MONTYPE>	Monitored type. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• 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 one tenth of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage.
• BIEC	FEC—Bit Errors Corrected
• BIT-EC	The number of bit errors corrected by the FEC algorithm
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section

• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High-Order Path Negative Pointer Justification Count
• HP-NPJC-PGEN	High-Order Path Negative Pointer Justification Count

• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count Seconds, Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted

• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias Current in microA
• LBCL-MAX	Maximum Laser Bias Current in microA
• LBCL-MIN	Minimum Laser Bias Current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Normalized Laser Bias Current—Higher Threshold
• LBCN-LWT	Normalized Laser Bias Current—Lower Threshold
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets

• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt
• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt
• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• 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
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path

• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
• OSNR-MIN	Minimum Optical Signal To Noise Ratio.
• OSNR-MAX	Maximum Optical Signal To Noise Ratio.
• OSNR-AVG	Average Optical Signal To Noise Ratio.
• PMD-MIN	Minimum Polarization Mode Dispersion.

• PMD-MAX	Maximum Polarization Mode Dispersion.
• PMD-AVG	Average Polarization Mode Dispersion.
<LOCN>	(Optional) Location associated with a particular command. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<THELV>	Threshold level. THLEV is a float.
<TMPER>	(Optional) Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24-hours. For SONET PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.

RTRV-TH-ALL

The Retrieve Threshold All (RTRV-TH-ALL) command retrieves the threshold level of all monitored parameters on the NE.

Usage Guidelines

- After a BLSR switch, the working path is switched out, the traffic goes through the protection path, and the threshold can be retrieved from the protection STS path.
- If there is an STS PCA on the protection path during BLSR switching, the PCA path is preemptive; sending this command on the protection path after a BLSR switch, the command returns the PMs from the protection path, not from the PCA path.

- Multiple RTRV completion codes will appear after the execution of this command according to Telcordia GR-1831-CORE for bulk retrievals. The final completion code after the multiple RTRV codes is COMPLD.
- Some monitored types are not available for some cards or cross-connect types. In that case, a 0 value will appear for the monitored type. This will happen only when 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.
- 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.

Category
Performance

Security
Retrieve

Input Format
RTRV-TH-ALL:[<TID>]::<CTAG>::[<MONTYPE>],[<LOCATION>],[<TMPER>][::];

Input Example
RTRV-TH-ALL:CHARGERS6::123::CVL,NEND,15-MIN;

Input Parameters

<MONTYPE>	Monitored type. A null value defaults to ALL. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• 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 one tenth of a percentage
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage
• BIEC	FEC—Bit Errors Corrected
• BIT-EC	The number of bit errors corrected by the FEC algorithm
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)

• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets

• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High-Order Path Negative Pointer Justification Count
• HP-NPJC-PGEN	High-Order Path, Negative Pointer Justification Count
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count Seconds, Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds

• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias Current in microA
• LBCL-MAX	Maximum Laser Bias Current in microA
• LBCL-MIN	Minimum Laser Bias Current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Normalized Laser Bias Current—Higher Threshold
• LBCN-LWT	Normalized Laser Bias Current—Lower Threshold
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error

• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt
• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt

• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• PRE-FECBER	Enum to hold PRE-FECBER value
• 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
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path

• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
• OSNR-MIN	Minimum Optical Signal To Noise Ratio.
• OSNR-MAX	Maximum Optical Signal To Noise Ratio.
• OSNR-AVG	Average Optical Signal To Noise Ratio.
• PMD-MIN	Minimum Polarization Mode Dispersion.
• PMD-MAX	Maximum Polarization Mode Dispersion.
• PMD-AVG	Average Polarization Mode Dispersion.
<LOCATION>	The location. A null value defaults to NEND. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<TMPER>	The accumulation time period for performance counters. A null value defaults to 15-MIN. The parameter type is TMPER, which is the accumulation time period for the performance management counter.

• 1-DAY	Performance parameter accumulation interval length is every 24 hours.
• 1-HR	Performance parameter accumulation interval length is every 1 hour.
• 1-MIN	Performance parameter accumulation interval length is every 1 minute.
• 15-MIN	Performance parameter accumulation interval length is every 15 minutes.
• RAW-DATA	Performance parameter accumulation interval length starts from the last time the counters were cleared. This is only applicable to RMON-managed PMs.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>,<AIDTYPE>:<MONTYPE>,<LOCATION>,,<THLEV>,<TMPER>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"FAC-1-1,DS3:CVL,NEND,,1,15-MIN"
;

Output Parameters

<AID>	Access identifier from the "28.2 AidUnionId" section on page 28-13.
<AIDTYPE>	Specifies the type of facility, link, or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type for certain generic TL1 commands.
• 10GIGE	10 Gigabit Ethernet.
• 100GIGE	100 Gigabit Ethernet.
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 10GFC	10-Gigabit Fibre Channel payload

• 2GFICON	2-Gigabit fiber connectivity payload
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 40GIGE	40-Gigabit Ethernet
• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• BITS	BITS alarm
• CHGRP	Channel group
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• DVBASI	Digital Video Broadband Asynchronous Serial Interface (DVBASI) payload
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FC	Fibre Channel alarm
• FSTE	FSTE alarm
• G1000	G1000 alarm
• GIGE	GIGE alarm
• HDLC	High-level data link control (HDLC) frame mode.
• HDSDI	1.5G HD-SDI video payload
• ISC1	InterSystem Channel, a protocol defined by IBM (ISC1) payload
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer

• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• MSISC	MSISC
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OC768	OC768 alarm
• OCH	Optical channel
• ODU0	Optical Data Unit Level 0
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTL	Optical Channel Transport Lane.
• OTU1	Optical Transport Unit Level 1
• OTU2	Optical Transport Unit Level 2
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• POS	POS alarm
• REP	Resilient Ethernet Protocol
• SDSDI	270M SDI video payload
• STS1	STS1 alarm
• STS3C	STS3c alarm
• STS6C	STS6c alarm
• STS9C	STS9c alarm
• STS12C	STS12c alarm
• STS18C	STS18c alarm

• STS24C	STS24c alarm
• STS48C	STS48c alarm
• STS192C	STS192c alarm
• SYNCN	SYNCN alarm
• T1	T1 alarm
• T3	T3 alarm
• TCC	TCC alarm
• VT1	VT1 alarm
• VT2	VT2 alarm
<MONTYPE>	Monitored type. A null value defaults to ALL. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• 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 one tenth of a percentage
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage
• BIEC	FEC—Bit Errors Corrected
• BIT-EC	The number of bit errors corrected by the FEC algorithm
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups

• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line

• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High-Order Path Negative Pointer Justification Count, Path Detected
• HP-NPJC-PGEN	High-Order Path Negative Pointer Justification Count, Path Generated
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count Seconds, Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected
• HP-PPJC-PGEN	High-Order Path Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets

• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias Current in microA
• LBCL-MAX	Maximum Laser Bias Current in microA
• LBCL-MIN	Minimum Laser Bias Current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Normalized Laser Bias Current—Higher Threshold
• LBCN-LWT	Normalized Laser Bias Current—Lower Threshold
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A

• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order Positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt
• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt
• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN

• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• 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
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point

• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
• OSNR-MIN	Minimum Optical Signal To Noise Ratio.
• OSNR-MAX	Maximum Optical Signal To Noise Ratio.
• OSNR-AVG	Average Optical Signal To Noise Ratio.
• PMD-MIN	Minimum Polarization Mode Dispersion.
• PMD-MAX	Maximum Polarization Mode Dispersion.
• PMD-AVG	Average Polarization Mode Dispersion.
<LOCATION>	The location. A null value defaults to NEND. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<THLEV>	Threshold level. Indicates the threshold value. THLEV is a float.
<TMPER>	The accumulation time period for performance counters. A null value defaults to 15-MIN. The parameter type is TMPER, which is the accumulation time period for the performance management counter.
• 1-DAY	Performance parameter accumulation interval length is every 24 hours.
• 1-HR	Performance parameter accumulation interval length is every 1 hour.
• 1-MIN	Performance parameter accumulation interval length is every 1 minute.

• 15-MIN	Performance parameter accumulation interval length is every 15 minutes.
• RAW-DATA	Performance parameter accumulation interval length starts from the last time the counters were cleared. This is only applicable to RMON-managed PMs.

RTRV- TH-ODU

This command retrieves RTRV Thresholds.

Usage Guidelines

Category
System

Security
Retrieve

Input Format
RTRV-TH-ODU:[<TID>]:<aid>:<CTAG>::[<montype>],[<locn>],[<tmper>]:[BANDWIDTH=<bandwidth>];

Input Example
RTRV-TH-ODU::ODU-1-3-11-1-1-2:a::BBE-PM,,:BANDWIDTH=ODU2E;

node113 2017-06-10 19:45:28
M a COMPLD
"ODU-1-3-11-1-1-2,ODU:BBE-PM,NEND,,85033,15-MIN"

Input Parameter

< AID >	AID of the ODU2. ALL AID is also supported. AID is Mandatory.
<BANDWIDTH>	ODU Level (ODU2E)

montype	ENUM (Mandatory). ES-SM, ES-PM, SES-SM, SES-PM, UAS-SM, UAS-PM, BBE-SM, BBE-PM, FC-SM and FC-PM.
locn	ENUM (Mandatory). FEND or NEND Location associated with a particular command. The parameter type is LOCATION, which is the location where the action is to take place.
tmper	**Minimum 15 or 1 day. Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.**

Output Format

Output Example

Output Parameters

RTRV-TOD

The Retrieve Time of Day (RTRV-TOD) command retrieves the system date and time at the instant when the command was executed. The time returned is in Coordinated Universal Time (UTC).

Usage Guidelines

None

Category

System

Security

Retrieve

Input Format

RTRV-TOD:[<TID>]::<CTAG>;

Input Example

RTRV-TOD:CAZADERO::230;

Input Parameters

None that require description

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    "<YEAR>,<MONTH>,<DAY>,<HOUR>,<MINUTE>,<SECOND>,<DIFFERENCE>:<TMTYPE>"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001   COMPLD
    "2002,05,08,17,01,33,840:LINT"
;
```

Output Parameters

<YEAR>	The current calendar year. YEAR is a string.
<MONTH>	The month of the year. Ranges from 01 to 12. MONTH is a string.
<DAY>	The day of the month. Ranges from 01 to 31. DAY is a string.
<HOUR>	The hour of the day. Ranges from 00 to 23. HOUR is a string.
<MINUTE>	The minute of the hour. Ranges from 00 to 59. MINUTE is a string.
<SECOND>	The second of the minute. Ranges from 00 to 59. SECOND is a string.
<DIFFERENCE>	The number of minutes off UTC. The parameter type is DIFFERENCE, which is the number of minutes off UTC.
• -120	2 hours before UTC
• -180	3 hours before UTC
• -210	3.5 hours before UTC
• -240	4 hours before UTC
• -300	5 hours before UTC
• -360	6 hours before UTC
• -420	7 hours before UTC
• -480	8 hours before UTC
• -540	9 hours before UTC

• -60	1 hour before UTC
• -600	10 hours before UTC
• -660	11 hours before UTC
• 0	UTC
• 120	2 hours after UTC
• 180	3 hours after UTC
• 210	3.5 hours after UTC
• 240	4 hours after UTC
• 270	4.5 hours after UTC
• 300	5 hours after UTC
• 330	5.5 hours after UTC
• 345	5.75 hours after UTC
• 360	6 hours after UTC
• 390	6.5 hours after UTC
• 420	7 hours after UTC
• 480	8 hours after UTC
• 540	9 hours after UTC
• 570	9.5 hours after UTC
• 60	1 hour after UTC
• 600	10 hours after UTC
• 630	10.5 hours after UTC
• 660	11 hours after UTC
• 690	11.5 hours after UTC
• 720	12 hours after UTC
• 765	12.75 hours after UTC
• 780	13 hours after UTC
• 840	14 hours after UTC
<TMTYPE>	Identifies the time zone. TMTYPE is a String

RTRV-TRAILADIT

This command is used to retrieve all TrailAdits configured on a node. The TraiAdits are showm as TL1 output.

Usage Guidelines

None.

Category

Node Level.

Security

Provisioning.

Input Format

RTRV-TRAILADIT:[<TID>]::<CTAG>;

Input Example

RTRV-TRAILADIT:::1;

Output Parameters

<Node ID>	Missing.
<Service ID>	Missing.
<PortIn>	Rx port
<PortOut>	Tx port

RTRV-TRAPTABLE

The Retrieve Trap Table (RTRV-TRAPTABLE) command retrieves a trap destination entry identified by a specific trap destination address.

Usage Guidelines

None

Category
System

Security
Retrieve

Input Format
RTRV-TRAPTABLE:[<TID>]:[<AID>]:<CTAG>;

Input Example
RTRV-TRAPTABLE::1.2.3.4:1;

Input Parameters

<AID>	Access identifier from the "28.19 IPADDR" section on page 28-45. IP address identifying the trap destination. Only a numeric IP address is allowed. A null value is equivalent to ALL.

Output Format

```
   SID DATE TIME
M   CTAG COMPLD
   "<DEST>,<TRAPPORT>,<COMMUNITY>,<SNMPVERSION>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M   001   COMPLD
   "1.2.3.4,162,\"PRIVATE\",SNMPV1"
;
```

Output Parameters	
<DEST>	Access identifier from the "28.19 IPADDR" section on page 28-45.
<TRAPPORT>	UDP port number associated with the trap destination. Defaults to 162. Integer
<COMMUNITY>	Community name associated to the trap destination. Maximum of 32 characters. COMMUNITY is a string.
<SNMPVERSION>	SNMP version number. Defaults to SNMPv1. The parameter type is SNMP_VERSION, which is the SNMP version.
• SNMPV1	SNMP version 1 (default)
• SNMPV2	SNMP version 2

RTRV-TRC-ODU

This command retrieves of ODU TTI.

Usage Guidelines

Category
System

Security
Retrieve

Input Format
RTRV-TRC-ODU:[<TID>]:<src>:<CTAG>::[<msgtype>],[<trclevel>]:BANDWIDTH=<bandwidth>;

Input Parameter	
< AID >	AID of the ODU2. ALL AID is also supported. AID is Mandatory.
<BANDWIDTH>	ODU Level (ODU2E)

Msgtype	ENUM (Optional). SAPIEXPTRC, DAPIEXPTRC, USEREXPTRC, SAPITRC, DAPITRC etc.
Trclevel	TTI-SM, TTI-PM, for ODU. Always TTI-PM

Output Format

Output Example

Output Parameters

RTRV-TRC-OCH

The Retrieve Trace Optical Channel (RTRV-TRC-OCH) 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.

Usage Guidelines

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.
- 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.
- 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 ITU-T 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 are 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.

Category

DWDM

Security

Retrieve

Input Format

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

Input Example

RTRV-TRC-OCH:CISCO:CHAN-2-2:100::EXPTRC,TTI-PM;

Input Parameters

<SRC>	Access identifier from the "28.8 CHANNEL" section on page 28-23.
<MSGTYPE>	Type of autonomous message to be retrieved. A null value is equivalent to ALL. The parameter type is MSGTYPE, which is the type of trace message.
• EXPTRC	Expected incoming path trace message
• INCTRC	Incoming path trace message
• TRC	Outgoing path trace message
• DAPIEXPTRC	
• DAPIINCTRC	
• DAPITRC	
• EXPTRC-ALL	
• INCTRC-ALL	
• SAPIEXPTRC	
• SAPIINCTRC	
• SAPITRC	
• TRC-ALL	
• USEREXPTRC	
• USERINCTRC	
• USERTRC	
<TRCLEVEL>	The trace level to be managed. A null value is equivalent to ALL. The parameter type is TRCLEVEL, which is the trace mode options.
• J0	Identifies the SONET J0 Section trace level
• TTI-PM	Identifies the TTI Path monitoring point

• TTI-SM	Identifies the TTI Section monitoring point

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    "<CHANNEL>,<MOD>::[TRCLEVEL=<TRCLEVEL>],[EXPTRC=<EXPTRC>],
    [TRC=<TRC>],[INCTRC=<INCTRC>],[TRCMODE=<TRCMODE>],
    [TRCFORMAT=<TRCFORMAT>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001   COMPLD
    "CHAN-2-2,OCH::TRCLEVEL=TTI-PM,EXPTRC=\"AAA\",TRC=\"AAA\",
    INCTRC=\"AAA\",TRCMODE=MAN,TRCFORMAT=64-BYTE"
;
```

Output Parameters

<CHANNEL>	Access identifier from the "28.8 CHANNEL" section on page 28-23.
<MOD>	Indicates an OCH AID type. The parameter type is MOD2, which is the line/path modifier.
• 10GFC	10-Gigabit Fibre Channel payload
• 10GFICON	10-Gigabit fiber connectivity payload
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 1GISC3	1-Gigabit ISC3 compatible
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 2GISC3	2-Gigabit ISC3 compatible
• 3GVIDEO	3G-SDI video payload.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload

• 5GIB	5Gbps InfiniBand (IB_5G) payload
• 8GFC	8-Gigabit Fibre Channel payload
• 40GIGE	40-Gigabit Ethernet
• CHGRP	Channel group
• D1VIDEO	D1 video
• DS1	DS1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETRCLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over POS. Virtual ports partitioned using GFP's multiplexing capability.
• GIGE	Gigabit Ethernet
• HDLC	High-level data link control (HDLC) frame mode.
• HDSDI	1.5G HD-SDI video payload.
• HDTV	HDTV
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• MSISC	MSISC
• OC3	OC-3 facility
• OC12	OC-12 facility
• OC48	OC-48 facility

• OC192	OC-192 facility
• OC768	OC-768 facility
• OCH	Optical Channel
• OCHCC	OCH client connection
• OCHNC	OCH network connection
• OCHTERM	OCH termination
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• OTU1	Optical Transport Unit Level 1
• OTU3	Optical Transport Unit Level 3
• POS	POS port
• REP	Resilient Ethernet Protocol
• SDSDI	270M SDI video payload.
• STS1	STS1 path
• STS3C	STS3c path
• STS6C	STS6c path
• STS9C	STS9c path
• STS18C	STS18c path
• STS12C	STS12c path
• STS24C	STS24c path
• STS36C	STS36c path
• STS48C	STS48c path
• STS192C	STS192c path
• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 path
• VT2	VT2 path
<TRCLEVEL>	(Optional) The trace level to be managed. The parameter type is TRCLEVEL, which is the trace mode options.

• J0	Identifies the SONET J0 Section trace level.
• TTI-PM	Identifies the TTI Path monitoring point.
• TTI-SM	Identifies the TTI Section monitoring point.
<EXPTRC>	(Optional) Expected path trace content. A 64 character ASCII string.
<TRC>	(Optional) The path trace message to be transmitted. The trace byte continuously transmits a 64 byte, fixed length ASCII string, one byte at a time. A null value defaults to the NE transmitting 62 null characters (hex 00) and CR and LF. TRC is a string.
<INCTRC>	(Optional) The incoming path trace message contents. INCTRC is a string.
<TRCMODE>	(Optional) Trace mode. The parameter type is TRCMODE (trace mode).
• 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 TIM-P is 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 TIM-P is detected.
• OFF	Turn off path trace capability. Nothing will be reported.
<TRCFORMAT>	(Optional) The size of the trace message. If in SONET mode, only 1 or 16 bytes is applicable for the J0 section trace. The TTI level trace is only 64 bytes. The parameter type is TRCFORMAT (trace format).
• 1-BYTE	1 byte trace message
• 16-BYTE	16 byte trace message
• 64-BYTE	64 byte trace message
• Y	Enable an attribute.

RTRV-TRC-OTU

The Retrieve Trace Optical Transport Unit Level (RTRV-TRC-OTU) command for OTU4C2 retrieves the sent trace string, expected trace string, received trace string, trace mode, and the trace level for the SDH J0 section and the TTI PATH and SECTION monitoring levels of the DWDM facility.

Usage Guidelines

- On the 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 SDH.
- On the DWDM port:
  - The J0 section trace and the TTI path and section trace monitoring point traces are allowed.
  - The J0 section trace is allowed only if the payload for the card is set to SDH.
  - The J0 section trace is allowed only if the card termination mode is not transparent. The TTI path and section trace is allowed only if ITU-T 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 are displayed.
  - If no MSGTYPE is provided, all MSGTYPEs are reported as applicable.
  - If an MSGTYPE is provided with out a TRCLEVEL, then the given MSGTYPE for all TRCLEVELs are displayed.

Category
DWDM

Security
Retrieve

Input Format
RTRV-TRC-OTU:[<TID>]:<SRC>:<CTAG>::[<MSGTYPE>],[<TRCLEVEL>][::];

Input Example
RTRV-TRC-OTU1:CISCO:VFAC-2-2-1:100::EXPTRC,TTI-PM;

Input Parameters

Parameter	Description
<SRC>	The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.
<MSGTYPE>	Type of autonomous message to be retrieved. A null value is equivalent to ALL. The parameter type is MSGTYPE, which is the type of trace message.
• EXPTRC	Expected incoming path trace message
• INCTRC	Incoming path trace message

• TRC	Outgoing path trace message
• DAPIEXPTC	
• DAPIINCTC	
• DAPITRC	
• EXPTRC-AL	
• INCTRC-AL	
• SAPIEXPTC	
• SAPIINCTC	
• SAPITRC	
• TRC-ALL	
• USEREXPTC	
• USERINCTC	
• USERTRC	
<TRCLEVEL>	The trace level to be managed. A null value is equivalent to ALL. The parameter type is TRCLEVEL, which is the trace mode options.
• J0	Identifies the SDH J0 section trace level.
• TTI-PM	Identifies the TTI path monitoring point.
• TTI-SM	Identifies the TTI section monitoring point.

Output Format

SID DATE TIME

M CTAG COMPLD

"<CHANNEL>,<MOD>::[TRCLEVEL=<TRCLEVEL>],[EXPTRC=<EXPTRC>],
[TRC=<TRC>],[INCTRC=<INCTRC>],[TRCMODE=<TRCMODE>], [TRCFORMAT=<TRCFORMAT>]"

;

Output Example

TID-000 1998-06-20 14:30:00

M 001 COMPLD

"VFAC-2-2-1,OTU1::TRCLEVEL=TTI-PM,EXPTRC=\"AAA\",TRC=\"AAA\",
INCTRC=\"AAA\",TRCMODE=MAN,TRCFORMAT=64-BYTE"

;

Output Parameters

Table 23-11 Output Parameter Support

Parameter	Description
<CHANNEL>	Access identifier from the "28.8 CHANNEL" section on page 28-23.
<MOD>	Indicates an OTU AID type. The parameter type is MOD2, which is the line/path modifier.
• OTU1	Optical Transport Unit Level 1
• OTU2	Optical Transport Unit Level 2
• OTU3	Optical Transport Unit Level 3
• OTU4	Optical Transport Unit Level 4
• SDSDI	270M SDI video payload
<TRCLEVEL>	(Optional) The trace level to be managed. The parameter type is TRCLEVEL, which is the trace mode options.
• J0	Identifies the SDH J0 section trace level.
• TTI-PM	Identifies the TTI path monitoring point.
• TTI-SM	Identifies the TTI section monitoring point.
<EXPTRC>	(Optional) Expected path trace content. A 64 character ASCII string.
<TRC>	(Optional) The path trace message to be transmitted. The trace byte continuously transmits a 64 byte, fixed length ASCII string, one byte at a time. A null value defaults to the NE transmitting 62 null characters (hex 00), CR, and LF. TRC is a string.
<INCTRC>	(Optional) The incoming path trace message contents. INCTRC is a string.
<TRCMODE>	(Optional) Trace mode. The parameter type is TRCMODE (trace mode).

• 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 is 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 is detected.
• OFF	Turn off path trace capability. Nothing will be reported.
<TRCFORMAT>	(Optional) The size of the trace message. If in SDH mode, only 1 or 16 bytes is applicable for the J0 section trace. The TTI level trace is only 64 bytes. The parameter type is TRCFORMAT, which is the trace format.
• 1-BYTE	1-byte trace message
• 16-BYTE	16-byte trace message
• 64-BYTE	64-byte trace message

Table 23-12 Input Parameter Support

Parameter	Description
<SRC>	Access identifier from the "26.8 CHANNEL" section on page 26-22.
<MSGTYPE>	Type of autonomous message to be retrieved. A null value is equivalent to ALL. The parameter type is MSGTYPE, which is the type of trace message.
• EXPTRC	Expected incoming path trace message
• INCTRC	Incoming path trace message
• TRC	Outgoing path trace message
<TRCLEVEL>	The trace level to be managed. A null value is equivalent to ALL. The parameter type is TRCLEVEL, which is the trace mode options.
• J0	Identifies the SDH J0 section trace level.
• TTI-PM	Identifies the TTI path monitoring point.

• TTI-SM	Identifies the TTI section monitoring point.

Table 23-13 Output Parameter Support

Parameter	Description
<CHANNEL>	Access identifier from the "26.8 CHANNEL" section on page 26-22.
<MOD>	Indicates an OTU2 AID type. The parameter type is MOD2, which is the line/path modifier.
• 3GVIDEO	3G-SDI video payload.
• HDSDI	1.5G HD-SDI video payload.
• ISC3STP1G	ISC-3 STP 1G video payload.
• ISC3STP2G	ISC-3 STP 2G video payload.
• OCH	Optical Channel
• OTU1	Optical Transport Unit Level 1
• OTU2	Optical Transport Unit Level 2
• OTU3	Optical Transport Unit Level 3
• SDSDI	270M SDI video payload.
<TRCLEVEL>	(Optional) The trace level to be managed. The parameter type is TRCLEVEL, which is the trace mode options.
• J0	Identifies the SDH J0 section trace level.
• TTI-PM	Identifies the TTI path monitoring point.
• TTI-SM	Identifies the TTI section monitoring point.
<EXPTRC>	(Optional) Expected path trace content. A 64 character ASCII string.
<TRC>	(Optional) The path trace message to be transmitted. The trace byte continuously transmits a 64 byte, fixed length ASCII string, one byte at a time. A null value defaults to the NE transmitting 62 null characters (hex 00), CR, and LF. TRC is a string.
<INCTRC>	(Optional) The incoming path trace message contents. INCTRC is a string.

<TRCMODE>	(Optional) Trace mode. The parameter type is TRCMODE (trace mode).
• 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 is 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 is detected.
• OFF	Turn off path trace capability. Nothing will be reported.
<TRCFORMAT>	(Optional) The size of the trace message. If in SDH mode, only 1 or 16 bytes is applicable for the J0 section trace. The TTI level trace is only 64 bytes. The parameter type is TRCFORMAT, which is the trace format.
• 1-BYTE	1-byte trace message
• 16-BYTE	16-byte trace message
• 64-BYTE	64-byte trace message

RTRV-TUNNEL-FIREWALL

The Retrieve Tunnel Firewall (RTRV-TUNNEL-FIREWALL) command retrieves the contents of the firewall tunnel table.

Usage Guidelines

None

Category

System

Security

Retrieve

Input Format

RTRV-TUNNEL-FIREWALL:[<TID>]::<CTAG>;

Input Example

RTRV-TUNNEL-FIREWALL:TID::CTAG;

Input Parameters

None that require description

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    "[SRC ADDR=<SRCADDR>],[SRC MASK=<SRCMASK>],[DEST ADDR=<DESTADDR>],
    [DEST MASK=<DESTMASK>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001   COMPLD
    "SRC ADDR=64.101.150.10,SRC MASK=255.255.255.0,DEST ADDR=64.101.144.7,
    DEST MASK=255.255.255.0"
;
```

Table 23-14 Output Parameter Support

<SRCADDR>	(Optional) Source IP address. SRCADDR is a string.
<SRCMASK>	(Optional) Source mask. SRCMASK is a string.
<DESTADDR>	(Optional) Destination IP address. DESTADDR is a string.
<DESTMASK>	(Optional) Destination mask. DESTMASK is a string.

RTRV-TUNNEL-PROXY

The Retrieve Tunnel Proxy command retrieves the contents of the proxy tunnel table.

Usage Guidelines

None

Category

System

Security

Retrieve

Input Format

RTRV-TUNNEL-PROXY:[<TID>]::<CTAG>;

Input Example

RTRV-TUNNEL-PROXY:TID::CTAG;

Input Parameters

None that require descriptions

Output Format

SID DATE TIME
M CTAG COMPLD
"[SRC ADDR=<SRCADDR>],[SRC MASK=<SRCMASK>],[DEST ADDR=<DESTADDR>],
[DEST MASK=<DESTMASK>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"SRC ADDR=64.101.150.10,SRC MASK=255.255.255.0,DEST ADDR=64.101.144.7,
DEST MASK=255.255.255.0"
;

Table 23-15 Output Parameter Support

<SRCADDR>	(Optional) Source IP address. SRCADDR is a string.
<SRCMASK>	(Optional) Source mask. SRCMASK is a string.
<DESTADDR>	(Optional) Destination IP address. DESTADDR is a string.
<DESTMASK>	(Optional) Destination mask. DESTMASK is a string.

RTRV-UNICFG

The Retrieve User Network Interface Configuration (RTRV-UNICFG) command retrieves the attributes and service parameters of the UNI configuration created.

Usage Guidelines

- With the VALMODE parameter value as NONE, the VALZONE parameter is not applicable, and hence not displayed.
- LMPTYPE is supported.

Category

Retrieve

Security

Provisioning

Input Format

RTRV-UNICFG:[<TID>]:<src>:<CTAG>::[:];

Input Example

RTRV-UNICFG::LINE-2-3:1;

Table 23-16 Input Parameter Support

Parameter	Description
<SRC>	Source AID from the "28.1 ALL" section on page 28-1.

Input Parameter

	Parameter Name	Description	Comments
1	TXPADMINSTATE	IS/OOS-DSBLD/OOS-MT/IS-AINS/	
2	TXPFREQ	FREQValue(float Value)	UTS Pkg- FREQ value will be converted to an appropriate WL and Shown FLEX Pkg- FREQ is shown as received from WSON after normalization
3	TXPWIDTH	WIDTHVALUE(floatValue)	UTS Pkg- Not applicable in UTS Pkg.
4	TXPCHMODE	FLEX/DWDM	
5	TXPPST	PST	
6	TXPPST	SST	
7	TXPLSPSRCIP	Local 2K node address	
8	TXPLSPREMOVEROUTERIP	Remove router address	
9	TXPLSPTUNNELID	Integer value	
10	TXPLSPID	Integer value	

Output Format

rtrv-unicfg::VFAC-3-5-2-1:1;

454-234 2017-08-28 13:31:21

M 1 COMPLD

"VFAC-3-5-2-1:VFAC-3-5-2-1,10.1.2.3,10.2.3.8,10.3.3.5,10.3.3.6,,VALMODE=FULL,VALZONE=GREEN,ADMINSTATE=UP,RESTTYPE=NONE,CKTLABEL=ckt1,USPWROFS=0.0,DSPWROFS=0.0,ALLOWREGEN=YES,RESTVALMODE=INHERITED,TERMINTFDX=0,ORIGINTFIDX=2005037,NUMBERED=FALSE,UNI-

MODE=STATIC,FECMODE=OFF,TRUNKMODE=DEFAULT,LMPTYPE=NOSIGNAL,TXPCON-TROLMODE=GMPLS,TXPFREQ=11.11,TXPWIDTH=22.22,TXPCHMODE=DWDM, TXPADMINSTATE=OOS-DSBLD,TXPPST=OOS-MA,TXPLSPSRCIP=10.65.187.119, TXPLSPREMOVEROUTERIP=12.34.45.67, TXPLSPTUN-NELID=2,TXPLSPID=4”

Output Example

```
rtrv-unicfg::VFAC-3-5-2-1:1;

   454-234 2017-08-28 13:31:21

M   1 COMPLD

   "VFAC-3-5-2-1:VFAC-3-5-2-
1,10.1.2.3,10.2.3.8,10.3.3.5,10.3.3.6,,VALMODE=FULL,VALZONE=GREEN,ADMINSTATE=UP,RESTTYPE=NONE,C
KTLABEL=ckt1,USPWROFS=0.0,DSPWROFS=0.0,ALLOWREGEN=YES,RESTVALMODE=INHERITED,TERMINTFD
X=0,ORIGINTFIDX=2005037,NUMBERED=FALSE,UNIMODE=STATIC,FECMODE=OFF,TRUNKMODE=DEFAULT,
LMPTYPE=NOSIGNAL,TXPCONTROLMODE=GMPLS,TXPFREQ=11.11,TXPWIDTH=22.22,TXPCHMODE=DWDM,
TXPADMINSTATE=OOS-DSBLD,TXPPST=OOS-MA,TXPLSPSRCIP=10.65.187.119,
TXPLSPREMOVEROUTERIP=12.34.45.67, TXPLSPTUNNELID=2,TXPLSPID=4”
```

Table 23-17 Output Parameter Support

Parameter	Description
<SRC>	Source AID from the “28.1 ALL” section on page 28-1.
<RVRSAID>	Destination AID from the “28.1 ALL” section on page 28-1.
<RSYSIP>	Remote system IP.
<RIFCIP>	Remote interface IP.
<MSTPIP>	MSTP interface IP.
<COMMIP>	Communication IP.
<VALMODE>	Identifies the validation mode.
• NONE	No optical validation is performed.
• FULL	The optical validation is performed as indicated in VALZONE parameter.
• INHERITED	
<VALZONE>	Identifies the validation operate zone.
• UNKNOWN	Not evaluated.

• GREEN	Margin > 3 sigma.
• YELLOW	1 < margin < 3 sigma.
• ORANGE	0 < margin < 1 sigma.
• RED	-3 < margin < 0 sigma.
• OUT	Margin < -3 sigma.
<ADMINSTATE>	Identifies the adminstate is UP or DOWN.
• UP	Indicates Adminstate is UP and UNI Services can be activated.
• DOWN	Indicates Adminstate is DOWN and UNI Services cannot be activated.
<RESTTYPE>	Indentifies the restoration type on UNI configuration.
• NONE	None restoration type for UNICFG.
• RESTORE	Restore restoration type for UNICFG.
<CKTLABEL>	Circuit label.
<CKTPRIORITY>	Circuit Priority.
<DSPWROFS>	Down stream pwer offset.
<USPWROFS>	Up stream power offset.
<ALLOWREGEN>	Allow Regeneration (ALLOWREGEN)—Allows the control plane to find a regenerator in the network. The regenerators are used when an optical LSP between two endpoints is not optical or lambda feasible with a single DWDM channel.
• YES	Allows the control plane to find a regenerator in the network.
• NO	Denies to find a regenerator in the network.

RTRV-USER-SECU

The Retrieve User Security (RTRV-USER-SECU) 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.

Usage Guidelines

- A Superuser can retrieve any user's security information. A user with MAINT, PROV, or RTRV privileges can only retrieve their own information.
- When using the keyword ALL, all users created for the system are displayed. This includes users created outside of the TL1 environment as well. Users displayed through the RTRV-USER-SECU command, these users shall also be able to log into the TL1 environment.

Category
Security

Security
Retrieve

Note Maintenance, Provisioning and Retrieve users can retrieve their own information only.

Input Format
RTRV-USER-SECU:[<TID>]:<UID>:<CTAG>;

Input Example
RTRV-USER-SECU::CISCO15:1;

Input Parameters

<UID>	User identifier. The user ID or the keyword ALL. A non-Superuser can only specify his own user ID. Must not be null. UID is a string.

Output Format

SID DATE TIME
M CTAG COMPLD
"<UID>:,<PRIVILEGE>:LOGGEDIN=<LOGGEDIN>,[NUMSESSIONS=<NUMSESS>,]
[LOCKEDOUT=<LOCKEDOUT>,][DISABLED=<DISABLED>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"CISCO15:,SUPER:LOGGEDIN=YES,NUMSESSIONS=1,LOCKEDOUT=NO,DISABLED=NO"
;

Output Parameters

<UID>	User identifier. The user ID that was retrieved. UID is a string.
<PRIVILEGE>	The privilege level of the user. The parameter type is PRIVILEGE, which is the security level.
• MAINT	Maintenance security level. 60 minutes of idle time.

• PROV	Provision security level. 30 minutes of idle time.
• RTRV	Retrieve security level. Unlimited idle time.
• SUPER	Superuser security level. 15 minutes of idle time.
• ROOT_USER	Root user.
• SEC_SUPER	Security super user.
• SEC_USER	Security user.
<LOGGEDIN>	Indicates whether the user is logged in to the NE. The parameter type is YES_NO, which indicates whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes
<NUMSESS>	(Optional) The number of times the user is logged into the NE. NUMSESS is an integer.
<LOCKEDOUT>	(Optional) Indicates whether the user is locked out of the NE. The parameter type is YES_NO, which indicates whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes
<DISABLED>	(Optional) Indicates if the user is disabled. The parameter type is YES_NO, which indicates whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes

RTRV-VCG

The Retrieve Virtual Concatenation Group (RTRV-VCG) command retrieves all the attributes provisioned for a VCG.

Usage Guidelines

None

Category
VCAT

Security
Retrieve

Input Format
RTRV-VCG:[<TID>]:<SRC>:<CTAG>[::::];

Input Example
RTRV-VCG:NODE1:FAC-1-1:1234;

Input Parameters

<SRC>	Source access identifier from the "28.17 FACILITY" section on page 28-42. ML1000-2 and ML100T-12 cards use the VFAC AID. The FC_MR-4 card uses the FAC AID.

Output Format

```
   SID DATE TIME
M   CTAG COMPLD
   "<SRC>::TYPE=<TYPE>,TXCOUNT=<TXCOUNT>,CCT=<CCT>,[LCAS=<LCAS>],
   [BUFFERS=<BUFFERS>],[NAME=<NAME>]:<PST>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M   001   COMPLD
   "FAC-1-1::TYPE=STS3C,TXCOUNT=8,CCT=2WAY,LCAS=LCAS,BUFFERS=DEFAULT,
   NAME="VCG2":IS"
;
```

Output Parameters

<SRC>	Source access identifier from the "28.17 FACILITY" section on page 28-42. ML1000-2 and ML100T-12 cards use the VFAC AID. The FC_MR-4 card uses the FAC AID.

<TYPE>	The type of the entity being provisioned. Null indicates not applicable. TYPE can be a CLEI code or another value. The type of member cross-connect. ML1000-2 and ML100T-12 cards support STS1, STS3c, and STS12c. The FC_MR-4 card supports STS3c only. The parameter type is MOD_PATH, which is the STS/VT path modifier.
• STS1	STS1 path
• STS12C	STS12c path
• STS18C	STS18c path
• STS192	STS192c path
• STS24C	STS24c path
• STS36C	STS36c path
• STS3C	STS3c path
• STS48C	STS48c path
• STS6C	STS6c path
• STS9C	STS9c path
• VT1	VT1 path
• VT2	VT2 path
<TXCOUNT>	Number of VCG members in the transmit (Tx) direction. For ML1000-2 and ML100T-12 cards, the only valid value is 2. For the FC_MR-4 card, the only valid value is 8. TXCOUNT is an integer.
<CCT>	Type of connection; one-way or two-way. Cross-connect type for the VCG member cross-connects. The parameter type is CCT, which is the type of cross-connect to be created.
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	Path Protection multicast drop with one-way continue
• 1WAYEN	Path Protection multicast end node with one-way continue
• 1WAYMON	A bidirectional connection between the two tributaries **Note** 1WAYMON is not supported with TL1. However, it is still supported from CTC. Using CTC, you can create 1WAYMON cross-connects that can be retrieved by 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 interconnects
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber
• DIAG	Diagnostics cross-connect. Supports BERT (BLSR PCA diagnostics cross-connect).
<LCAS>	(Optional) Link capacity adjustment scheme. The parameter type is LCAS, which is the link capacity adjustment scheme mode for the VCG created.
• LCAS	LCAS is enabled.
• NONE	No LCAS.
• SW-LCAS	Supports the temporary removal of a VCG member during the member failure. Only supported by the ML1000-2 and ML100T-12 cards.
<BUFFERS>	(Optional) Buffer type. The default value is DEFAULT. The FC_MR-4 card supports DEFAULT and EXPANDED buffers. Other data cards support DEFAULT buffers only. The parameter type is BUFFER_TYPE, which is the buffer type (used in VCAT).
• DEFAULT	Default buffer value
• EXPANDED	Expanded buffer value
<NAME>	(Optional) Name of the VCAT group. NAME is a string.
<PST>	(Optional) Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In Service
• OOS	Out of Service

RTRV-VLAN

The Retrieve Virtual LAN (RTRV-VLAN) command retrieves a virtual LAN entry from the VLAN database. The VLAN database is a collection of VLANs used in an NE.

Usage Guidelines

- If the AID is invalid, an IIAC (Invalid AID) error message is returned.

Category
Ethernet

Security
Retrieve

Input Format
RTRV-VLAN:[<TID>]:<AID>:<CTAG>[::::];

Input Example
RTRV-VLAN:ROCKS:VLAN-4096:1;

Input Parameters

<AID>	The AID is used to access the VLAN.
• VLAN-{0-4096}	The AID for a single VLAN. The value 0 is reserved for untagged VLANs.

Output Format

```
   SID DATE TIME
M   CTAG COMPLD
   “<AID>::[NAME=<NAME>],[PROTN=<PROTN>]:”
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M   001   COMPLD
   “VLAN-4096::NAME="MYVLAN",PROTN=Y:”
;
```

Output Parameters

<AID>	Aid is used to access the VLAN.
• VLAN-{0-4096}	The AID for a single VLAN. The value 0 is reserved for untagged VLANs.
<NAME>	Indicates the VLAN name.
<PROTN>	Indicates the VLAN protection (enabled or disabled).

• Y	VLAN protection is enabled.
• N	(Default) VLAN protection is disabled.

RTRV-VLAN-ETH

The VLAN attributes on a L2 ethernet port command retrieves the VLAN Profile associated to the couple L2 Ethernet pot - VLAN.

It retrieves also the Alarm status of a VLAN associated to a L2 ethernet port and the Multicast Mac address list.

Usage Guidelines

This command accept the ALL AID.

Category

ETHERNET

Security

Retrieve

Input Format

RTRV-VLAN-ETH[:<TID>]:<AID>:<CTAG>[::<VLAN_ID>],[<VLAN_TYPE>][::];

Input Example

RTRV-VLAN-ETH:TID:ETH-1-1-1:CTAG::110;

Input Parameters

<AID>	Ethernet aids used to access L2 Ethernet ports.
• ALL	The ALL aid is applicable for RTRV-only commands, basically the RTRV-rr type of commands.
• ETH[-{1-50}]-{1-5,12-16}-{1-22}-1	Facility aid for GE-XP card.
• ETH[-{1-50}]-{1-6,12-17}-{1-4}-1	Facility aid for 10GE-XP card.
<VLAN_ID>	The VLAN identifier. A VLAN ID is a number in the range 1..4096. The value of 0 is reserved to UNTAGged VLAN.

VLAN_TYPE	Specifies the type of VLAN.
• SVLAN	Service provider VLAN.
• CVLAN	Customer VLAN.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:<VLANID>,<VLANTYPE>:[<ALM>],[<ALMDAT>],[<ALMTM>],[<BWP>],[<IGMPIP>]:"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"ETH-1-1-1:110:ALM=VLAN-AIS,ALMDAT=08-07,ALMTM=16-38-57,BWP=23:";
;

Output Parameters

<AID>	Ethernet aids are used to access L2 Ethernet ports.
ALL	The ALL aid is applicable for RTRV-only commands, basically the RTRV-rr type of commands. For e.g. RTRV-ETH with ALL aid returns all ETH ports on the node.
• ETH[-{1-50}]-{1-5,12-16}-{1-22}-1	Facility aid for GE-XP card in the format of:ETH-[shelf]-[slot]-[ppm]-[port]
• ETH[-{1-50}]-{1-6,12-17}-{1-4}-1	Facility aid for 10GE-XP card in the format of:ETH-[shelf]-[slot]-[ppm]-[port]
<VLANID>	This is the VLAN identifier. A VLAN ID is a number in the range 1..4096. The value of 0 is reserved to UNTAGged VLAN.This identifier is used for both CE (Customer) VLAN ID and S (Service Provider) VLAN ID.Default value is -
VLAN_TYPE	Specifies the type of VLAN.
• SVLAN	Service provider VLAN.
• CVLAN	Customer VLAN.
<ALM>	This is used to represent the Vlan Alarm status
• VLAN-AIS	Alarm condition indicating Vlan is lost

<ALMDAT>	identifies the date. date is a String. Default value is - "current date"
<ALMTM>	identifies the time. time is a String. Default value is - current time
<BWP>	This is the BWP identifier. A BWP ID is a number in the range 0..10000. The value of 0 is reserved for the default profile that can't be edited nor delete. - Default value is 0
<IGMPIP>	IGMP IP address. Is the Multicast IP address indicating the IGMP group activated on a L2 Ethernet port to provide multicast stream through a specific S-Vlan. Default value is -

RTRV-VT

The Retrieve Virtual Tributary (RTRV-VT) command retrieves the attributes associated with a VT path based on the granularity level of NE- or slot-specific VTs.

Usage Guidelines

- Supported AIDs are ALL, SLOT-N (N=1,2,...ALL), VT-<SLOT>[-<PORT>]-<STS NUMBER>-<VT GROUP>-<VT NUMBER>.
- The RVRTV, RVTM, HOLDOFFTIMER, and UPSRPTHSTATE parameters only apply to UPSR.

Category

Paths

Security

Retrieve

Input Format

RTRV-VT:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-VT:TID:VT1-1-1-1-1:1;

Input Parameters

<AID>	Access identifier from the “28.2 AidUnionId” section on page 28-13.

Output Format

```
    SID DATE TIME
M   CTAG COMPLD
    "<AID>::[LEVEL=<LEVEL>],[RVRTV=<RVRTV>],[RVTM=<RVTM>],
    [HOLDOFFTIMER=<HOLDOFFTIMER>],[TACC=<TACC>],[TAPTYPE=<TAPTYPE>],
    [UPSRPTHSTATE=<UPSRPTHSTATE>]:[<PST>],[<SST>]"
;
```

Output Example

```
    TID-000 1998-06-20 14:30:00
M   001   COMPLD
    "VT1-1-1-1-1-1::LEVEL=VT1,RVRTV=Y,RVTM=1.0,HOLDOFFTIMER=2000,TACC=8,
    TAPTYPE=SINGLE,UPSRPTHSTATE=ACT:OOS,AINS"
;
```

Output Parameters

<AID>	Access identifier from the "28.2 AidUnionId" section on page 28-13.
<LEVEL>	(Optional) The rate of the cross-connect. Indicates the rate of the cross-connected channel. Applicable only to VT1 path in SONET. The parameter type is VT_PATH, which is the modifier for some VT commands.
• VT1	Virtual Tributary 1
• VT2	Virtual Tributary 2
<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. Only applies to path protection. Defaults to empty because RVRTV is N when a path protection path is created. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<HOLDOFFTIMER>	(Optional) Hold off timer. HOLDOFFTIMER is an integer.

<TACC>	(Optional) Test access. Indicates whether the digroup being provisioned is to be used as a test access digroup. Defaults to N.
<TAPTYPE>	(Optional) TAP type. The parameter type is TAPTYPE, which is the test access point type.
• DUAL	Dual FAD
• SINGLE	Single FAD
<UPSRPTHSTATE>	(Optional) Indicates whether a given AID is the working or standby path of a path protection cross-connect. The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In Service
• OOS	Out of Service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RTRV-VLB-REP

The Retrieve VLAN Load Balancing Resilient Ethernet Protocol (RTRV-VLB-REP) command retrieves the VLAN Load Balancing (VLB) for REP Segment on the ethernet ports.

Usage Guidelines

- REP must be configured on the ethernet port.
- This command is applicable only to GE_XP and 10GE_XP cards.

Category

Ethernet

Security

Retrieve

Input Format

RTRV-VLB-REP:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-VLB-REP:CISCO:ETH-16-2-1:1;

Input Parameters

<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[VLBENABLED=<VLBENABLED>],[VLANRANGE=<VLANRANGE>],
[REPPORTID=<REPPORTID>],[PREFERRED=<PREFERRED>]"
;

Output Example

SID DATE TIME
M CTAG COMPLD
"ETH-16-2-1::VLBENABLED=Y,VLANRANGE=1010-1024&1010-1025,
REPPORTID=0X0134A543456785A8,PREFERRED=N"
;

Output Parameters

Input Parameters	Description
<AID>	Access identifier from the "28.17 FACILITY" section on page 28-42.

<VLBENABLED>	Enables or disables the segment topology notification on ethernet entity for REP.
• Y	Enables STCN on the ethernet port.
• N	Disables STCN on the ethernet port.
<VLBOPERATION>	Adds or removes the range for STCN notification.
• ADD	Adds the range to a list of segment ranges for STCN notification.
• REMOVE	Removes the range from a list of segment ranges for STCN notification.
<VLANRANGESTART>	Indicates the VLAN range start value for VLB on REP. The valid range is 0 to 1024.
<VLANRANGEEND>	Indicates the VLAN range end value for VLB on REP. The valid range is from 0 to 1024.
<PREFERRED>	Indicates that the port is the preferred alternate port. Or the preferred port for VLAN load balancing.
• Y	Yes
• N	No
<REPPORTID>	Determines the REP port to trigger VLB.

RTRV-WDMANS

The Retrieve Wavelength Division Multiplexing Automatic Node Setup (RTRV-WDMANS) command retrieves the Automatic Optical Node Setup (AONS) application attributes.

Usage Guidelines

None

Category

DWDM

Security

Maintenance

Input Format

RTRV-WDMANS:[<TID>]:<AID>:<CTAG>:[<WLEN>]:;

Input Example

RTRV-WDMANS::LINE-1-13-2-TX:77::1530.33;

Input Parameters

<AID>	The AID is used to access the WDM node or a single port of the DWDM node.
• WDMNODE	Indicates the WDM node of an MSTP and accesses the NTWTYPE and DITHER WDMANS node parameters.
• LINE	The optical transport section port.
• BAND	The optical multiplex section port.
• CHAN	The optical channel port.
<WLEN>	(Optional) The parameter type is OPTICAL_WLEN, which indicates the optical wavelength.
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1528.77	Wavelength 1528.77
• 1529.16	Wavelength 1529.16
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68

• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33

• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13

• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05
• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27
• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50

• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35

• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68

• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610

Output Format

(For legacy package)

SID DATE TIME
M CTAG COMPLD
“<AID>:[<WLEN>]:[VOAATTN=<VOAATTN>],[VOAATTNFLG=<VOAATTNFLG>],[POWEROSC=<POWEROSC>],[POWEROSCFLG=<POWEROSCFLG>],[NTWTYPE=<NTWTYPE>],[NTWTYPEFLG=<NTWTYPEFLG>],[CHLOSS=<CHLOSS>],[CHLOSSFLG=<CHLOSSFLG>],[GAIN=<GAIN>],[GAINFLG=<GAINFLG>],[TILT=<TILT>],[TILTFLG=<TILTFLG>],[CHPWR=<CHPWR>],[CHPWRFLG=<CHPWRFLG>],[AMPLMODE=<AMPLMODE>],[AMPLMODEFLG=<AMPLMODEFLG>],[RATIO=<RATIO>],[RATIOFLG=<RATIOFLG>],[OSCLOSS=<OSCLOSS>],[OSCLOSSFLG=<OSCLOSSFLG>],[OPTICALNODETYPE=<OPTICALNODETYPE>],[DITHER=<DITHER>],[DITHERFLG=<DITHERFLG>],[TOTALPWR=<TOTALPWR>],[TOTALPWRFLG=<TOTALPWRFLG>],[HIGHSLVEXP=<HIGHSLVEXP>],[HIGHSLVEXPFLG=<HIGHSLVEXPFLG>],[LOWSLVEXP=<LOWSLVEXP>],[LOWSLVEXPFLG=<LOWSLVEXPFLG>],TOTALPWRDBM=<TOTALPWRDBM>][LASTRUNDAT=<LASTRUNDAT>],[LASTRUNTM=<LASTRUNTM>][:]”;

(For flex package)

SID DATE TIME
M CTAG COMPLD
“<AID>:[<WLEN>]:[VOAATTN=<VOAATTN>],[VOAATTNFLG=<VOAATTNFLG>],[POWEROSC=<POWEROSC>],[POWEROSCFLG=<POWEROSCFLG>],[NTWTYPE=<NTWTYPE>],[NTWTYPEFLG=<NTWTYPEFLG>],[CHLOSS=<CHLOSS>],[CHLOSSFLG=<CHLOSSFLG>],[GAIN=<GAIN>],[GAINFLG=<GAINFLG>],[TILT=<TILT>],[TILTFLG=<TILTFLG>],[CHPWR=<CHPWR>],[CHPWRFLG=<CHPWRFLG>],[AMPLMODE=<AMPLMODE>],[AMPLMODEFLG=<AMPLMODEFLG>],[RATIO=<RATIO>],[RATIOFLG=<RATIOFLG>],[OSCLOSS=<OSCLOSS>],[OSCLOSSFLG=<OSCLOSSFLG>],[OPTICALNODETYPE=<OPTICALNODETYPE>],[DITHER=<DITHER>],[DITHERFLG=<DITHERFLG>],[TOTALPWR=<TOTALPWR>],[TOTALPWRFLG=<TOTALPWRFLG>],[HIGHSLVEXP=<HIGHSLVEXP>],[HIGHSLVEXPFLG=<HIGHSLVEXPFLG>],[LOWSLVEXP=<LOWSLVEXP>],[LOWSLVEXPFLG=<LOWSLVEXPFLG>],TOTALPWRDBM=<TOTALPWRDBM>],[CHPWROFFSET],[CHPWROFFSETFLG],[ENABLELOGO],[ENABLELOGOFLG],[LASTRUNDAT=<LASTRUNDAT>],[LASTRUNTM=<LASTRUNTM>][:]”;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
CHAN-1-13-1-TX::CHPWR=-14.1,CHPWRFLG=PROV,
“WDMNODE::NTWTYPE=METRO-CORE,NTWTYPEFLG=DFLT,OPTICALNODETYPE=OADM,LASTRUNDAT=2009-09-03,LASTRUNTM=11-52-18,:"

Output Parameters

<AID>	The AID is used to access the WDM node or a single port of the DWDM node.
• WDMNODE	Indicates the WDM node of an MSTP and accesses the NTWTYPE and DITHER WDMANS node parameters.
• LINE	The optical transport section port.
• BAND	The optical multiplex section port.

• CHAN	The optical channel port.
<WLEN>	(Optional) The parameter type is OPTICAL_WLEN, which indicates the optical wavelength.
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1528.77	Wavelength 1528.77
• 1529.16	Wavelength 1529.16
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22

• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92

• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77

• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1562.23	Wavelength 1562.23
• 1562.64	Wavelength 1562.64
• 1563.05	Wavelength 1563.05
• 1563.45	Wavelength 1563.45
• 1563.86	Wavelength 1563.86
• 1564.27	Wavelength 1564.27
• 1564.68	Wavelength 1564.68
• 1565.09	Wavelength 1565.09
• 1565.50	Wavelength 1565.50
• 1565.90	Wavelength 1565.90
• 1566.31	Wavelength 1566.31
• 1566.72	Wavelength 1566.72
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48

• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11

• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49

• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
<VOAATTN>	The value of calibrated attenuation for the VOA expressed in dBm. The range is 0.0 to +30.0. VOAATTN is a float.
<VOAATTNFLG>	Status flag indicating the state of the WDMANS parameter.
<POWEROSC>	WDM-ANS OSC power parameter.
<POWEROSCFLG>	Status flag indicating the state of the WDMANS parameter.
<NTWTYPE>	WDM-ANS network type parameter.
<NTWTYPEFLG>	Status flag indicating the state of the WDMANS parameter.
<CHLOSS>	WDM-ANS channel loss parameter.
<CHLOSSFLG>	Status flag indicating the state of the WDMANS parameter.

<GAIN>	WDM-ANS amplifier gain parameter.
<GAINFLG>	Status flag indicating the state of the WDMANS parameter.
<TILT>	WDM-ANS amplifier tilt parameter.
<TILTFLG>	Status flag indicating the state of the WDMANS parameter.
<CHPWR>	WDM-ANS channel power parameter.
<CHPWRFLG>	Status flag indicating the state of the WDMANS parameter.
<AMPLMODE	WDM-ANS amplifier mode parameter.
<AMPLMODEFLG>	Status flag indicating the state of the WDMANS parameter.
<RATIO>	WDM-ANS Raman amplifier pump ratio parameter.
<RATIOFLG>	.Status flag indicating the state of the WDMANS parameter.
<OSCLOSS>	WDM-ANS OSC channel loss parameter.
<OSCLOSSFLG>	Status flag indicating the state of the WDMANS parameter.
<OPTICALNODETYPE>	(Optional) The optical configuration type for the NE. The parameter type is OPTICAL_NODE_TYPE, which is the optical configuration types for NEs.
<DITHER>	WDM-ANS WXC dithering parameter.
<DITHERFLG>	Status flag indicating the state of the WDMANS parameter.
<TOTALPWR>	WDM-ANS Raman amplifier total power in mW.
<TOTALPWRFLG>	Status flag indicating the state of the WDMANS parameter.
<HIGHSLVEXP>	Span loss verification—high value.
<HIGHSLVEXPFLG>	Status flag indicating the state of the WDMANS parameter.
<LOWSLVEXP>	Span loss verification—low value.
<LOWSLVEXPFLG>	Status flag indicating the state of the WDMANS parameter.
<TOTALPWRDBM>	Optical power setting in dBm.
<CHPWROFFSETFLG >	Status flag indicating the status of the optical channel power setting.
<ENABLELOGO>	Enable logo.
<ENABLELOGOFLG>	Status flag indicating the status of enable log.

<LASTRUNDAT>	(Optional) The last date when the WDMANS application calculated the parameters. The format is MM-DD, where MM (month of year) ranges from 1 to 12 and DD (day of month) ranges from 1 to 31.
<LASTRUNTM>	(Optional) The last time when the WDMANS application calculated the parameters. The format is HH-MM, where HH (hour of day) ranges from 1 to 23 and MM (minute of hour) ranges from 0 to 59.
<LASTCALCDAT>	(Optional) The last date when the WDMANS application was run automatically or by user request. The format is MM-DD, where MM (month of year) ranges from 1 to 12 and DD (day of month) ranges from 1 to 31.
<LASTCALSTM>	(Optional) The last time when the WDMANS application was run automatically or by user request. The format is HH-MM, where HH (hour of day) ranges from 1 to 23 and MM (minute of hour) ranges from 0 to 59.

RTRV-WDMSIDE

The Retrieve Wavelength Division Multiplexing Side (RTRV-WDMSIDE) command retrieves the WDM side and defines its attributes.

Usage Guidelines

None

Category

DWDM

Security

Maintenance

Input Format

RTRV-WDMSIDE:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-WDMSIDE:PENNGROVE:WDMSIDE-A:114;

Input Parameters

<AID>	The AID is used to access the WDM side of an DWDM node. This is applicable to WDMANS and APC applications of the NE.
• WDMSIDE-{A,B,C,D,E,F,G,H}	DWDM side identifier.

Output Format

SID DATE TIME
M CTAG COMPLD
"

;

<AID>:[<ROLE>]:[<LINEIN>],[<LINEOUT>],[<OSC>],[<REMOTENODEIP>],[<REMOTESIDE>],[<NBR-SIDE>],[<SIDEDESC>],[<IFINDEX>]:

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"WDMSIDE-A::LINEIN=LINE-1-3-RX,LINEOUT=LINE-1-3-TX,OSC=FAC-8-1"
;

Output Parameters

<AID>	The AID is used to access the WDM side of an DWDM node. This is applicable to WDMANS and APC applications of the NE.
• WDMSIDE-{A,B,C,D,E,F,G,H}	DWDM side identifier.
<LINEIN>	(Optional) Used to access the OTS layer of optical network units.
• ALL	Indicates all the OTSs of the NE. The ALL AID is applicable only for retrieve commands.
• LINE[-{1-8}]-{1-6,12-17}-{1-3}-ALL	All the lines (COM=1, OSC=2, LINE=3) in OPT-BST, OPT-BST-E, OPT-BST-L, OPT-AMP-17-C, and OPT-AMP-23-C cards where the format is LINE-[SHELF]-[SLOT]-[PORT]-ALL.

• LINE[-{1-8}]-{1-6,12-17}-{1-3}-{RX,TX}	The receive/transmit lines (COM=1, OSC=2, LINE=3) in OPT-BST, OPT-BST-E, OPT-BST-L, OPT-AMP-17-C, and OPT-AMP-23-C cards where the format is LINE-[SHELF]-[SLOT]-[PORT]-[DIRN].
<LINEOUT>	(Optional) Used to access the OTS layer of optical network units.
• ALL	Indicates all the OTSs of the NE. The ALL AID is applicable for retrieve-only commands.
• LINE[-{1-8}]-{1-6,12-17}-{1-3}-ALL	All the lines (COM=1, OSC=2, LINE=3) in OPT-BST, OPT-BST-E, OPT-BST-L, OPT-AMP-17-C, and OPT-AMP-23-C cards where the format is LINE-[SHELF]-[SLOT]-[PORT]-ALL.
• LINE[-{1-8}]-{1-6,12-17}-{1-3}-{RX,TX}	The receive/transmit lines (COM=1, OSC=2, LINE=3) in OPT-BST, OPT-BST-E, OPT-BST-L, OPT-AMP-17-C, and OPT-AMP-23-C cards where the format is LINE-[SHELF]-[SLOT]-[PORT]-[DIRN].
<OSC>	Facility AID from the "28.17 FACILITY" section on page 28-42.

RTRV-WLEN

The Retrieve Wavelength (RTRV-WLEN) command retrieves the wavelength provisioning information.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-WLEN:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-WLEN:PENNGROVE:WLEN-A-ADD-1530.33:114;

Input Parameters

<AID>	Access identifier from the "28.36 WLEN" section on page 28-62.

Output Format

(For legacy package)

SID DATE TIME
M CTAG COMPLD
"<AID>:<CCT>:[SIZE=<SIZE>],[CKTID=<CKTID>],[TOSIDE=<TOSIDE>],[SRC=<SRC>],
[DST=<DST>]:<PST_PSTQ>,[<SSTQ>]"
;

(For flex package)

SID DATE TIME
M CTAG COMPLD
"<AID>:<CCT>:[SIZE=<SIZE>],[CKTID=<CKTID>],[TOSIDE=<TOSIDE>],[FREQ],[WIDTH],[SRC=<SRC>],[DST=<DST>]:<PST_PSTQ>,[<SSTQ>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"WLEN-A-ADD-1530.33:1WAY:SIZE=MULTI-RATE,CKTID=CKTID,SRC=CHAN-4-1-RX,
DST=LINEWL-1-3-TX-1530.33:OOS-AU,AINS"
;

Output Parameters

<AID>	Access identifier from the "28.36 WLEN" section on page 28-62.
<CCT>	Identifies the wavelength connection types.
• 1WAY	A unidirectional wavelength connection for one specified ring direction.
• 2WAY	A bidirectional wavelength connection for both the ring directions
<SIZE>	Identifies the DWDM circuit size used on a wavelength.
<CKTID>	(Optional) Circuit identification parameter that contains the a common language ID or other alias of the circuit being provisioned. It cannot contain blank spaces. CKTID is a string.

<TOSIDE>	The AID is used to access the WDM side of a DWDM node.
• WDMSIDE-{A,B,C,D,E,F,G,H}	DWDM side identifier.
<FREQ>	Optical wavelength.
<WIDTH>	Width.
<SRC>	Source access identifier from the "28.21 LINEWL" section on page 28-50.
<DST>	Destination AID of the cross-connection from the "28.21 LINEWL" section on page 28-50.
<PST_PSTQ>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by primary state (PST) and primary state qualifier (PSTQ).
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is secondary state (SST), which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

RTRV-CPSFAILUREINFO

The RTRV-CPSFAILUREINFO command retrieves all the errors seen in the CPS circuit.

Usage Guidelines

None

Category
Missing

Security
Missing

Input Format

RTRV-CPSFAILUREINFO:[<TID>]:<aid>:<CTAG>[::::];

Input Example

> rtrv-cpsfailureinfo::all:1;

"test" 2015-09-01 04:04:45

M 1 COMPLD

"CHAN-3-2:10.58.229.78,CHAN-3-2,CKTID=\"TRAIL-ver2\",FAILUREREASON=CIRCUITS-NEED-REPAIR,FAILURESTRING=\"CPS-1701: Repair needed: next hop address changed from 10.58.229.68 to 10.64.107.174\":IS,"

"AGGR-3-1-1:10.58.229.78,AGGR-3-1-1,CKTID=\"ver2\",FAILUREREASON=NONE,:IS,";

Input Parameters

<AID>	Source AID of the CPS Circuit.

Output Format

<srcaid>:<dstaddr>,<dstaid>,<wct>,<cpstype>:<cktid>,[<valmode>],[<valzone>],[<valmodesec>],[<valzonesec>],[<cpsstatus>],[<actvalzone>],[<resttype>],[<revertmode>],[<soaktime>],[<r

eststs>],[<cktlabel>],[<freq>],[<width>],[<cktpri>],[<alwrgn>],[<pathpolicy>],[<dnstrmpwr>],[<upstrmpwr>],[<wsonver>],[<serviceid>],[<lastaction>],[<nodeid>],[<isuni>],[<unictrlmode>

],[<restvalmode>],[<restvalzone>]:[<prefWl>],[<pst>]

Output Example

Output Parameters

RTRV-HOP-UNICFG

The RTRV-HOP-UNICFG command retrieves the HOPs route constraint of the UNICFG Circuits.

Usage Guidelines

None

Category

Missing

Security

Missing

Input Format

RTRV-HOP-UNICFG:[<TID>]:<src>:<CTAG>::[<hoptype>],[<hopnode>],[<hopside>][::];

Input Example

> RTRV-HOP-UNICFG::AGGR-1-7-1-1:A;

ENE-236 2015-06-08 13:30:14

M A COMPLD

"AGGR-1-7-1-1:LOOSE,10.7.1.1,WDMSIDE-A"

;

> RTRV-HOP-UNICFG::ALL:C;

ENE-236 2015-06-08 13:30:20

M C COMPLD

"PLINE-2-5-RX:STRICT,10.1.1.1,"

"AGGR-1-7-1-1:LOOSE,10.7.1.1,WDMSIDE-A"

;

Input Parameters

< SRC>	Source AID

<HOPTYPE> • STRICT • LOOSE • EXCLUDE	Identifies the type of hop constraint. The allowed values are:
<HOPNODE>	Identifies the IP address of the target node
<HOPSIDE>	Identifies the hop constraint target WDM side

Output Format

Output Example

Output Parameters

RTRV-OTDRCFGSCHED

The Retrieve OTDR Configuration Schedule (RTRV-OTDRCFGSCHED) command retrieves all the schedule information associated with the PPM port of a TNCS-O card.

Usage Guidelines

The command retrieves the SCANSTATUS and SCANTYPE for a scan.

- If the scan on a sector is in progress, RUNNING is retrived, else IDLE is retrieved.
- If the scan is scheduled as a Periodic scan, PERIODIC is retrived. If the scan is scheduled as a Delta scan, DELTA is retrived.
- If no scan is scheduled, NONE is retrived.

Category
Equipment

Security
Provisioning

Input Format

RTRV-OTDRCFGSCHED :: <Aid>:CTAG;

Input Example

RTRV-OTDRCFGSCHED::ppm-1-1-1:1;

Input Parameters

<AID>	Source AID. Two types of AID values possible are: PPM-Shelf-Slot-PPM_port.
• Specific PPM port on TNC • ALL	List of all OTDR scan configurations for a node.

Output Format

SID DATE TIME
M CTAG COMPLD

"<AID>,
[SECTOR=<>],[SCANTYPE=<>],[DAY=<>],[DELTADAY=<>],[HH=<>],[MM=<>],[DIRECTION=<>],[CONFIG=<>]";

Output Example

> RTRV-OTDRCFGSCHED::all:a;

node126 2015-12-09 14:53:49
M a COMPLD

"PPM-1-8-1:SECTOR=ZONE#1,SCANTYPE=PERIODIC,DAY=MON,HH=0,MM=0,DIRECTION=TX,CONFIG=ENABLE"
"PPM-1-8-2:SECTOR=ZONE#3,SCANTYPE=PERIODIC,DAY=MON,HH=0,MM=0,DIRECTION=TX-RX,CONFIG=ENA-
BLE" ;

Output Parameters

<AID>	Specific PPM port on TNC.
<SECTOR> • EXPERT	Sector parameter of enum type that takes the following values

• ZONE #1 (0 to 1km) • ZONE #2 (0 to 25km) • ZONE #3 (0 to 80km) • ZONE #4 (0 to 100km)	
<SCANTYPE> • PERIODIC • DELTA	Defines the type of scan. Enum type parameter that takes the following values
<DAY> • MON to SUN	Defines the day value and applicable only when <SCANTYPE>=PERIODIC. Enum type parameter that takes the following values
<DELTADAY> • 0 to 365	Defines the day value and applicable only when <SCANTYPE>=DELTA. Enum type parameter that takes the following values
<HH> • 0 to 24	Defines the hour value that takes the following values
<MM> • 0 to 60	Defines the minute value that takes the following values
<DIRECTION> • TX • RX • TX-RX	Defines the scan direction. Enum type parameter that takes the following values
<CONFIG> • DISABLE • ENABLE	Enum type parameter that takes the following values

RTRV-OTDRCFGSECT

The Retrieve OTDR Configuration Sector (RTRV-OTDRCFGSECT) command retrieves all the sector information associated with the PPM port of a TNCS-O card.

Usage Guidelines

The command retrieves the SCANTYPE of a scan.

Category

Equipment

Security
Provisioning

Input Format

RTRV-OTDRCFGSECT:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-OTDRCFGSECT::ppm-1-1-1:1;

Input Parameters

<AID>		Source AID. Two types of AID values possible are: PPM-Shelf-Slot-PPM_port.
	• Specific PPM port on TNC	List of all OTDR scan configurations for a node.
	• ALL	

Output Format

SID DATE TIME
M CTAG COMPLD

“<AID>, [SECTOR=<SECTOR>],[CAPTUREENDPOINT=< CAPTUREENDPOINT>], [PULSEWIDTH=<PULSE-WIDTH>],[MEASURETIME=<MEASURETIME>],[CAPTURESTARTPOINT=<CAPTURESTARTPOINT>],[RESOLU-TION=<RESOLUTION>],[LOSSSENSITIVITY=<LOSSSENSITIVITY>],[REFLECTIONSENSITIVITY=<REFLECTION-SENSITIVITY>],[SCANSTATUS=<SCANSTATUS>],[SCANTYPE=< SCANTYPE>]”;

Output Example

> RTRV-OTDRCFGSECT::PPM-1-8-1:1;

node126 2015-12-09 14:50:43
M 1 COMPLD

"PPM-1-8-1:SECTOR=ZONE#1,CAPTUREENDPOINT=1.0000,PULSEWIDTH=0.06,MEASURETIME=180.00,CAP-TURESTARTPOINT=0.0000,RESOLUTION=1.0000,LOSSSENSITIVITY=0.40,REFLECTIONSENSITIVITY=-30.00,SCANSTATUS=IDLE,SCANTYPE=NONE"
"PPM-1-8-1:SECTOR=ZONE#2,CAPTUREENDPOINT=25.0000,PULSEWIDTH=0.40,MEASURE-TIME=180.00,CAPTURESTARTPOINT=0.0000,RESOLUTION=10.0000,LOSSSENSITIVITY=0.60,REFLECTION-SENSITIVITY=-30.00,SCANSTATUS=IDLE,SCANTYPE=NONE"

"PPM-1-8-1:SECTOR=ZONE#3,CAPTUREENDPOINT=80.0000,PULSEWIDTH=2.00,MEASURE-TIME=180.00,CAPTURESTARTPOINT=0.0000,RESOLUTION=25.0000,LOSSSENSITIVITY=1.50,REFLECTION-SENSITIVITY=-30.00,SCANSTATUS=IDLE,SCANTYPE=NONE"

"PPM-1-8-1:SECTOR=ZONE#4,CAPTUREENDPOINT=100.0000,PULSEWIDTH=20.00,MEASURE-TIME=180.00,CAPTURESTARTPOINT=0.0000,RESOLUTION=50.0000,LOSSSENSITIVITY=1.50,REFLECTION-SENSITIVITY=-30.00,SCANSTATUS=IDLE,SCANTYPE=NONE"

"PPM-1-8-1:SECTOR=EXPERTMODE,CAPTUREENDPOINT=80.0000,PULSEWIDTH=2.00,MEASURE-TIME=180.00,CAPTURESTARTPOINT=0.0000,RESOLUTION=25.0000,LOSSSENSITIVITY=1.50,REFLECTION-SENSITIVITY=-30.00,SCANSTATUS=IDLE,SCANTYPE=NONE"

"PPM-1-8-1:SECTOR=AUTOSCANMODE,CAPTUREENDPOINT=80.0000,PULSEWIDTH=2.00,MEASURE-TIME=180.00,CAPTURESTARTPOINT=0.0000,RESOLUTION=25.0000,LOSSSENSITIVITY=1.50,REFLECTION-SENSITIVITY=-30.00,SCANSTATUS=IDLE,SCANTYPE=NONE" ;

Output Parameters

<AID>	Specific PPM port on TNC
<SECTOR> • EXPERT • ZONE #1 (0 to 1km) • ZONE #2 (0 to 25km) • ZONE #3 (0 to 80km) • ZONE #4 (0 to 100km)	Sector parameter of enum type that takes the following values
<CAPTUREENDPOINT>	Capture Length
<PULSEWIDTH>	Pulse Width
<MEASURETIME>	Measure Time
<CAPTURESTARTPOINT>	Capture Offset
<RESOLUTION>	Resolution
<SCANSTATUS> • IDLE • RUNNING	Defines the status of the scan
<SCANTYPE> • PERIODIC	Defines the type of scan

- DELTA
- NONE

RTRV-OTDRCFGTH

The Retrieve OTDR Configuration Threshold (RTRV-OTDRCFGTH) command retrieves the threshold information associated with the PPM port of a TNCS-O card.

Usage Guidelines

The command retrieves the LOSSALMTH and REFLECTIONALMTH parameters of the PPM port of a TNCS-O card.

Category

Equipment

Security

Provisioning

Input Format

RTRV-OTDRCFGTH::<AID>:CTAG;

Input Example

RTRV-OTDRCFGTH::PPM-1-1-1:1;

Input Parameters

<AID>	Source AID. Two types of AID values possible are: PPM-Shelf-Slot-PPM_port. • Specific PPM port on TNC • ALL List of all OTDR scan configurations for a node.

Output Format

SID DATE TIME
M CTAG COMPLD

"<AID>, [LOSSALMTH=<>], [REFLECTIONALMTH=<>]";

Output Example

> RTRV-OTDRCFGTH::all:a;

node126 2015-12-09 14:55:33

M a COMPLD

"PPM-1-8-1:LOSSALMTH=0.50,REFLECTIONALMTH=2.00"

"PPM-1-8-2:LOSSALMTH=0.80,REFLECTIONALMTH=2.00" ;

Output Parameters

<AID>	Specific PPM port on TNC
<LOSSALMTH>	Defines loss threshold
<REFLECTIONALMTH>	Defines reflection threshold

RTRV- OTDREQPTIL

This command retrieves OTDR equipment Insertion Loss.

Usage Guidelines

Category
System

Security
Retrieve

Input Format
RTRV-OTDREQPTIL:[<TID>]:<aid>:<CTAG>::DIRN=<dirn>;

Input Example
>rtrv-otdreqptil::ppm-1-1:1::DIRN=RX;

fwtnc143 2017-08-09 08:05:11

M 1 COMPLD

"PPM-1-1:DIRN=RX,ILVALUE=0.90,"

;

Input Parameter	
< AID >	AID of the PPM where OTDR command is executed.
< DIRN (DIRECTION)>	Direction TX/RX/TX-RX. ENUM

Output Format

Output Example

Output Parameters	
< AID >	AID of the PPM where OTDR command is executed.
< DIRN (DIRECTION)>	Direction TX/RX/TX-RX. ENUM
ILValue	Insertion loss value. CHAR

RTRV- OTDRORLTHR

This command retrieves ORL Threshold value.

Usage Guidelines

Category

System

Security

Retrieve

Input Format

RTRV-OTDRORLTHR:[<TID>]:<aid>:<CTAG>::DIRN=<dirn>;

Input Example

rtrv-otdrorlthr::ppm-1-1:1::DIRN=TX;

fwtnc143 2017-08-09 06:27:46

M 1 COMPLD

"PPM-1-1:THR=15.00,DIRN=TX"

;

Input Parameter

< AID >	AID of the PPM where OTDR command is executed.
< DIRN (DIRECTION)>	Direction TX/RX/TX-RX. ENUM

Output Format

Output Example

Output Parameters

< AID >	AID of the PPM where OTDR command is executed.
< DIRN (DIRECTION)>	Direction TX/RX/TX-RX. ENUM
<THR (Threshold)>	ORL threshold Value

RTRV- OTDRORLVAL

This command retrieves ORL values.

Usage Guidelines

Category
System

Security
Retrieve

Input Format
RTRV-OTDRORLVAL:[<TID>]:<aid>:<CTAG>::DIRN=<dirn>,SCANTYPE=<scantype>;

Input Example
rtrv-otdrorlval::ppm-1-1:1::DIRN=TX,SCANTYPE=LASTSCAN;

fwtnc143 2017-08-09 06:33:02

M 1 COMPLD

"PPM-1-1:DIRN=RX,SCANTYPE=LASTSCAN,ORLQUALIFIER=AVAILABLE,ORLVALUE=15.00,TIMESTAMP=\"7-8-2017 13:49:18\""

Input Parameter

< AID >	AID of the PPM where OTDR command is executed.
< DIRN (DIRECTION)>	Direction TX/RX/TX-RX. ENUM
SCANTYPE	Scan type(Hybrid/Fast). ENUM

Output Format

Output Example

Output Parameters

< AID >	AID of the PPM where OTDR command is executed.

< DIRN (DIRECTION)>	Direction TX/RX/TX-RX. ENUM
SCANTYPE	Scan type(Hybrid/Fast). ENUM
ORLQUALIFIER	ENUM. TRAINIG-FAILED TRAINIG-MISSING OSC-DOWN TRAINING-REQUESTED, REMOTE-SIDE-UNAVAILABLE, AVAILABLE
ORLVALUE	(CHAR). ORLVALUE
Timestamp	(CHAR) Timestamp returned by CORBA as unsigned long value.

RTRV-OTDRSCANEVENT

The Retrieve OTDR Scan Event (RTRV-OTDRSCANEVENT) command retrieves all the events generated during a one-time scan or a scheduled scan.

Usage Guidelines

The command retrieves the LOCATION value indicating the distance to the event generated.

Category

Equipment

Security

Provisioning

Input Format

RTRV-OTDRSCANEVENT:[<TID>]:<AID>:<CTAG>:::SECTOR=<sector>,SCANTYPE=<scantype>,DIRECTION=<direction>;

Input Example

RTRV-OTDRSCANEVENT::PPM-1-8-1:a:::SECTOR=ZONE#1,SCANTYPE=LASTSCAN,DIRECTION=TX;

Input Parameters

<AID> • Specific PPM port on TNC • ALL	Source AID. Two types of AID values possible are: PPM-Shelf-Slot-PPM_port. List of all OTDR scan configurations for a node.
<SECTOR> • EXPERT • ZONE #1 (0 to 1km) • ZONE #2 (0 to 25km) • ZONE #3 (0 to 80km) • ZONE #4 (0 to 100km)	Sector parameter of enum type that takes the following values
<SCANTYPE> • LastScan • Baseline	Defines the type of scan. Enum type parameter that takes the following values
<DIRECTION> • TX • RX • TX-RX	Defines the scan direction. Enum type parameter that takes the following values

Output Format

SID DATE TIME
M CTAG COMPLD

"<AID>,<SECTOR>,<DIRECTION>,<EVENTID>,[TIMESTAMP=<TIMESTAMP>],[LOCATION=<LOCATION>],[INSERTIONLOSS=<INSERTIONLOSS>],[REFLECTION=<REFLECTION>],[QUALIFIER=<QUALIFIER>]";

Output Example

> RTRV-OTDRSCANEVENT::PPM-1-8-1:a:::SECTOR=ZONE#1,SCANTYPE=LASTSCAN,DIRECTION=TX;

node126 2015-12-10 10:02:43
M a COMPLD

"PPM-1-8-1:SECTOR=ZONE#1,DIRECTION=TX,EVENTID=0,TIMESTAMP=\"2015/12/10 10:0:43 PST\",LOCATION=0.4000,INSERTIONLOSS=-5.00,REFLECTION=-9.00,QUALIFIER=GAINLOSS"

"PPM-1-8-1:SECTOR=ZONE#1,DIRECTION=TX,EVENTID=1,TIMESTAMP=\"2015/12/10 10:0:43 PST\",LOCATION=0.8000,INSERTIONLOSS=-7.00,REFLECTION=-9.00,QUALIFIER=GAINLOSS" ;

Output Parameters

<SECTOR> • EXPERT • ZONE #1 (0 to 1km) • ZONE #2 (0 to 25km) • ZONE #3 (0 to 80km) • ZONE #4 (0 to 100km)	Sector parameter of enum type that takes the following values
<DIRECTION> • TX • RX • TX-RX	Defines the scan direction. Enum type parameter that takes the following values
<EVENTID>	Identifies the event id.
<TIMESTAMP>	Identifies the timestamp.
<LOCATION>	Identifies the location parameter in km.
<INSERTIONLOSS>	Identifies the insertion loss in dB.
<REFLECTION>	Identifies the reflection loss in dB.
QUALIFIER • REFLECTION • GAINLOSS	Enum type parameter that takes the following values

RTRV-OTDRSCANPOINTS

The Retrieve OTDR Scan Event (RTRV-OTDRSCANPOINTS) command retrieves the scan points generated during a one-time or a schedule scan.

Usage Guidelines

The command retrieves the LOCATION value indicating the distance to the event generated.

Category

Equipment

Security
Provisioning

Input Format

RTRV-OTDRSCANPOINTS:[<TID>]:<AID>:<CTAG>::SECTOR=<sector>,SCANTYPE=<scantype>,DIRECTION=<direction>;

Input Example

RTRV-OTDRSCANPOINTS::PPM-1-8-1:a:::SECTOR=ZONE#1,SCANTYPE=LASTSCAN,DIRECTION=TX;

Input Parameters

<AID> • Specific PPM port on TNC • ALL	Source AID. Two types of AID values possible are: PPM-Shelf-Slot-PPM_port. List of all OTDR scan configurations for a node.
<SECTOR> • EXPERT • ZONE #1 (0 to 1km) • ZONE #2 (0 to 25km) • ZONE #3 (0 to 80km) • ZONE #4 (0 to 100km)	Sector parameter of enum type that takes the following values
<SCANTYPE> • LastScan • Baseline	Defines the type of scan. Enum type parameter that takes the following values
<DIRECTION> • TX • RX • TX-RX	Defines the scan direction. Enum type parameter that takes the following values

Output Format

SID DATE TIME
M CTAG COMPLD

“<AID>,<SECTOR>,<DIRECTION>,<recordId>, [TIMESTAMP=<timestamp>[DISTANCE=<DISTANCE>],[RELATIVE-LOSS=<RELATIVELOSS>]”;

Output Example

RTRV-OTDRSCANPOINTS::PPM-1-8-1:a:::SECTOR=ZONE#1,SCANTYPE=LASTSCAN,DIRECTION=TX

node126 2015-12-10 16:52:19
M a COMPLD

"PPM-1-8-1:SECTOR=ZONE#1,DIRECTION=TX,RECORDID=992,TIMESTAMP=\"2015/12/10 16:50:16 PST\",DISTANCE=0.9919,RELATIVELOSS=8.00"
"PPM-1-8-1:SECTOR=ZONE#1,DIRECTION=TX,RECORDID=993,TIMESTAMP=\"2015/12/10 16:50:16 PST\",DISTANCE=0.9929,RELATIVELOSS=1.00"
"PPM-1-8-1:SECTOR=ZONE#1,DIRECTION=TX,RECORDID=994,TIMESTAMP=\"2015/12/10 16:50:16 PST\",DISTANCE=0.9939,RELATIVELOSS=-7.00"
"PPM-1-8-1:SECTOR=ZONE#1,DIRECTION=TX,RECORDID=995,TIMESTAMP=\"2015/12/10 16:50:16 PST\",DISTANCE=0.9949,RELATIVELOSS=9.00"
"PPM-1-8-1:SECTOR=ZONE#1,DIRECTION=TX,RECORDID=996,TIMESTAMP=\"2015/12/10 16:50:16 PST\",DISTANCE=0.9959,RELATIVELOSS=6.00"
"PPM-1-8-1:SECTOR=ZONE#1,DIRECTION=TX,RECORDID=997,TIMESTAMP=\"2015/12/10 16:50:16 PST\",DISTANCE=0.9969,RELATIVELOSS=10.00"
"PPM-1-8-1:SECTOR=ZONE#1,DIRECTION=TX,RECORDID=998,TIMESTAMP=\"2015/12/10 16:50:16 PST\",DISTANCE=0.9979,RELATIVELOSS=9.00"
"PPM-1-8-1:SECTOR=ZONE#1,DIRECTION=TX,RECORDID=999,TIMESTAMP=\"2015/12/10 16:50:16 PST\",DISTANCE=0.9989,RELATIVELOSS=-7.00"
;

Output Parameters

<SECTOR> • EXPERT • ZONE #1 (0 to 1km) • ZONE #2 (0 to 25km) • ZONE #3 (0 to 80km) • ZONE #4 (0 to 100km)	Sector parameter of enum type that takes the following values
<DIRECTION> • TX • RX • TX-RX	Defines the scan direction. Enum type parameter that takes the following values
<RECORDID>	

<TIMESTAMP>	
<DISTANCE>	
<RELATIVELOSS>	

RTRV-PROTSW-EQPT

The RTRV-PROTSW-EQPT command retrieves the working and protection Power Supply Module configured for a node.

Usage Guidelines

In a mutli-shelf node, the command accepts the AID of the shelf or ALL.

In single-shelf node, AID is not provided.

Category

DWDM

Security

Maintainence

Input Format

RTRV-PROTSW-EQPT:[<TID>]:[<ShelfAid>]:<CTAG>;

Input Example

Input Parameters

<AID>		Source AID. Two types of AID values possible are:
	• ShelfAID	Shelf AID.
	• ALL	List of all AIDs.

Output Format

SID DATE TIME
M CTAG COMPLD

“[<ShelfAid>]:<WRK=<WRK>,[<PRT=<PRT>]” ;

Output Example

> rtrv-protsw-eqpt::all:1;

vxTarget 2000-05-03 03:27:03

M 1 COMPLD

"SHELF-1:WRK=PWRM-1-1,PRT=PWRM-1-2"

"SHELF-2:WRK=PWRM-2-1,PRT=NONE" ;

> rtrv-protsw-eqpt::SHELF-2:1;

vxTarget 2000-05-03 03:27:36

M 1 COMPLD

"SHELF-2:WRK=PWRM-2-1,PRT=NONE" ;

Output Parameters

<AID>	Source AID. Two types of AID values possible are:
• ShelfAID	Shelf AID.
• ALL	List of all AIDs.
<WRK>	Working power supply module(s).
<PRT>	Protect power supply module(s).

RTRV-EQPT

Missing.

Usage Guidelines

None

Category

Missing

Security

Missing

Input Format

[<TID>]:<AID>:<CTAG><ALARMPROFILENAME>;

Input Example

Input Parameters

<ALARMPROFILENAME>	Name of the profile created using the command ENT-ALMPROFILE
• MD-48-EVEN	
• MD-48-ODD	
• MD-48-CM	
• EDRA-1-26	
• EDRA-1-35	
• EDRA-2-26	
• EDRA-2-35	
• 16-WXC-FS	
• MF-16AD-CFS	
• MF-4x4-COFS	
• MF-DEG-5	
• MF-UPG-4	
• MF-MPO-8LC	
• MF-AST-EDFA	

- SMR20-FS
- SMR9-17-FS
- SMR9-24-FS
- SMR9-34-FS
- AD-12-FS
- AD-16-FS
- MF-MPO-16LC
- MF-2MPO-ADP
- MF-16AE-CFS
- MF-10AD-CFS
- MF-PPMESH8-5AD
- PSHELF-MF-6RU
- PSHELF-MF10-6RU
- SMR20-FS-CV
- MF-MPO-20LC
- MF-6AD-CFS
- MF-8X10G-FO
- MD-48-ODD-E
- MD-48-EVEN-E

- MD-48-CM-E

Output Format

SID DATE TIME
M CTAG COMPLD

"<AID>:<TNC>,<EQUIP>,ACT:CARDNAME=<>,CARDMODE=<>,ALARMSUPPRESS=<>,ACTUALCARDNAME=TNC:IS-NR,";

Output Example

Output Parameters

RTRV-NEDFLT-ALSPARAM

Description

Usage Guidelines

Category

Security

Input Format

RTRV-NEDFLT-ALSMODE:[<TID>]::<CTAG>::<eqptType>,<porttype>;

Input Parameter

#	Parameter Name	Optional(True/False)	Values
1	Eqtype	False	Enum – EQTYPE ENUM
2	PortType	False	Enum- Port Type Enum

Output Format

rtrv-NEDFLT-ALSPARAM:::1::400G-XP-LC,OTU4;

Output Example

> > rtrv-NEDFLT-ALSPARAM:::1::400G-XP-LC,OTU4;

node136 2018-08-09 02:09:46
M 1 COMPLD
"400G-XP-LC,OTU4,ALSMODE=MAN-RESTART,ALSRCINT=90,ALSRCPW=80;

Output Parameters

<eqptType>: The parameter type is EQPT_TYPE, which is the type of equipment being provisioned into a slot

Example of some of the equipment's are

. 400G-XP-LC

. 100G-LC-C

. 100G-CK-C

. 10X10G-LC

RTRV-NEDFLT-OPTSTH

Description
Retirve Default Optics Threshold

Usage Guidelines

NA

Category

System

Security

Retrieve

Input Format

RTRV-NEDFLT-OPTSTH:[<TID>]::<CTAG>::<eqptType>,[<lossb>],[<fec>],[<tmper>];

Input Parameter

<eqptType>: The parameter type is EQPT_TYPE, which is the type of equipment being provisioned into a slot

Example of some of the equipment's are

. 400G-XP-LC

. 100G-LC-C

. 100G-CK-C

. 10X10G-LC

<lossb>: (Optional) The parameter type is REACH, which indicates the reach values. The default value for Ne default is set to AUTOPROV

Example of some of the rich values are :

. AUTOPROV

. SR

. SR-1

. SR-2

. SR-3

. SR-5

<fec>: (Optional) Forward error correction. It can be enabled only if ITU-T G.709 monitoring is turned ON. It is either off or enabled in standard or enhanced mode. Default fec mode for Ne default is OFF

The values of Fec are

. OFF

. STD

. ENH

. ENH-I4

. ENH-I4

. ENH-I7

. HG-20

. HG-7

. SD-20

. SD-7

. SD-15-DE-OFF

. SD-25-DE-OFF

. SD-15-DE-ON

. SD-27-DE-OFF

. SD-27-DE-ON

<tmper>: Accumulation time period for performance counters. Defaults is 15-MIN

Values are

. 15-MIN

. 1-DAY

. ALARM

Output Example

Output Parameters

<eqptType>: The parameter type is EQPT_TYPE, which is the type of equipment being provisioned into a slot

Example of some of the equipment's are

. 400G-XP-LC

. 100G-LC-C

. 100G-CK-C

. 10X10G-LC

<montype>: Monitored type. The parameter type is ALL_MONTYPE, which is the monitoring type list.

. OPT-MIN

. OPR-MAX

. OPR-MIN

. LBCL-MAX

<thlev>: Threshold level. THLEVEL is a float.

<lossb>: (Optional) The parameter type is REACH, which indicates the reach values. The default value for Ne default is set to AUTOPROV

Example of some of the rich values are.

. AUTOPROV

. SR

. SR-1

. SR-2

. SR-3

. SR-5

<fec>: (Optional) Forward error correction. It can be enabled only if ITU-T G.709 monitoring is turned ON. It is either off or enabled in standard or enhanced mode. Default fec mode for Ne default is OFF

The values of Fec are

. OFF

. STD

. ENH

. ENH-I4

. ENH-I4

. ENH-I7

. HG-20

. HG-7

. SD-20

. SD-7

. SD-15-DE-OFF

. SD-25-DE-OFF

. SD-15-DE-ON

. SD-27-DE-OFF

. SD-27-DE-ON

<tmper>: Accumulation time period for performance counters. Defaults is 15-MIN Values are

. 15-MIN

. 1-DAY

. ALARM

RTRV-OTDRSCANTIME

The Retrieve OTDR Scan Timestamp (RTRV-OTDRSCANTIME) command retrieves all the time stamp of the Last scan or a baseline scan.

Usage Guidelines

The command retrieves the SCANTYPE (LASTSCAN or BASELINE), DIRECTION (TX,RX or TX-RX), and the Time stamp of LASTSCAN or BASELINE.

Category

Equipment

Security

Provisioning

Input Format

RTRV-OTDRSCANTIME:[<TID>]:<AID>:<CTAG>[:::];

Input Example

RTRV-OTDRSCANTIME::ppm-1-1-1:1;

Input Parameters

<AID>	Specific PPM port on the TNC.

Output Format

SID DATE TIME

M CTAG COMPLD

"<AID>, [SECTOR=<SECTOR>],[DIRECTION=<direction>], [SCANTYPE=<scantype>],[TIMESTAMP=<timestamp>];

Output Example

```
> RTRV-OTDRSCANTIME::ppm-1-8-1:a;
   node126 2015-11-24 14:37:20
M   a COMPLD
   "PPM-1-8-1:SECTOR=ZONE#1,DIRECTION=TX,SCANTYPE=1,TIMESTAMP=2015/11/24 14:35:6 PST\""
   "PPM-1-8-1:SECTOR=ZONE#1,DIRECTION=RX,SCANTYPE=1,TIMESTAMP=2015/11/24 14:36:28 PST\""
   "PPM-1-8-1:SECTOR=ZONE#1,DIRECTION=TX,SCANTYPE=0,TIMESTAMP=2015/11/24 14:32:7 PST\""
   "PPM-1-8-1:SECTOR=ZONE#1,DIRECTION=RX,SCANTYPE=0,TIMESTAMP=2015/11/24 14:36:28 PST\""
;
```

Output Parameters

<AID> • Specific • All	Specific PPM port on the TNC or All OTDR scan configurations on a node
<SECTOR> • EXPERT • ZONE #1 (0 to 1km) • ZONE #2 (0 to 25km) • ZONE #3 (0 to 80km) • ZONE #4 (0 to 100km) • AUTOSCANMODE	Sector parameter of enum type that takes the following values
<DIRECTION> • TX • RX • TX-RX	Defines the scan direction. Enum type parameter that takes the following values
<SCANTYPE> • LastScan • Baseline	Defines the type of scan. Enum type parameter that takes the following values
<TIMESTAMP>	Defines timestamp for the last scan.

RTRV-OTDRAUTOSCAN

The Retrieve OTDR auto scan (RTRV-OTDRAUTOSCAN) is used to retrieve NE attributed for an automatic OTDR scan.

Usage Guidelines

The command retrieves the AUTOSCANLOS, AUTOBASELINE, DISABLECIRCUITS, ENABLEPFCRITERIA, and

AUTOSCANSPANLOSSINCREASE as Enabled or Disabled. The other parameters are numeric in a given range.

Category
System

Security
Retrieve

Input Format

RTRV-OTDRAUTOSCAN: [<TID>]::<CTAG> [:::] ;

Input Example

RTRV-OTDRSCANTIME::ppm-1-1-1:1;

Input Parameters

Output Format

SID DATE TIME
M CTAG COMPLD
[AUTOSCANLOS=<autoscanlos>],[SCANDELAYMINS=<scandelaymins>],[AUTOBASELINE=<autobaseline>],[DISABLE-CIRCUITS=<disablecircuits>,[ENABLEPFCRITERIA=<enablepfcriteria>],[MAXTOTALFIBERBR=<maxtotalfiber-break>],[MAXEVENTBR=<maxeventbreak>],[MAXEVENTLOSS=<maxeventloss>],[AUTOSCANSPANLOSSIN-CREASE=<autoscanspanlossincrease>],[SPANLOSSINCREASETH=<spanlossincreasethreshold> ;

Output Example

> RTRV-OTDRAUTOSCAN:::1 ;
node126 2015-12-24 15:20:40
M 1 COMPLD
"AUTOSCANLOS=N,SCANDELAYMINS=5,AUTOBASELINE=N,DISABLECIRCUITS=N,ENABLEPFCRITERIA=N,MAX-TOTALFIBERBR=-25.0,MAXEVENTBR=-30.0,MAXEVENTLOSS=2.0,AUTOSCANSPANLOSSINCREASE=N,SPANLOSS-INCREASETH=2.0"
;

Output Parameters	
<AUTOSCANLOS> • Y • N	Defines the automatic scan on LOS and is an Enum Type parameter with the following values
<SCANDELAYMINS>	Defines OTDR scan delay in minutes.
<AUTOBASELINE> • Y • N	Defines the baseline set after the auto scan. Enum type parameter that takes the following values
<DISABLECIRCUITS> • Y • N	Enum type parameter that takes the following values
<ENABLEPFCRITERIA> • Y • N	Defines Pass-Fail Criteria for the scan. Enum type parameter that takes the following values
<MAXTOTALFIBERBR>	Defines maximum total fiber break.
<MAXEVENTBR>	Defines maximum back reflection.
<MAXEVENTLOSS>	Defines maximum event loss.
<AUTOSCANSPANLOSSINCREASE> • Y • N	Enum type parameter that takes the following values
<SPANLOSSINCREASETH>	Defines span loss increase threshold.

RTRV-OTDRRXORLPARAMS

Description

Retrive OTDR Optical Remote Loss Parameters

Usage Guidelines

Category
System

Security
Retrieve

Input Format

RTRV-OTDRRXORLPARAMS:[<TID>]:<aid>:<CTAG>[::::];

Input Parameter

AID:

Output Format

Output Example

rtrv-otdrrxorlparams::ppm-1-1-1:1;

node136 2018-07-26 00:11:50

M 1 COMPLD

"PPM-1-1-1:ENABLERXORL=Y,REFRESHRATE=6"

;

Output Parameters

< ENABLERXORL >	Y/N. Enum

< REFRESHRATE >	Refresh Rate.

RTRV-OTDRSCANPOINTSHEADER

Description

This command is the Optimization for RTRV-OTDRSCANPOINTS

Usage Guidelines

ALL AID does not work.

Category

Equipment

Security

Retrieve

Input Format

RTRV-OTDRSCANPOINTSHEADER:[<TID>]:<AID>:<CTAG>::SECTOR=<sector>, DIRECTION= <direc-

tion>,SCANTYPE=<scantype>;

Input Parameter

< AID > Source AID. Two types of AID values possible are: PPM-Shelf-Slot-PPM_port

Specific PPM port on TNC - ALL Source AID.

Two types of AID values possible are: PPM-Shelf-Slot-PPM_port. List of all OTDR scan configurations for a node.

<SECTOR>

• EXPERT •

ZONE #1 (0 to 1km) • ZONE #2 (0 to 25km) • ZONE #3 (0 to 80km) • ZONE #4 (0 to 100km)

Output Format

SID DATE TIME
M CTAG COMPLD

Output Example

RTRV-OTDRSCANPOINTSHEADER ::ppm-1-8-1:1::: SECTOR=ZONE#1,DIRECTION=TX,
SCANTYPE=LASTSCAN;
"PPM-1-8-1:SECTOR=ZONE#1,DIRECTION=TX,TIMESTAMP=35672,SCANMODE=FASTSCAN,

SCANQUALITY=LEGACY,HIGHREFLECTIONDISTANCE=0.00,SCANFORMAT=SCANRESULT"

Output Parameters

<Sector>

• EXPERT • ZONE #1 (0 to 1km) • ZONE #2 (0 to 25km) • ZONE #3 (0 to 80km) • ZONE #4 (0 to 100km) Sector parameter of enum type that takes the following values.

<Direction>

TX •

RX •

TX-RX

RTRV-OTDRSCANPOINTSLIST

Description

This command is the Optimization for RTRV-OTDRSCANPOINTS

Usage Guidelines

ALL Aid does not work.

Category

Security
Retrieve

Input Format
RTRV-OTDRSCANPOINTSLIST:[<TID>]:<AID>:<CTAG>:::SECTOR=<sector>,DIRECTION=<direc-
tion>,SCANTYPE=<scantype>,TIMESTAMP=<timestamp>;

Input Parameter

< AID > Source AID. Two types of AID values possible are: PPM-Shelf-Slot-PPM_port

Specific PPM port on TNC - ALL Source AID.

PPM_port. List of all Two types of AID values possible are: PPM-Shelf-Slot-OTDR scan configurations for a node.

<SECTOR>

< DIRN (DIRECTION)> Direction TX/RX/TX-RX. ENUM

< SCANTYPE> Scan type(Hybrid/Fast). ENUM

TIMESTAMP – (CHAR) Timestamp returned by CORBA as unsigned long value.

Output Format

Output Example

RTRV-OTDRSCANPOINTSHEADER:: ppm-1-8-1:1::: SECTOR=ZONE#1,DIRECTION=TX, SCANTYPE=LASTSCAN,

TIMESTAMP=345762;

S

Output Parameters

RTRV-OTDRSCANSTATUSDIR

Description

Retrive scan status (running or not running) on given sector and direction of scan

Usage Guidelines

Category

Equipment

Security

Retrieve

Input Format

RTRV-OTDRSCANSTATUSDIR:[<TID>]:<aid>:<CTAG>::SECTOR=<sector>;

Input Parameter

AID –

Sector –

ZONE#1 ZONE#2 ZONE#3 ZONE#4 EXPERTMODE

AUTOSCANMODE EVENTMODE

Output Format

Output Example

> rtrv-otdrscanstatusdir::ppm-1-1-1:1::SECTOR=AUTOSCANMODE;

node136 2018-07-26 01:22:50

M 1 COMPLD

"PPM-1-1-1:SECTOR=AUTOSCANMODE,SCANSTATUS=RUNNING,DIRECTION=TX,SCANMODE=FASTSCAN"

;

>

Output Parameters

Sector –

ZONE#1 ZONE#2 ZONE#3 ZONE#4 EXPERTMODE

AUTOSCANMODE EVENTMODE

Direction:

TX,

RX

RTRV-CKTINFO

MISSING

Usage Guidelines

This command retrieves circuit information for all the circuits on the node having circuit inormation.

Category

MISSING

Security

MISSING

Input Format

RTRV-CKTINFO:[<TID>]::<CTAG> ;

Input Example

> rtrv-cktinfo:::1;

"test" 2015-10-15 03:57:36
M 1 COMPLD

"NODEID=9B3104A0,SERVICEID=2,SOURCETP=9b3104a0/0x1004002,DROPTP=9b2e0400/0x1004002/PATH-UNPROTECTED,CKTTYPE=OCH-TRAIL-CIRCUIT,ISGMPLS=N"
"NODEID=9B3104A0,SERVICEID=1,SOURCETP=9b3104a0/0x0,DROPTP=9b2e0400/0x0/PATH-UNPROTECTED,CKTTYPE=OCH-TRAIL-TUNNEL,ISGMPLS=N”

Input Parameters

Output Format

Output Example

Output Parameters

RTRV-CKTINFONC

MISSING

Usage Guidelines

This command retrieves circuit information of OCHNC circuits for all the OCHNC on the node that have circuit information.

Category

MISSING

Security

MISSING

Input Format

RTRV-CKTINFONC:[<TID>]:<aid>:<CTAG>[::::] ;

Input Example

rtrv-cktinfonc::all:1;

"test" 2015-10-15 03:59:39
M 1 COMPLD
"CHAN-2-5-1-RX&LINEWL-2-7-3-RX-1530.33,LINEWL-2-7-3-RX-1530.33&CHAN-2-6-1-TX::CKTID=\"2W_1\",NODEID=9B3104A0,SERVICEID=1,SOURCETP=9b3104a0/0x0,DROPTP=9b2e0400/0x0/PATH-UNPROTECTED,CKTTYPE=OCH-TRAIL-TUNNEL,ISGMPLS=N"

Input Parameters

<AID>	AID of OCHNC

Output Format

Output Example

Output Parameters

RTRV-CKTINFOCC

MISSING

Usage Guidelines

This command retrieves circuit information of OCHNC circuits for all the OCHNC on the node that have circuit information.

Category
MISSING

Security
MISSING

Input Format

RTRV-CKTINFOCC:[<TID>]:<aid>:<CTAG>[::::];

Input Example

```
> RTRV-CKTINFOCC::all:1;
m6 2015-10-28 00:39:41
M  1 COMPLD
"AGGR-2-4-1-1::CKTID=\"1W_CC\",NODEID=9B3104A0,SER-
VICEID=2,SOURCETP=9b3104a0/0x1004002,DROPTP=9b2e0400/0x1004002/PATH-UNPROTECTED,CKTTYPE=OCH-
TRAIL-CIRCUIT,ISGMPLS=N"
```

Input Parameters

<AID>	AID of OCHNC

Output Format

Output Example

Output Parameters

RTRV-EQPT-POS

The command lets you know about the Rack label and position of a shelf.

Usage Guidelines

The command accepts either a shelf AID or ALL as AID in a multi-shelf setup. The command does not accept any AID in a stand-alone setup.

Category

Equipment

Security

Provisioning

Input Format

RTRV-EQPT-POS:[<TID>]:[<ShelfAid>]:<CTAG> ;

Input Example

In Mutlishelf:

rtrv-eqpt-pos::all:1;

TNC 2017-06-25 00:47:53

M 1 COMPLD

"SHELF-1:SHELF-M6:RACKNUMBER=1,POSITIONINRACK=107,"

"PUNIT-2:15216-MD-40-EVEN:RACKNUMBER=1,POSITIONINRACK=117,SLOTNUMBER=1,"

"PSHELF-1:PSHELF-MF10-6RU:RACKNUMBER=1,POSITIONINRACK=101,SLOTNUMBER=1,"

"PSUNIT-1-3:MF-MPO-16LC:RACKNUMBER=0,POSITIONINRACK=0,SLOTNUMBER=0,"

In Single shelf:

rtrv-eqpt-pos:::1;

TNC 2017-06-25 00:40:44

M 1 COMPLD

"::RACKNUMBER=1,POSITIONINRACK=102,"

Input Parameters

<AID>	Shelf AID

Output Format

Output Example

Output Parameters	
<RACKNUMBER>	Defines the rack number of the rack where the shelf is located.
<POSITIONINRACK>	Defines the position in the rack.
<SLOTNUMBER>	Defines the slot number of the slot in the rack where the shelf is located.
<RACKLABEL>	Defines the name/label of the rack.

RTRV-ACTIVELOGINS

This command shows the active TL1 logins

Usage Guidelines

Retrieve the active Tl1 login with USERID, SECURITYLEVEL, SESSIONTYPE, LOGINTIME, ACTIVITYTIME, SESSIONID parameters

Category

System

Security

Superuser

Input Format

RTRV-ACTIVELOGINS:[<TID>]::<CTAG>[:::]

Input Parameter

NA

Output Format

SID DATE TIME

M CTAG COMPLD

"USERID=<userid>,SECURITYLEVEL=<securitylevel>,SOURCE=<source>,SESSION-TYPE=TL1,LOGINTIME=<logintime>,ACTIVITYTIME=<activetime>,SESSIONID=<sessionid>"

;

Output Example

```
> RTRV-ACTIVELOGINS:::1;

   tcc2 2002-08-21 18:17:21

M   1 COMPLD

   "USERID=CISCO15,SECURITYLEVEL=SUPER,SOURCE=\"64.103.217.192\",SESSION-
TYPE=TL1,LOGINTIME=\"2002-08-21 18:01:30\",ACTIVITYTIME=\"2002-08-21 18:01:30\",SESSIONID=163880877"

   "USERID=CISCO15,SECURITYLEVEL=SUPER,SOURCE=\"10.76.199.43\",SESSIONTYPE=EMS,LOGINTIME=\"2002-
08-21 11:54:21\",ACTIVITYTIME=\"2002-08-21 11:54:21\",SESSIONID=152865938"
```

Output Parameters

<USERID>	Displays the name of the user who is currently logged in.
<SECURITYLEVEL>	Level of security provided to the user. Possible values are: • RETRIEVE • MAINTENANCE • PROVISIONING • SUPER
<SOURCE>	IP Address of the computer where the user is logged in.
< SESSIONTYPE>	An enum to identify the type of session and can have the following values: • EMS • FTP • HTTP • PCLI • RLOGIN • SFTP • SOCKS • SSH • SYSLOG • TELNET • TELNET-RELAY • TL1
<LOGINTIME>	Displays the login time of user (in MM/DD/YY HH:MM format).
<ACTIVITYTIME>	Displays the time in ((MM/DD/YY HH:MM) format at which the last command was sent

< SESSIONID>	Unique id provided for the session

RTRV-ALMPROFILE

This command will retrieve all available alarm profiles including inherited and default.

Usage Guidelines

NA

Category

System

Security

Retrieve

Input Format

RTRV-ALMPROFILE:[<TID>]::<CTAG>

Input Parameter

NA

Output Format

SID DATE TIME

M CTAG COMPLD

"USERID=<userid>,SECURITYLEVEL=<securitylevel>,SOURCE=<source>,SESSION-TYPE=TL1,LOGINTIME=<logintime>,ACTIVITYTIME=<activetime>,SESSIONID=<sessionid> SID DATE TIME

M CTAG COMPLD

“PROFILENAME=<profilename>”"

Output Example

> RTRV-ALMPROFILE:::1;

node113 2016-06-10 12:39:28

M 1 COMPLD

"PROFILENAME=\"Inherited\""

"PROFILENAME=\"Default\""

"PROFILENAME=\"bcd\""

"PROFILENAME=\"wwwwwwwwwwwwwwwwjjjjjjjjjjjjjjjjjjjjjjjjjjjjjjjjgggggggggggggggggg\""

Output Parameters

<PROFILENAME>	Name of the alarm profile.

RTRV-ALMPROFILEDETAIL

Retrieve alarm type, condition and severity for user-defined alarmprofile as per the profile name.

Usage Guidelines

NA

Category

System

Security

Retrieve

Input Format

RTRV-ALMPROFILEDETAIL:[<TID>]::<CTAG>:::PROFILENAME=<profilename>

Input Parameter

<PROFILENAME>	Name of profile for which alarm type, condition and severity is to be displayed

Output Format

SID DATE TIME

M CTAG COMPLD

“ALARMTYPE=<alarmtype>,CONDITION=<condition>,SEVERITY=<severity>”

Output Example

> RTRV-ALMPROFILEDETAIL:::1:::PROFILENAME=AAA;
Tcc3 2002-05-11 15:47:24

M 1 COMPLD
"ALARMTYPE=\"NE\",CONDITION=\"HITEMP\",SEVERITY=\"NA\""
"ALARMTYPE=\"NE\",CONDITION=\"SYSBOOT\",SEVERITY=\"INH\""
"ALARMTYPE=\"NE\",CONDITION=\"DATAFLT\",SEVERITY=\"CR\""
"ALARMTYPE=\"NE\",CONDITION=\"SNTP-HOST\",SEVERITY=\"INH\""
"ALARMTYPE=\"NE\",CONDITION=\"AUD-LOG-LOW\",SEVERITY=\"MJ\""
"ALARMTYPE=\"NE\",CONDITION=\"AUD-LOG-LOSS\",SEVERITY=\"INH\""
"ALARMTYPE=\"NE\",CONDITION=\"DBOSYNC\",SEVERITY=\"CR\""
"ALARMTYPE=\"NE\",CONDITION=\"LAN-POL-REV\",SEVERITY=\"INH\""
"ALARMTYPE=\"NE\",CONDITION=\"INTRUSION-PSWD\",SEVERITY=\"INH\""
"ALARMTYPE=\"NE\",CONDITION=\"I-HITEMP\",SEVERITY=\"INH\""
"ALARMTYPE=\"NE\",CONDITION=\"DUP-IPADDR\",SEVERITY=\"MI\""
"ALARMTYPE=\"NE\",CONDITION=\"DUP-NODENAME\",SEVERITY=\"MJ\""
"ALARMTYPE=\"NE\",CONDITION=\"ETH-LINKLOSS\",SEVERITY=\"MI\""
"ALARMTYPE=\"NE\",CONDITION=\"APC-END\",SEVERITY=\"INH\""
"ALARMTYPE=\"NE\",CONDITION=\"TEMP-MISM\",SEVERITY=\"INH\""
"ALARMTYPE=\"NE\",CONDITION=\"ROUTE-OVERFLOW\",SEVERITY=\"MJ\""
"ALARMTYPE=\"NE\",CONDITION=\"SFTWDOWN-FAIL\",SEVERITY=\"INH\""
"ALARMTYPE=\"NE\",CONDITION=\"PATCH-DOWNLOAD-FAILED\",SEVERITY=\"INH\""
"ALARMTYPE=\"NE\",CONDITION=\"APC-END\",SEVERITY=\"INH\""
"ALARMTYPE=\"NE\",CONDITION=\"CP-UNVER-CLEARED\",SEVERITY=\"INH\""
"ALARMTYPE=\"NE\",CONDITION=\"IPC-VERIFICATION-FAIL\",SEVERITY=\"INH\""
"ALARMTYPE=\"NE\",CONDITION=\"IPC-VERIFICATION-DEGRADE\",SEVERITY=\"INH\""
"ALARMTYPE=\"NE\",CONDITION=\"IPC-VERIFICATION-RUNNING\",SEVERITY=\"INH\""
"ALARMTYPE=\"NE\",CONDITION=\"AS-CMD\",SEVERITY=\"INH\""
"ALARMTYPE=\"BPLANE\",CONDITION=\"MFGMEM\",SEVERITY=\"INH\""
"ALARMTYPE=\"BPLANE\",CONDITION=\"AS-CMD\",SEVERITY=\"INH\""
"ALARMTYPE=\"OSC-RING\",CONDITION=\"RING-ID-MIS\",SEVERITY=\"INH\""
"ALARMTYPE=\"EQPT\",CONDITION=\"CTNEQPT-PBWORK\",SEVERITY=\"INH\""
"ALARMTYPE=\"EQPT\",CONDITION=\"CTNEQPT-PBPROT\",SEVERITY=\"INH\""

"ALARMTYPE=\"EQPT\",CONDITION=\"EQPT\",SEVERITY=\"INH\""
"ALARMTYPE=\"EQPT\",CONDITION=\"FAILTOSW\",SEVERITY=\"INH\""
"ALARMTYPE=\"EQPT\",CONDITION=\"PEER-NORESPONSE\",SEVERITY=\"INH\""
"ALARMTYPE=\"EQPT\",CONDITION=\"EQPT-FAIL\",SEVERITY=\"INH\""
"ALARMTYPE=\"EQPT\",CONDITION=\"PWR-FAIL-A\",SEVERITY=\"INH\""
"ALARMTYPE=\"EQPT\",CONDITION=\"PWR-FAIL-B\",SEVERITY=\"INH\""
"ALARMTYPE=\"EQPT\",CONDITION=\"PWR-FAIL-RET-A\",SEVERITY=\"INH\""
"ALARMTYPE=\"EQPT\",CONDITION=\"PWR-FAIL-RET-B\",SEVERITY=\"INH\""
"ALARMTYPE=\"EQPT\",CONDITION=\"LO-TXPOWER\",SEVERITY=\"INH\""
"ALARMTYPE=\"EQPT\",CONDITION=\"HI-TXPOWER\",SEVERITY=\"INH\""
"ALARMTYPE=\"EQPT\",CONDITION=\"LO-LASERBIAS\",SEVERITY=\"INH\""
"ALARMTYPE=\"EQPT\",CONDITION=\"HI-LASERBIAS\",SEVERITY=\"INH\""
"ALARMTYPE=\"EQPT\",CONDITION=\"WTR\",SEVERITY=\"INH\""
"ALARMTYPE=\"EQPT\",CONDITION=\"HITEMP\",SEVERITY=\"INH\""
"ALARMTYPE=\"EQPT\",CONDITION=\"COMM-FAIL\",SEVERITY=\"INH\""
"ALARMTYPE=\"EQPT\",CONDITION=\"MAN-REQ\",SEVERITY=\"INH\""
"ALARMTYPE=\"EQPT\",CONDITION=\"LOCKOUT-REQ\",SEVERITY=\"INH\""

```
    "ALARMTYPE=\"EQPT\",CONDITION=\"EQPT-DIAG\",SEVERITY=\"INH\""
    "ALARMTYPE=\"EQPT\",CONDITION=\"ALS-DISABLED\",SEVERITY=\"INH\""
    "ALARMTYPE=\"EQPT\",CONDITION=\"FAPS-CONFIG-MISMATCH\",SEVERITY=\"INH\""
    "ALARMTYPE=\"EQPT\",CONDITION=\"CPP-INCAPABLE\",SEVERITY=\"INH\""
    "ALARMTYPE=\"EQPT\",CONDITION=\"PROV-MISMATCH\",SEVERITY=\"INH\""
    "ALARMTYPE=\"EQPT\",CONDITION=\"MCAST-MAC-TABLE-FULL\",SEVERITY=\"INH\""
    "ALARMTYPE=\"EQPT\",CONDITION=\"VOA-DISABLED\",SEVERITY=\"INH\""
    "ALARMTYPE=\"EQPT\",CONDITION=\"EQPT-DEGRADE\",SEVERITY=\"INH\""
    "ALARMTYPE=\"EQPT\",CONDITION=\"SOFT-VERIF-FAIL\",SEVERITY=\"INH\""
    "ALARMTYPE=\"EQPT\",CONDITION=\"LIC-MISSING\",SEVERITY=\"INH\""
    "ALARMTYPE=\"EQPT\",CONDITION=\"BP-LPBKFACILITY\",SEVERITY=\"INH\""
    "ALARMTYPE=\"EQPT\",CONDITION=\"BP-LPBKTERMINAL\",SEVERITY=\"INH\""
    "ALARMTYPE=\"EQPT\",CONDITION=\"UNIT-HIGH-TEMP\",SEVERITY=\"INH\""
>
```

Output Parameters

<ALARMTYPE>	It is a string value which displays the type of alarm.
<CONDITION>	It is a string value which shows the alarm condition
<SEVERITY>	Displays the severity of the alarm

RTRV-COOLINGPROFILE

This command retrieves cooling profile which can be set to high, medium or low.

Usage Guidelines

NA

Category

System

Security

Retrieve

Input Format

RTRV-COOLINGPROFILE:[<TID>]:[<aid>]:<CTAG>

Input Parameter

<AID>	For single shelf-configuration, AID is not required. For multiple shelf, AID can be SHELF-<shelf number>.

Output Format

SID DATE TIME

M CTAG COMPLD

"<COOLINGPROFILE =< COOLINGPROFILE >"

Output Example

```
> RTRV-COOLINGPROFILE::shelf-1:1;
   node113 2016-07-16 09:11:17
M   1 COMPLD
   "SHELF-1:COOLINGPROFILE=HIGH"
;
>
> RTRV-COOLINGPROFILE:::1;
   node113 2016-07-17 14:12:56
M   1 COMPLD
   ":COOLINGPROFILE=LOW"
```

Output Parameters

<COOLINGPROFILE>	It is an enum with the following possible values: • LOW • MEDIUM • HIGH

RTRV-LOGODATA

This command is used to retrieve logo data.

Usage Guidelines

Able to access the multiple logo information by giving multiple AIDs separated by "&" . The AID can be all.

Category

Equipment

Security
Retrieve

Input Format
RTRV-LOGODATA:[<TID>]:<aid>:<CTAG>::[:]

Input Parameter

<AID>	AID can be line device, passive line device or all.

Output Format
SID DATE TIME
M CTAG COMPLD
"<AID>:DATAVALID=<datavalid>,LASTUPDATE=<lastupdate>, NOISEEQAVEDB=<noiseeqavedb>, NOISEEQSIG-MADB=<noiseeqsigmadb>,CD=<cd>,CDSLOPE=<cdslope>, DROPPOWER=<droppower>, PMD=<pmd>,PDL=<pdl>"

Output Example
> RTRV-LOGODATA::all:a;

454-234 2016-09-15 05:42:47
M a COMPLD
"LINE-1-2-1-TX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"
"LINE-1-2-2-RX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"
"LINE-1-2-2-TX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"
"LINE-1-2-3-RX:DATAVALID=NO,LASTUPDATE=\"2016/9/15 5:22:45 PDT\",NOISEEQAVEDB=-99.000,NOISEEQSIG-MADB=-99.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"
"LINE-1-2-4-RX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"
"LINE-1-2-4-TX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-5.250,PMD=0.000,PDL=0.000,"
"LINE-1-2-5-RX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"
"LINE-1-2-5-TX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-5.250,PMD=0.000,PDL=0.000,"
"LINE-1-2-6-RX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"
"PSLINE-1-14-23-TX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-9.350,PMD=0.050,PDL=0.100,SFFILTERS=10,FGDRFIL-TERS=6"

"PSLINE-1-14-23-RX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.050,PDL=0.100,SFFILTERS=10,FGDRFIL-TERS=6"

"PSLINE-1-14-24-TX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-9.450,PMD=0.050,PDL=0.100,SFFILTERS=10,FGDRFIL-TERS=6"

"PSLINE-1-14-24-RX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.050,PDL=0.100,SFFILTERS=10,FGDRFIL-TERS=6"

"PSLINE-1-14-25-TX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-1-14-25-RX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-1-14-26-TX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-1-14-26-RX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-1-14-27-TX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-9.350,PMD=0.050,PDL=0.100,SFFILTERS=10,FGDRFIL-TERS=6"

"PSLINE-1-14-27-RX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.050,PDL=0.100,SFFILTERS=10,FGDRFIL-TERS=6"

"PSLINE-1-14-28-TX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-9.450,PMD=0.050,PDL=0.100,SFFILTERS=10,FGDRFIL-TERS=6"

"PSLINE-1-14-28-RX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.050,PDL=0.100,SFFILTERS=10,FGDRFIL-TERS=6"

"PSLINE-1-14-29-TX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-1-14-29-RX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-1-14-30-TX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-1-14-30-RX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-1-14-31-TX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-9.350,PMD=0.050,PDL=0.100,SFFILTERS=10,FGDRFIL-TERS=6"

"PSLINE-1-14-31-RX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.050,PDL=0.100,SFFILTERS=10,FGDRFIL-TERS=6"

"PSLINE-1-14-32-TX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-9.450,PMD=0.050,PDL=0.100,SFFILTERS=10,FGDRFIL-TERS=6"

"PSLINE-1-14-32-RX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.050,PDL=0.100,SFFILTERS=10,FGDRFIL-TERS=6"

"PSLINE-2-1-1-TX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-2-1-1-RX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-2-1-2-TX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-2-1-2-RX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-2-1-3-TX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-2-1-3-RX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-2-1-4-TX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-2-1-4-RX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-2-1-5-TX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-2-1-5-RX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-2-1-6-TX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-2-1-6-RX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-2-1-7-TX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-2-1-7-RX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-2-1-8-TX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-2-1-8-RX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"

"PSLINE-2-1-9-TX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-48.182,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-11.000,PMD=0.512,PDL=0.520,SFFIL-TERS=12&10&10,FGDRFILTERS=10&6"

"PSLINE-2-1-9-RX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-32.782,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.512,PDL=0.520,SFFIL-TERS=12&10&10,FGDRFILTERS=10&6"

"PSLINE-2-1-10-TX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-48.182,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-11.000,PMD=0.512,PDL=0.520,SFFIL-TERS=12&10&10,FGDRFILTERS=10&6"

"PSLINE-2-1-10-RX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-32.782,NOISEEQSIG-MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.512,PDL=0.520,SFFIL-TERS=12&10&10,FGDRFILTERS=10&6"

```
   "PSLINE-2-1-11-TX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-48.182,NOISEEQSIG-
MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-11.000,PMD=0.512,PDL=0.520,SFFIL-
TERS=12&10&10,FGDRFILTERS=10&6"
   "PSLINE-2-1-11-RX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-32.782,NOISEEQSIG-
MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.512,PDL=0.520,SFFIL-
TERS=12&10&10,FGDRFILTERS=10&6"
   "PSLINE-2-1-12-TX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-48.182,NOISEEQSIG-
MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-11.000,PMD=0.512,PDL=0.520,SFFIL-
TERS=12&10&10,FGDRFILTERS=10&6"
   "PSLINE-2-1-12-RX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-32.782,NOISEEQSIG-
MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.512,PDL=0.520,SFFIL-
TERS=12&10&10,FGDRFILTERS=10&6"
   "PSLINE-2-1-13-TX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-48.182,NOISEEQSIG-
MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-11.000,PMD=0.512,PDL=0.520,SFFIL-
TERS=12&10&10,FGDRFILTERS=10&6"
   "PSLINE-2-1-13-RX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-32.782,NOISEEQSIG-
MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.512,PDL=0.520,SFFIL-
TERS=12&10&10,FGDRFILTERS=10&6"
   "PSLINE-2-1-14-TX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-48.182,NOISEEQSIG-
MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-11.000,PMD=0.512,PDL=0.520,SFFIL-
TERS=12&10&10,FGDRFILTERS=10&6"
>


> RTRV-LOGODATA::PSLINE-2-1-9-TX:1;

   454-234 2016-09-15 06:22:00
M   1 COMPLD
   "PSLINE-2-1-9-TX:DATAVALID=YES,LASTUPDATE=NA,NOISEEQAVEDB=-48.182,NOISEEQSIG-
MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-11.000,PMD=0.512,PDL=0.520,SFFIL-
TERS=12&10&10,FGDRFILTERS=10&6"
;
>

> RTRV-LOGODATA::LINE-1-2-2-TX:1;

   454-234 2016-09-15 06:24:13
M   1 COMPLD
   "LINE-1-2-2-TX:DATAVALID=NO,LASTUPDATE=NA,NOISEEQAVEDB=-70.000,NOISEEQSIG-
MADB=0.000,CD=0.000,CDSLOPE=0.000,DROPPOWER=-70.000,PMD=0.000,PDL=0.000,"
;
```

>Output Parameters

<VERSION>	This shows the version of logo data

<DATAVALID>	This is an enum which is true if data has meaning with the following possible values: • YES • NO
<LASTUPDATE>	Represents the timestamp of latest update
< NOISEEQAVEDB>	The noise average value
< NOISEEQSIGMADB>	This noise sigma value
<CD>	Represents Chromatic Dispersion[ps/nm].
<CDSLOPE>	Slope of chromatic Dispersion[ps/nm^2]
<DROPPOWER>	Expected drop power level[dBm]
<PMD>	Polarization Mode Dispersion[ps]
<PDL>	Polarization Dependent Loss/Gain in [dB]
< SFFILTERS>	Self-Filtering traversed filter types
< FGDRFILTERS>	Displays FGDR traversed filter types

RTRV- OTDRFAILEDSCAN

This will retrieve the entire fail scan list failed during otdr scan.

Usage Guidelines

Following could be the reason for the scan fail:

- Scan is failed fail during schedule scan or one-time scan
- Scan completed but far end is not reachable
- Scan is failed and far end is not reachable
- Scan is stuck: operation timeout
- Scan is failed: FPGA error
- Scan is failed: module failure
- Scan is failed: module trace file failure
- Scan is failed: module event file failure
- Cancel from remote side
- Reflection is too high

- Otdr failure: ppp is down
- Scan procedure failed for timeout
- Scan data transfer failed for timeout
- Scan data transfer failed
- Otdr module auto reset

Category
System

Security
Retrieve

Input Format
RTRV-OTDRFAILEDSCAN:[<TID>]:<AID>:<CTAG>[:::]

Input Parameter

<AID>	Two types of AID are possible: • Specific PPM port on the TNC-Format: PPM-Shelf-Slot-PPM port. • All is allowed.This will give list of all failed scan list.

Output Format
SID DATE TIME
M CTAG COMPLD
"<AID>, [SECTOR=<SECTOR>],[DIRECTION=< DIRECTION >],
[SCANMODE=<SCANMODE>],[SPECPROBLEM=< SPECPROBLEM >]

Output Example
> RTRV-OTDRFAILEDSCAN::ppm-1-8-1:a;

node113 2016-06-09 11:35:58
M a COMPLD
"PPM-1-8-1:SECTOR=ZONE#1,DIRECTION=TX,SCANMODE=FASTSCAN,SPECPROBLEM=\"Scan is failed and far end is not reachable\""

Output Parameters

<AID>	Specific PPM port on the TNC – Format – PPM-Shelf-Slot-PPM port

< SECTOR>	An enum which takes the values: • EXPERT • ZONE#1 (0 to 1km) • ZONE#2 (0 to 25km) • ZONE#3 (0 to 80km) • ZONE#4 (0 to 100km) • AUTOSCANMODE
<DIRECTION>	An enum which takes the values: • TX • RX • TX-RX
<SCANMODE>	An enum which takes the values: • FASTSCAN • HYBRIDSCAN
<SPECPROBLEM>	Specific problem for the scanfail

RTRV- OTDRALMEVENTS

Once OTDR scan starts, if faults are present in Fiber line, then events are generated. If the events cross the threshold, then event alarm will get generated. Those alarms can be retrieved using RTRV-OTDRALMEVENTS.

Usage Guidelines

The output of this command is subsets of OTDRSCANEVENTS, which can be found using the command RTRV-OTDRSCA-NEVENT. The Alarm event can be identified from RTRV-OTDRSCANEVENT by the parameter ALARMSTATUS. If it is ON, then that event is an Alarm event.

Category

Equipment

Security

Retrieve

Input Format

RTRV-OTDRALMEVENTS:[<TID>]:<AID>:<CTAG>;

Input Parameter

<AID>	Two types of AID are possible: • Specific PPM port on the TNC-Format: PPM-Shelf-Slot-PPM port. • All is also allowed.This will give list of all the Alarm events present in all ppm ports.

Output Format

SID DATE TIME
M CTAG COMPLD
“<AID>,<SECTOR>,<DIRECTION>,<EVENTID>,<TIMESTAMP>,< LOCATION >,<DETECTEDPWR>, <QUALIFIER>”
;

Output Example

> RTRV-OTDRALMEVENTS::all:a;

node126 2016-02-18 15:49:40

M a COMPLD

"PPM-1-8-1:SECTOR=ZONE#1,DIRECTION=TX,EVENTID=0,TIMESTAMP=\"2016/2/18 15:48:39 PST\",LOCATION=0.4000,DETECTEDPWR=8.00,QUALIFIER=GAINLOSS"

"PPM-1-8-1:SECTOR=ZONE#1,DIRECTION=TX,EVENTID=1,TIMESTAMP=\"2016/2/18 15:48:39 PST\",LOCATION=0.8000,DETECTEDPWR=8.00,QUALIFIER=GAINLOSS"

Output Parameters

< SECTOR>	An enum which takes the values: • EXPERT • ZONE#1 (0 to 1km) • ZONE#2 (0 to 25km) • ZONE#3 (0 to 80km) • ZONE#4 (0 to 100km) • AUTOSCANMODE
<DIRECTION>	An enum which takes the values: • TX • RX • TX-RX

<EVENTID>	Event id generated during event generate
<TIMESTAMP>	Timestamp of the scan
< LOCATION>	Distance where the loss is detected
< DETECTEDPWR>	Loss. It can be reflection or gain loss, depending upon the parameter QUALIFIER
< QUALIFIER>	An enum which takes the values: • REFLECTION • GAINLOSS

RTRV-ORLRXPARAM

This command retrieves RX ORL parameters.

Usage Guidelines

The command acts at node level, hence no AID is needed.

Category

System

Security

Retrieve

Input Format

RTRV-ORLRXPARAM:[<TID>]::<CTAG>;

Input Example

rtrv-orlrxparam:::1;

fwtnc143 2017-08-09 07:03:30

M 1 COMPLD

"ENABLERXORL=N,REFRESHRATE=7";

Input Parameter
None

Output Format

Output Example

Output Parameters

< ENABLERXORL >	Y/N. Enum
< REFRESHRATE >	Refresh Rate.

RTRV- SLRG-NODE

RTRV-SRLG-NODE retrieves the UNIQUESRLG and ADDITIONALSRLG constraints in NE level.

Usage Guidelines

- ADDITIONALSRLG parameter contain set of SRLG constraints in the form of string separated by “&”.
- The max number of SRLG constraints within ADDITIONALSRLG is 20.
- All the SRLG constraints within ADDITIONALSRLG and UNIQUESRLG are unique.
- The range of SRLG constraints is 0 to 4294967294.

Category
System

Security
Retrieve

Input Format
RTRV-SRLG-NODE:[<TID>]::<CTAG>;

Input Parameter

None

Output Format

SID DATE TIME
M CTAG COMPLD
“<UNIQUESRLG>,[<ADDITIONALSRLG>]

Output Example

```
> RTRV-SRLG-NODE:::1;

   node113 2016-04-13 03:56:56
M   1 COMPLD
   "UNIQUESRLG=0,ADDITIONALSRLG=\"12&34&22&4294967294\""
;
>
```

Output Parameters

< UNIQUESRLG>	Unique SRLG constraints, range in between 0 to 4294967294. This can be unique with ADDITIONALSRLG.
< ADDITIONALSRLG>	It contains set of SRLG constraints in the form of string separated by “&”. Set of constraints are unique. This should not contain the value used in UNIQUESRLG. Each of the value in the set has the range in between 1 to 4294967294.

RTRV- SLRG-WDMSIDE

RTRV-SRLG-NODE retrieves the UNIQUESRLG and ADDITIONALSRLG constraints in NE level.

Usage Guidelines

- ADDITIONALSRLG parameter contain set of SRLG constraints in the form of string separated by “&”.
- The max number of SRLG constraints within ADDITIONALSRLG is 20.
- All the SRLG constraints within ADDITIONALSRLG and UNIQUESRLG are unique.
- The range of SRLG constraints is 0 to 4294967294.

Category
DWDM

Security
Maintenance

Input Format
RTRV-SRLG-WDMSIDE:[<TID>]:<AID>:<CTAG>[::::];

Input Parameter

<AID>	The AID is used to access the WDM side of a DWDM node. This is applicable to WDMANS and APC applications of the NE. • WDMSIDE - {A,B,C,D,E,F,G,H} DWDM side identifier

Output Format
SID DATE TIME
M CTAG COMPLD
"<AID>::<UNIQUESRLG>,[<ADDITIONALSRLG>]
;

Output Example
> RTRV-SRLG-WDMSIDE::WDMSIDE-A:1;

node113 2016-04-17 07:49:35
M 1 COMPLD
"WDMSIDE-A:UNIQUESRLG=0,ADDITIONALSRLG=\"12&34&22&4294967294\""
;
>

Output Parameters

<AID>	The AID is used to access the WDM side of a DWDM node. This is applicable to WDMANS and APC applications of the NE. • WDMSIDE - {A,B,C,D,E,F,G,H} DWDM side identifier
< UNIQUESRLG>	Unique SRLG constraints, range in between 0 to 4294967294. This can be unique with ADDITIONALSRLG.

< ADDITIONALSRLG>	It contains set of SRLG constraints in the form of string separated by “&”. Set of constraints are unique. This should not contain the value used in UNIQUESRLG. Each of the value in the set has the range in between 1 to 4294967294.

Chapter 24: SCHED Commands

This chapter provides schedule (SCHED) commands for the Cisco NCS 2000 Series.

SCHED-PMREPT-<MOD2>

The Schedule Performance Monitoring Report for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 4GFC, 4GFICON, 5GIB, 8GFC, VC412C, T1, T3, VC432C, VC46C, OTU2, PASSTHRU, ILK, CHGRP, CLNT, D1VIDEO, DS3I, DV6000, DVBASI, E1, E3, E4, ESCON, ETRCLO, ETH, FSTE, G1000, GFPOS, GIGE, HDLC, HDTV, ISC1, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, STM4, STM64, STM1, STM16, OCH, OMS, OTS, OTU3, OTU4, OTU4C2, POS, STM1E, VC3, VC44C, VC464C, VC48C, VC4, VC416C, VC412C, VC42C, VC43C, VC12, VC3, VC11, or VC12 (SCHED-PMREPT-\<MOD2\>) command schedules or reschedules the network element (NE) to report the performance monitoring data for a line facility or for a VC/VT path periodically, using the automatic REPT PM message. This command can also remove the previously created schedule.

Usage Guidelines

- 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.
- 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.
- A schedule cannot be created if the card associated with the schedule is not provisioned, or if the cross-connect 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-connect has not been created.
- 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.
- 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.
- Identical schedules for an NE are 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.

  The “Duplicate Schedule” error message is returned if you try to create a schedule that is a duplicate of a existing schedule. However, if the existing schedule expires (with the NUMINVL parameter equal to zero when retrieved by the RTRV-PMSCHED command, that is, no more performance monitoring reporting sent) the new schedule with the identical parameter will replace the existing schedule.
- When a electrical or optical card is unprovisioned by the DLT-EQPT command, or a cross-connect is deleted by the DLT-CRS command, the schedules associated with that card or that cross-connect will be removed silently by the NE. This removal prevents another type of card or cross-connect 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 Cisco Transport Controller (CTC). The schedules associated with that card or cross-connect will also be removed silently by the NE.
- VC11 level schedules cannot be created on optical ports because the VT level PMs are monitored only on the path terminating ports.

- A PM schedule cannot be created on the Electrical Protect card.

Category
Performance

Security
Retrieve

Input Format
SCHED-PMREPT-<MOD2>:[<TID>]:<SRC>:<CTAG>::[<REPTINVL>],[<REPTSTATM>],
[<NUMREPT>],,[<MONLEV>],[<LOCN>],,[<TMPER>],[<TMOFST>];

Input Example
SCHED-PMREPT-STM1:NE-NAME:FAC-3-1:123::60-MIN,
15-30,100,,1-UP,NEND,,15-MIN,0-0-15;

Table 24-1 Parameter Support

Parameter	Description
<SRC>	Access identifier. Must not be null.
<REPTINVL>	(Optional) Reporting interval. How often a report is to generated and sent to the appropriate operating system. Specifies how often a performance monitoring report is generated. The format is VAL-UN, where valid values for VAL (value) are 1 to 31 if UN (units of time) is DAY, VAL is 1 to 24 if UN is HR, or VAL is 1 to 1440 if UN is MIN. Examples are: 10-DAY, 12-HR, and 100-MIN. A null value for the input defaults to 15-MIN. REPTINVL is a string **Note** Processing of PM schedules is performed every 5 minutes, therefore specifying a REPTINVL of 5-MIN or less would be processed at the earliest every 5 minutes.
<REPTSTATM>	(Optional) The starting time for the performance monitoring report. The format is HOD-MOH, where HOD (hour of day) ranges from 0 to 23, and MOH (minute of hour) ranges from 0 to 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, the reporting will be scheduled to start at 5:30 the next day. A null value defaults to the current time of day. REPTSTATM is a string.

<NUMREPT>	(Optional) The number of reports that the schedule is expected to produce. A value of 0 is used to delete a existing identical schedule. If NUMREPT is null, the schedule will be kept in effect until it is deleted. The value of NUMREPT will continue to be decremented even though the automatic performance monitoring reporting is inhibited. NUMREPT is an integer.
<MONLEV>	(Optional) The discriminating level of the requested monitored parameter. It applies to all MONTYPEs of the scheduled performance monitoring report. The format is LEV-DIRN, where 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. MONLEV is a string.
<LOCN>	(Optional) Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. A null input defaults to NEND. FEND is not supported by all MOD2 types. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<TMPER>	(Optional) Accumulation time period for performance counters. Defaults to 15-MIN. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length is every 24 hours. For NCS PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length is every 1 hour. This is only applicable to remote monitoring (RMON) managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length is every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length is every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length starts from the last time the counters were cleared. This is only applicable to RMON managed PMs.

<TMOFST>	(Optional) Time offset between reporting/diagnostics/exercises; from the end of the last complete accumulation time period to the beginning of the accumulation time period specified by TMPER. The format is DAY-HR-MIN where DAYS (days) ranges from 0 to 99, HR (hours) ranges from 0 to 23, and MIN (minutes) ranges from 1 to 59. A null value defaults to 0-0-0. Grouping of this parameter is not supported. If the value specified is larger than the maximum length of PM history the system is saving, there will be no PM report for the PM schedule generated. For example, if a PM schedule for STM16 is created with TMOFST of 2-1-0 (format: day-hour-minute), no report will be generated because the system can only hold two days worth of PM history. For setting 15-MIN schedules, the system can only hold 32 15-MIN buckets which totals eight hours therefore a schedule greater than 0-8-0 will not result in PM schedules being generated. TMOFST is a string.

SCHED-PMREPT-ODU

This command schedule performance monitoring.

Usage Guidelines

None

Category

Performance

Security

Retrieve

Input Format

SCHED-PMREPT-ODU:[<TID>]:<aid>:<CTAG>::[<reptinvl>],[<reptstatm>],[<numrept>],,[<monlev>],[<locn>],,[<tmper>],[<tmofst>]:BANDWIDTH=<bandwidth>;

Input Example

> SCHED-PMREPT-ODU::ODU-1-3-12-1-1-20:c::5-min,,10000,,40-up,nend,,15-min,:BANDWIDTH=odu2e;

node113 2017-06-16 18:35:07

M c COMPLD

;

Input Parameters	
<AID>	Access identifier. AID of the ODU2
<BANDWIDTH>	ENUM (Mandatory). ODU Level (ODU2E)
reptinvl	Reporting interval of a report to be generated and sent to the appropriate NE. REPTINVL is a string.
reptstatm	The starting time for the performance monitoring report. The format is HOD-MOH, where HOD (hour of day) ranges from 0 to 23, and MOH (minute of hour) ranges from 0 to 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, the reporting will be scheduled to start at 5:30 the next day. A null value defaults to the current time of day. REPTSTATM is a string.
numrept	The number of reports that the schedule is expected to produce. A value of 0 is used to delete an existing identical schedule. If NUMREPT is null, the schedule is kept in effect until it is deleted. The value of NUMREPT will continue to be decremented even though the automatic performance monitoring reporting is inhibited. NUMREPT is an integer.
monlev	The number of reports that the schedule is expected to produce. A value of 0 is used to delete an existing identical schedule. If NUMREPT is null, the schedule is kept in effect until it is deleted. The value of NUMREPT continues to be decremented even though the automatic performance monitoring reporting is inhibited. NUMREPT is an integer
Locn	ENUM (Optional). Location associated with a particular command. The parameter type is LOCATION, which is the location where the action is to take place. FEND or NEND.
tmper	Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center. 15-min or 1-day.
tmofst	Time offset between reporting/diagnostics/exercises; from the end of the last complete accumulation time period to the beginning of the accumulation time period specified by TMPER. The format is DAY-HR-MIN where DAYS (days) ranges from 0 to 99, HR (hours) ranges from 0 to 23, and MIN (minutes) ranges from 1 to 59. A null value defaults to 0-0-0. Grouping of this parameter is not supported.

Chapter 25: SET Commands

This chapter provides set (SET) commands for the Cisco NCS 2000 Series.

SET-ACLCONFIG

The Set ACLCONFIG command is used to set and enable ACL configuration in NCS 2000.

Usage Guidelines

• This command will enable/disable the ACL feature.

Category

System

Security

Provisioning

Input Format

SET-ACLCONFIG:[<TID>]::<CTAG>::ENABLE=<enable>;

Input Example

SET-ACLCONFIG:::1::ENABLE=y;
N-6 2023-01-08 17:21:40
M 1 COMPLD;

Input Parameters

SET-ALMTH-<MOD2>

The Set Alarm Threshold for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 4GFC, 2GFICON, 5GIB, 8GFC, CLNT, D1VIDEO, DS1, DV6000, DVBASI, EC1, ESCON, ETRCLO, ETH, FSTE, GIGE, HDTV, ISC1, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OC12, OC192, OC3, OC48, OC768, OCH, OMS, OTS, OTU3, T1, T3, OTL, OTU1, OTU2, OTU4, OTU4C2, SDSDI, HDSDI, 3GVIDEO, ISC3STP1G, and ISC3STP2G (SET-ALMTH-<MOD2>) command sets the alarm thresholds on the following cards/ports/channels: MXP_2.5G_10G, TXP_MR_10G, optical service channel (OSC), optical amplifier, dispersion compensation unit (DCU), multiplexer, demultiplexer, and optical add/drop multiplexing (OADM).

Usage Guidelines

- This command is used to set the alarm thresholds on a facilities, ports, channels, for example. Not all MOD2 types are supported.
- This command supports the modifier OTU1, SDSDI, HDSDI, 3GVIDEO, ISC3STP1G, and ISC3STP2G.
- Tx alarm thresholds is blocked on Rx Video pluggables and vice-versa.
- Tx alarm thresholds is not applicable on ESCON payload.
- The SET-ALMTH-OTL is denied on backplane virtual ports of 100G-LC-C.

- The SET-ALMTH-OTL is denied on sublanes of CFP-LC but sets the alarms thresholds on first sublane of 100G-LC-C card.
- SET-ALMTH-<MOD2> on 100G-LC-C, 10x10G-LC, and CFP-LC cards use MOD2, and the following AID:
  - OCH modifier (CHAN AID) for non-OTU payloads on 100G-LC-C and 10x10G-LC fixed trunk ports.
  - MOD2 modifier on the OTU payloads of 10x10G-LC card on the VFAC AID.
  - OCH modifier (ACHAN AID) on the non-OTU payloads of the 100G-LC-C aggregate port.
  - MOD2 modifier (VLINE AID) on the first sublane of the 100G-LC-C card.
  - OCH modifier (CHAN AID) on the CFP-LC ports.
  - Alarm threshold cannot be set on the sublanes (VLINE) of the CFP-LC cards.

Category
Fault

Security
Provisioning

Input Format
SET-ALMTH-<MOD2>:[<TID>]:<AID>:<CTAG>::<CONDTYPE>,<THLEV>[,,,];

Input Example
SET-ALMTH-OTL:100G-LC-C:VLINE-3-1-1-2:1::OPT-LOW,-9;

Input Parameters

<AID>	Access identifier. Must not be null. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is ALM_THR, which is the 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.
• ADD-HDEG	ADD Power - High Degrade
• ADD-HFAIL	ADD Power - High Failure
• ADD-LDEG	ADD Power - Low Degrade
• ADD-LFAIL	ADD Power - Low Failure
• BATV-EHIGH	Battery Voltage—Extremely High
• BATV-ELOW	Battery Voltage—Extremely Low

• BATV-HIGH	Battery Voltage—High
• BATV-LOW	Battery Voltage—Low
• CD-LOW	Low Threshold value for Chromatic Dispersion. Measured value -70000dBm to +70000dBm.
• CD-HIGH	High Threshold value for Chromatic Dispersion. Measured value -70000dBm to +70000dBm.
• 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 microA as one tenth of a percentage. High Warning Threshold, Low Warning Threshold. Measured value (0.0 percent, 100.0 percent)
• OPR-HIGH	Receive power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)
• OPR-LOW	Receive power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)
• OPT-HIGH	Transmit power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)
• OPT-LOW	Transmit power in one tenth of a microW. 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
• OSNR-LOW	Low Threshold value for Optical Signal to Noise Ratio. Measured value +40dBm to +80dBm.
• OSNR-HIGH	High Threshold value for Optical Signal to Noise Ratio. Measured value +40dBm to +80dBm.
• PMD-LOW	Low Threshold value for Polarization Mode for Dispersion. Measured value +0 to +100dBm.
• PMD-HIGH	High Threshold value for Polarization Mode for Dispersion. Measured value +0 to +100dBm.
• 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
<THLEVEL>	Threshold level. THLEVEL is a float.

SET-ALMTH-EQPT

The Set Alarm Threshold Equipment (SET-ALMTH-EQPT) command sets the alarm thresholds to manage the power level monitoring on an NE.

Usage Guidelines

None

Category

Equipment

Security

Provisioning

Input Format

SET-ALMTH-EQPT:[<TID>]:[<AID>]:<CTAG>::<ALMTHTYPE>,<THLEV>[,,,];

Input Example

SET-ALMTH-EQPT::SHELF-2:1::BATV-HIGH,-53.5;

SET-ALMTH-EQPT:::1::BATV-HIGH,-53.5;

Input Parameters

<AID>	The node or shelf access identifier. If omitted it addresses the node or first shelf of the node. Must not be null
<CONDTYPE>	Alarm threshold type. The parameter type is ALM_THR, which is the 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.
• BATV-EHIGH	Battery Voltage—Extremely High
• BATV-ELOW	Battery Voltage—Extremely Low

• BATV-HIGH	Battery Voltage—High
• BATV-LOW	Battery Voltage—Low
• CD-LOW	Low Threshold value for Chromatic Dispersion. Measured value -70000dBm to +70000dBm.
• CD-HIGH	High Threshold value for Chromatic Dispersion. Measured value -70000dBm to +70000dBm.
• 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 microA as one tenth of a percentage High Warning Threshold, Low Warning Threshold. Measured value (0.0 percent, 100.0 percent)
• OPR-HIGH	Receive power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)
• OPR-LOW	Receive power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)
• OPT-HIGH	Transmit power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)
• OPT-LOW	Transmit power in one tenth of a microW. 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
• OSNR-LOW	Low Threshold value for Optical Signal to Noise Ratio. Measured value +40dBm to +80dBm.
• OSNR-HIGH	High Threshold value for Optical Signal to Noise Ratio. Measured value +40dBm to +80dBm.
• PMD-LOW	Low Threshold value for Polarization Mode for Dispersion. Measured value +0 to +100dBm.
• PMD-HIGH	High Threshold value for Polarization Mode for Dispersion. Measured value +0 to +100dBm.
• 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
<THLEVEL>	Threshold level. THLEV is a float.

Note: The power incremental threshold value must be a step value of 0.5.

SET-ATTR-CONT

The Set Attribute Control (SET-ATTR-CONT) 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.

Usage Guidelines

- If the CONTTYPE parameter is not specified, the control specified by AID is unprovisioned.
- A control should be unprovisioned before it is reprovisioned to another type of control.

Category

Environment

Security

Provisioning

Input Format

SET-ATTR-CONT:[<TID>]:<AID>:<CTAG>[::<CONTTYPE>];

Input Example

SET-ATTR-CONT:CISCO:ENV-OUT-1:123::AIRCOND;

Input Parameters

<AID>	Access identifier. Identifies the external control for which attributes are being retrieved.
<CONTTYPE>	Environmental control type. A null value is equivalent to ALL. The parameter type is CONTTYPE, which is the environmental control type.
• AIRCOND	Air conditioning

• ENGINE	Engine
• FAN	Fan
• GEN	Generator
• HEAT	Heat
• LIGHT	Light
• MISC	Miscellaneous
• SPKLR	Sprinkler

SET-ATTR-ENV

The Set Attribute Environment (SET-ATTR-ENV) command sets the attributes associated with an external control.

Usage Guidelines

- If the NTFCNCDE, ALMTYPE, and ALMMSG parameters are omitted, the environmental alarm specified by AID is unprovisioned.
- An alarm should be unprovisioned and you should wait for any raised alarm to clear before reprovisioning the alarm to another alarm type.
- CL in NOTIF_CODE is not valid for provisioning commands. It is only valid for autonomous messages.

Category

Environment

Security

Provisioning

Input Format

SET-ATTR-ENV:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<ALMTYPE>],[<ALMMSG>];

Input Example

SET-ATTR-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR,\“OPEN DOOR\”;

Input Parameters

<AID>	Access identifier. Must not be null.

<NTFCNCDE>	Two-letter notification code. Must not be null. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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.
<ALMTYPE>	The alarm type for the environmental alarm. Must not be null. The parameter type is ENV_ALM, which is the environmental alarm type.
• 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
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail

• HATCH	Controlled Environment Vault (CEV) hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnected bypass
• 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 V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage

• RINGGENMJ	Ringing generator major
• RINGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure
>ALMMSG>	Alarm message. ALMMSG is a string. Must not be null.

SET-ATTR-SECUDFLT

The Set Attribute Security Default (SET-ATTR-SECUDFLT) command sets the system-wide default values associated with several security parameters.

Usage Guidelines

- 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 TMOUT. 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.

- When PWDMINLEN parameter value is 2, then it is mandatory to set the value of PWDCHRULE parameter to ANY_CHAR rule.
- When PWDCHRULE parameter value is set to ANY_CHAR, then the PWDMINLEN parameter can be set to 2 or 4, or 6 or 8, or 10 or 12.

Category
Security

Security
Superuser

Input Format
SET-ATTR-SECUDFLT:[<TID>]::<CTAG>::[PAGE=<PAGE>],[PCND=<PCND>],[MXINV=<MXINV>],[DURAL=<DURAL>],[TMOUT=<TMOUT>],[UOUT=<UOUT>],[PFRCD=<PFRCD>],[POLD=<POLD>],[PINT=<PINT>],[LOGIN=<LOGIN>],[PRIVLVL=<UAP>],[PDIF=<PDIF>],[PWDCHRULE=<PWDCHRULE>],[PWDMINLEN=<PWDMINLEN>],[PWDMAXLEN=<PWDMAXLEN>];

Input Example
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,PDIF=1;

SET-ATTR-SECUDFLT:::1::PWDCHRULE=ANY_CHAR,PWDMINLEN=2,PWDMAXLEN=20;

Input Parameters

<PAGE>	Password aging interval. It is the number of days before a user is prompted to change his/her password. 0 indicates that the policy is turned off and is the default. If PAGE is turned on for all privilege levels and is not specified for each privilege level, it defaults to 45 days. PAGE ranges from 20 to 90 days. PAGE is an integer.
<PCND>	Number of days a password can be used before a new one is mandatory (for example, the warning period). Default is 5 days. PCND ranges from 2 to 20 days. PCND is an integer.
<MXINV>	Maximum number of consecutive and invalid session setup attempts allowed to occur before an intrusion attempt is suspected (for example, “Failed Logins Before Lockout” from Cisco Transport Controller [CTC]). 0 indicates the policy is turned off. Default is 5. MXINV ranges from 0 to 10. MXINV is an integer.

<DURAL>	Time interval (in seconds) during which a user ID is locked out when an intrusion attempt is suspected (for example, “Lockout Duration”). If the user is locked out until unlocked by a Superuser, DURAL=INFINITE. Default is 30 seconds. DURAL ranges from 0 to 600 seconds. DURAL is a string.
<TMOUT>	Interval (in minutes) after which a session is terminated if no messages are exchanged between the user and the NE. 0 indicates that the session will not timeout. TMOUT ranges from 0 minutes to 999 minutes. Defaults are 0 (no timeout) for RTRV users, 60 minutes for MAINT users, 30 minutes for PROV users, and 15 minutes for SUPER users. TMOUT is an integer.
<UOUT>	UID aging interval, expressed in days. If a user ID has not been used in UOUT days, the user will be forced to change his/her password (or logout) at the next login. No other command is allowed until the password has been changed. 0 indicates the policy is turned off and is the default. UOUT ranges from 0 to 99 days. UOUT is an integer.
<PFRCD>	Indicates that a password change is required when a new user establishes a session to the NE for the first time (for example, “Require password change on 1st login”). Default is NO. The parameter type is YES_NO, which indicates whether the user’s password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes
<POLD>	Number of prior passwords that cannot be reused (for example, “Prevent reusing last X passwords”). Default is 1. POLD ranges from 1 to 10. POLD is an integer.
<PINT>	Number of days that must pass before a password can be changed. If PINT is 0, the policy is turned off. Default is off. PINT ranges from 20 to 95 days. PINT is an integer.
<LOGIN>	Number of times a user can log into an NE. LOGIN is either SINGLE or MULTIPLE. If LOGIN is SINGLE, a user can only log into an NE one time with any given user ID, regardless of the method of login (for example, CTC, TL1, etc.). Default is MULTIPLE. The parameter type is USER_LOGINS, which is the number of times a user can log into the same NE with the same user ID.
• MULTIPLE	A user can log into the same NE many times.
• SINGLE	A user can log into the NE only once (includes both CTC and TL1 sessions).

<PRIVLVL>	User's access privilege. The parameter type is PRIVILEGE, which is the security level.
• MAINT	Maintenance security level. 60 minutes of idle time.
• PROV	Provision security level. 30 minutes of idle time.
• RTRV	Retrieve security level. Unlimited idle time.
• SUPER	Superuser security level. 15 minutes of idle time.
• ROOT_USER	Root user.
• SEC_SUPER	Security super user.
• SEC_USER	Security user.
<PDIF>	Indicates how many characters must differ between the old and new password. Default minimum character difference is 1. PDIF ranges from 1 to 5 characters. PDIF is a rangeable integer.
<PWDCHRULE>	(Optional) Password Characters Rule. Indicates the password characters rule for the specified minimum length of the password.
• ONE_EACH_OF_LETTER_NUM_TL1SPECIAL	One letter, one number, and one TL1 special character (%, #, +).
• ONE_EACH_OF_LETTER_NUM_SPECIAL	One letter, one number, and one special character.
• TWO_EACH_OF_TWO_OF_UPPER_LOWER_NUM_TL1SPECIAL	Two each of any of the two numbers, upper, lower, or TL1 special characters.
• TWO_EACH_OF_TWO_OF_UPPER_LOWER_NUM_SPECIAL	Two each of any of the two numbers, upper, lower, or special characters.
• ANY_CHAR	Any character.
<PWDMINLEN>	(Optional) Password Minimum Length. Indicates the minimum number of characters that can be set for password configuration. The values are 2, 4, 6, 8, 10 and 12.
<PWDMAXLEN>	(Optional) Password Maximum Length. Indicates the maximum number of characters that can be set for password configuration. The values are 20 or 80.

SET-GENERICMIB

Description
Set Value of Generic MIB

Usage Guidelines
- None

Category
NCS

Security
Maintenance

Input Format
SET-GENERICMIB:::1::GENERICMIB=N;

Input Parameters

Parameter	Description
GENERICMIB	GenericMIB value. This is an ENUM of Type YES/NO and can take the values-
• Y	
• N	

SET-HOP-CPS

The Set HOP Control Plane Service (SET-HOP-CPS) command is used to add, remove and modify an HOP route contraint of a Control Plane Service.

Usage Guidelines
- Specify only the source port to identify the CPS.
- Specify both the source AIDs, if the CPS is of type ADD 2WAY.
- CLIENT cps type support FAC and VFAC AID type.
- TRUNK cps type support CHAN AID type.
- ADD cps type support CHAN, PCHAN, and LINEWL AID type.

- In case of 1WAY, unidirectional connection, SRC and DST are single AIDs. In case of 2WAY, bidirectional connection, SRC and DST are double AIDs. However, in case of CLIENT or TRUNK cpstype, src and dst are single AID and the connection is of type 2WAY because of bidirectional ports hence this rule is not applicable.

Category
DWDM

Security
Provisioning

Input Format
SET-HOP-CPS:[<TID>]:<SRC>:<CTAG>::<CIRCUITTYPE>,<ROUTETYPE>,<HOPACTION>,[<POSITION>],<HOPTYPE>,<HOPNODE>,[<HOPSIDE>][::];

Input Example
SET-HOP-CPS::VFAC-1-5-2:8::PRIMARY,MAINROUTE,ADD,,LOOSE,10.20.33.44;

Input Parameters

<SRC>	Source AID.
<CIRCUITTYPE>	Identifies the target circuit. Allowed values are PRIMARY, SECONDARY.
<ROUTETYPE>	Identifies the target circuit route. Allowed values are MAINROUTE, BRIDGEROUTE.
<HOPACTION>	Identifies the action to perform on the hop item. Allowed values are ADD, REMOVE, MODIFY, CLEARALL
<POSITION>	Identifies the position of the hop in the item list. Default value is 0. • If action=ADD and position=0 than append at the end; • If action=REMOVE and position=0 than remove all matching items; • If action=REMOVE and position<>0 than hop values are ignored; • If action=MODIFY and position<>0 than replace the item in the position indicated; • If action=CLEARALL than clears the list ignoring position and other parameters;

<HOPTYPE>	Type of hop constraint. Allowed values are STRICT, LOOSE, EXCLUDE • STRICT—The next hop of the path must be the indicated node and side • LOOSE—The path must cross the indicated node and side • EXCLUDE—The path must exclude the indicated node
<HOPNODE>	IP address of the target node.
<HOPSIDE>	Hop constraint target WDM side.

SET-HOP-MCH

The Set HOP Control Plane Service (SET-HOP-MCH) command is used to set constraints of Media Channel.

Usage Guidelines

- Specify only the source port to identify the CPS.
- Specify both the source AIDs, if the CPS is of type ADD 2WAY.
- CLIENT cps type support FAC and VFAC AID type.
- TRUNK cps type support CHAN AID type.
- ADD cps type support CHAN, PCHAN, and LINEWL AID type.
- In case of 1WAY, unidirectional connection, SRC and DST are single AIDs. In case of 2WAY, bidirectional connection, SRC and DST are double AIDs. However, in case of CLIENT or TRUNK cpstype, src and dst are single AID and the connection is of type 2WAY because of bidirectional ports hence this rule is not applicable.

Category

DWDM

Security

Provisioning

Input Format

SET-HOP-MCH:[<TID>]:<SRC>:<CTAG>::<CIRCUITTYPE>,<ROUTETYPE>,<HOPACTION>,[<POSITION>],<HOPTYPE>,<HOPNODE>,[<HOPSIDE>][::];

Input Example

Input Parameters

<SRC>	Source AID.
<CIRCUITTYPE>	Identifies the target circuit. Allowed values are PRIMARY, SECONDARY.
<ROUTETYPE>	Identifies the target circuit route. Allowed values are MAINROUTE, BRIDGEROUTE.
<HOPACTION>	Identifies the action to perform on the hop item. Allowed values are ADD, REMOVE, MODIFY, CLEARALL
<POSITION>	Identifies the position of the hop in the item list. Default value is 0. • If action=ADD and position=0 than append at the end; • If action=REMOVE and position=0 than remove all matching items; • If action=REMOVE and position<>0 than hop values are ignored; • If action=MODIFY and position<>0 than replace the item in the position indicated; • If action=CLEARALL than clears the list ignoring position and other parameters;
<HOPTYPE>	Type of hop constraint. Allowed values are STRICT, LOOSE, EXCLUDE • STRICT—The next hop of the path must be the indicated node and side • LOOSE—The path must cross the indicated node and side • EXCLUDE—The path must exclude the indicated node
<HOPNODE>	IP address of the target node.
<HOPSIDE>	Hop constraint target WDM side.

SET-HOP-MCHG

The Set HOP Control Plane Service (SET-HOP-MCHG) command is used to set constraints of Media Channel Group.

Usage Guidelines

- Specify only the source port to identify the CPS.
- Specify both the source AIDs, if the CPS is of type ADD 2WAY.

- CLIENT cps type support FAC and VFAC AID type.
- TRUNK cps type support CHAN AID type.
- ADD cps type support CHAN, PCHAN, and LINEWL AID type.
- In case of 1WAY, unidirectional connection, SRC and DST are single AIDs. In case of 2WAY, bidirectional connection, SRC and DST are double AIDs. However, in case of CLIENT or TRUNK cpstype, src and dst are single AID and the connection is of type 2WAY because of bidirectional ports hence this rule is not applicable.

Category
DWDM

Security
Provisioning

Input Format
SET-HOP-MCHG:[<TID>]:<SRC>:<CTAG>::<CIRCUITTYPE>,<ROUTETYPE>,<HOPACTION>,[<POSITION>],<HOPTYPE>,<HOPNODE>,[<HOPSIDE>][::];

Input Example

Input Parameters

<SRC>	Source AID.
<CIRCUITTYPE>	Identifies the target circuit. Allowed values are PRIMARY, SECONDARY.
<ROUTETYPE>	Identifies the target circuit route. Allowed values are MAINROUTE, BRIDGEROUTE.
<HOPACTION>	Identifies the action to perform on the hop item. Allowed values are ADD, REMOVE, MODIFY, CLEARALL
<POSITION>	Identifies the position of the hop in the item list. Default value is 0. • If action=ADD and position=0 than append at the end; • If action=REMOVE and position=0 than remove all matching items; • If action=REMOVE and position<>0 than hop values are ignored; • If action=MODIFY and position<>0 than replace the item in the position indicated;

- If action=CLEARALL than clears the list ignoring position and other parameters;

<HOPTYPE>	Type of hop constraint. Allowed values are STRICT, LOOSE, EXCLUDE • STRICT—The next hop of the path must be the indicated node and side • LOOSE—The path must cross the indicated node and side • EXCLUDE—The path must exclude the indicated node
<HOPNODE>	IP address of the target node.
<HOPSIDE>	Hop constraint target WDM side.

SET-NEDFLT-ALSPARAM

Set NE DEFAULT for Alarm Laser Attributes

Usage Guideline

NONE

Category

Security

Input Format

SET-NEDFLT-ALSPARAM:::1::400G-XP-LC,OTU4,ALSMODE=MAN-RESTART,ALSRCINT=90,ALSRCPW=80;

Input Parameter

#	Parameter Name	Optional(True/False)	Type
1	Eqtype	False	Enum – EQTYPE ENUM
2	PortType	False	Enum- Port Type Enum
3	ALS Mode	True	ENUM – ALSMODE Enum
4	ALSRCINT	True	int
5	ALSRCPW	True	Int

Output Format

Output Example

Output Parameters

SET-NEDFLT-BERLEVEL

Description

Usage Guidelines

Category

Security

Input Format

SET-NEDFLT-BERLEVEL:[<TID>]::<CTAG>::>::<eqptType>,<porttype>:SFBER=<sfberlevel>,SDBER=<sdber>;

Input Parameter

#	Parameter Name	Optional(True/False)	Type
1	Eqtype	False	Enum – EQTYPE ENUM
2	PortType	False	Enum- Port Type Enum
3	SFBER	True	Enum
4	SDBER	True	Enum

Output Format

Output Example

set-nedflt-berlevel:::1::400G-XP-LC,CLIENT-OC192:SDBER=1E-7,SFBER=1E-4;

node136 2018-08-16 00:35:54

M 1 COMPLD
;

Output Parameters

SET-NEDFLT-DWDMCONFIG

Description

Set the NEDEFAULT for DWDM config

Usage Guidelines

Category

DWDM

Security

System

Input Format

SET-NEDFLT-DWDMCONFIG:[<TID>]::<CTAG>::<eqpttype>:TERMMODE=<termmode>,SQUELCHMODE=<squelchmode>;"

Input Parameter

#	Parameter Name	Optional(True/False)	Type
1	Eqtype	False	Enum – EQTYPE ENUM
2	Termmode	False	Enum
3	Squelchmode	False	Enum

Output Format

Output Example

set-nedflt-dwdmconfig:::1::TXP-MR-10EX:TERMMODE=LINE,SQUELCHMODE=AIS;

node136 2018-08-23 03:38:10

M 1 COMPLD
;

Output Parameters

<TERMMODE>

<SQUELCHMODE>

SET-NEDFLT-ETHERPARAM

Description

Set NEDEFAULTS for Ethernet Attributes

Usage Guidelines

Category

Dwdm

Security

System

Input Format

SET_NEDFLT_ETHERPARAM:[<TID>]::<CTAG>::<eqpttype>,<porttype>:MTU=<mtu>;

Input Parameter

#	Parameter Name	Optional(True/False)	Type
1	Eqtype	False	Enum – EQTYPE ENUM
2	PortType	False	Enum- Port Type Enum
3	MTU	False	Int

Output Format

Output Example

```
set-nedflt-etherparam:::1::100G-CK-C,100GIGE:MTU=1548;

    node136 2018-08-27 01:21:56
M   1 COMPLD
;
```

Output Parameters

SET-NEDFLT-FECMODE

Description

Set NEDEFAULT for Forward Error Correction for the Interfaces

Usage Guidelines

Category

System

Security

Provisioning

Input Format

SET_NEDFLT_FECMODE:[<TID>]::<CTAG>::<eqpttype>,<porttype>:FECMODE=<fecmode>;

Input Parameter

#	Parameter Name	Optional(True/False)	Type
1	Eqtype	False	Enum – EQTYPE ENUM
2	PortType	False	Enum- Port Type Enum
3	FECMODE	False	Enum

Output Format

Output Example

set-nedflt-fecmode:::1::100G-CK-C,OTU4:FECMODE=STD;

node136 2018-08-15 22:23:41
M 1 COMPLD
;

Output Parameters

SET-NEDFLT-NEGEN

Description

Set NEDEFAULTS related to Node LMP.

Usage Guidelines

Category
System

Security
Provisioning

Input Format
SET-NEDFLT-NEGEN:[<TID>]::<CTAG>:::NAME=<name>,VALUE=<value>;

Input Parameter

#	Parameter Name	Optional(True/False)	Type
1	NAME	False	Enum – Name enum. Values are LMP-GEN-ALLOWED LMP-CNTRLCHNL-MINHI LMP-CNTRLCHNL-MINHDI LMP-CNTRLCHNL-MAXHI LMP-CNTRLCHNL-MAXHDI LMP-CNTRLCHNL-HI LMP-CNTRLCHNL-HDI LMP-CNTRLCHNL-ADMSTATE LMP-TELINK-CAPBLT LMP-TELINK-DWDM LMP-TELINK-ADMSTATE LMP-DATALINK-TYPE
2	VALUE	False	It's an integer value.

			It can be 0→FALSE, 1→TRUE if NAME=LMP-GEN-ALLOWE It's an integer value > 0 if NAME= LMP-CNTRLCHNL-MINHI or LMP-CNTRLCHNL-MINHDI or LMP-CNTRLCHNL-MAXHI or LMP-CNTRLCHNL-MAXHDI or LMP-CNTRLCHNL-HI or LMP-CNTRLCHNL-MINHI It can be 0→IS, 1→[OOS,DSBLD] if NAME= LMP-CNTRLCHNL-AD-MSTATE It can be VALUE=0 → Packet Switch – Level -1 VALUE=1 →Packet Switch – Level -2 VALUE=2 →Packet Switch – Level -3 VALUE=3 →Packet Switch – Level -4 VALUE=4 →Layer 2 Switch VALUE=5 →TDM Cross Connect VALUE=6 →Lambda Switch VALUE=7 →Fiber Switch If NAME=LMP-TELINK-CAPBLT It can be VALUE=0 → Port VALUE=1 → Component If NAME=LMP-DATALINK-TYPE

Output Format

Output Example

Output Parameters

SET-NEDFLT-OPTSTH

Description

Set Ne Defaults to Optics Threshold and FEC Thresholds-

Usage Guidelines

Category

System

Security
Provision

Input Format

SET-NEDFLT-OPTSTH:[<TID>]::<CTAG>:::<eqptType>,<portType>,<montype>,<thlev>,[<lossb>],[<fec>],[<tmper>]

Input Parameter

#	Parameter Name	Optional(True/False)	Values
1	<eqptType>	False	400G-XP-LC,100G-LC-C, 100G-CK-C,10X10G-LC and so on.
2	<portType>	False	CPAK, CLIENT, TRUNK, CXP, OTU4 and so on.
3	<montype>	False	OPT-MIN, OPR-MAX, OPR-MIN, LBCL-MAX
4	<thlev>	False	Threshold level. THLEVEL is a float
5	<lossb>	True	AUTOPROV, SR, SR-1, SR-2, SR-3, SR-5 and so on.
6	<fec>	True	OFF, STD, ENH, ENH-I4, ENH-I4, ENH-I7, HG-20, HG-7, SD-20, SD-7, SD-15-DE-OFF, SD-25-DE-OFF,

			SD-15-DE-ON, SD-27-DE-OFF, SD-27-DE-ON
7	<tmper>	True	15-MIN, 1-DAY, ALARM

Output Format

Output Example

Output Parameters

SET-NEDFLT-OTNLINE

Description

Set NE Defaults related to OTNLINE

Usage Guidelines

Category
System

Security

Provisioning

Input Format

SET-NEDFLT-OTNLINE:[<TID>]::<CTAG>::<eqpttype>,<porttype>:[SDBER=<sdber>],[FECMODE=<fec>],[G709OTN=<g709otn>];

Input Parameter

#	Parameter Name	Optional(True/False)	Type
1	Eqtype	False	Enum – EQTYPE ENUM
2	PortType	False	Enum- Port Type Enum
3	SDBER	True	Enum- Sdber enum
4	FECMODE	True	Enum- fec enum
5	G709OTN	True	Enum – DISABLED/ ENA- BLED

Output Format

Output Example

Output Parameters

SET-NEDFLT-OTNPPR

Description

Set NE Defaults related to OTN proactive protection configuration.

Usage Guidelines

Category

System

Security

Provision

Input Format

SET-NEDFLT-OTNPPR:[<TID>]::<CTAG>::<eqpttype>,[<fec>]:[TRIGTH=<trigth>],[RVRTTH=<rvrtth>],[TRIGWIN-DOW=<trigwindow>],[RVRTWINDOW=<rvrtwindow>];

Input Parameter

#	Parameter Name	Optional(True/False)	Type
1	Eqtype	False	Enum – EQTYPE ENUM
2	PortType	False	Enum- Port Type Enum
3	fec	True	Enum- fec enum
4	TRIGTH	True	Enum - Trigger threshold enum
5	RVRTTH	True	Enum - Revert threshold enum
6	TRIGWINDOW	True	INT- Trigger window value
7	RVRTWINDOW	True	INT - revert window value

Output Format

Output Example

Output Parameters

SET-NEDFLT-OTNTH

Description

Set NE Defaults related to OTN and G709 thresholds

Usage Guidelines

Category

System

Security

Provision

Input Format

SET-NEDFLT-OTNTH ::[<TID>]::<CTAG>::<eqptType>,<portType>,<montype>,<thlev>,[<locn>],[<tmper>];

Input Parameter

#	Parameter Name	Optional(True/False)	Values
1	<eqptType>	False	400G-XP-LC,100G-LC-C, 100G-CK-C,10X10G-LC and so on
2	<portType>	False	CPAK, CLIENT, TRUNK, CXP, OTU4 , OC192 and so on
	<montype>	False	UAS-PM,SES-PM,FC-PM,ES-PM,BBE-PM,UAS-SM, SES-SM, FC-SM, ES-SM, BBE-SM
3	<thlev>	False	Threshold level. THLEVEL is a float
4	<locn>	True	NEND, FRND

5	<tmper>	True	15-MIN, 1-DAY, ALARM

Output Format

Output Example

Output Parameters

SET-NEDFLT-PMTH

Description

Set NE Defaults related to PM Thresholds- Line and Section

Usage Guidelines

Category

System

Security

Provisioning

Input Format

SET-NEDFLT-PMTH ::[<TID>]::<CTAG>::<eqptType>,<portType>,<thtype>,<montype>,<thlev>,[<locn>],[<tmper>];

Input Parameter

#	Parameter Name	Optional(True/False)	Values
1	<eqptType>	False	400G-XP-LC,100G-LC-C, 100G-CK-C,10X10G-LC and so on

2	<portType>	False	CPAK, CLIENT, TRUNK, CXP, OTU4 , OC192 and so on
3	<thtype>	False	LINE, SECTION
4	<montype>	False	OPT-MIN, OPR-MAX, OPR-MIN, LBCL-MAX
5	<thlev>	False	Threshold level. THLEVEL is a float
6	<locn>	True	NEND, FRND
7	<tmper>	True	15-MIN, 1-DAY, ALARM

Output Format

Output Example

Output Parameters

SET-NEDFLT-PROTECTION

Description

Set NE Defaults related to Protection parameters.

Usage Guidelines

Category

System

Security

Provisioning

Input Format

"SET-NEDFLT-PROTECTION: :[<TID>]::<CTAG>:::[ONEPONEGUARDTIME=<oneponeguard-time>],[ONEPONEREV=<oneponerev],[ONEPONEREVTIME=<oneponerevtime>],[ONEOPNERECGUARD-

TIME=<oneponerecguardtime>],[ONEPONEDETGUARDTIME=<oneponedetguardtime>],[ONEPONE-BIDIRSWITCH=<oneponebidirswitch>],[BLSRSPANREV=<blsrspanrev>],[BLSRSPANREVTIME=<blsrspanrev-time>],[BLSRRINGREV=<blsrringrev>],[BLSRRINGREVTIME=<blsrringrevtime>],[YCABLEREV=<ycablerev>],[YCABLEREV-TIME=<ycablerevtime>],[SPLITTERREV=<splitterrev>],[SPLITTERREVTIME=<splitterrevtime>];

Input Parameter

#	Parameter Name	Optional(True/False)	Type
1	ONEPONEGUARDTIME	True	Enum – VERIFICA-TION_GUARD_TIMER:0.5,1.0)
2	ONEPONEREV	True	Enum- ON_OFF_ENA-BLED/ON_OFF_DISABLED
3	ONEPONEREVTIME	True	Enum- REVERTIVE_TIME:0.0,0.5….
4	ONEOPNERECGUARDTIME	True	Enum- RECOV-ERY_GUARD_TIMER:0.0,0.05…
5	ONEPONEDETGUARDTIME	True	Enum- DETEC-TION_GUARD_TIMER:0,0.05…
6	ONEPONEBIDIRSWITCH	True	Enum-TRUE/FALSE
7	BLSRSPANREV	True	Enum- ON_OFF_ENA-BLED/ON_OFF_DISABLED
8	BLSRSPANREVTIME	True	Enum- REVERTIVE_TIME:0.0,0.5….
9	BLSRRINGREV	True	Enum- ON_OFF_ENA-BLED/ON_OFF_DISABLED
10	BLSRRINGREVTIME	True	Enum- REVERTIVE_TIME:0.0,0.5….
11	YCABLEREV	True	Enum- ON_OFF_ENA-BLED/ON_OFF_DISABLED
12	YCABLEREVTIME	True	Enum- REVERTIVE_TIME:0.0,0.5….
13	SPLITTERREV	True	Enum- ON_OFF_ENA-BLED/ON_OFF_DISABLED
14	SPLITTERREVTIME	True	Enum- REVERTIVE_TIME:0.0,0.5….

Output Format

Output Example

Output Parameters

SET-NEDFLT-SNMPMIB

Description

Usage Guidelines

Category

Security

Input Format

Input Parameter

Output Format

Output Example

Output Parameters

SET-NEDFLT-SOAKTIME

Description

Set NE Defaults related to Soak Time.

Usage Guidelines

Category

System

Security

Provisioning

Input Format

SET-NEDFLT-SOAKTIME:[<TID>]::<CTAG>::<eqptType>,<porttype>:SOAKTIME=<soaktime>;

Input Parameter

#	Parameter Name	Optional(True/False)	Type
1	Eqtype	False	Enum – EQTYPE ENUM
2	PortType	False	Enum- Port Type Enum
3	SOAK Time	False	Int

Output Format

Output Example

Output Parameters

SET-NEDFLT-SOFTWARE

Description

Set NE Defaults related to Node Software

Usage Guidelines

Category

System

Security

Provision

Input Format

SET-NEDFLT SOFTWARE:[<TID>]::<CTAG>:::[DFLTDELDUPGRD=<dfltdeldupgrd>],[ALWDELDUPGRD=<alwdeldupgrd>];

Input Parameter

#	Parameter Name	Optional(True/False)	Type
1	DFLTDELDUPGRD	True	Enum – (TRUE/FALSE)
2	ALWDELDUPGRD	True	Enum – (TRUE/FALSE)

Output Format

Output Example

Output Parameters

SET-NEDFLT-SYNCCONF

Description

Set NE Defaults related to sync config.

Usage Guidelines

Category

System

Security

Provisioning

Input Format

SET-NEDFLT-SYNCCONF:[<TID>]::<CTAG>::<eqpttype>,<portType>,[<systmn>]:[SYNCMSG=<syncmsg>],[SEND-DUS=<senddus>],[ADMSSM=<admssm>],[SENDDUSFF=<senddusff>];

Input Parameter

#	Parameter Name	Optional(True/False)	Type
1	Eqtype	False	Enum – EQTYPE ENUM
2	PortType	False	Enum- Port Type Enum
3	Systmn	True	ENUM – SONET SDH
4	SYNCMSG	True	ENUM - N -:Disable an attribute. Y -:Enable an attribute.
5	SENDDUS	True	ENUM - N -:Disable an attribute. Y -:Enable an attribute.

6	ADMSSM	True	Enum - Administrative synchronization status message enum
7	SENDDUSFF	True	ENUM - N -:Disable an attribute. Y -:Enable an attribute.

Output Format

Output Example

SET-NEDFLT-WSON

Description

Set NE Defaults related to WSON parameters.

Usage Guidelines

Category

System

Security

Provisioning

Input Format

"SET-NEDFLT-
WSON:[<TID>]::<CTAG>:::[AUTOCKTREPAIR=<autocktrepair>],[LOCKBASETIMEOUT=<lockbasetimeout>],
[MUTUALDIVTIMEOUT=<mutualdivtimeout>],[NONUNIDFLTSRLGPOLICY=<nonunidfltsrlgpolicy>],[eds=<unidfltsrlgpolicy>],[POLICY=<policy>],[TEDVALIDITY=<tedvalidity>],[DOMAINWIN=<domainwin>],[LENGTHWIN=<lengthwin>],[MAXROUTENUM=<maxroutenum>],[MAXSETUPATTEMPTS=<maxsetupattempts>],[OSNRMARGIN=<osnrmargin>],[OSNRWINDOW=<osnrwindow>],[UNITRAILPERSTO=<unitrailpersto>],[UNICONFWAITTO=<uniconfwaitto>],[UNIACTIVATER

SVPM=<uniactivatersvpm>],[REFRESHMULTIPLE=<refreshmultiple>],[REFRESHINTERVAL=<refreshinterval>],[INACTIVEEXPIRETO=<inactiveexpireto>],[ALARMDETECTIONDELAY=<alarmdetectiondelay>],[FORCEALARMCHKDELAY=<forcealarmchkdelay>],[INTERNALLOSDETCTIONDELAY=<losdetectiondelay>],[RESTORATIONDELAY=<restorationdelay>];"

Input Parameter

#	Parameter Name	Optional(True/False)	Type
1	AUTOCKTREPAIR	True	Enum – (TRUE/FALSE)
2	LOCKBASETIMEOUT	True	long
3	MUTUALDIVTIMEOUT	True	Long
4	NONUNIDFLTSRLGPOLICY	True	long
5	UNIDFLTSRLGPOLICY	True	Long
6	POLICY	True	Long
7	TEDVALIDITY	True	long
8	DOMAINWIN	True	Long
9	LENGTHWIN	True	Long
10	MAXROUTENUM	True	Long
11	MAXSETUPATTEMPTS	True	Long
12	OSNRMARGIN	True	Long
13	OSNRWINDOW	True	Long
14	UNITRAILPERSTO	True	Long
15	UNICONFWAITTO	True	Long
16	UNIACTIVATERSVPM	True	Long
17	REFRESHMULTIPLE	True	Long
18	REFRESHINTERVAL	True	Long
19	INACTIVEEXPIRETO	True	Long
20	ALARMDETECTIONDELAY	True	Long
21	FORCEALARMCHKDELAY	True	Long
22	INTERNALLOSDETCTIONDELAY	True	long
23	RESTORATIONDELAY	True	long

Output Format

Output Example

Output Parameters

SET-OPMOD-PTSYS

The Set Operation Mode Packet Transport System (SET-OPMOD-PTSYS) sets the operation mode for the CPT 50 panel.

Usage Guidelines

- Sets the operation mode for the PTSYS.
- OPMODE can be set as NMS or IOS.
- RETAINDB can be set only for IOS.

Category

Equipment

Security

Retrieve

Input Format

SET-OPMOD-PTSYS:[<TID>]:<AID>:<CTAG>:::<OPMODE>,[RETAINDB=<RETAINDB>];

Input Example

SET-OPMOD-PTSYS::PTSYS-1:1:::IOS,RETAINDB=Y;

Input Parameters

<AID>	AID of the PTSYS.
<OPMODE>	Operation mode of the PTSYSTEM.
• NMS	TCP IPC mode.
• IOS	IPC mode.

<RETAINDB>	Retain the database. Can be updated only for the IOS mode.
Y	Retains the database.
N	Does not retain the databse.

SET- ORLRXPARAM

This command sets RX ORL Parameters.

Usage Guidelines

The command acts at node level, hence no AID is needed.

Category

Equipment

Security

Retrieve

Input Format

SET-ORLRXPARAM:[<TID>]::<CTAG>:::[ENABLERXORL=<enablerxorl>],[REFRESHRATE=<refreshrate>]

Input Example

>set-orlrxparam:::1:::ENABLERXORL=Y,REFRESHRATE=50;

vxTarget 2016-06-01 14:50:44

M 1 COMPLD

Input Parameters

ENABLERXORL	ENUM. Y/N..
REFRESHRATE	Long. Refresh rate being set.

SET- OTDRORLTHR

This command sets ORL threshold value.

Usage Guidelines

Category
Equipment

Security
Retrieve

Input Format
SET-OTDRORLTHR:[<TID>]:<aid>:<CTAG>:::THR=<thr>,DIRN=<dirn>;

Input Example
set-otdrorlthr::ppm-1-1:1::THR=15,DIRN=TX;

fwtnc143 2017-08-09 06:27:37

M 1 COMPLD

;

Input Parameters

AID	AID (Mandatory). AID of the PPM where OTDR command is executed
THR (Threshold)	Value to be set as ORL Threshold. Long
DIRN (Direction)	ENUM. Direction TX/RX/TX-RX

SET-OTDRRXORLPARAMS

This command sets the periodic ORL training in RX direction of each OTDR port.

Usage Guidelines
The command acts at the PPM level, hence no AID is needed.

Category
Port Level

Security
Provisioning

Input Format

Input Example

Input Parameters

Output Format

Output Example

SET-OTDRRXORLPARAMS::PPM-1-1-1:1::ENABLERXORL=Y,REFRESHRATE=6;
M 1 COMPLD
;

Output Parameters

SET-PMMODE-<STS_PATH>

The Set Performance Mode of PM Data Collection for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, or STS9C (SET-PMMODE-<STS_PATH>) command sets the mode and turns the performance monitoring (PM) data collection mode on or off.

Usage Guidelines

Note • The PM mode and state of an entity are retrieved by using the RTRV-PMMODE command.

- The near-end monitoring of the intermediate-path performance monitoring (IPPM) only supports OC3, OC12, OC48, OC192, and EC-1 on STS Path.
- The far-end IPPM data collection is supported by MRC-12 and ADM-10G cards only.
- 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. PM monitoring for Line (L) and Section (S) are supported, and the storing PM data is always performed.

Category

Performance

Security
Provisioning

Input Format
SET-PMMODE-<STS_PATH>:[<TID>]:<SRC>:<CTAG>::<LOCN>,<MODETYPE>,
[<PMSTATE>];

Input Example
SET-PMMODE-STS1:CISCO:STS-4-1-2:123::NEND,P,ON;

Input Parameters

<SRC>	Source access identifier.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. Only near-end PM data collection is supported. The parameter type is LOCATION, which is the location where the action is to take place.
• NEND	Action occurs on the near end of the facility.
<MODETYPE>	The type of PM parameters that the entity or the sub entity is to store as a result of an attribute change. Only the path (P) PM parameter is supported. The parameter type is PM_MODE, which is the type of PM parameter.
• P	Transport Path PM parameters
<PMSTATE>	Directs the named PM mode type to turn on or off. A null value defaults to on. The parameter type is PM_STATE, which directs the named PM mode type (P) state.
• OFF	Disable the mode
• ON	Enable the mode

SET-PMMODE-<VT_PATH>

The Set Performance Mode of PM Data Collection for VT1 and VT2 (SET-PMMODE-<VT_PATH>) command sets the mode and turns the performance monitoring (PM) data collection mode on or off.

Usage Guidelines

- The PM mode and state of an entity is retrieved by using the RTRV-PMMODE command.
- 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.

Category
Performance

Security
Provisioning

Input Format
SET-PMMODE-<VT_PATH>:[<TID>]:<SRC>:<CTAG>::<LOCN>,<MODETYPE>,[<PMSTATE>];

Input Example
SET-PMMODE-VT1:CISCO:VT1-1-1-2-2:123::NEND,P,ON;

Input Parameters

<SRC>	Source access identifier. Must not be null.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be set. Only near end (NEND)PM data collection is supported. The parameter type is LOCATION, which is the location where the action is to take place. Must not be null.
• NEND	Action occurs on the near end of the facility.
<MODETYPE>	The type of PM parameters that the entity or the subentity is to store as a result of an attribute change. Only the path (P) type is supported. The parameter type is PM_MODE, which is the type of PM parameters.
• P	Transport Path PM parameters.
<PMSTATE>	Directs the named PM mode type to turn on or off. A null value defaults to on. The parameter type is PM_STATE, which directs the named PM mode type (P) state.
• OFF	Disable the mode
• ON	Enable the mode

SET-RGNCONSTRAINT-CPS

This command allows you to set Regen constraint for CPS.

Usage Guidelines
While setting the Regen constraints, single and multiple constraints can be added using “&”.

Category
System

Security
Provisioning

Input Format
SET-RGNCONSTRAINT-CPS:[<TID>]:<src>:<CTAG>::<constrainttype>,<circuittype>,<action>,[<nodelist>],[<trunklist>],[<regenside>][::];

Input Example
SET-RGNCONSTRAINT-CPS::CHAN-1-6-2:1::MAINCONSTRAINT,PRIMARY,ADD,10.10.1.70,0x0,ANY;

Input Parameters

AID, Single/Multiple Regen Constraints.

SET-RGNCONSTRAINT-MCH

This command allows you to set Regen constraint for MCH.

Usage Guidelines
While setting the Regen constraints, single and multiple constraints can be added using “&”.

Category
System

Security
Provisioning

Input Format
SET-RGNCONSTRAINT-MCH:[<TID>]:<src>:<CTAG>::<constrainttype>,<circuittype>,<action>,[<nodelist>],[<trunk-list>],[<regenside>][::];

Input Example
SET-RGNCONSTRAINT-MCH::CHAN-6-3-2:1::MAINCONSTRAINT,PRIMARY,ADD,10.1.2.3,2002,INGRESS;

M 1 COMPLD

Input Parameters

AID, Regen Constrains

Output Format

M 1 COMPLD

Output Example

SET-RGNCONSTRAINT-MCH::CHAN-6-3-2:1::MAINCONSTRAINT,PRIMARY,ADD,10.1.2.3,2002,INGRESS;

M 1 COMPLD

SET-RGNCONSTRAINT-UNICFG

This command allows you to set Regen constraint for UNICFG.

Usage Guidelines

While setting the Regen constraints, single and multiple constraints can be added using "&".

Category

System

Security

Provisioning

Input Format

SET-RGNCONSTRAINT-
UNICFG:[<TID>]:<src>:<CTAG>::<constrainttype>,<action>,[<nodelist>],[<trunklist>],[<regensid[::];

Input Example

Input Parameters

AID, Regen Constraints

Output Format

M 1 COMPLD

Output Example

SET-RGNCONSTRAINT-UNICFG::PLINE-14-2-RX:1::MAINCONSTRAINT,ADD,10.1.12.1,2002,INGRESS;

M 1 COMPLD

SET-SRVTYPE

The Set Service Type (SET-SRVTYPE) command allows you to set the service type in the TNC card to carry User Data Channel (UDC) or voice over IP (VOIP) traffic.

Usage Guidelines

- You can configure UDC or VoIP on the two SFP ports present on the TNC card. The TNC card supports the UDC/VoIP configuration only when OSC is provisioned on the SFP ports.
- You can configure UDC or VoIP on only one SFP port at a time per TNC card. If you want to configure UDC or VoIP on the second SFP port, set NONE for the first port and then set UDC or VoIP for the second port.

Category

Ports

Security

Provisioning

Input Format

SET-SRVTYPE:[<TID>]:<AID>:<CTAG>:::<SRVTYPE>;

Input Example

SET-SRVTYPE::FAC-1-1-1:1:::UDC;

Input Parameters

<AID>	FAC-<Shelf>-<Slot>-<PPM>-<Port>.
<SRVTYPE>	Indicates the service type set on the TNC port.
• UDC	To set the service type to UDC.
• VOIP	To set the service type to VOIP
• NONE	To set the service type to NONE.

SET-TH-<MOD2>

The Set Threshold for 10GFC, 10GIGE, 40GIGE, 100GIGE, 1GFC, 1GFICON, 2GFC, 4GFC, 2GFICON, 5GIB, 8GFC, CLNT, D1VIDEO, DS1, DS3I, DV6000, DVBASI, E1, E3, E4, EC1, ESCON, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OC12, OC192, OC3, OC48, OC768, OCH,

OMS, OTS, OTU3, POS, STM1E, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS96C, STS6C, STS9C, T1, T3, VC11, VC12, VC3, VT1, VT2, OTL, OTU1, OTU2, OTU4, OTU4C2, SDSDI, HDSDI, 3GVIDEO, ISC3STP1G, or ISC3STP2G (SET-TH-<MOD2>) command sets the threshold for PMs and sets the alarm thresholds for the MXP_2.5G_10G and TXP_MR_10G cards. If this command is used to set the alarm thresholds on, the time period is not applicable. This command sets alarm thresholds on AR-MXP, AR-XP, and AR-XPE cards and ports, and optical add/drop multiplexing (OADM).

Usage Guidelines

The command supports the modifier OTU1, SDSDI, HDSDI, 3GVIDEO, ISC3STP1G, and ISC3STP2G.

The Tx power is blocked on Rx Video pluggables and vice-versa. The Tx power is not applicable on ESCON payload.

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.
- The SET-TH-OTL is denied on backplane virtual ports of 100G-LC-C for optical thresholds only.
- The SET-TH-OTL is denied on sublanes of CFP-LC. The command sets the alarms thresholds on first sublane of 100G-LC-C card.
- The SET-TH-<MOD2> on 100G-LC-C, 10x10G-LC, and CFP-LC ports use MOD2 and the following AID:
  - OCH (CHAN AID for non-OTU payloads on 100G-LC-C, 10x10G-LC, and CFP-LC fixed trunk ports. ACHAN for non-OTU payloads on the 100G-LC-C card using the CXP pluggable).
  - MOD2 (VFAC AID for OTU payloads on 10x10G-LC and CFP-LC ports. ACHAN for OTU payloads on the 100G-LC-C card using the CXP pluggable).
  - TCA threshold cannot be set on sublanes (VLINE) of CFP-LC cards.

Category

Performance

Security

Provisioning

Input Format

SET-TH-<MOD2>:[<TID>]:<AID>:<CTAG>::<MONTYPE>,<THLEV>,[<LOCN>],,[<TMPER>];

Input Example

SET-TH-OTU4::VFAC-5-1-1:1::LBCL-MAX,-10;

Input Parameters	
<AID>	Access identifier. All of the STS, VT1, Facility, and DS1 AIDs are supported. The AR-MXP, AR-XP, and AR-XPE cards use the VFAC Access Identifier.
<MONTYPE>	Monitored type. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• 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 one tenth of a percentage
• BBER-SM	OTN—Background Block Error Ratio—Section monitor point expressed as one tenth of a percentage
• BIEC	FEC—Bit Errors Corrected
• BIT-EC	The number of bit errors corrected by the FEC algorithm
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path

• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FC-L	Failure Count—Line
• FC-P	Failure Count—Path
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio

• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High-Order Path Negative Pointer Justification Count
• HP-NPJC-PGEN	High-Order Path, Negative Pointer Justification Count
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count
• HP-SEPI	The number of High-Order Path Severely Errored Period Intensity events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset

• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload cyclic redundancy check (CRC) errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in microA
• LBCL-MAX	Maximum Laser Bias current in microA
• LBCL-MIN	Minimum Laser Bias current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period

• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OPR-AVG	Average Receive Power in one tenth of a microW
• OPR-MAX	Maximum Receive Power in one tenth of a microW
• OPR-MIN	Minimum Receive Power in one tenth of a microW
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microW
• OPT-MAX	Maximum Transmit Power in one tenth of a microW
• OPT-MIN	Minimum Transmit Power in one tenth of a microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PRE-FECBER	Enum to hold PRE-FECBER value
• 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
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point

• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
• OSNR-MIN	Minimum Optical Signal To Noise Ratio.
• OSNR-MAX	Maximum Optical Signal To Noise Ratio.
• PMD-MIN	Minimum Polarization Mode Dispersion.
• PMD-MAX	Maximum Polarization Mode Dispersion.
<THELV>	Threshold level. THLEV is a float.
<LOCN>	Location associated with a particular command. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility
• NEND	Action occurs on the near end of the facility
<TMPER>	(Optional) Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24-hours. For SONET PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.

SET-TH-ODU

This command sets ODU threshold

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

SET-TH-ODU:[<TID>]:<aid>:<CTAG>::<montype>,<thlev>,[<locn>],,[<tmper>]:[BANDWIDTH=<bandwidth>]

Input Example

SET-TH-ODU::ODU-1-3-11-1-1-2:a::BBE-PM,85033,,,:BANDWIDTH=ODU2E;

node113 2017-06-10 19:45:28

M a COMPLD

;

Input Parameters

AID	AID (Mandatory). ODU AID. Example: ODU-1-5-7-1-1-1
BANDWIDTH	ENUM (Mandatory). ODU Level (ODU2E).
montype	ENUM (Mandatory). ES-PM, SES-PM, UAS-PM, BBE-PM, and FC-PM.
thlev	Float. Threshold level.
locn	ENUM (optional). Location associated with a particular command. The parameter type is LOCATION, which is the location where the action is to take place.
tmper	ENUM, (optional). Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.15-min or 1-day.

SET-TOD

The Set Time of Day (SET-TOD) 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 (for example, military time).

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

SET-TOD:[<TID>]::<CTAG>::<YEAR>,<MONTH>,<DAY>,<HOUR>,<MINUTE>,<SECOND>,[<DIFFERENCE>][:DST=<DST>];,[TMTYPE=<tmtype>];

Input Example

SET-TOD:CAZADERO::240::1998,05,08,13,18,55,480:DST=Y;

Input Parameters

<YEAR>	The current calendar year. YEAR is an integer.
<MONTH>	The month of the year. Ranges from 01 to 12. MONTH is an integer.
<DAY>	The day of the month. Ranges from 01 to 31. DAY is an integer.
<HOUR>	The hour of the day. Ranges from 00 to 23. HOUR is an integer.
<MINUTE>	The minute of the hour. Ranges from 00 to 59. MINUTE is an integer.
<SECOND>	The second of the minute. Ranges from 00 to 59. SECOND is an integer.
<DIFFERENCE>	The number of minutes off UTC. DIFFERENCE is an integer.
<DST>	Daylight savings time. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.

SET-HOP-UNICFG

The SET-HOP-UNICFG command adds, removes, or modifies a HOP route constraint of a UNICFG circuit.

Usage Guidelines

- Missing.

Category

Missing

Security

Missing

Input Format

SET-HOP-UNICFG:[<TID>]:<src>:<CTAG>::<hopaction>,[<hoptype>],[<hopnode>],[<hopside>][::];

Input Example

> SET-HOP-UNICFG::AGGR-1-7-1-1:A::ADD,LOOSE,10.7.1.1,WDMSIDE-A;

ENE-236 2015-06-08 13:30:02

M A COMPLD;

Input Parameters

< SRC>	Source AID
< HOPACTION> • ADD • REMOVE • MODIFY • CLEARALL	Identifies the action to be performed on the hop item. The allowed values are:
<HOPTYPE> • STRICT • LOOSE • EXCLUDE	Identifies the type of hop constraint. The allowed values are:
<HOPNODE>	Identifies the IP address of the target node
<HOPSIDE>	Identifies the hop constraint target WDM side

SET-OTDRBASESCAN

The Set base scan (SET-OTDRBASESCAN) command is used to set the last scan results as baseline.

Usage Guidelines

Last scan values for SECTOR and DIRECTION are set as baseline values.

Category
Equipment

Security
Provisioning

Input Format
SET-OTDRBASESCAN:[<TID>]:<AID>:<CTAG>::SECTOR=<sector>,DIRECTION=<direction>;

Input Example

SET-OTDRBASESCAN::PPM-1-8-1:a::SECTOR=ZONE#1,DIRECTION=TX;

Input Parameters

<AID>	Specific PPM port on the TNC
<DIRECTION> • TX • RX	Defines the direction for the scan. Enum type parameter that takes the following values:
<SECTOR> • EXPERT • ZONE #1 (0 to 1km) • ZONE #2 (0 to 25km) • ZONE #3 (0 to 80km) • ZONE #4 (0 to 100km	Sector parameter of enum type that takes the following values:

SET-COOLINGPROFILE

This command is used to set cooling profile.

Usage Guidelines
The AID is not required for single shelf. COOLINGPROFILE is an enum whose value can be LOW,MEDIUM or HIGH.

Category
Equipment

Security
Provisioning

Input Format
SET-COOLINGPROFILE:[<TID>]:[<AID>]:<CTAG>:::COOLINGPROFILE=<coolingprofile>

Input Parameters

<AID>	For single shelf-configuration AID is not required. For multiple shelf AID can be SHELF-<shelf number>
<COOLINGPROFILE>	This is an enum which has values: • LOW • MEDIUM • HIGH

Output Format
NA

Ouput Example
> SET-COOLINGPROFILE:::1:::COOLINGPROFILE=HIGH;
node113 2016-07-17 14:12:56
M 1 COMPLD
;
> SET-COOLINGPROFILE::SHELF-1:1:::COOLINGPROFILE=HIGH;
node113 2016-07-16 09:11:17
M 1 COMPLD

Output Parameters
NA

SET-SLRG-NODE

SET-SRLG-NODE sets the UNIQUESRLG and ADDITIONALSRLG constraints in NE level.

Usage Guidelines

- ADDITIONALSRLG parameter contain set of SRLG constraints in the form of string separated by “&”.
- The max number of SRLG constraints within ADDITIONALSRLG is 20.
- All the SRLG constraints within ADDITIONALSRLG and UNIQUESRLG are unique.
- The range of SRLG constraints is 0 to 4294967294.

Category
System

Security
Superuser

Input Format
RTRV-SRLG-NODE:[<TID>]::<CTAG>:::[UNIQUESRLG=<uniquesrlg>],[ADDITIONALSRLG=<additionalsrlg>];

Input Parameters

<UNIQUESRLG>	Unique SRLG constraints, range is in between 0 to 4294967294. This can be unique with ADDITIONALSRLG.
<ADDITIONALSRLG>	It contains set of SRLG constraints in the form of string separated by “&”. Set of constraints are unique. This should not contain the value used in UNIQUESRLG. Each of the value in the set has the range is in between 1 to 4294967294

Output Format
NA

Output Example
NA

Output Parameters
NA

SET-SLRG-WDMSIDE

SET-SRLG-NODE sets the UNIQUESRLG and ADDITIONALSRLG constraints for WDM side.

Usage Guidelines

- ADDITIONALSRLG parameter contains set of SRLG constraints in the form of string separated by “&”.
- The max number of SRLG constraints within ADDITIONALSRLG is 20.
- All the SRLG constraints within ADDITIONALSRLG and UNIQUESRLG are unique.
- The range of SRLG constraints is 0 to 4294967294.

Category
System

Security
Superuser

Input Format
RTRV-SRLG-NODE:[<TID>]:<AID>:<CTAG>:::[UNIQUESRLG=<uniquesrlg>],[ADDITIONALSRLG=<additionalsrlg>];

Input Parameters

<AID>	The AID is used to access the WDM side of an DWDM node. This is applicable to WDMANS and APC applications of the NE. • WDMSIDE-{A,B,C,D,E,F,G,H} DWDM side identifier
<UNIQUESRLG>	Unique SRLG constraints, range is in between 0 to 4294967294. This can be unique with ADDITIONALSRLG.
<ADDITIONALSRLG>	It contains set of SRLG constraints in the form of string separated by “&”. Set of constraints are unique. This should not contain the value used in UNIQUESRLG. Each of the value in the set has the range is in between 1 to 4294967294

Output Format
NA

Output Example
NA

Output Parameters
NA

Chapter 26: SW Commands

This chapter provides switch (SW) commands for the Cisco NCS 2000 Series.

SW-DX-EQPT

The Switch Duplex Equipment (SW-DX-EQPT) command switches an XC-VXL-10G or XC-VXL-2.5G card with its redundant card within the NE.

Usage Guidelines

If sending a mode parameter with a value other than NORM, FRCD, or NULL, the Input, Data Not Valid (IDNV) error message will be returned.

Category

Equipment

Security

Maintenance

Input Format

SW-DX-EQPT:[<TID>]:<AID>:<CTAG>::[<MODE>][,];

Input Example

SW-DX-EQPT:CISCO:SLOT-8:123::NORM;

Table 26-1 Input Parameter Support

Parameter	Description
<AID>	Access identifier. Identifies the equipment unit in the NE that is to be switched with its redundant card.
<MODE>	(Optional) Command mode. Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in Unlocked-Enabled or Locked-Disabled, AutomaticInService service states.
• FRCD	Force the system to override a state in which the command would normally be denied. (FRCD is not supported in this command).

• NORM	Execute the command normally. Do not override any conditions that may make the command fail.

SW-TOPROTN-EQPT

The Switch to Protection Equipment (SW-TOPROTN-EQPT) command performs an equipment unit protection switch.

- This command is used for electrical cards that can participate in an electrical protection group (for example, E1, E3, E4, and DS3i-N-12).
- 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 1:N protection groups with N > 1. For example, suppose a 1:N protection group has 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 become active. When Card B is replaced and the revert timer expires, Card B will carry traffic and Card A will carry traffic. The protect card will not carry any traffic.
- 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 nonrevertive protection group, the unit specified by the AID will raise the transient condition of WKSWPR if the command is executed without an error.
- The following actions will return error messages:
  - The default PROTID is the protect unit if there is only one protect unit per protection group in the NE, otherwise a DENY error message will be returned.
  - This command only supports the BTH or null value of the DIRN parameter. A command with any other value is considered an incorrect use of the command. An Input, Data Not Valid (IDNV) error message will be returned.
  - This command is not used for the common control (TCC2, TCC2P, TCC3, XC-VXL-10G, XC-VXL-2.5G, or XC-VXC-10G) cards. A command on a common control card will generate an Input, Invalid Access Identifier (IIAC) error message. To switch the common control cards, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
  - This command is not used for NCS (STM) cards. A command on a NCS card will return an IIAC error message. To switch an NCS card, use the OPR-PROTNSW and RLS-PROTNSW commands.
  - If this command is used on a card that is not in a protection group, the Status, Not in Valid State (SNVS) error message will be returned.
  - If this command is sent to a missing working card, the Status, Working Unit Failed (SWFA) error message will be returned.
  - If this command is used on a protect card, the IIAC error message will be returned.
  - Sending a mode parameter with a value other than NORM, FRCD, or null will return the IDNV error message.
  - Sending the SW-TOPROTN command to a working card when the working card has raised INHSWPR will return the Status, Working Unit Locked (SWLD) error message.
  - Sending the SW-TOPROTN command to a working card when the protection card has raised INHSWPR will return the Status, Protection Unit Locked (SPLD) error message.
  - 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) will return the Status, Not in Valid State (SNVS) error message.
  - Sending the SW-TOPROTN command to an active working card when the protect card is failed or missing will return the Status, Protection Unit Failed (SPFA) error message.
  - Sending this command to a standby working card will return the SNVS error message.

Category
Equipment

Security
Maintenance

Input Format
SW-TOPROTN-EQPT:[<TID>]:<AID>:<CTAG>::[<MODE>],[<PROTID>],[<DIRN>];

Input Example
SW-TOPROTN-EQPT:CISCO:SLOT-1:123::FRCD,SLOT-3,BTH;

Table 26-2 Parameter Support

Parameter	Description
<AID>	Access identifier. Specifies the working unit which will have traffic switched to protection.
<MODE>	(Optional) Command mode. Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in Unlocked-Enabled or Locked-Disabled, AutomaticInService service states.
• 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.
<PROTID>	(Optional) Access identifier. Identifies the protection unit to be switched when there is more than one protection unit within the NE.

<DIRN>	(Optional) The direction relative to the entity defined in the AID field. The direction of the switching. This command only supports the BTH value of this parameter. DIRN defaults to BTH. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions

SW-TOWKG-EQPT

The Switch to Working Equipment (SW-TOWKG-EQPT) command switches the active protect card back to working card.

Usage Guidelines

- This command is used for electrical cards that can participate in an electrical group (for example, E1, E3, E4, and DS3i-N-12).
- 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 is executed without an error. In a nonrevertive protection group, the unit specified by the AID will raise the transient condition of WKSWBK if the command were executed without an error.
- The following actions will return error messages:
  - This command only supports the BTH or null value of the DIR> parameter. A command with any other value is considered an incorrect use of the command. An IDNV error message will be returned.
  - This command is not used for the common control (TCC2, TCC2P, TCC3, XC-VXL-10G, XC-VXL-2.5G, or XC-VXC-10G) cards. A command on a common control card will return an IIAC error message. To switch common control cards, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
  - This command is not used for NCS (STM) cards. A command on a NCS card will return an IIAC error message. To switch an NCS card, use the OPR-PROTNSW and RLS-PROTNSW commands.
  - If this command is used on a card that is not in a protection group, the SNVS error message will be returned.
  - If this command is sent to a missing working card, the SWFA error message will be returned.
  - If this command is used on a protection card, the IIAC error message will be returned.
  - If you send a mode parameter with a value other than NORM, FRCD, or null, the IDNV error message will be returned.
  - Sending the SW-TOWKG command to a working card when the working card has raised INHSWWKG will return the SWLD error message.
  - Sending the SW-TOWKG command to a working card when the protection card has raised INHSWWKG will return the SPLD error message.
  - Sending the SW-TOWKG command to an active working card will return the SNVS error message.

Category

Equipment

Security
Maintenance

Input Format
SW-TOWKG-EQPT:[<TID>]:<AID>:<CTAG>::[<MODE>][,<DIRN>];

Input Example
SW-TOWKG-EQPT:CISCO:SLOT-2:123::FRCD,BTH;

Table 26-3 Parameter Support

Parameter	Description
<AID>	Access Identifier. Specifies the working unit which will have traffic switched to protection.
<MODE>	(Optional) Command mode. Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in Unlocked-Enabled or Locked-Disabled, AutomaticInService service states.
• 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.
<DIRN>	(Optional) The direction relative to the entity defined in the AID field. The direction of the switching. This command only supports the BTH value of this parameter. DIRN defaults to BTH. The parameter type is DIRECTION, which is the transmit and receive directions
• BTH	Both transmit and receive direction

Chapter 27: Access Identifiers

This chapter describes the access identifiers (AIDs) of TL1 commands and autonomous messages for the for the Cisco NCS 2000 Series.

The AID code directs an input command to its intended physical or data entity inside the network element (NE). Equipment modules and facilities are typical examples of entities addressed by the access code.

ALL

AID for CXP port on 100G-LC-C card: AGGR-[SLOT]-[APPM]-[PORT].

AID for fixed trunk on 100G-LC-C card: CHAN-[SLOT]-[PORT].

Table 28-1 ALL

AID	**Pattern**	
AidUnionId	FACILITY STS VT	
AidUnionId1	BLSR	
ACHAN	ACHAN[-{1-50}]-{2-7}-{1}-{1}	
AGGR	AGGR-[SLOT]-[APPM]-[PORT] AGGR[-{1-50}]-{2-7}-{1}-{1}	
BAND	ALL BAND[-{1-50}]-{1-6,12-17}-{1-4}-ALL BAND[-{1-50}]-{1-6,12-17}-{1-4}-{RX,TX} BAND[-{1-50}]-{1-6,12-17}-{1}-ALL BAND[-{1-50}]-{1-6,12-17}-{1}-{RX,TX}	
BANDWL	BANDWL-{1-6,12-17}-{1-32}-{RX,TX}-1530.33 BANDWL-{1-6,12-17}-{1-32}-{RX,TX}-ALL BANDWL-[{1-50}-]{1-6,12-17}-{1-32}-{RX,TX,PT}-<WLEN> BANDWL-[{1-50}-]{1-6,12-17}-{1-32}-{RX,TX,PT}-ALL	
BITS	ALL BITS-ALL BITS[<SHELFID>]-ALL BITS[<SHELFID>]-{1,2} SYNC[<SHELFID>]-BITS{1,2}	
BLSR	BLSR-RINGID	

BWP	BWP-ALL BWP-{1-10000}	
CHANNEL	ALL CHAN[-{1-50}]-{1-6,12-17}-ALL CHAN[-{1-50}]-{1-6,12-17}-{1-32}-ALL CHAN[-{1-50}]-{1-6,12-17}-{1-32}-{RX,TX} CHAN[-{1-50}]-{1-6,12-17}-{1-32}-{RX,PT} CHAN[-{1-50}]-{1-6,12-17}-{1-40}-ALL CHAN[-{1-50}]-{1-6,12-17}-{1-40}-{RX,TX} CHAN[-{1-50}]-{1-6,12-17}-{1-40}-{RX,PT} CHAN[-{1-50}]-{1-6,12-17}-{1-4}-ALL CHAN[-{1-50}]-{1-6,12-17}-{1-4}-{RX,TX} CHAN[-{1-50}]-{1-6,12-17}-{2,3} CHAN-[SLOT]-[PORT] CHAN[-{1-50}]-{2-7}-{1-10}-{1}	CHAN[-{1-50}]-{1-6,12-17}-{5} CHAN[-{1-50}]-{1-6,12-17}-{9} CHAN[-{1-50}]-{1-6,12-17}-{9,10} CHAN[-{1-50}]-{1-6,12-17}-{3,4}-{1} CHAN[-{1-50}]-{1-6,12-17}-{21,22}-{1} CHAN[-{1-50}]-{1-6,12-17}-{19}-{1} CHAN[-{1-50}]-{1-6,12-17}-{17,18}-{1} CHAN[-{1-50}]-{1-6,12-17}-{1-4}-{1} CHAN[-{1-50}]-{1-6,12-17}-{1,2} CHAN[-{1-50}]-{1-6,12-17}-{1-4}-{1} CHAN[-{1-50}]-{1-6,12-17}-{5}
COM	Common	
CTRL	CTRL-ALL CTRL-{1-4}	
CrossConnectId	FACILITY STS	
CrossConnectId1	VCM FACILITY STS VT	
DS1	ALL DS1-{1-6,12-17}-{1-50,13,15,17,19,21,23,25,27,29,31,33,35}-{1-28} DS1-{1-6,12-17}-{1-50,13,15,17,19,21,23}-{1-28} DS1-{1-6,12-17}-{1-6}-{1-28}	

ENV	ALL ENV-IN-ALL ENV-IN[-{1-50}]-ALL ENV-IN[-{1-50}]-{1-20} ENV-IN[-{1-50}]-{1-32} ENV-IN[-{1-50}]-{1-3} ENV-IN[-{1-50}]-{1-4}	ENV-IN[-{1-50}]-{1-6} ENV-OUT-ALL ENV-OUT[-{1-50}]-ALL ENV-OUT[-{1-50}]-{1-16} ENV-OUT[-{1-50}]-{1-2} ENV-OUT[-{1-50}]-{1-4} ENV-{IN,OUT}[-{1-50}]-{1-16}
EQPT	ALL AIP-ALL AIP[-{1-50}] BIC-ALL BIC[-{1-50}]-ALL BIC[-{1-50}]-{A,B} BP-ALL BP[-{1-50}] FAN-ALL FAN[-{1-50}] PIM[-{1-50}]-{1-4,11-14}-ALL PIM[-{1-50}]-{1-4,11-14}-{1-4} PPM[-{1-50}]-1-{1,2} PPM[-{1-50}]-2-{1,2} PPM[-{1-50}]-{1-4,11-14}-{1-4}-ALL	PPM[-{1-50}]-{1-4,11-14}-{1-4}-{1-4} PPM[-{1-50}]-{1-6,12-17}-{1-4} PPM[-{1-50}]-{1-6,12-17}-{1-8} PWR-ALL PWR[-{1-50}]-ALL PWR[-{1-50}]-{A,B} SLOT-ALL SLOT[-{1-50}]-ALL SLOT[-{1-50}]-{1-14} SLOT[-{1-50}]-{1-17} SLOT[-{1-50}]-{1-2} SLOT[-{1-50}]-{1-4,11-14} SLOT[-{1-50}]-{1-6,12-17} SLOT[-{1-50}]-{1-8} SHELF-ALL SHELF-{1-50}
ETHERNET	ALL ETH[-{1-50}]-{1-5,12-16}-{1-22}-1 ETH[-{1-50}]-{1-6,12-17}-{1-4}-1	
ETH	ETH-{1,2,5,6}-{1-6} ETH-{1}-{1-6}	
ETHID	ALL ETHID[-{1-50}]-{1-5,12-16}-{1-22}-1-{1-20} ETHID[-{1-50}]-{1-6,12-17}-{1-4}-1-{1-20}	

FACILITY	ALL E1-{1,2,5,6}-{1-21} E1-{1,2,5,6}-{1-63} E3-{1,2,5,6}-{1-3} EC1-{1,2,5,6}-{1-3} EC1-{2}-{1-3} ETH-{1,2,5,6}-{1-6} ETH-{1}-{1-6} FAC[-{1-50}]-{1-4,11-14}-ALL FAC[-{1-50}]-{1-4,11-14}-{1-16} FAC[-{1-50}]-{1-4,11-14}-{1-4} FAC[-{1-50}]-{1-4,11-14}-{1-4}-{1-4}-{1} FAC[-{1-50}]-{1-4,14-17}-{1-8} FAC[-{1-50}]-{1-4}-1 FAC[-{1-50}]-{1-4}-{1-4} FAC[-{1-50}]-{1-6,12-17}-1 FAC[-{1-50}]-{1-6,12-17}-ALL FAC[-{1-50}]-{1-6,12-17}-{0-11} FAC[-{1-50}]-{1-6,12-17}-{0-1} FAC[-{1-50}]-{1-6,12-17}-{1-50,14,16,18,20,22,24,26,28,30,32,34,36} FAC[-{1-50}]-{1-6,12-17}-{1-50,14,16,18,20,22,24} FAC[-{1-50}]-{1-6,12-17}-{1-12} FAC[-{1-50}]-{1-6,12-17}-{1-4} FAC[-{1-50}]-{1-6,12-17}-{1-6} FAC[-{1-50}]-{1-6,12-17}-{1} FAC[-{1-50}]-{1-6}-ALL FAC[-{1-50}]-{5,6,12,13}-{1} FAC[-{1-50}]-{5-6}-{1-28}	FAC[-{1-50}]-{5-6}-{1-3} FAC[-{1-50}]-{8,10}-{1} FSTE-{1,2,5,6}-{0-7} FSTE-{1,2,5,6}-{1-8} FSTE-{1}-{0-7} FSTE-{1}-{1-8} OC12-{2}-{1-2}-{1} OC12-{3,4}-{1-2}-{1} OC3-{2}-{1-2}-{1} OC3-{3,4}-{1-2}-{1} OC48-{3,4}-{1-2}-{1} STM1-{3,4}-{1,2}-{1} STM4-{3,4}-{1,2}-{1} STM16-{3,4}-{1,2}-{1} T1-{1,2,5,6}-{1-28} T1-{1,2,5,6}-{1-84} T1-{2}-{1-21} T3-{1,2,5,6}-{1-3} T3-{2}-{1-3} VFAC-{1,2,5,6}-{0-1} VFAC-{1,2,5,6}-{1-6} VFAC-{1,2,5,6}-{1-8} VFAC[-{1-50}]-{1-4,11-14}-{1-4}-{1-4}-1 VFAC[-{1-50}]-{1-6,12-17}-{0-1} VFAC[-{1-50}]-{1-6,12-17}-{1,2} VFAC[-{1-50}]-{1-6,12-17}-{1,2}-{1,8} VFAC[-{1-50}]-{1}-{0-1} VFAC[-{1-50}]-{1}-{1-8}
IPADDR	111.222.333.444 "[3ffe:0501:0008:0000:0260:97ff:fe40:efab]"	
IPCC	ALL CC-{1-16}	

LINE	LINE[-{1-50}]-{1-6,12-17}-{1-2}-ALL
	LINE[-{1-50}]-{1-6,12-17}-{1-2}-{RX,TX}
	LINE[-{1-50}]-{1-6,12-17}-{1-3}-ALL
	LINE[-{1-50}]-{1-6,12-17}-{1-3}-{RX,TX}
	LINE[-{1-50}]-{8,10}-{1}-ALL
	LINE[-{1-50}]-{8,10}-{1}-{RX,TX}
	LINE-[{1-50}-]{1-6,12-17}-{1}-{RX,TX}(COM)
	LINE-[{1-50}-]{1-6,12-17}-{2}-{RX,TX}(OSC)
	LINE-[{1-50}-]{1-6,12-17}-{3}-{RX,TX}(LINE)
	LINE-[{1-50}-]{1-6,12-17}-{1-3}-ALL
	LINE-[{1-50}-]{1-6,12-17}-{1}-{RX,TX}(LINE)
	LINE-[{1-50}-]{1-6,12-17}-{2}-{RX,TX}(COM)
	LINE-[{1-50}-]{1-6,12-17}-{3}-{RX,TX}(OSC)
	LINE-[{1-50}-]{1-6,12-17}-{4}-{RX,TX}(DC)
	LINE-[{1-50}-]{1-6,12-17}-{1-4}-ALL
	LINE-[{1-50}-]{1-6,12-17}-1-RX (For input OTS)
	LINE-[{1-50}-]{1-6,12-17}-1-ALL
	CHAN-[{1-50}-]{1-6,12-17}-{1-32}-TX (For drop OCH)
	CHAN-[{1-50}-]{1-6,12-17}-{1-32}-ALL
	LINE-[{1-50}-]{1-5,12-16}-{1}-{RX,TX} (EXP)
	LINE-[{1-50}-]{1-5,12-16}-{2}-{RX,TX} (COM)
	LINE-[{1-50}-]{1-5,12-16}-{3}-{TX} (DROP)
	LINE-[{1-50}-]{1-5,12-16}-{1-3}-ALL
	CHAN-[{1-50}-]{1-5,12-16}-{1-32}-{RX} (ADD)
	CHAN-[{1-50}-]{1-5,12-16}-{1-32}-{PT} (PT)
	CHAN-[{1-50}-]{1-5,12-16}-{1-32}-ALL
	LINE-[{1-50}-]{1-6,12-17}-{1}-{RX,TX} (EXP)
	LINE-[{1-50}-]{1-6,12-17}-{2}-{RX,TX} (COM)
	LINE-[{1-50}-]{1-6,12-17}-{3}-{RX,TX} (EXP to other ring)
	LINE-[{1-50}-]{1-6,12-17}-{1-3}-ALL

LINEWL	LINEWL[-{1-50}]-{1-6,8,10,12-17}-ALL LINEWL[-{1-50}]-{1-6,12-17}-{1}-{RX,TX}-ALL LINEWL[-{1-50}]-{1-6,12-17}-{1}-{RX,TX}-<WLEN> LINEWL[-{1-50}]-{1-6,12-17}-{1-3}-{RX,TX}-ALL LINEWL[-{1-50}]-{1-6,12-17}-{1-3}-{RX,TX}-<WLEN> LINEWL[-{1-50}]-{1-6,12-17}-{1-2}-{RX,TX}-ALL LINEWL[-{1-50}]-{1-6,12-17}-{1-2}-{RX,TX}-<WLEN> LINEWL[-{1-50}]-{1-6,12-17}-{1-2}-{RX,TX}-ALL LINEWL[-{1-50}]-{1-6,12-17}-{1-2}-{RX,TX}-<WLEN> LINEWL[-{1-50}]-{1-6,12-17}-{1,3,4}-{RX,TX}-ALL LINEWL[-{1-50}]-{1-6,12-17}-{1,3,4}-{RX,TX}-<WLEN> LINEWL[-{1-50}]-{1-6,12-17}-{1-3}-{RX,TX}-<LABEL>	LINEWL[-{1-50}]-{1-6,12-17}-{1}-{RX,TX}-ALL LINEWL[-{1-50}]-{1-6,12-17}-{1}-{RX,TX}-<WLEN> LINEWL-[{1-50}]-{1-5,12-16}-{1-8}-{RX}-<WLEN> LINEWL-[{1-50}]-{1-5,12-16}-{9}-{RX,TX}-<WLEN> LINEWL-[{1-50}]-{1-5,12-16}-{10}-{TX}-<WLEN> LINEWL-[{1-50}]-{1-5,12-16}-{11}-{RX,TX}-<WLEN>
LNKTERM	ALL LNKTERM-ALL LNKTERM-{1-65535}	
ODU0	ODU0[-{1-50}]-{1-6,12-17}-{1-10}-{1}-{1-4}-{1-2}	
OSC	OSC-RINGID	
OPM	ALL OPM[-{1-50}]-{1-5,12-16}-<WLEN> OPM[-{1-50}]-{1-5,12-16}-ALL	

PRSLOT	NULL SLOT-1 SLOT-13 SLOT-15 SLOT-17 SLOT-3 SLOT-5	
RPRIF	ALL RPRIF-{1-6,12-17}-0	PPM[-{1-50}]-{1-4,11-14}-{1-4}-{1-4} RPRIF-<SLOT>-<RPR INTERFACE>. Currently, only interface 0 is supported.
RFILE	RFILE-DB RFILE-LOG RFILE-PKG RFILE-COMPDB	
SHELF	SHELF-ALL SHELF-{1-50}	

STS	FAC-{1-4,11-14}-{1-4}-{1-4}-{1} FAC-{1-6,12-17}-{1-4} STS-{1,2,5,6}-1 STS-{1,2,5,6}-{1-3} STS-{1,2,5,6}-{1-3}-1 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}-{1,4}-{1} STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,13,25,37}	

STS (continued)	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,25}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,13,16,25,28,37,40}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7,10,13,16,19,22,25,28,31,34,37,40,43,46}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-12}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-3}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-48}
	STS-{1-4,11-14}-{1-4}-{1-192}
	STS-{1-4,11-14}-{1-4}-{1-4}-{1}-ALL
	STS-{1-4,11-14}-{1-4}-{1-4}-{1}-{1,4,7,13,16,19,25,28,31,43}
	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 (continued)	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}-1
	STS-{1-6,12-17}-{1-24}-1
	STS-{1-6,12-17}-{1-36}-1
	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-{2}-{1-2}-{1}-{1,4,7,10}
	STS-{2}-{1-2}-{1}-{1,7}
	STS-{2}-{1-2}-{1}-{1-12}
	STS-{2}-{1-2}-{1}-{1-3}
	STS-{2}-{1-2}-{1}-{1}
	STS-{2}-{1-3}-{1}
	STS-{2}-{1}
	STS-{3,4}-{1,2}-1-{1-12}
	STS-{3,4}-{1,2}-1-{1-3}
	STS-{3,4}-{1,2}-1-{1-48}
	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 (continued)	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}-{1-4}-1 STS-{5-6}-ALL VFAC-{1-6,12-17}-{0-1}	
SYN	SYNC-NE	
SYN_SRC	BITS-1 BITS-2 FAC-{1-4,11-14}-{1-16} FAC-{1-4,11-14}-{1-4} FAC-{1-4}-1 FAC-{1-4}-{1-4} FAC-{1-6,12-17}-{1-4} FAC-{1-6,12-17}-{1}	FAC-{5,6,12,13}-{1} INTERNAL NONE OC12-{2}-{1-2}-{1} OC3-{2}-{1-2}-{1} SYNC-NE T1-{2}-{1-21}
SYNC_REF	SYNC-ALL SYNC-NE SYNC-{BITS1,BITS2}	
SYNCSW	INT PRI SEC	
UDC	UDC-{F,DCC}-{A,B}	
VCFAC	VCFAC[-{1-50}]-{2-7}-{1-2}	
VFAC	VFAC[-{1-50}]-{2-7}-{1-10}-1	
VCHAN	VCHAN[-{1-50}]-{2-7}-{1-2}	
VLINE	VLINE[-{1-50}]-{2-7}-{1-2}-{1}-{1-12}	

VT	VT1-{1,2,5,6}-1-{1-7}-{1-4} VT1-{1,2,5,6}-{1-3}-1-{1-7}-{1-4} VT1-{1,2,5,6}-{1-3}-{1-7}-{1-4} VT1-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-4} VT1-{1-4}-1-{1-12}-{1-7}-{1-4} VT1-{1-4}-1-{1-48}-{1-7}-{1-4} VT1-{1-4}-{1-4}-{1-3}-{1-7}-{1-4} VT1-{1-6,12-17}-1-{1-12}-{1-7}-{1-4} VT1-{1-6,12-17}-1-{1-48}-{1-7}-{1-4} VT1-{1-6,12-17}-1-{1-7}-{1-2} VT1-{1-6,12-17}-{1-12}-1-{1-7}-{1-4} VT1-{1-6,12-17}-{1-24}-1-{1-7}-{1-4} VT1-{1-6,12-17}-{1-36}-1-{1-7}-{1-4} VT1-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-4} VT1-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-4} VT1-{1-6,12-17}-{1-6}-{1-7}-{1-4} VT1-{2}-{1-2}-{1}-{1-12}-{1-7}-{1-4}	VT1-{2}-{1-2}-{1}-{1-3}-{1-7}-{1-4} VT1-{2}-{1-3}-{1}-{1-7}-{1-4} VT1-{2}-{1}-{1-7}-{1-3} VT1-{3,4}-{1-2}-{1}-{1-12}-{1-7}-{1-4} VT1-{3,4}-{1-2}-{1}-{1-3}-{1-7}-{1-4} VT1-{3,4}-{1-2}-{1}-{1-48}-{1-7}-{1-4} VT1-{5,6,12,13}-1-{1-192}-{1-7}-{1-4} VT1-{5,6,12,13}-1-{1-48}-{1-7}-{1-4} VT1-{5-6}-1-{1-7}-{1-2} VT1-{5-6}-1-{1-7}-{1-4} VT2-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-3} VT2-{1-6,12-17}-1-{1-12}-{1-7}-{1-3} VT2-{1-6,12-17}-1-{1-48}-{1-7}-{1-3} VT2-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-3} VT2-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-3} VT2-{5,6,12,13}-1-{1-192}-{1-7}-{1-3} VT2-{5,6,12,13}-1-{1-48}-{1-7}-{1-3}
WDMANS	WDMSIDE-{UNKNOWN,A,B,C,D,E,F,G,H} WDMNODE	
WLEN	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}	

AidUnionId

Table 28-2 AidUnionId

AID	Pattern	
Facility	ALL	FAC-{5-6}-{1-3}
	ACHAN[-{1-50}]-{2-7}-{1}-{1}	FAC-{8,10}-{1}
	AGGR[-{1-50}]-{2-7}-{1}-{1}	FSTE-{1,2,5,6}-{0-7}
	CHAN[-{1-50}]-{2-7}-{2}	FSTE-{1,2,5,6}-{1-8}
	CHAN[-{1-50}]-{2-7}-{1-10}-{1}	FSTE-{1}-{0-7}
	EC1-{1,2,5,6}-{1-3}	FSTE-{1}-{1-8}
	EC1-{2}-{1-3}	OC12-{2}-{1-2}-{1}
	FAC-{1-4,11-14}-ALL	OC12-{3,4}-{1-2}-{1}
	FAC-{1-4,11-14}-{1-16}	OC3-{2}-{1-2}-{1}
	FAC-{1-4,11-14}-{1-4}	OC3-{3,4}-{1-2}-{1}
	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}	T1-{1,2,5,6}-{1-28}
	FAC-{1-4,14-17}-{1-8}	T1-{1,2,5,6}-{1-84}
	FAC-{1-4}-1	T1-{2}-{1-21}
	FAC-{1-4}-{1-4}	T3-{1,2,5,6}-{1-3}
	FAC-{1-6,12-17}-1	T3-{2}-{1-3}
	FAC-{1-6,12-17}-ALL	VFAC-{1,2,5,6}-{0-1}
	FAC-{1-6,12-17}-{0-11}	VFAC-{1,2,5,6}-{1-8}
	FAC-{1-6,12-17}-{0-1}	VFAC-{1-4,11-14}-{1-4}-{1-4}-1
	FAC-{1-6,12-17}-{1-50,14,16,18,20,22,24,26,28,30,32,34,36}	VFAC-{1-6,12-17}-{0-1}
		VFAC-{1-6,12-17}-{1,2}
		VFAC-{1-6,12-17}-{1,2}-{1,8}
	FAC-{1-6,12-17}-{1-50,14,16,18,20,22,24}	VFAC-{1}-{0-1}
		VFAC-{1}-{1-8}
	FAC-{1-6,12-17}-{1-12}	VFAC[-{1-50}]-{2-7}-{1-10}-{1}
	FAC-{1-6,12-17}-{1-4}	VLINE[-{1-50}]-{2-7}-{1-2}-{1}-{1-12}
	FAC-{1-6,12-17}-{1-6}	
	FAC-{1-6,12-17}-{1}	
	FAC-{1-6}-ALL	
	FAC-{5,6,12,13}-{1}	
	FAC-{5-6}-{1-28}	

STS	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}
	FAC-{1-6,12-17}-{1-4}
	STS-{1,2,5,6}-1
	STS-{1,2,5,6}-{1-3}
	STS-{1,2,5,6}-{1-3}-1
	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 (continued)	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}-{1,4}-{1}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,13,25,37}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,25}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,13,16,25,28,37,40}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7,10,13,16,19,22,25,28,31,34,37,40,43,46}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-12}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-3}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-48}
	STS-{1-4,11-14}-{1-4}-{1-192}
	STS-{1-4,11-14}-{1-4}-{1-4}-{1}-ALL
	STS-{1-4,11-14}-{1-4}-{1-4}-{1}-{1,4,7,13,16,19,25,28,31,43}

STS (continued)	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
	STS-{1-6,12-17}-{1-12}-1
	STS-{1-6,12-17}-{1-24}-1

STS (continued)	STS-{1-6,12-17}-{1-36}-1
	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-{2}-{1-2}-{1}-{1,4,7,10}
	STS-{2}-{1-2}-{1}-{1,7}
	STS-{2}-{1-2}-{1}-{1-12}
	STS-{2}-{1-2}-{1}-{1-3}
	STS-{2}-{1-2}-{1}-{1}
	STS-{2}-{1-3}-{1}
	STS-{2}-{1}
	STS-{3,4}-{1,2}-1-{1-12}
	STS-{3,4}-{1,2}-1-{1-3}
	STS-{3,4}-{1,2}-1-{1-48}
	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}-{1-4}-1
	STS-{5-6}-ALL
	VFAC-{1-6,12-17}-{0-1}

VT	ALL
	VT1-{1,2,5,6}-1-{1-7}-{1-4}
	VT1-{1,2,5,6}-{1-3}-1-{1-7}-{1-4}
	VT1-{1,2,5,6}-{1-3}-{1-7}-{1-4}
	VT1-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-4}
	VT1-{1-4}-1-{1-12}-{1-7}-{1-4}
	VT1-{1-4}-1-{1-48}-{1-7}-{1-4}
	VT1-{1-4}-{1-4}-{1-3}-{1-7}-{1-4}
	VT1-{1-6,12-17}-1-{1-12}-{1-7}-{1-4}
	VT1-{1-6,12-17}-1-{1-48}-{1-7}-{1-4}
	VT1-{1-6,12-17}-1-{1-7}-{1-2}
	VT1-{1-6,12-17}-{1-12}-1-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-24}-1-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-36}-1-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-6}-{1-7}-{1-4}

VT (continued)	VT1-{2}-{1-2}-{1}-{1-12}-{1-7}-{1-4} VT1-{2}-{1-2}-{1}-{1-3}-{1-7}-{1-4} VT1-{2}-{1-3}-{1}-{1-7}-{1-4} VT1-{2}-{1}-{1-7}-{1-3} VT1-{3,4}-{1-2}-{1}-{1-12}-{1-7}-{1-4} VT1-{3,4}-{1-2}-{1}-{1-3}-{1-7}-{1-4} VT1-{3,4}-{1-2}-{1}-{1-48}-{1-7}-{1-4} VT1-{5,6,12,13}-1-{1-192}-{1-7}-{1-4} VT1-{5,6,12,13}-1-{1-48}-{1-7}-{1-4} VT1-{5-6}-1-{1-7}-{1-2} VT1-{5-6}-1-{1-7}-{1-4} VT2-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-3} VT2-{1-6,12-17}-1-{1-12}-{1-7}-{1-3} VT2-{1-6,12-17}-1-{1-48}-{1-7}-{1-3} VT2-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-3} VT2-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-3} VT2-{5,6,12,13}-1-{1-192}-{1-7}-{1-3} VT2-{5,6,12,13}-1-{1-48}-{1-7}-{1-3}

AidUnionId1

Table 28-3 AidUnionId1

AID	Patterns
BLSR	ALL BLSR-RINGID

BAND

The BAND AID is used to access Optical Multiplex Section (OMS) layer of optical networking units.

AID for OCH interface of CXP port on 100G-LC-C card: ACHAN-[SLOT]-[PPM]-[PORT].

AID for fixed trunk on 100G-LC-C card: CHAN-[SLOT]-[PORT].

Table 28-4 BAND

Pattern	Description
ALL	All of the OMSs of the NE. The ALL AID is applicable for retrieve-only commands.
BAND[-{1-50}]-{1-6,12-17}-{1-4}-ALL	All the channels in a Band OADM (1Bn, 4Bn) unit.
BAND[-{1-50}]-{1-6,12-17}-{1-4}-{RX,TX}	The Receive/Transmit channels in a Band OADM (1Bn, 4Bn) unit.
BAND[-{1-50}]-{1-6,12-17}-{1}-ALL	All the channels in an Optical Multiplexer/Demultiplexer (4Ch) unit.
BAND[-{1-50}]-{1-6,12-17}-{1}-{RX,TX}	The Receive/Transmit channels in an Optical Multiplexer/Demultiplexer (4Ch) unit.

BANDWL

Band wavelength. Identifies a wavelength channel included in any of the lower layer OMS facilities.

Table 28-5 BANDWL

Pattern	Description
BANDWL-{1-6,12-17}-{1-32}-{RX,TX}-1530.33	Identifies an allocated wavelength channel included in any of the lower layer OMS facilities.
BANDWL-{1-6,12-17}-{1-32}-{RX,TX}-ALL	Identifies all of the allocated wavelength channels included in any of the lower layer OMS facilities.
BANDWL-[{1-50}-]{1-6,12-17}-{1-32}-{RX,TX,PT}-<WLEN>	OCH is the termination point of OCHNC connections and it is also used to report alarms and conditions eventually notified by the node connection anomalies. Because the end points of an OCHNC connection can be both at the OCH filter level and at the node LINE OTS single wavelength level, this logical termination is useful to represent univocally a wavelength termination independently by the physical port it is contained in.

	The format is CHAN-[SHELF]-[SLOT]-[PORT]-[PORTDIRECTION]-[WAVELENGTH (in the form of 15xx.yy)]
BANDWL-[{1-50}-]{1-6,12-17}-{1-32}-{RX,TX,PT}-ALL	OCH is the termination point of OCHNC connections and it is also used to report alarms and conditions eventually notified by the node connection anomalies. Because the end points of an OCHNC connection can be both at the OCH filter level and at the node LINE OTS single wavelength level, this logical termination is useful to represent univocally a wavelength termination independently by the physical port it is contained in. The format is CHAN-[SHELF]-[SLOT]-[PORT]-[PORTDIRECTION]-[WAVELENGTH (in the form of 15xx.yy)]

BITS

AID for building integrated timing supply (BITS).

Table 28-6 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[<SHELFID>]-ALL	BITS shelf ID of both BITS-1 and BITS-2 in the RTRV-BITS command.
BITS[<SHELFID>]-{1,2}	Individual BITS AID.

SYNC[<SHELFID>]-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.

CHANNEL

Accesses the optical channels (OCH) layer of optical networking units.

Table 28-8 CHANNEL

CHANNEL Values	Description
ALL	ALL OCHs of the NE. The ALL AID is applicable for retrieve-only commands.
ACHAN[-{1-50}]-{2-7}-{1}-{1}	Identifies the OCH Facility of Aggregate port of 100G-LC-C Card.
CHAN[-{1-50}]-{2-7}-{2}	Identifies the Fixed Trunk or the Coherent Trunk on 100G-LC-C Card.
CHAN[-{1-50}]-{1-6,12-17}-ALL	All the channels of an Optical Transponder/Muxponder. The format is CHAN-[SLOT]-ALL
CHAN[-{1-50}]-{1-6,12-17}-{1-32}-ALL	All the channels in an Optical Multiplexer/Demultiplexer 32WSS unit. The format is CHAN-[SHELF]-[SLOT]-[PORT]-ALL.
CHAN[-{1-50}]-{1-6,12-17}-{1-32}-{RX,TX}	The Receive/Transmit channels in an Optical Multiplexer/Demultiplexer (32DMX, 32MUX) units. The format is CHAN-[SHELF]-[SLOT]-[PORT]-[DIRECTION].
CHAN[-{1-50}]-{1-6,12-17}-{1-32}-{RX,PT}	The Receive/Pass-through channels in an Optical 32WSS unit. The format is CHAN-[SHELF]-[SLOT]-[PORT]-[DIRECTION].
CHAN[-{1-50}]-{1-5,12-16}-{1-40}-ALL	All the channels in Optical Multiplexer/Demultiplexer/WSS (40Ch) units. The format is CHAN-[SHELF]-[SLOT]-[PORT]-ALL.
CHAN[-{1-50}]-{1-5,12-16}-{1-40}-{RX,TX}	The receive/transmit channels in an Optical Multiplexer/Demultiplexer (40Ch) unit. The format is CHAN-[SHELF]-[SLOT]-[PORT]-[DIRECTION].
CHAN[-{1-50}]-{1-5,12-16}-{1-40}-{RX,PT}	The Receive/Pass-through channels in an Optical WSS (40Ch) unit. The format is CHAN-[SHELF]-[SLOT]-[PORT]-[DIRECTION].
CHAN[-{1-50}]-{1-6,12-17}-{1-4}-ALL	All the Channels in an OADM (AD-1C-xx.x, AD-2C-xx.x, AD-4C-xx.x) unit or Optical Multiplexer/Demultiplexer (4MD-xx.x) units. The format is CHAN-[SHELF]-[SLOT]-[PORT]-ALL.

CHAN[-{1-50}]-{1-6,12-17}-{1-4}-{RX,TX}	The Receive/Transmit Channels in an OADM (AD-1C-xx.x, AD-2C-xx.x, AD-4C-xx.x) unit or Optical Multiplexer/Demultiplexer (4MD-xx.x) unit. The format is CHAN-[SHELF]-[SLOT]-[PORT]-[DIRECTION].
CHAN[-{1-50}]-{1-6,12-17}-{2,3}	A single channel of an Optical Transponder/Muxponder. The TXP_MR_10G, TXP_MR_10E, and TXP_MR_2.5G cards use CHAN-[SHELF]-SLOT-2 for the one dense wavelength division multiplexing (DWDM) Facility. The TXPP_MR_2.5G card uses CHAN-[SHELF]-SLOT-{2,3} for the two DWDM Facilities. The format is CHAN-[SHELF]-[SLOT]-[PORT].
CHAN[-{1-50}]-{1-6,12-17}-{5}	A single channel of an Optical Muxponder. The TXP_MR_10G and TXP_MR_10E cards use CHAN-[SHELF]-SLOT-5 for the one DWDM facility. The TXP_MR_10G uses the CHAN-[SHELF]-SLOT-5 for the one DWDM facility. The format is CHAN-[SHELF]-[SLOT]-[PORT].
CHAN[-{1-50}]-{1-6,12-17}-{9,10}	A single channel of an Optical Muxponder. The MXP_MR_10DME_C and MXP_2.5G_10G cards use CHAN-[SHELF]-SLOT-9 for the one DWDM Facility. The MXPP_2.5G_10G card uses CHAN-[SHELF]-SLOT-{9,10} for the two DWDM Facilities. The format is CHAN-[SHELF]-[SLOT]-[PORT].
CHAN[-{1-50}]-{1-6,12-17}-{3,4}-{1}	A single channel of an Optical Muxponder. The 10GE-XP uses CHAN-[SHELF]-SLOT-{3,4}-1 for the two DWDM facilities. The format is CHAN-[SHELF]-[SLOT]-[PPM]-[PORT].
CHAN[-{1-50}]-{1-6,12-17}-{21,22}-{1}	A single channel of an Optical Muxponder. The GE-XP uses CHAN-[SHELF]-SLOT-{11,12}-1 for the two DWDM facilities. The format is CHAN-[SHELF]-[SLOT]-[PPM]-[PORT].
CHAN-[{1-50}-]{1-6,12-17}-{1-32}-{RX,TX,PT}	OCH is the termination point of OCHNC connections and it is also used to report alarms and conditions eventually notified by the node connection anomalies. Because the end points of an OCHNC connection can be both at the OCH filter level and at the node LINE OTS single wavelength level, this logical termination is useful to represent univocally a wavelength termination independently by the physical port it is contained in. The format is CHAN-[SHELF]-[SLOT]-[PORT]-[PORTDIRECTION].
CHAN-[{1-50}-]{1-6,12-17}-{1-32}-ALL	OCH is the termination point of OCHNC connections and it is also used to report alarms and conditions eventually notified by the node connection anomalies. Because the end points of an OCHNC connection can be both at the OCH filter level and at the node LINE OTS single wavelength level, this logical termination is useful to represent univocally a wavelength termination independently by the physical port it is contained in. The format is CHAN-[SHELF]-[SLOT]-[PORT]-[PORTDIRECTION]-[WAVELENGTH (in the form of 15xx.yy)].

CHAN[-{1-50}]-{1-6,12-17}-{19}-{1}	A single channel of an ADM-10G card. ADM-10G uses CHAN-[SHELF]-SLOT-19 for one DWDM Facility. Format is CHAN-[SHELF]-[SLOT]-[PPM]-[PORT].
CHAN[-{1-50}]-{1-6,12-17}-{17,18}-{1}	The DWDM interlinks between two peer ADM-10G cards. ADM-10G uses CHAN-[SHELF]-SLOT-{17,18} for the two DWDM interlinks Facilities. Format is CHAN-[SHELF]-[SLOT]-[PPM]-[PORT].
CHAN[-{1-50}]-{1-6,12-17}-{19}-{1}	A single channel of an ADM-10G card. ADM-10G uses CHAN-[shelf]-slot-19 for the 1 DWDM Facility. Format is CHAN-[shelf]-[slot]-[ppm]-[port].
CHAN[-{1-50}]-{2-7}-{1-10}-{1}	Identifies OCH interface of SFP+ ports on 10x10G-LC and CFP ports on CFP-LC.
CHAN[-{1--0}]-{1-6,12-17}-{17,18}-{1	The DWDM Interlinks between 2 peer ADM-10G cards. ADM-10G uses CHAN-[shelf]-slot-{17,18} for the 2 DWDM Interlinks Facilities. Where format is CHAN-[shelf]-[slot]-[ppm]-[port]. In Release 9.0 or later, Port Number 18 can be used as an optical channel in the single card mode, the AID and the format remain the same.
PCHAN-ALL	All the Channels in all the Passive patch panel module where format is PCHAN-ALL. This AID is applicable to OCH commands like ENT/DLT/RTRV-LNK, ENT/DLT/ED/RTRV-OCHNC, RTRV-OCH, ENT/ED/RTRV/OPR/RLS/DLT-CPS, SET/RTRV-HOP-CPS.
PCHAN-{1-96}-ALL	All the Channels in a Passive patch panel module where format is PCHAN-[id]-ALL. This AID is applicable to OCH commands like ENT/DLT/RTRV-LNK, ENT/DLT/ED/RTRV-OCHNC, RTRV-OCH, ENT/ED/RTRV/OPR/RLS/DLT-CPS, SET/RTRV-HOP-CPS.
PCHAN-{1-96}-{1-4}-ALL	All the TX and RX Channels in a port of 15216-FLD-xx-x, passive modules where format is PCHAN-[id]-[port]-ALL. This AID is applicable to OCH commands like ENT/DLT/RTRV-LNK, ENT/DLT/ED/RTRV-OCHNC, RTRV-OCH, ENT/ED/RTRV/OPR/RLS/DLT-CPS, SET/RTRV-HOP-CPS.
PCHAN-{1-96}-{1-4}-{RX-TX}	All the TX and RX Channels in a port of 15216-FLD-xx-x, passive modules where format is PCHAN-[id]-[port]-[direction]. This AID is applicable to OCH commands like ENT/DLT/RTRV-LNK, ENT/DLT/ED/RTRV-OCHNC, RTRV-OCH, ENT/ED/RTRV/OPR/RLS/DLT-CPS, SET/RTRV-HOP-CPS.
PCHAN-{1-96}-{1-40}-ALL	All the TX and RX Channels in a port of 15216-MD-ODD, 15216-MD-EVEN passive modules where format is PCHAN-[id]-[port]-ALL. This AID is applicable to OCH commands like ENT/DLT/RTRV-LNK, ENT/DLT/ED/RTRV-OCHNC, RTRV-OCH, ENT/ED/RTRV/OPR/RLS/DLT-CPS, SET/RTRV-HOP-CPS.

PCHAN-{1-96}-{1-40}-{RX,TX}	The Recieve/Transmit Channels in a 15216-MD-ODD, 15216-MD-EVEN passive modules where format is PCHAN-[id]-[port]-[direction]. This AID is applicable to OCH commands like ENT/DLT/RTRV-LNK, ENT/DLT/ED/RTRV-OCHNC, RTRV-OCH, ENT/ED/RTRV/OPR/RLS/DLT-CPS, SET/RTRV-HOP-CPS.
PCHAN-{1-96}-{1-40}-ALL	All the TX and RX Channels in a port of 15216-MD-ODD, 15216-MD-EVEN passive modules where format is PCHAN-[id]-[port]-ALL. This AID is applicable to OCH commands like ENT/DLT/RTRV-LNK, ENT/DLT/ED/RTRV-OCHNC, RTRV-OCH, ENT/ED/RTRV/OPR/RLS/DLT-CPS, SET/RTRV-HOP-CPS.
PCHAN-{1-96}-{1-40}-{RX,TX}	The Recieve/Transmit Channels in a 15216-MD-ODD, 15216-MD-EVEN passive modules where format is PCHAN-[id]-[port]-[direction]. This AID is applicable to OCH commands like ENT/DLT/RTRV-LNK, ENT/DLT/ED/RTRV-OCHNC, RTRV-OCH, ENT/ED/RTRV/OPR/RLS/DLT-CPS, SET/RTRV-HOP-CPS.
VCHAN[-{1-50}]-{2-7}-{1-2}	Indentifies the OCH Facility of the Backplane Virtual ports on 100G-LC-C card.
FPCHAN-{1-126}-{1-48}-{RX-TX}	All the ADD/DROP ports of MD-48-EVEN/MD-48-ODD passive module where format is FPCHAN-[id]-[port]-[DIR}.

CHGRP

AID for the Channel Group (CHGRP).

Table 28-9 CHGRP

Pattern	Description
ALL	The ALL aid is applicable for RTRV-only commands, basically the RTRV-rr type of commands. For example, RTRV-CHGRP with ALL aid returns all CHGRP ports on the GE_XP and 10GE_XP cards.
CHGRP-[{1-50}]-{1-6,12-17}-{1-11}	Channel group AID on GE_XP and 10GE_XP cards. The format is CHGRP-[SHELF]-[SLOT]-[CHGRP]

COM

Common

Table 28-10 COM

Pattern	Description
COM	Common

CrossConnectId

AID for CXP port on 100G-LC-C: AGGR-[SLOT]-[APPM]-[PORT].

AID for fixed trunk on 100G-LC-C: CHAN-[SLOT]-[PORT] .

Table 28-11 CrossConnect Id

Pattern	Description	
FACILITY	ALL	FAC-{5-6}-{1-3}
	EC1-{1,2,5,6}-{1-3}	FAC-{8,10}-{1}
	EC1-{2}-{1-3}	FSTE-{1,2,5,6}-{0-7}
	FAC-{1-4,11-14}-ALL	FSTE-{1,2,5,6}-{1-8}
	FAC-{1-4,11-14}-{1-16}	FSTE-{1}-{0-7}
	FAC-{1-4,11-14}-{1-4}	FSTE-{1}-{1-8}
	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}	OC12-{2}-{1-2}-{1}
	FAC-{1-4,14-17}-{1-8}	OC12-{3,4}-{1-2}-{1}
	FAC-{1-4}-1	OC3-{2}-{1-2}-{1}
	FAC-{1-4}-{1-4}	OC3-{3,4}-{1-2}-{1}
	FAC-{1-6,12-17}-1	T1-{1,2,5,6}-{1-28}
	FAC-{1-6,12-17}-ALL	T1-{1,2,5,6}-{1-84}
	FAC-{1-6,12-17}-{0-11}	T1-{2}-{1-21}
	FAC-{1-6,12-17}-{0-1}	T3-{1,2,5,6}-{1-3}
	FAC-{1-6,12-17}-{1-12,14,16,18,20,22,24,26,28,30,32,34,36}	T3-{2}-{1-3}
		VFAC-{1,2,5,6}-{0-1}
	FAC-{1-6,12-17}-{1-12,14,16,18,20,22,24}	VFAC-{1,2,5,6}-{1-8}
		VFAC-{1-4,11-14}-{1-4}-{1-4}-1
	FAC-{1-6,12-17}-{1-12}	VFAC-{1-6,12-17}-{0-1}
	FAC-{1-6,12-17}-{1-4}	VFAC-{1-6,12-17}-{1,2}
	FAC-{1-6,12-17}-{1-6}	VFAC-{1-6,12-17}-{1,2}-{1,8}
	FAC-{1-6,12-17}-{1}	VFAC-{1}-{0-1}
	FAC-{1-6}-ALL	VFAC-{1}-{1-8}
	FAC-{5,6,12,13}-{1}	
	FAC-{5-6}-{1-28}	
STS	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}	

STS (continued)	FAC-{1-6,12-17}-{1-4} STS-{1,2,5,6}-1 STS-{1,2,5,6}-{1-3} STS-{1,2,5,6}-{1-3}-1 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}-{1,4}-{1} STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,13,25,37} STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,25} STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,13,16,25,28,37,40} STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7,10,13,16,19,22,25,28,31,34,37,40,43,46} STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7} STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4} STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-12} STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-3}

STS (continued)	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-48}
	STS-{1-4,11-14}-{1-4}-{1-192}
	STS-{1-4,11-14}-{1-4}-{1-4}-{1}-ALL
	STS-{1-4,11-14}-{1-4}-{1-4}-{1}-{1,4,7,13,16,19,25,28,31,43}
	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 (continued)	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}-1 STS-{1-6,12-17}-{1-24}-1 STS-{1-6,12-17}-{1-36}-1 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-{2}-{1-2}-{1}-{1,4,7,10} STS-{2}-{1-2}-{1}-{1,7} STS-{2}-{1-2}-{1}-{1-12} STS-{2}-{1-2}-{1}-{1-3} STS-{2}-{1-2}-{1}-{1} STS-{2}-{1-3}-{1} STS-{2}-{1} STS-{3,4}-{1,2}-1-{1-12} STS-{3,4}-{1,2}-1-{1-3} STS-{3,4}-{1,2}-1-{1-48} 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 (continued)	STS-{5,6}-1 STS-{5,6}-{1-4}-1 STS-{5-6}-ALL VFAC-{1-6,12-17}-{0-1}

CrossConnectId1

AID for CXP port on 100G-LC-C: AGGR[-{1-50}]-{2-7}-{1}-{1}.

AID for fixed trunk on 100G-LC-C: CHAN-[SLOT]-[PORT].

Table 28-12 CrossConnectId1

AID	Pattern	
EQPT	ALL	PPM[-{1-50}]-{1-4,11-14}-{1-4}-{1-4}
	AIP-ALL	PPM[-{1-50}]-{1-6,12-17}-{1-4}
	AIP[-{1-50}]	PPM[-{1-50}]-{1-6,12-17}-{1-8}
	BIC-ALL	PWR-ALL
	BIC[-{1-50}]-ALL	PWR[-{1-50}]-ALL
	BIC[-{1-50}]-{A,B}	PWR[-{1-50}]-{A,B}
	BP-ALL	SLOT-ALL
	BP[-{1-50}]	SLOT[-{1-50}]-ALL
	FAN-ALL	SLOT[-{1-50}]-{1-14}
	FAN[-{1-50}]	SLOT[-{1-50}]-{1-17}
	PIM[-{1-50}]-{1-4,11-14}-ALL	SLOT[-{1-50}]-{1-2}
	PIM[-{1-50}]-{1-4,11-14}-{1-4}	SLOT[-{1-50}]-{1-4,11-14}
	PPM[-{1-50}]-1-{1,2}	SLOT[-{1-50}]-{1-6,12-17}
	PPM[-{1-50}]-2-{1,2}	SLOT[-{1-50}]-{1-8}
	PPM[-{1-50}]-{1-4,11-14}-{1-4}-ALL	
VCM	VCM-{1,2,5,6}-{0-1}-{1-256}	
	VCM-{1,2,5,6}-{1-8}-{1-256}	
	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	

FACILITY	ALL	FAC-{5-6}-{1-3}
	EC1-{1,2,5,6}-{1-3}	FAC-{8,10}-{1}
	EC1-{2}-{1-3}	FSTE-{1,2,5,6}-{0-7}
	FAC-{1-4,11-14}-ALL	FSTE-{1,2,5,6}-{1-8}
	FAC-{1-4,11-14}-{1-16}	FSTE-{1}-{0-7}
	FAC-{1-4,11-14}-{1-4}	FSTE-{1}-{1-8}
	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}	OC12-{2}-{1-2}-{1}
	FAC-{1-4,14-17}-{1-8}	OC12-{3,4}-{1-2}-{1}
	FAC-{1-4}-1	OC3-{2}-{1-2}-{1}
	FAC-{1-4}-{1-4}	OC3-{3,4}-{1-2}-{1}
	FAC-{1-6,12-17}-1	T1-{1,2,5,6}-{1-28}
	FAC-{1-6,12-17}-ALL	T1-{1,2,5,6}-{1-84}
	FAC-{1-6,12-17}-{0-11}	T1-{2}-{1-21}
	FAC-{1-6,12-17}-{0-1}	T3-{1,2,5,6}-{1-3}
	FAC-{1-6,12-17}-{1-12,14,16,18,20,22,24,26,28,30,32,34,36}	T3-{2}-{1-3}
		VFAC-{1,2,5,6}-{0-1}
	FAC-{1-6,12-17}-{1-12,14,16,18,20,22,24}	VFAC-{1,2,5,6}-{1-8}
		VFAC-{1-4,11-14}-{1-4}-{1-4}-1
	FAC-{1-6,12-17}-{1-12}	VFAC-{1-6,12-17}-{0-1}
	FAC-{1-6,12-17}-{1-4}	VFAC-{1-6,12-17}-{1,2}
	FAC-{1-6,12-17}-{1-6}	VFAC-{1-6,12-17}-{1,2}-{1,8}
	FAC-{1-6,12-17}-{1}	VFAC-{1}-{0-1}
	FAC-{1-6}-ALL	VFAC-{1}-{1-8}
	FAC-{5,6,12,13}-{1}	
	FAC-{5-6}-{1-28}	

STS	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}
	FAC-{1-6,12-17}-{1-4}
	STS-{1,2,5,6}-1
	STS-{1,2,5,6}-{1-3}
	STS-{1,2,5,6}-{1-3}-1
	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}-{1,4}-{1}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,13,25,37}

STS (continued)	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,25}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,13,16,25,28,37,40}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7,10,13,16,19,22,25,28,31,34,37,40,43,46}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-12}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-3}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-48}
	STS-{1-4,11-14}-{1-4}-{1-192}
	STS-{1-4,11-14}-{1-4}-{1-4}-{1}-ALL
	STS-{1-4,11-14}-{1-4}-{1-4}-{1}-{1,4,7,13,16,19,25,28,31,43}
	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 (continued)	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}-1
	STS-{1-6,12-17}-{1-24}-1
	STS-{1-6,12-17}-{1-36}-1
	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-{2}-{1-2}-{1}-{1,4,7,10}
	STS-{2}-{1-2}-{1}-{1,7}
	STS-{2}-{1-2}-{1}-{1-12}
	STS-{2}-{1-2}-{1}-{1-3}
	STS-{2}-{1-2}-{1}-{1}
	STS-{2}-{1-3}-{1}
	STS-{2}-{1}
	STS-{3,4}-{1,2}-1-{1-12}
	STS-{3,4}-{1,2}-1-{1-3}
	STS-{3,4}-{1,2}-1-{1-48}
	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 (continued)	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}-{1-4}-1 STS-{5-6}-ALL STS[-{1-50}]-{1-5,12-16}-{1-17,19}-{1}-{1-48} VFAC-{1-6,12-17}-{0-1}

VT	ALL
	VT1-{1,2,5,6}-1-{1-7}-{1-4}
	VT1-{1,2,5,6}-{1-3}-1-{1-7}-{1-4}
	VT1-{1,2,5,6}-{1-3}-{1-7}-{1-4}
	VT1-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-4}
	VT1-{1-4}-1-{1-12}-{1-7}-{1-4}
	VT1-{1-4}-1-{1-48}-{1-7}-{1-4}
	VT1-{1-4}-{1-4}-{1-3}-{1-7}-{1-4}
	VT1-{1-6,12-17}-1-{1-12}-{1-7}-{1-4}
	VT1-{1-6,12-17}-1-{1-48}-{1-7}-{1-4}
	VT1-{1-6,12-17}-1-{1-7}-{1-2}
	VT1-{1-6,12-17}-{1-12}-1-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-24}-1-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-36}-1-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-6}-{1-7}-{1-4}
	VT1-{2}-{1-2}-{1}-{1-12}-{1-7}-{1-4}
	VT1-{2}-{1-2}-{1}-{1-3}-{1-7}-{1-4}
	VT1-{2}-{1-3}-{1}-{1-7}-{1-4}
	VT1-{2}-{1}-{1-7}-{1-3}

VT (continued)	VT1-{3,4}-{1-2}-{1}-{1-12}-{1-7}-{1-4} VT1-{3,4}-{1-2}-{1}-{1-3}-{1-7}-{1-4} VT1-{3,4}-{1-2}-{1}-{1-48}-{1-7}-{1-4} VT1-{5,6,12,13}-1-{1-192}-{1-7}-{1-4} VT1-{5,6,12,13}-1-{1-48}-{1-7}-{1-4}

DS1

Used to access the DS-1 frame layer of the DS3XM. The format is DS1-[SLOT]-[DS3PORT]-[DS1PORT].

Table 28-13 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}-{1-12,13,15,17,19,21,23,25,27,29,31,33,35}-{1-28}	DS1 AIDs for the DS3XM-12 card STS48 backplane rate. The format is DS1-[SLOT]-[DS3PORT]-[DS1PORT]. Ports 1–12 are always available and odd ports after 12 are available. **Note** The DS3XM-12 even DS3Ports (after 12) are valid DS3XM-12 DS1 AIDs, which are applied on DS3XM-12 TCA autonomous events (REPT EVT DS1) only. **Note** The DS3XM-12 even DS3Ports (after 12) are not valid DS3XM-12 DS1 AIDs for all DS3XM-12 DS1 provisioning/retrieval non-TCA event commands.
DS1-{1-6,12-17}-{1-12,13,15,17,19,21,23}-{1-28}	DS1 AIDs for DS3XM-12 card STS48 backplane rate. The format is DS1-[SLOT]-[DS3PORT]-[DS1PORT]. Ports 1–12 are always available and odd ports after 12 are available **Note** The DS3XM-12 even DS3Ports (after 12) are valid DS3XM-12 DS1 AIDs, which are applied on DS3XM-12 TCA autonomous events (REPT EVT DS1) only. **Note** The DS3XM-12 even DS3Ports (after 12) are not valid DS3XM-12 DS1 AIDs for all DS3XM-12 DS1 provisioning/retrieval non-TCA event commands.
DS1-{1-6,12-17}-{1-6}-{1-28}	DS1 AIDs for DS3XM-6 cards. Format is DS1-[SLOT]-[DS3PORT]-[DS1PORT].

ENV

The environmental AID for the AIC-I cards.“IN” is used for environmental alarms. “OUT” is used for environmental controls.

Table 28-14 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	Environmental AID for ALL environmental alarms on the Cisco NCS 2000 Series.
ENV-IN[-{1-50}]-ALL	Environmental AID for ALL multishelf environmental alarms.
ENV-IN[-{1-50}]-{1-4}	Environmental AID for the AIC-I card. “IN” is used for environmental alarms.
ENV-IN[-{1-50}]-{1-20}	Environmental AID for the AIC-I card. “IN” is used for environmental alarms.
ENV-IN[-{1-50}]-{1-32}	Environmental AID for AIC-I card extensions. “IN” is used for environmental alarms.
ENV-IN[-{1-50}]-{1-3}	Environmental AID for the AIC-I card. “IN” is used for environmental alarms.
ENV-IN[-{1-50}]-{1-6}	Environmental AID. “IN” is used for environmental alarms.
ENV-OUT-ALL	All environmental control output contacts.
ENV-OUT[-{1-50}]-ALL	Environmental AID for AIC-I cards. “OUT” is used for environmental controls
ENV-OUT[-{1-12}]-{1-2}	Environmental control AID.
ENV-OUT[-{1-50}]-{1-4}	Environmental control AID for the AIC-I cards.
ENV-OUT[-{1-50}]-{1-16}	Environmental control AID for AIC-I card extensions.

EQPT

Equipment AIDs are used to access specific cards.

I

Table 28-15 EQPT

Pattern	Description
AIP-[-{1-50}]	The AID for the alarm interface panel (AIP). It is used for RTRV-INV output only.
AIP-ALL	The AID for all of the AIPs in any shelf of the node. It is used for RTRV-INV output only.
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 NCS 2000 includes the multiservice cards, common control cards, and the AIP, BP, and FAN.
BIC-ALL	AIDs for the backplane interface connectors (BICs), BIC-A and BIC-B. These AIDs are valid only for the RTRV-ALM-EQPT and RTRV-COND-EQPT commands.
BIC-[-{1-50}]-ALL	AIDs for the backplane interface connectors (BICs), BIC-A and BIC-B of a single shelf in a multishelf node. These AIDs are valid only for the RTRV-ALM-EQPT and RTRV-COND-EQPT commands.
BIC[-{1-50}]-{A,B}	AIDs for the BICs. These AIDs are valid only for the RTRV-ALM-EQPT and RTRV-COND-EQPT commands.
BP[-{1-50}]	The AID for the backplane. It is used for RTRV-INV output only.
BP-ALL	The AID for all of the backplanes in any shelf on the multishelf node. It is used for RTRV-INV output only.
FAN[-{1-50}]	The AID for the fan tray. It is used for RTRV-INV, RTRV-ALM, RTRV-COND, RTRV-ALM-EQPT, and RTRV-COND-EQPT output only.
FAN-ALL	The AID for all of the fan tray in all the shelves of a multishelf node. It is used for RTRV-INV, RTRV-ALM, RTRV-COND, RTRV-ALM-EQPT, and RTRV-COND-EQPT output only.
PPM-{1-6,12-17}-{1-4}	Pluggable Port Module for MRC-2.5G-4.Format is PPM-[SLOT]-[PPM]. It is not applied on CHG-EQPT, and RMV/RST/ED-EQPT commands.
PPM-{1-6,12-17}-{1-12}	Pluggable Port Module for MRC-2.5G-12. Format is PPM-[SLOT]-[PPM]. It is not applied on CHG-EQPT, and RMV/RST/ED-EQPT commands.
PPM[-{1-50}]-{1-4,11-14}-{1-4}-ALL	PPM AID. Applicable for the RTRV-EQPT and RTRV-INV commands pertaining to the ASAP card. Format is PPM-[SLOT]-[PIM]-[PPM].

PPM[-{1-50}]-{1-4,11-14}-{1-4}-{1-4}	PPM AID. Applicable for the ENT/ED/RTRV/DLT-EQPT and RTRV-INV commands pertaining to the ASAP card. Format is PPM-[SLOT]-[PIM]-[PPM].
PPM-{1-6,12-17}-1	PPM for the OC192-XFP card. Format is PPM-[SLOT]-[PPM].
PPM-{1-6,12-17}-{1-12}	PPM for the MRC-12 card. Format is PPM-[SLOT]-[PPM].
PPM[-{1-50}]-{1-6,12-17}-{1-4}	PPM AID for dense wavelength division multiplexing (DWDM) MXP_2.5G_10G, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, MXP_2.5G_10E, and TXP_MR_10E cards. Format of AID is PPM-[SLOT]-[PPM].
PPM[-{1-50}]-{1-6,12-17}-{1-8}	PPM AID for the MXP_MR_2.5G and MXPP_MR_2.5G cards. Format of AID is PPM-[SLOT]-[PPM].
PPM[-{1-50}]-{1-6,12-17}-{1-22}	PPM AID for XP-GE Cards. Format of AID is PPM-[SHELF]-[SLOT]-[PPM]
PUNIT-ALL	The whole NE Passive patch panel equipment AIDs. These AIDs are applicable to EQPT commands like ENT/DLT/RTRV/ED-EQPT commands.
PUNIT-{1-96}	Individual equipment AID of the Passive patch panel units in a 15454 where format is PUNIT-[id]. These AIDs are applicable to EQPT commands like ENT/DLT/RTRV/ED-EQPT commands.
PWR-ALL	AIDs for the power supply sources. These AIDs are valid only for the RTRV-ALM-EQPT and RTRV-COND-EQPT commands.
PWR[-{1-50}]-{A,B}	AIDs for the power supply sources. These AIDs are valid only for the RTRV-ALM-EQPT and RTRV-COND-EQPT commands.
PWR[-{1-50}]-ALL	AIDs for all of 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[-{1-50}]-{1-17}	EQPT AID where the format is SLOT-[SLOT].
SLOT[-{1-12}]-{1-2}	EQPT AID where the format is SLOT-[SLOT].

SLOT[-{1-50}]-{1-6,12-17}	Individual equipment AID of the multiservice card units or slots where the format is SLOT-[SLOT].
SPPM[-{36-55}]-{1-44}	PPM for the CPT 50 panel GIGE ports card. The format is SPPM-[PTSA]-[PPM].
SFOPPM[-{36-55}]-{45-48}	PPM for the CPT 50 panel 10GIGE ports card. The format is SFOPPM-[PTSA]-[PPM].
PTSYS[-{1}]-ALL	PT System AID for the CPT system. The format is PTSYS-{PTSYSID}.
FOG[-{1}]-{36-55}-ALL	Fan-Out-Group AID for connecting the CPT 50 panel to fabric and line cards. The format is FOG-{PTSYSID}-{FOGID}.

ETH

Ethernet (ETH) AIDs are used to access the ethernet port.

Table 28-16 ETH

Pattern	Description
ETH-{1,2,5,6}-{1-6}	Format is ETH-slot-port. Port numbering is 1-based.
ETH[-{1-50}]-{1-6,12-17}-{1-22}-{1}	Ethernet AID for ethernet port on GE_XP and 10GE_XP cards. The format is ETH-[SHELF]-[SLOT]-[PPM]-[PORT.
ETH[-{1-50}]-{1-6,12-17}-{1-22}-{1}-{1-4096}	Ethernet CEPID AID for ethernet port CEP on GE_XP and 10GE_XP cards. The format is ETH-[SHELF]-[SLOT]-[PPM]-[PORT]-[CEPID], where [CEPID] is the connection end point identifier, that identifies a single 1 Gbit/sec circuit inside an ethernet port.

FACILITY

Facility AIDs are used to access specific ports.

Facility AID format:

- Format for optical and EC1 facilities without PPM: FAC-[SLOT]-[PORT]
- Format for optical facilities with PPM: FAC-[SLOT]-[PPM]-[PORT]
- Format for optical facilities with PPM and PIM: FAC-[SLOT]-[PIM]-[PPM]-[PORT]
- Format for DS1-flavored electrical facilities: FAC-[SLOT]-[PORT]
- Format for DS3-flavored (including DS3i) electrical facilities: FAC-[SLOT]-[PORT]
- Format for packet-over-SONET (POS) ports: VFAC-[SLOT]-[PORT]
- Format for POS ports with PIMs and PPMs: VFAC-[SLOT]-[PIM]-[PPM]-[PORT]
- Format for 100G-LC-C, 10x10G-LC, and CFP-LC cards: VLINE-[SLOT]-[PPM]-[PORT]-[SUBLANE-NO] Sublane Aid for all sublanes

- Format for CXP port on 100G-LC-C card: AGGR-[SLOT]-[APPM]-[PORT].
- Format for SFP+ ports on for 10x10G-LC and CFP-LC cards: VFAC-[SLOT]-[PPM]-[PORT]

Table 28-17 FACILITY

Pattern	Description
ALL	The ALL AID is applicable for RTRV-only commands (RTRV-rr type of commands), for example, RTRV-OC48 with the ALL AID returns all OC48 facilities on the node. RTRV-T1 with the ALL AID returns all T1 facilities on the node.
EC1-{2}-{1-3}	Facility AID for EC1 ports on the 15310-CL-CTX card, where the format is EC1-[SLOT]-[PORT].
ETH-{1,2,5,6}-{1-6}	Port numbering is 1-based.
ETH-{1}-{1-6}	Facility AIDs for front end ports on CE-MR-6 (GT3) card on (15310CL). Format is ETH-[SLOT]-[PORT]. Port numbering is 1-based.
AGGR[-{1-50}]-{2-7}-{1}-{1}	Facility AID for CXP port on 100G-LC-C card.
ETH[-{1-50}]-{1-5,12-16}-{1-22}-1	Facility AID for GE-XP card. Format is FAC-[SHELF]-[SLOT]-[PPM]-[PORT]
ETH[-{1-50}]-{1-6,12-17}-{1-4}-1	Facility AID for 10GE-XP card. Format is FAC-[SHELF]-[SLOT]-[PPM]-[PORT]
FAC-{1-6,12-17}-{1-10}	Facility AID for CE-MR-10 (454) cards that can plug into Slots 1-6 and 12-17 and there are 10 Facility ports, where format is FAC-[SLOT]-[PORT]
FAC[-{1-12}]-{1-4,11-14}-ALL	Facility AID for all optical cards or slots, where the format is FAC-[SLOT]-ALL.
FAC[-{1-12}]-{1-4,11-14}-{1-16}	Facility AID for the 16-port OC-48, where the format is FAC-[SLOT]-[PORT].
FAC[-{1-12}]-{1-4,11-14}-{1-4}	Facility AID for the 4-port OC-192, where the format is FAC-[SLOT]-[PORT].
FAC[-{1-50}]-{1-4,11-14}-{1-4}-{1-4}-{1}	Facility AID for the ASAP card with PIM and PPM. The format is FAC-[SLOT]-[PIM]-[PPM]-[PORT].
FAC[-{1-50}]-{1-4,14-17}-{1-8}	Facility AID for an OC3-8 card, where the format is FAC-[SLOT]-[PORT].
FAC[-{1-50}]-{1-5,12-16}-{1-20}-1	Facility AID for GE-XP card, where format is: FAC-[SHELF]-[SLOT]-[PPM]-[PORT]

FAC[-{1-50}]-{1-6,12-17}-{1-2}-1	Facility AID for 10GE-XP card, where format is: FAC-[SHELF]-[SLOT]-[PPM]-[PORT]
FAC[-{1-50}]-{1-6,12-17}-1	Facility AID for the 1 Client (CLNT) port on a TXP_MR_10G, TXP_MR_2.5G, TXP_MR_2.5G, or TXPP_MR_2.5G card, where the format is FAC-[SLOT]-[PORT].
FAC[-{1-50}]-{1-6,12-17}-ALL	All the facilities of an multiservice unit or slot, where the format is FAC-[SLOT]-[ALL].
FAC[-{1-50}]-{1-6,12-17}-{0-11}	Facility AID for the Ethernet front-end ports on the ML-100T-12 card. Ports are numbered starting with 0. The first port is FAC-SLOT-0, the second port is FAC-SLOT-1, and so on. The last port is FAC-SLOT-11. The format is FAC-[SLOT]-[PORT].
FAC[-{1-50}]-{1-6,12-17}-{0-1}	Facility AID for the Ethernet back-end ports on the ML1000-2 card. Ports are numbered starting with 0. The first port is FAC-SLOT-0 and the second port is FAC-SLOT-1). The format is FAC-[SLOT]-[PORT].
FAC-{1-6,12-17}-{1-8}	Facility AID for the Ethernet front-end ports on the CE-100T-8 card The format is FAC-[SLOT]-[PORT].
FAC-{1-6,12-17}-{0-11}	Facility AID for the Ethernet front-end ports on the MS-ISC-100T The first port is FAC-SLOT-0, the second port is FAC-SLOT-1, and so on. The last port is FAC-SLOT-11. The format is FAC-[SLOT]-[PORT].
FAC[-{1-50}]-{1-6,12-17}-{1-12, 14,16,18,20,22,24,26,28, 30,32,34, 36}	Facility AID for the DS3XM-12 STS48 backplane rate, where the format is FAC-[SLOT]-[PORT]. Ports 1 through 12 are always available, but only even ports greater than 12 are available.
FAC[-{1-50}]-{1-6,12-17}-{1-12, 14,16,18,20,22,24}	Facility AID for DS3XM-12 STS12 backplane, rate where the format is FAC-[SLOT]-[PORT]. Ports 1 through 12 are always available, but only even ports greater than 12 are available.
FAC[-{1-50}]-{1-6,12-17}-{1-12}	Facilities AID for the EC1 and DS3 cards, where the format is FAC-[SLOT]-[PORT].
FAC[-{1-50}]-{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/VC3, STS3C/VC4, STS6C/VC4-2C, STS9C/VC4-3C, STS12C/VC4-4C, and STS24C/VC4-8C) for the 4-port G1000/FC_MR-4 card, where the format is FAC-[SLOT]-[PORT].
FAC[-{1-50}]-{1-6,12-17}-{1-6}	Facility AID for the DS3XM card, where the format FAC-[SLOT]-[PORT].

FAC[-{1-50}]-{1-6,12-17}-{1}	Facility AID for a single-port OC12, OC48AS and OC3 in OSC-CSM cards. Facility AID for the client ports on the muxponder (MXP) and transponder (TXP) cards, where the format is FAC-[SLOT]-[PORT].
FAC[-{1-50}]-{5,6,12,13}-{1}	Facility AID for the OC48/OC192 cards. The OC48/OC192 cards can only use Slots 5, 6, 12, and 13), where the format is FAC-[SLOT]-[PORT].
FAC[-{1-50}]-{8,10}-{1}	Facility AID for the OSCM card. The OSCM cards can use only the XC slots (Slot 8, Slot 10), where the format is FAC-[SLOT]-[PORT].
FAC[-{1-50}]-{1-6,12-17}-1-1	Facility AID for the TXP_MR_2.5G, TXPP_MR_2.5G, TXP_MR_10E, TXP_MR_10EX and TXPP_MR_10EX cards in the format of:FAC-[shelf]-[slot]-[ppm]-[port].
FSTE-{1}-{0-7}	Facility AID for front-end ports on the ML-100T-8 card when provisioned in L2L3 mode. The format is FSTE-[SLOT]-[PORT]. Port numbering starts at 0.
FSTE-{1}-{1-8}	Facility AID for front-end ports on the CE-100T-8 card when provisioned in Mapper mode. The format is FSTE-[SLOT]-[PORT]. Port numbering starts at 1.
OC12-{2}-{1-2}-{1}	Facility AID for OC12 ports on the 15310-CL-CTX card, where the format is OC12-[SLOT]-[PPM]-[PORT].
VFAC-{1-6,12-17}-{1-10}	Virtual Facility AID for CE-MR-10 cards that can plug into Slots 1-6 and 12-17 and there are 10 Virtual Facility ports. Format is VFAC-[SLOT]-[PORT]
VFAC-{1}-{1-6	Virtual Facility AID for CE-MR-6 (310CL) cards that can plug into Slot 1and there are 6 Virtual Facility ports. Format is VFAC-[SLOT]-[PORT]
VFAC[-{1-12}]-{1-4,11-14}-{1-4}-{1-4}-1	Facility AID for the back-end POS ports on the L1P_ETHERNET PORT on an ASAP card, where the format is VFAC-[SLOT]-[PIM]-[PPM]-[PORT].
VFAC[-{1-50}]-{1-5,12-16}-{21-22}-1	Facility AID for the trunk "higher layer" of GE-XP card in the format of:VFAC-[SHELF]-[SLOT]-[PPM]-[PORT]
VFAC[-{1-50}]-{1-6,12-17}-{3-4}-1	Facility AID for the trunk "higher layer" of 10GE-XP card in the format of:VFAC-[SHELF]-[SLOT]-[PPM]-[PORT]
VFAC[-{1-50}]-{1-6,12-17}-{0-1}	Facility AID for the back-end POS ports on the ML-Series cards. 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, and VC4-8C for the ML1000 and ML100T cards. Format is VFAC-[SLOT]-[PORT].

VFAC[-{1-50}]-{1-6,12-17}-{1,2}	Generic framing procedure (GFP) facility AIDS on the MXP-MR-2.5G and MXPP-MR-2.5G cards.
VFAC[-{1-50}]-{1-6,12-17}-{1,2}-{1,8}	GFP client facility AIDS for MXP-MR-2.5G and MXPP-MR-2.5G cards.
FAC[-{1-50}]-{1-4,14-17}-{1-4}	Facility AID for four Ether Ports on the CE1000 card.
VFAC[-{1-50}]-{1-4,14-17}-{1-4}	Facility AID for the back-end ports on the CE1000 card.
VFAC[-{1-50}]-{2-7}-{1-10}-{1}	Facility AID for SFP+ ports on 10x10G-LC and CFP ports on Fumaiolo cards.
VLINE[-{1-50}]-{2-7}-{1-2}-{1}-{1-12}	Facility AID for sublanes on 10x10G-LC card only.
SFAC[-{36-55}]-{1-44}-1	GIGE facilities on the CPT 50 panel. The format is SFAC-[PTSAID]-[PPM]-[PORT].
SFOFAC[-{36-55}]-{45-48}-1	10GIGE facilities on the CPT 50 panel. The format is SFOFAC-[PTSAID]-[PPM]-[PORT].
VFAC[-{1-12}]-{1}-{0-1}	Facility AIDs for back-end ports on the ML-100T-8 card when provisioned in L2L3 mode. Format is VFAC-[SLOT]-[PORT]. Port numbering starts at 0.
VFAC[-{1-12}]-{1}-{1-8}	Facility AID for back-end ports on the ML-100T-8 card when provisioned in L2L3 mode. Format is VFAC-[SLOT]-[PORT]. Port numbering starts at 1.

FPLINE

FPLINE AIDs are used on passive OTS ports of MD-48-EVEN/MD-48-ODD passive module. The FPLINE AID format is: FPLINE-ID-PORT-DIR-LABEL

Table 28-18 FPLINE

Pattern	Description
FPLINE-{1-126}-{1-48}-{RX-TX}	All the ADD/DROP ports of MD-48-EVEN/MD-48-ODD passive module where format is FPCHAN-[id]-[port]-[DIR}.
FPLINE-{1-126}-{1-20}-{RX-TX}	All the IN/OUT ports of MF-DEG-5 passive module where format is FPCHAN-[id]-[port]-[DIR}.
FPLINE-{1-126}-{1-32}-{RX-TX}	All the IN/OUT ports of MF-UPG-4 passive module where format is FPCHAN-[id]-[port]-[DIR}.

FPLINE-{1-126}-{1-8}-{RX-TX}	All the ports of MF-MPO-8LC passive module where format is FPCHAN-[id]-[port]-[DIR.
FPLINE-{1-126}-{1-8}-{RX-TX}	All the IN/OUT ports of MF-4x4-COFS passive module where format is FPCHAN-[id]-[port]-[DIR}.
FPLINE-{1-126}-{1-17}-{RX-TX}	All the IN/OUT ports of MF-16AD-CFS passive module where format is FPCHAN-[id]-[port]-[DIR}.

IPADDR

IP Address

Table 28-19 IPADDR

Pattern	Description
111.222.333.444	Standard 4-part IP address notation
ALL	ALL

LINE

The LINE AID is used to access the Optical Transport Section (OTS) layer of optical network units. Applicable only to AD-1B-xx.x, AD-4B-xx.x, AD-1C-xx.x, AD-2C-xx.x, AB-4C-xx.x, OSC-CSM, OSCM, OPT-BST, OPT-PRE, 4MD-xx.x, 32MUX-O, 32DMX-O, 40-SMR1-C, 40-SMR2-C, and 80-WXC-C cards.

The format is LINE-[SLOT]-[PORT]-[DIRECTION].

Table 28-20 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 an OPT-PRE, OCS-CSM, AD-1B, AD-4B, AD-1C, AD-2C, or AD-4C unit.
LINE-{1-6,12-17}-{1-2}-{RX,TX}	The receive/transmit lines in an OPT-PRE, OCS-CSM, AD-1B, AD-4B, AD-1C, AD-2C, or AD-4C unit.
LINE-{1-6,12-17}-{1-3}-{RX,TX}	The receive/transmit lines in an OPT-BST unit.
LINE-{8,10}-{1}-ALL	All the lines in OSCM units.
LINE-{8,10}-{1}-{RX,TX}	The receive/transmit lines in OSCM units.

LINE-[{1-50}-]{1-6,12-17}-{1}-{RX,TX}	For Booster units, there is an input OTS for LINE(1) and an output OTS (Amplified) for amplification stage COM(2), 2 OTS for input line COM(2) and output LINE(1) and 2 OTS for OSC(3) Add & Drop service channel.
LINE-[{1-50}-]{1-6,12-17}-{2}-{RX,TX}	
LINE-[{1-50}-]{1-6,12-17}-{3}-{RX,TX}	
LINE-[{1-50}-]{1-6,12-17}-{1-3}-ALL	
LINE-[{1-50}-]{1-6,12-17}-{1}-{RX,TX}	Pre-Amplifier unit with 2 stages of amplification; input OTS for LINE(1) and an output OTS (Amplified) for amplification stage COM(2), 2 OTS for input line COM(2) and output LINE(1) and 2 OTS for OSC(3) Add & Drop service channel and output and an input OTS for the DCU(2).
LINE-[{1-50}-]{1-6,12-17}-{2}-{RX,TX}	
LINE-[{1-50}-]{1-6,12-17}-{3}-{RX,TX}	
LINE-[{1-50}-]{1-6,12-17}-{4}-{RX,TX}	
LINE-[{1-50}-]{1-6,12-17}-{1-4}-ALL	
LINE-[{1-50}-]{1-6,12-17}-1-RX For input OTS	For demux units there is an OTS for input line, and up to 32 OCH for drop channel connectors. Demux is a unidirectional unit.
LINE-[{1-50}-]{1-6,12-17}-1-ALL	
CHAN-[{1-50}-]{1-6,12-17}-{1-32}-TXFor Drop OCH	
CHAN-[{1-50}-]{1-6,12-17}-{1-32}-ALL	
LINE-[{1-50}-]{1-5,12-16}-{1}-{RX,TX} (EXP)	Wavelength switch selector unit has input and output OTS for signal coming from amplifier units COM(2), input and output OTS for signal continuing to next WSS unit in the node EXP(1) and an output PT(3)

LINE-[{1-50}-]{1-5,12-16}-{2}-{RX,TX} (COM)	drop port for the signal continuing to 32-DMX-L card. It also has 32 internal OCH pass-through channels (PT) and 32 external input channels (ADD). This unit is 2 slots sized.
LINE-[{1-50}-]{1-5,12-16}-{3}-{TX} (DROP)	
LINE-[{1-50}-]{1-5,12-16}-{1-3}-ALL	
CHAN-[{1-50}-]{1-5,12-16}-{1-32}-{RX} (ADD)	
CHAN-[{1-50}-]{1-5,12-16}-{1-32}-{PT} (PT)	
CHAN-[{1-50}-]{1-5,12-16}-{1-32}-ALL	
LINE-[{1-50}-]{1-6,12-17}-{1}-{RX,TX} (EXP)	Multiring/mesh unit has 6 OTS connectors: 2 are the input and output OTS for signal coming from amplifier units COM(1), the other are for the split 50/50 signal continuing to AD, MUX/DEMUX, WSS unit. Because the incoming signal is split into 2 separate signals, there are two sets of input and output EXP port (2 and 3).
LINE-[{1-50}-]{1-6,12-17}-{2}-{RX,TX} (COM)	
LINE-[{1-50}-]{1-6,12-17}-{3}-{RX,TX} (EXP to other ring)	
LINE-[{1-50}-]{1-6,12-17}-{1-3}-ALL	
LINE[-{1-50}]-{1-6,12-17}-{4}-ALL	All the receive and transmit COM lines in a 40-SMR2-C card.
LINE[-{1-50}]-{1-6,12-17}-{4}-{RX,TX}	The receive/transmit COM lines in a 40-SMR2-C card.
LINE[-{1-50}]-{1-6,12-17}-{2}-ALL	All the receive and transmit OSC lines in a 40-SMR2-C card.
LINE[-{1-50}]-{1-6,12-17}-{2}-{RX,TX}	The receive/transmit OSC lines in a 40-SMR2-C card.
LINE[-{1-50}]-{1-6,12-17}-{1}-ALL	All the receive and transmit DC lines in a 40-SMR2-C card.

LINE[-{1-50}]-{1-6,12-17}-{1}-{RX,TX}	The receive/transmit DC lines in a 40-SMR2-C card.
LINE[-{1-50}]-{1-6,12-17}-{3}-ALL	All the ADD-RX and DROP-TX lines in a 40-SMR2-C card.
LINE[-{1-50}]-{1-6,12-17}-{3}-{RX,TX}	The ADD-RX/DROP-TX lines in a 40-SMR2-C card.
LINE[-{1-50}]-{1-6,12-17}-{5}-TX	The transmit EXP-TX line in a 40-SMR2-C card.
LINE[-{1-50}]-{1-6,12-17}-{6-8}-RX	The receive EXP-RX lines in a 40-SMR2-C card.
LINE[-{1-50}]-{1-6,12-17}-{5}-ALL	All the receive and transmit COM lines in a 40-SMR1-C card.
LINE[-{1-50}]-{1-6,12-17}-{5}-{RX,TX}	The receive/transmit COM lines in a 40-SMR1-C card.
LINE[-{1-50}]-{1-6,12-17}-{3}-ALL	All the receive and transmit OSC lines in a 40-SMR1-C card.
LINE[-{1-50}]-{1-6,12-17}-{3}-{RX,TX}	The receive/transmit OSC lines in a 40-SMR1-C card.
LINE[-{1-50}]-{1-6,12-17}-{2}-ALL	All the receive and transmit DC lines in a 40-SMR1-C card.
LINE[-{1-50}]-{1-6,12-17}-{2}-{RX,TX}	The receive/transmit DC lines in a 40-SMR1-C card.
LINE[-{1-50}]-{1-6,12-17}-{4}-ALL	All the ADD-RX and DROP-TX lines in a 40-SMR1-C card.
LINE[-{1-50}]-{1-6,12-17}-{4}-{RX,TX}	The ADD-RX/DROP-TX lines in a 40-SMR1-C card.
LINE[-{1-50}]-{1-6,12-17}-{1}-ALL	All the receive and transmit EXP lines in a 40-SMR1-C card.
LINE[-{1-50}]-{1-6,12-17}-{1}-{RX,TX}	The receive/transmit EXP lines in a 40-SMR1-C card.
LINE[-{1-50}]-{1-5,12-16}-ALL	All the OTSs lines in a 80-WXC-C cards.
LINE[-{1-50}]-{1-5,12-16}-{10}	The receive or transmit COM line in a 80-WXC-C card.

LINE[-{1-50}]-{1-5,12-16}-{9}	The receive or transmit AD line in a 80-WXC-C card.
LINE[-{1-50}]-{1-5,12-16}-{1-8}	The receive or transmit EAD line in a 80-WXC-C card.
LINE[-{1-50}]-{1-5,12-16}-{11}-ALL	All the DROP-TX lines in a 80-WXC-C card.
LINE[-{1-50}]-{1-5,12-16}-{11}-{TX}	The transmit DROP-TX line in a 80-WXC-C card.
LINE[-{1-50}]-{1-5,12-16}-{12}-ALL	All the EXP-TX lines in a 80-WXC-C card.
LINE[-{1-50}]-{1-5,12-16}-{12}-{TX}	The transmit EXP-TX line in a 80-WXC-C card.
LINE[-{1-50}]-{1-5,12-16}-{13}-ALL	All the COM-RX lines in a 80-WXC-C card.
LINE[-{1-50}]-{1-5,12-16}-{13}-{RX}	The receive COM-RX line in a 80-WXC-C card.
PLINE-ALL	All the EXP/COMM/DC lines in all the Passive patch panel module where format is PLINE-ALL.
PLINE-{1-96}-ALL	All the EXP/COM/DC lines in a Passive patch panel module where format is PLINE-[id]-ALL.
PLINE-{1-96}-{1}-ALL	All the IN and OUT DC/COM lines in DCU,15216-MD-40-ODD/EVEN passive modules where format is PLINE-[id]-[port]-ALL
PLINE-{1-96}-{1-3}-ALL	All the IN and OUT COM lines in 15216-MD-ID-50 passive module where format is PLINE-[id]-[port]-ALL.
PLINE-{1-96}-{1-20}-ALL	All the IN COM and OUT EXP lines in PP-MESH-4 passive module where format is PLINE-[id]-[port]-ALL.
PLINE-{1-96}-{1-72}-ALL	All the IN COM and OUT EXP lines in PP-MESH-8 passive module where format is PLINE-[id]-[port]-ALL.
PLINE-{1-96}-{1}-{RX-TX}	The Receive or Transmit DC/COM lines in DCU,15216-MD-40-ODD/EVEN passive modules where format is PLINE-[id]-[port]-[direction]
PLINE-{1-96}-{1-3}-{RX-TX}	The Recieve or Transmit COM line in a 15216-MD-ID-50 passive module where format is PLINE-[id]-[port]-[direction].
PLINE-{1-96}-{1,6,11,16}-RX	The Recieve COM lines in a PP-MESH-4 passive module where format is PLINE-[id]-[port]-[direction].

PLINE-{1-96}-{2-5,7-10,12-15,17-20}-TX	The Transmit EXP lines in a PP-MESH-4 passive module where format is PLINE-[id]-[port]-[direction].
PLINE-{1-96}-{1,10,19,28,37,46,55,64}-RX	The Recieve COM line in a PP-MESH-8, passive modules where format is PLINE-[id]-[port]-[direction].
PLINE-{1-96}-{2-9,11-18,20-27,29-36,38-45,47-54,56-63,65-72}-TX	The Transmit EXP line in a PP-MESH-8, passive modules where format is PLINE-[id]-[port]-[direction].
PLINE-{1-96}-{1}-{RX-TX}	The Recieve or Transmit COM line in a 15216-FLD-xx-x, passive modules where format is PLINE-[id]-[port]-[direction].
PLINE-{1-96}-{2}-{RX-TX}	The Recieve or Transmit EXP line in a 15216-FLD-xx-x, passive modules where format is PLINE-[id]-[port]-[direction].

LINEWL

Line wavelength. Identifies a wavelength channel included in any of the lower layer OTS facilities.

Table 28-21 LINEWL

Values	Description
LINEWL[-{1-50}]-{1-6,8,10,12-17}-ALL	All the Optical Channels representing single wavelength inside OTS facility of a card configured in specified slot. The format is LINE-[SHELF]-[SLOT]-ALL
LINEWL[-{1-50}]-{1-6,12-17}-{1}-{RX,TX}-ALL	The Optical Channel representing single wavelength inside OTS facility in a 32-DMX-O, 32-DMX, 32-DMX-L, 32-MUX-O, 40-DMX-C, 40-MUX-C cards. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-ALL.
LINEWL[-{1-50}]-{1-6,12-17}-{1}-{RX,TX}-<wlen>	The Optical Channel representing single wavelength inside OTS facility in a 32-DMX-O, 32-DMX, 32-DMX-L, 32-MUX-O, 40-DMX-C, 40-MUX-C cards. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-[WLEN].
LINEWL[-{1-50}]-{1-6,12-17}-{1-3}-{RX,TX}-ALL	The Optical Channel representing single wavelength inside OTS facility in a 32-WSS, 40-WSS-C cards. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-ALL.
LINEWL[-{1-50}]-{1-6,12-17}-{1-3}-{RX,TX}-<WLEN>	The Optical Channel representing single wavelength inside OTS facility in a 32-WSS, 40-WSS-C cards. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-[WLEN].
LINEWL[-{1-50}]-{1-6,12-17}-{1-2}-{RX,TX}-ALL	All the Optical Channel representing single wavelength inside OTS facility in a AD-1B, AD-4B, AD-1C, AD-2C, AD-4C units. The format is LINE-[SHELF]-[SLOT]-[PORT]-[DIRN]-ALL

LINEWL[-{1-50}]-{1-6,12-17}-{1-2}-{RX,TX}-<WLEN>	The Optical Channel representing single wavelength inside OTS facility in a AD-1B, AD-4B, AD-1C, AD-2C, AD-4C units. The format is LINE-[SHELF]-[SLOT]-[PORT]-[DIRN]-[WLEN]
LINEWL[-{1-50}]-{1-6,12-17}-{1-2}-{RX,TX}-ALL	All the Optical Channel representing single wavelength inside OTS (COM=1, DC=2) facility in an OPT-PRE unit. The format is LINE-[SHELF]-[SLOT]-[PORT]-[DIRN]-ALL
LINEWL[-{1-50}]-{1-6,12-17}-{1-2}-{RX,TX}-<WLEN>	The Optical Channel representing single wavelength inside OTS (COM=1, DC=2) facility in a OPT-PRE units. The format is LINE-[SHELF]-[SLOT]-[PORT]-[DIRN]-<WLEN>
LINEWL[-{1-50}]-{1-6,12-17}-{1,3}-{RX,TX}-ALL	The Optical Channel representing single wavelength inside OTS (COM=1, LINE=3) facility in a OPT-BST, OPT-BST-E, OPT-BST-L, OPT-AMP-L, OPT-AMP-17-C, and OPT-AMP-23-C cards. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-ALL.
LINEWL[-{1-50}]-{1-6,12-17}-{1,3}-{RX,TX}-<WLEN>	The Optical Channel representing single wavelength inside OTS (COM=1, LINE=3) facility in a OPT-BST, OPT-BST-E, OPT-BST-L, OPT-AMP-L, OPT-AMP-17-C, OPT-AMP-23-C, and OPT-AMP-C cards. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-[WLEN].
LINEWL[-{1-50}]-{1-6,12-17}-{1,3,4}-{RX,TX}-ALL	The Optical Channel representing single wavelength inside OTS (COM=1, LINE=3, DC=4) facility in a OPT-AMP-C card. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-ALL.
LINEWL[-{1-50}]-{1-6,12-17}-{1,3,4}-{RX,TX}-<WLEN>	The Optical Channel representing single wavelength inside OTS (COM=1, LINE=3, DC=4) facility in a OPT-AMP-C card. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-[WLEN].
LINEWL[-{1-50}]-{1-6,12-17}-{1}-{RX,TX}-ALL	All the Optical Channel representing single wavelength inside OTS (COM) facility in a OPT-PRE units. The format is LINE-[SHELF]-[SLOT]-[PORT]-[DIRN]-ALL
LINEWL[-{1-50}]-{1-6,12-17}-{1}-{RX,TX}-<WLEN>	The Optical Channel representing single wavelength inside OTS (COM) facility in a OPT-PRE units.The format is LINE-[SHELF]-[SLOT]-[PORT]-[DIRN]-[WLEN]
LINEWL[-{1-50}]-{1-6,12-17}-{1,3}-{RX,TX}-ALL	The Optical Channel representing single wavelength inside OTS (COM=1, LINE=3) facility in a OPT-BST, OPT-BST-E, OPT-BST-L, OPT-AMP-L, OPT-AMP-17-C and OPT-AMP-23-C cards. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-ALL.

LINEWL[-{1-50}]-{1-6,12-17}-{1,3}-{RX,TX}-<WLEN>	The Optical Channel representing single wavelength inside OTS (COM=1, LINE=3) facility in a OPT-BST, OPT-BST-E, OPT-BST-L, OPT-AMP-L, OPT-AMP-17-C and OPT-AMP-23-C cards. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-[WLEN].
LINEWL[-{1-50}]-{1-6,12-17}-{1-2}-{RX,TX}-ALL	The Optical Channel representing single wavelength inside OTS (COM=1, LINE=2) facility in a OSC-CSM cards. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-ALL.
LINEWL[-{1-50}]-{1-6,12-17}-{1-2}-{RX,TX}-<WLEN>	The Optical Channel representing single wavelength inside OTS (COM=1, LINE=2) facility in a OSC-CSM cards. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-[WLEN].
LINEWL-[{1-50}]-{1-5,12-16}-{1-8}-{RX}-<WLEN>	The Optical Channel representing single wavelength inside EXP lines from all the other WXC cards in a 40-WX-C card. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN].
LINEWL-[{1-50}]-{1-5,12-16}-{9}-{RX,TX}-<WLEN>	The Optical Channel representing single wavelength inside ADD/DROP line to/from MUX/DMX/WSS cards in a 40-WXC-C card. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN].
LINEWL-[{1-50}]-{1-5,12-16}-{10}-{TX}-<WLEN>	The Optical Channel representing single wavelength inside EXP line in a 40-WXC-C card. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN].
LINEWL-[{1-50}]-{1-5,12-16}-{11}-{RX,TX}-<WLEN>	The Optical Channel representing single wavelength inside COM line in a 40-WXC-C card. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN].
LINEWL[-{1-50}]-{1-6,12-17}-{4}-{TX}-ALL	All the Optical Channel representing single wavelength inside COM line TX in a 40-SMR2-C cards. The format is LINEWL-[shelf]-[slot]-[port]-[dirn]-ALL
LINEWL[-{1-50}]-{1-6,12-17}-{4}-{TX}-<wlen>	The Optical Channel representing single wavelength inside COM line TX in a 40-SMR2-C cards. The format is LINEWL-[shelf]-[slot]-[port]-[dirn]-<wlen>
LINEWL[-{1-50}]-{1-6,12-17}-{3}-{RX,TX}-ALL	All the Optical Channel representing single wavelength inside ADD-RX/DROP-TX lines in a 40-SMR2-C cards. The format is LINEWL-[shelf]-[slot]-[port]-[dirn]-ALL
LINEWL[-{1-50}]-{1-6,12-17}-{3}-{RX,TX}-<wlen>	The Optical Channel representing single wavelength inside ADD-RX/DROP-TX line in a 40-SMR2-C cards. The format is LINEWL-[shelf]-[slot]-[port]-[dirn]-<wlen>.
LINEWL[-{1-50}]-{1-6,12-17}-{5}-{TX}-ALL	All the Optical Channel representing single wavelength inside EXP-TX line in a 40-SMR2-C cards. The format is LINEWL-[shelf]-[slot]-[port]-[dirn]-ALL.

LINEWL[-{1-50}]-{1-6,12-17}-{5}-{TX}-<wlen>	The Optical Channel representing single wavelength inside EXP-TX line in a 40-SMR2-C cards. The format is LINEWL-[shelf]-[slot]-[port]-[dirn]-<wlen>
LINEWL[-{1-50}]-{1-6,12-17}-{6-8}-{RX}-ALL	All the Optical Channel representing single wavelength inside EXP-RX lines in a 40-SMR2-C cards. The format is LINEWL-[shelf]-[slot]-[port]-[dirn]-ALL
LINEWL[-{1-50}]-{1-6,12-17}-{6-8}-{RX}-<wlen>	The Optical Channel representing single wavelength inside EXP-RX lines in a 40-SMR2-C cards. The format is LINEWL-[shelf]-[slot]-[port]-[dirn]-<wlen>
LINEWL[-{1-50}]-{1-6,12-17}-{5}-{TX}-ALL	All the Optical Channel representing single wavelength inside COM line TX in a 40-SMR1-C cards. The format is LINEWL-[shelf]-[slot]-[port]-[dirn]-ALL
LINEWL[-{1-50}]-{1-6,12-17}-{5}-{TX}-<wlen>	The Optical Channel representing single wavelength inside COM line TX in a 40-SMR1-C cards. The format is LINEWL-[shelf]-[slot]-[port]-[dirn]-<wlen>
LINEWL[-{1-50}]-{1-6,12-17}-{4}-{RX,TX}-ALL	All the Optical Channel representing single wavelength inside ADD-RX/DROP-TX lines in a 40-SMR1-C cards. The format is LINEWL-[shelf]-[slot]-[port]-[dirn]-ALL
LINEWL[-{1-50}]-{1-6,12-17}-{4}-{RX,TX}-<wlen>	The Optical Channel representing single wavelength inside ADD-RX/DROP-TX line in a 40-SMR1-C cards. The format is LINEWL-[shelf]-[slot]-[port]-[dirn]-<wlen>
LINEWL[-{1-50}]-{1-6,12-17}-{1}-{RX,TX}-ALL	All the Optical Channel representing single wavelength inside EXP lines in a 40-SMR1-C cards. The format is LINEWL-[shelf]-[slot]-[port]-[dirn]-ALL
LINEWL[-{1-50}]-{1-6,12-17}-{1}-{RX,TX}-<wlen>	The Optical Channel representing single wavelength inside EXP line in a 40-SMR1-C cards. The format is LINEWL-[shelf]-[slot]-[port]-[dirn]-<wlen>
LINEWL[-{1-50}]-{1-5,12-16}-ALL	All the Optical Channels representing single wavelength inside OTS facility in a 80-WXC-C card configured in specified slot. The format is LINEWL-[shelf]-[slot]-ALL
LINEWL[-{1-50}]-{1-5,12-16}-{10}-ALL	All the Optical Channel representing single wavelength inside COM line in a 80-WXC-C cards. The format is LINEWL-[shelf]-[slot]-[port]-ALL
LINEWL[-{1-50}]-{1-5,12-16}-{10}-<wlen>	The Optical Channel representing single wavelength inside COM line in a 80-WXC-C cards. The format is LINEWL-[shelf]-[slot]-[port]-<wlen>
LINEWL[-{1-50}]-{1-5,12-16}-{9}-ALL	All the Optical Channel representing single wavelength inside ADD/DROP line in a 80-WXC-C cards. The format is LINEWL-[shelf]-[slot]-[port]-ALL

LINEWL[-{1-50}]-{1-5,12-16}-{9}-<wlen>	The Optical Channel representing single wavelength inside ADD/DROP line in a 80-WXC-C cards. The format is LINEWL-[shelf]-[slot]-[port]-<wlen>
LINEWL[-{1-50}]-{1-5,12-16}-{1-8}-ALL	All the Optical Channel representing single wavelength inside EAD line in a 80-WXC-C cards. The format is LINEWL-[shelf]-[slot]-[port]-ALL
LINEWL[-{1-50}]-{1-5,12-16}-{1-8}-<wlen>	The Optical Channel representing single wavelength inside EAD line in a 80-WXC-C cards. The format is LINEWL-[shelf]-[slot]-[port]-<wlen>
LINEWL[-{1-50}]-{1-5,12-16}-{11}-{TX}-ALL	All the Optical Channel representing single wavelength inside DROP-TX line in a 80-WXC-C cards. The format is LINEWL-[shelf]-[slot]-[port]-[dirn]-ALL
LINEWL[-{1-50}]-{1-5,12-16}-{11}-{TX}-<wlen>	The Optical Channel representing single wavelength inside DROP-TX line in a 80-WXC-C cards. The format is LINEWL-[shelf]-[slot]-[port]-[dirn]-<wlen>
LINEWL[-{1-50}]-{1-6,12-17}-{1-3}-{RX,TX}-<LABEL>	The Optical Channel representing OCHTERM interface in a OPT-EDRA/OPT-EDFA/16-WXC-FS units.The format is LINE-[SHELF]-[SLOT]-[PORT]-[DIRN]-[LABEL].

LNKTERM

Link termination AIDs are used to access the termination points of a provisionable patchcord.

Table 28-22 LNKTERM

Pattern	Description
ALL	Indicates all the provisionable patchcord terminations on a node. Applicable only for the retrieve commands.
LNKTERM-ALL	Indicates all the provisionable patchcord terminations on a node. Applicable only for the retrieve commands.
LNKTERM-{1-65535}	Indicates a single provisionable patchcord termination point on a node, where the format is LNKTERM-.

OPM

OPM AIDs represent the single wavelength inside an optical power monitoring object.

Table 28-23 OPM

Values	Description
ALL	The first ID represents the shelf, the second ID represents the slot, and the last ID is the wavelength, represented in the form of 15xx.yy nanometers. The last index of the
OPM[-{1-50}]-{1-5,12-16}-ALL	

OPM[-{1-50}]-{1-5,12-16}-<wlen>	wavelength is the value of the wavelength as described in OPTICAL_WLEN.

OSC

OSC AIDs are used to access the OSC of the NE.

Table 28-24 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).

PRSLOT

Valid protection slots for the electrical cards.

Table 28-25 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.

RFILE

File transfer type.

Table 28-26 RFILE

Pattern	Description
RFILE-DB	Transferring the provisioning database.
RFILE-LOG	Transferring a log file.

RFILE-PKG	Transferring a software package.
RFILE-COMPDB	Transferring the provisioning and system database.

SHELF

Identifies a shelf within a node. SHELF is applicable only to nodes that are set to MULTISHELF or MULTISHELFETH mode.

Table 28-27 SHELF

Pattern	Description
SHELF-ALL	All of the shelves in the node.
SHELF-{1-50}	A specific shelf in the node (shelf 1 through 30).

STS

SONET frame-level AID set:

- STS AID format for optical and EC1 facilities without PPM: STS-[SLOT]-[PORT]-[STS]
- STS AID format for optical facilities with PPMs: STS-[SLOT]-[PPM]-[PORT]-[STS]
- STS AID format for optical facilities with PIMs and PPMs: STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS]
- STS AID format for DS1 electrical facilities: STS-[SLOT]-[STS]
- STS AID format for DS3 (except DS3i) electrical facilities: STS-[SLOT]-[PORT]-[STS]
- STS AID format for DS3i electrical facilities: STS-[SLOT]-[STS]
- STS AID format for G1K-4 card Gigabit Ethernet (GIGE) facilities: FAC-[SLOT]-[PORT]

Table 28-28 STS

Pattern	Description
ALL	The ALL AID applies to the RTRV-only commands: RTRV-STS with the 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-{1-4,11-14}-{1-4}-{1-4}-{1}	Dynamically allocated STSs of all widths for the GIGE port on an ASAP card. Format is FAC-[SLOT]-[PIM]-[PPM]-[PORT].
FAC-{1-6,12-17}-{1-4}	Dynamically allocated STSs of all widths for the G1K-4 card. Format is FAC-[SLOT]-[PORT]
STS-{1-4,11-14}-{1-16}-1	STS48c AID for 16-port OC48 card. Format is STS-[SLOT]-[PORT]-[STS].

STS-{1-4,11-14}-{1-16}-ALL	All STSs of all path widths on the 16-port OC48 card. Format is STS-[SLOT]-[PORT]-ALL.
STS-{1-4,11-14}-{1-16}-{1,13,25,37}	STS12C AID for the 16-port OC48 card. Format is STS-[SLOT]-[PORT]-ALL.
STS-{1-4,11-14}-{1-16}-{1,25}	STS24C AID for the 16-port OC48 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,11-14}-{1-16}-{1,4,7,10,-,46}	STS3c AID for the 16-port OC48 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-1	STS192c AID for the 4-port OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-ALL	All STSs of all path widths on the 4-port OC192 card. Format is STS-[SLOT]-[PORT]-ALL.
STS-{1-4,11-14}-{1-4}-{1,13,25,37,-,181}	STS12c AID for the 4-port OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,25,49,73,-,169}	STS24c AID for the 4-port OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4,7,10,-,190}	STS3c AID for the 4-port OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,49,97,145}	STS48c AID for the 4-port OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}	StS3c AID for the ASAP card with an OC3 port provisioned. STS12C AID for the ASAP card with an OC12 port provisioned. STS48C AID for the ASAP card with OC48 port provisioned. Format of AID is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,13,25,37}	STS12C AID for the ASAP card with an OC48 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,25}	STS24C AID for the ASAP card with an OC48 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,13,16, 25,28,37,40}	STS9C AID for the ASAP card with an OC48 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7,10,13,16,19, 22,25,28,31,34,37,40,43,46}	STS3C AID for the ASAP card with an OC48 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].

STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7}	STS6C AID for the ASAP card with an OC12 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4}	STS9C AID for the ASAP card with an OC12 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-12}	STS1 AID for the ASAP card with an OC12 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-3}	STS1 AID for the ASAP card with an OC3 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-48}	STS1 AID for the ASAP card with an OC48 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1-192}	STS1 AID for the 4-port OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1-4}-{1}-ALL	STS1, STS3C, STS6C, STS9C, STS12C, STS24C, and STS48C AID for the ASAP card with an OCN port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1-4}-{1}-{1,4,7,13,16,19,25, 28,31,43}	STS6C AID for the ASAP card with an OC48 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,14-17}-{1-16}-{1-48}	STS1 AID for the 16-port OC48 card Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,14-17}-{1-4}-1	STS12C AIDs for a 4-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,14-17}-{1-4}-ALL	All the STSs for a given 4-port OC12 card. Format is STS-[SLOT]-[PORT]-ALL.
STS-{1-4,14-17}-{1-4}-{1,4,7,10}	STS3C for the 4-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,14-17}-{1-4}-{1,4,7}	STS6C AIDs for a 4-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,14-17}-{1-4}-{1-3}	STS1 AID for the 4-port OC3 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,14-17}-{1-8}-1	STS3C for the 8-port OC3 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,14-17}-{1-8}-ALL	All the STSs for a given 8-port OC3 card. Format is STS-[SLOT]-[PORT]-ALL.

STS-{1-4,14-17}-{1-8}-{1-3}	STS1 AID for the 8-port OC3 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1	STS1 AID for a DS1 card. Format is STS-[SLOT]-[STS]. There is only 1 STS for the DS1 card.
STS-{1-6,12-17}-1-1	STS12C AID for a single-port OC12 card STS48C AID for an OC48AS card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1-ALL	All the STSs of an STS bandwidth on a single port optical card. Format is STS-[SLOT]-[PORT]-ALL.
STS-{1-6,12-17}-1-{1,13,25,37}	STS12C AIDs for an OC48AS card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-{1,4,10,13,16,19,25,28,37,40}	STS9C AID for an OC48AS card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1-{1,4,7,10,13,16,19,22,25}	STS24C AID for an OC48AS card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1-{1,4,7,10-46}	STS3C AID for an OC48AS card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1-{1,4,7,10}	STS3C AID for a single-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1-{1,4,7,13,16,19,25,28,37,40,43}	STS6C AID for an OC48AS card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1-{1,4,7}	STS6C AID for an OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1-{1,4}	STS9C AID for a single-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1-{1-12}	STS1 AID for a single-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1-{1-48}	STS1 AID for an OC48AS card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-ALL	STS ALL AID for the card in the given slot. Format is STS-[SLOT]-[ALL].
STS-{1-6,12-17}-{1-12}-1	STS1 AID for EC1 and DS3 cards. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-{1-24}-1	STS1 AIDs for the DS3XM-12 STS12 backplane rate cards. Format is STS-[SLOT]-[PORT]-[STS].

STS-{1-6,12-17}-{1-36}-1	STS1 AIDs for the DS3XM-12 STS48 backplane rate cards. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-{1-4}-1	STS3C AID for a 4-port OC3 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-{1-4}-ALL	All the STSs for a 4-port OC3 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-{1-4}-{1,4,7,10-46}	Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-{1-4}-{1,4,7}	STS6c AID for a 4-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-{1-4}-{1,4}	STS9C AID for a 4-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-{1-4}-{1-12}	STS1 AID for a 4-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-{1-6}	STS1 AID for a DS3XM card. Format is STS-[SLOT]-[STS].
STS-{2}-{1-2}-{1}-{1,4,7,10}	STS3c AID for the OC12 port. Format is STS-[SLOT]-[PPM]-[PORT]-[STS].
STS-{2}-{1-2}-{1}-{1,7}	STS6c AID for the OC12 port. Format is STS-[SLOT]-[PPM]-[PORT]-[STS].
STS-{2}-{1-2}-{1}-{1-12}	STS1 AID for the OC12 port. Format is STS-[SLOT]-[PPM]-[PORT]-[STS].
STS-{2}-{1-2}-{1}-{1-3}	STS1 AID for the OC3 port. Format is STS-[SLOT]-[PPM]-[PORT]-[STS].
STS-{2}-{1-2}-{1}-{1}	STS3c AID for the OC3 port, or STS9C AID for the OC12 port, or STS12c AID for the OC12 port. Format is STS-[SLOT]-[PPM]-[PORT]-[STS].
STS-{2}-{1-3}-{1}	STS1 AID for the 15310-CL-CTX T3 ports. Format is STS-[SLOT]-[PORT]-[STS]. The AIDs are port-based and presented as one STS per port.
STS-{2}-{1}	STS1 AID for the 15310-CL-CTX T1 port. Format is STS-[SLOT]-[STS]. There is only one STS for the WBE ports on the 15310-CL-CTX card.
STS-{5,6,12,13}-1-1	STS48c AID for an OC48 card, or STS192 AID for an OC192 card. Format is STS-[SLOT]-[PORT]-[STS].

STS-{5,6,12,13}-1-{1,13,25,37-180}	STS12c AID for an OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{5,6,12,13}-1-{1,13,25,37}	STS12c AIDs for an OC48 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{5,6,12,13}-1-{1,4,7,10,13,16,19,22,25}	STS24c AID for an OC48 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{5,6,12,13}-1-{1,4,7,10-190}	STS3c for an OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{5,6,12,13}-1-{1,4,7,10-46}	STS3c AID for an OC48 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{5,6,12,13}-1-{1,4,7,13,16,19,25,28,37,40,43}	STS6c AID for an OC48 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{5,6,12,13}-1-{1,49,97,145}	STS48c AID for an OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{5,6,12,13}-1-{1-192}	STS1 AID for an OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{5,6,12,13}-1-{1-48}	STS1 AID for an OC48 card. Format is STS-[SLOT]-[PORT]-[STS].
VFAC-{1-6,12-17}-{0-1}	Virtual facility AID for the ML-Series card back-end POS ports. Both the ML1000-2 and ML100T-12 have two POS ports. Port numbering starts at 0. Format is VFAC-[SLOT]-[PORT].

SYN

Synchronization AIDs

Table 28-29 SYN

Pattern	Description
SYNC[-{1-50}]-ALL	ALL synchronization AID (values 1 to 8 is the shelf ID).
SYNC[-{1-50}]-NE	NE synchronization AID (values 1 to 8 is the shelf ID).
SYNC[-{1-50}]-{BITS1,BITS2}	BITS synchronization AID (values 1 to 8 is the shelf ID).

SYN_SRC

Synchronization source

Table 28-30 SYN_SRC

Pattern	Description
BITS-1	Synchronization source is BITS-1. Format is BITS-[PORT].
BITS-2	Synchronization source is BITS-2. Format is BITS-[PORT].
FAC-{1-4,11-14}-{1-16}	Synchronization source is 16-port OC48. Format is FAC-[SLOT]-[PORT].
FAC-{1-4,11-14}-{1-4}	Synchronization source is 4-port OC192. Format is FAC-[SLOT]-[PORT].
FAC-{1-6,12-17}-{1-4}	Synchronization source is the optical card (four-port OC3 and four-port OC12) facility. Format is FAC-[SLOT]-[PORT].
FAC-{1-6,12-17}-{1}	Synchronization source is the optical card (one-port OC12 and OC48AS) facility. Format is FAC-[SLOT]-[PORT].
FAC-{5,6,12,13}-{1}	Synchronization source is the optical card (OC48, OC192) facility. Format is FAC-[SLOT]-[PORT].
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.

SYNC_REF

Synchronization AIDs.

Table 28-31 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-SYNCN, RTRV-ALM-SYNCN, and RTRV-COND-SYNCN.
SYNC-ALL	All synchronization references.
SYNC-{1-50}-NE	NE synchronization AID.

SYNC-{1-50}-{BITS1,BITS2}	BITS1 and BITS2 synchronization AIDs.

SYNCSW

New synchronization reference that will be used.

Table 28-32 SYNCSW

Pattern	Description
INT	Internal clock. The INT value is only applied for the SYNC-NE AID on the OPR-SYNCSW command.
PRI	Primary timing reference.
SEC	Secondary timing reference.

UDC

UDC AIDs for F-UDC and DCC-UDC channels on the AIC-I card.

Table 28-33 UDC

Pattern	Description
ALL	Applicable to RTRV-only commands, for example, RTRV-ALM/COND-UDCF and RTRV-ALM/COND-UDCDCC. 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.

VT

Virtual tributary.

- VT1 AID format for optical and EC1 facilities without PPM: VT1-[SLOT]-[PORT]-[STS]-[VTG]-[VTN]
- VT1 AID format for optical facilities with PPM: VT1-[SLOT]-[PPM]-[PORT]-[STS]-[VTG]-[VTN]
- VT1 AID format for DS1 electrical facilities: VT1-[SLOT]-[STS]-[VTG]-[VTN]
- VT1 AID format for DS3 electrical facilities: VT1-[SLOT]-[PORT]-[STS]-[VTG]-[VTN]

Table 28-34 VT

Pattern	Description
ALL	Applies to RTRV-only commands. For example, the RTRV-VT and RTRV-VT1 with ALL AIDs return all VT1 interfaces on the node.
VT1-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-4}	8-port OC3 card

VT1-{1-6,12-17}-1-{1-12}-{1-7}-{1-4}	Single-port OC12 card
VT1-{1-6,12-17}-1-{1-48}-{1-7}-{1-4}	OC48AS card
VT1-{1-6,12-17}-1-{1-7}-{1-2}	DS1 card
VT1-{1-6,12-17}-{1-12}-1-{1-7}-{1-4}	EC1 card
VT1-{1-6,12-17}-{1-24}-1-{1-7}-{1-4}	VT1.5 AIDs for DS3XM-12 STS12 backplane rate cards
VT1-{1-6,12-17}-{1-36}-1-{1-7}-{1-4}	VT1.5 AIDs for DS3XM-12 STS48 backplane rate cards
VT1-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-4}	4-port OC12 card
VT1-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-4}	4-port OC3 card
VT1-{1-6,12-17}-{1-6}-{1-7}-{1-4}	DS3XM-6 card
VT1-{2}-{1-2}-{1}-{1-12}-{1-7}-{1-4}	VT1 AIDs for OC3 port on a 15310-CL-CTX card
VT1-{2}-{1-2}-{1}-{1-3}-{1-7}-{1-4}	VT1 AIDs for OC3 port on a 15310-CL-CTX card
VT1-{2}-{1-3}-{1}-{1-7}-{1-4}	VT1 AIDs for BBE port on a 15310-CL-CTX card. The AIDs are port-based and presented as one STS per port. VTs are supported only for EC1 ports.
VT1-{2}-{1}-{1-7}-{1-3}	VT1 AIDs for T1 (WBE) port on a 15310-CL-CTX card. There is only one STS for the WBE ports on the 15310-CL-CTX card. There are seven VT groups, each containing three VTs.
VT1-{5,6,12,13}-1-{1-192}-{1-7}-{1-4}	OC192 card
VT1-{5,6,12,13}-1-{1-48}-{1-7}-{1-4}	OC48 card
VT2-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-3}	Eight-port OC3 card
VT2-{1-6,12-17}-1-{1-12}-{1-7}-{1-3}	Single-port OC12 card
VT2-{1-6,12-17}-1-{1-48}-{1-7}-{1-3}	OC48AS card
VT2-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-3}	Four-port OC12 card
VT2-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-3}	Four-port OC3 card
VT2-{5,6,12,13}-1-{1-192}-{1-7}-{1-3}	OC192 card
VT2-{5,6,12,13}-1-{1-48}-{1-7}-{1-3}	OC48 card

WDMANS

This AID is used to access the Wavelength Division Multiplexing (WDM) automatic optical node setup (AONS) application of the NE.

Table 28-35 WDMANS

Pattern	Description
WDMSIDE-{UNKNOWN,A,B,C,D,E,F,G,H}	Automatic MSTP node setup identifier
WDMNODE	Automatic MSTP node setup identifier

WLEN

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 28-36 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, 1555.75,1556.55,1558.17,1558.98,1559.79,1560.61,1577.44,1577.86,1578.27,1578.69,1579.10,1579.52,1579.93,1580.35,1580.77,1581.18,1581.60,1582.02,1582.44,1582.85,1583.27,1583.69,1584.11,1584.53,1584.95,1585.36,1585.78,1586.20,1586.62, 1587.04,1587.46,1587.88,1588.30,1588.73,1589.15,1589.57,1589.99,1590.41,1590.83,1591.26,1591.68,1592.10,1592.52,1592.95,1593.37,1593.79}	Wavelength identifier

WPLINE

WPLINE AID is used to define the LINE and VEXP ports of FLD-OSC and Virtual Passive Devices respectively.

Table 28.37 WPLINE

Pattern	Description
WPLINE-{1-126}-{1-1}-{RX-TX}	All LINE Ports of FLD-OSC
WPLINE-{1-126}-{6-8}-{RX-TX}	All IN-VEXP and OUT-VEXP ports of Virtual Passive Device 4-1, Virtual Passive Device 4-2, Virtual Passive

	Device 4-3 and Virtual Passive Device 4-4
WPLINE-{1-126}-{10-16}-{RX-TX}	All IN-VEXP and OUT-VEXP ports of Virtual Passive Device 8-1, Virtual Passive Device 8-2, Virtual Passive Device 8-3, Virtual Passive Device 8-4, Virtual Passive Device 8-5, Virtual Passive Device 8-6, Virtual Passive Device 8-7, Virtual Passive Device 8-8

WPLINEWL

WPLINEWL AID is used to define Wavelength (WLINEWL) AID channel included in any of the LINE and VEXP ports of FLD-OSC and Virtual Passive Devices respectively.

Table 28.38 WPLINEWL

Pattern	Description
WPLINEWL-{1-126}-{1-1}-{RX-TX}	All Wavelength AID channel in LINE Ports of FLD-OSC
WPLINEWL-{1-126}-{6-8}-{RX-TX}	All Wavelength AID channel in IN-VEXP and OUT-VEXP ports of Virtual Passive Device 4-1, Virtual Passive Device 4-2, Virtual Passive Device 4-3 and Virtual Passive Device 4-4
WPLINEWL-{1-126}-{10-16}-{RX-TX}	All Wavelength AID channel in IN-VEXP and OUT-VEXP ports of Virtual Passive Device 8-1, Virtual Passive Device 8-2, Virtual Passive Device 8-3, Virtual Passive Device 8-4, Virtual Passive Device 8-5, Virtual Passive Device 8-6, Virtual Passive Device 8-7, Virtual Passive Device 8-8

PWRM

PWRM Aid used to identify Power Modules of M15.

Table 28.39 PWRM

Pattern	Description

PWRM-{1-50}-{1-4}	All Power Modules of M15

USBPORT

USBPORT Aid used to identify the ECU USBPORTS of M15.

Table 28.40 USBPORT

Pattern	Description
USBPORT-{1-50}-18-{1-14}	The shelf Id of ECU on M15 is 18. USBPORTS are a part of the ECU Slot.

MSISCIF

MSISCIF Aid used to identify the MSISC ports of M15.

Table 28.41 MSISCIF

Pattern	Description
MSISCIF-{1-50}-18-{1-2}	The shelf Id of ECU on M15 is 18. MSISC ports are a part of the ECU Slot.

CTC Port Numbers and TL1 Aids

Table 28-42 CTC Port Numbers and TL1 Aids

Equipment	CTC Port Name	CTC Port Number	TL1 Aid
OPT-RAMP-C	COM-RX	1	LINE-shelf-slot-1-RX
	COM-TX	2	LINE-shelf-slot-1-TX
	OSC-RX	3	LINE-shelf-slot-2-RX
	OSC-TX	4	LINE-shelf-slot-2-TX
	LINE-RX	5	LINE-shelf-slot-3-RX
	LINE-TX	6	LINE-shelf-slot-3-TX
	DC-RX	7	LINE-shelf-slot-4-RX
	DC-TX	8	LINE-shelf-slot-4-TX
	RAMAN-RX	9	LINE-shelf-slot-5-RX

	RAMAN-TX	10	LINE-shelf-slot-5-TX
OPT-AMP-17C	COM-RX	1	LINE-shelf-slot-1-RX
	COM-TX	2	LINE-shelf-slot-1-TX
	OSC-RX	3	LINE-shelf-slot-2-RX
	OSC-TX	4	LINE-shelf-slot-2-TX
	LINE-RX	5	LINE-shelf-slot-3-RX
	LINE-TX	6	LINE-shelf-slot-3-TX
OPT-AMP-C	COM-RX	1	LINE-shelf-slot-1-RX
	COM-TX	2	LINE-shelf-slot-1-TX
	DC-RX	7	LINE-shelf-slot-4-RX
	DC-TX	8	LINE-shelf-slot-4-TX
	OSC-RX	3	LINE-shelf-slot-2-RX
	OSC-TX	4	LINE-shelf-slot-2-TX
	LINE-RX	5	LINE-shelf-slot-3-RX
	LINE-TX	6	LINE-shelf-slot-3-TX
OSC-CSM	COM-RX	2	LINE-shelf-slot-1-RX
	COM-TX	3	LINE-shelf-slot-1-TX
	LINE-RX	4	LINE-shelf-slot-2-RX
	LINE-TX	5	LINE-shelf-slot-2-TX
	OSC-RX	6	LINE-shelf-slot-3-RX
	OSC-TX	7	LINE-shelf-slot-3-TX
	OC3	1	FAC-shelf-slot-1
40 WXC	EXP-i-RX	1..8	LINE-shelf-slot-i-RX (i=1..8)
	EXP-TX	11	LINE-shelf-slot-10-TX
	ADD-RX	9	LINE-shelf-slot-9-RX
	DROP-TX	10	LINE-shelf-slot-9-TX
	COM-RX	12	LINE-shelf-slot-11-RX

	COM-TX	13	LINE-shelf-slot-11-TX
80-WXC-C	EAD-i-R/T	1..8	LINE-shelf-slot-i (i=1..8)
	ADD R/T	9	LINE-shelf-slot-9
	COM R/T	10	LINE-shelf-slot-10
	DROP-TX	11	LINE-shelf-slot-11-TX
	COM-RX	13	LINE-shelf-slot-13-RX
	EXP-TX	12	LINE-shelf-slot-12-TX
32 DMX	CHAN TX	1-32	CHAN-shelf-slot-i-TX (i=1..32)
	COM-RX	33	LINE-shelf-slot-1-RX
OPT-PRE	COM-RX	1	LINE-shelf-slot-1-RX
	COM-TX	2	LINE-shelf-slot-1-TX
	DC-RX	3	LINE-shelf-slot-2-RX
	DC-TX	4	LINE-shelf-slot-2-TX
40 DMX	CHAN TX	1 - 40	CHAN-shelf-slot-i-TX (i=1..40)
	COM RX	41	LINE-shelf-slot-1-RX
4 MD	CHAN-RX	1	CHAN-shelf-slot-1-RX
	CHAN-TX	2	CHAN-shelf-slot-1-TX
	CHAN-RX	3	CHAN-shelf-slot-2-RX
	CHAN-TX	4	CHAN-shelf-slot-2-TX
	CHAN-RX	5	CHAN-shelf-slot-3-RX
	CHAN-TX	6	CHAN-shelf-slot-3-TX
	CHAN-RX	7	CHAN-shelf-slot-4-RX
	CHAN-TX	8	CHAN-shelf-slot-4-TX
	COM-RX	9	LINE-shelf-slot-1-RX
	COM-TX	10	LINE-shelf-slot-1-TX
40 MUX	CHAN-RX	1-40	CHAN-shelf-slot-i-RX (i=1..40)
	COM-TX	41	LINE-shelf-slot-1-TX

32 DMX L	CHAN TX	1 - 32	CHAN-shelf-slot-i-TX (i=1..32)
	COM RX	33	LINE-shelf-slot-1-RX
32 WSS L	ADD-RX	1-32	CHAN-shelf-slot-i-RX (i=1..32)
	PT	33-64	CHAN-shelf-slot-i-PT (i=1..32)
	DROP-TX	69	LINE-shelf-slot-3-TX
	EXP-RX	66	LINE-shelf-slot-2-RX
	EXP-TX	65	LINE-shelf-slot-2-TX
	COM-RX	68	LINE-shelf-slot-1-RX
	COM-TX	67	LINE-shelf-slot-1-TX
OPT-BST	COM-RX	1	LINE-shelf-slot-1-RX
	COM-TX	2	LINE-shelf-slot-1-TX
	OSC-RX	3	LINE-shelf-slot-2-RX
	OSC-TX	4	LINE-shelf-slot-2-TX
	LINE-RX	5	LINE-shelf-slot-3-RX
	LINE-TX	6	LINE-shelf-slot-3-TX
OPT-BST E	COM-RX	1	LINE-shelf-slot-1-RX
	COM-TX	2	LINE-shelf-slot-1-TX
	OSC-RX	3	LINE-shelf-slot-2-RX
	OSC-TX	4	LINE-shelf-slot-2-TX
	LINE-RX	5	LINE-shelf-slot-3-RX
	LINE-TX	6	LINE-shelf-slot-3-TX
OPT-AMP L	COM-RX	1	LINE-shelf-slot-1-RX
	COM-TX	2	LINE-shelf-slot-1-TX
	DC-RX	7	LINE-shelf-slot-4-RX
	DC-TX	8	LINE-shelf-slot-4-TX
	OSC-RX	3	LINE-shelf-slot-2-RX
	OSC-TX	4	LINE-shelf-slot-2-TX

	LINE-RX	5	LINE-shelf-slot-3-RX
	LINE-TX	6	LINE-shelf-slot-3-TX
OPT-BST L	COM-RX	1	LINE-shelf-slot-1-RX
	COM-TX	2	LINE-shelf-slot-2-TX
	OSC-RX	3	LINE-shelf-slot-1-RX
	OSC-TX	4	LINE-shelf-slot-2-TX
	LINE-RX	5	LINE-shelf-slot-1-RX
	LINE-TX	6	LINE-shelf-slot-2-TX
MMU	EXPA-RX	5	LINE-shelf-slot-3-RX
	EXPA-TX	6	LINE-shelf-slot-3-TX
	EXP-RX	1	LINE-shelf-slot-1-RX
	EXP-TX	2	LINE-shelf-slot-1-TX
	COM-RX	3	LINE-shelf-slot-2-RX
	COM-TX	4	LINE-shelf-slot-2-TX
PSM	W-RX	1	LINE-shelf-slot-1-RX
	W-TX	2	LINE-shelf-slot-1-TX
	P-RX	3	LINE-shelf-slot-2-RX
	P-TX	4	LINE-shelf-slot-2-TX
	COM-RX	5	LINE-shelf-slot-3-RX
	COM-TX	6	LINE-shelf-slot-3-TX
AD 1B	BAND-RX	1	BAND-shelf-slot-1-RX
	BAND-TX	2	BAND-shelf-slot-1-TX
	EXP-RX	3	LINE-shelf-slot-1-RX
	EXP-TX	4	LINE-shelf-slot-1-TX
	COM-RX	5	LINE-shelf-slot-2-RX
	COM-TX	6	LINE-shelf-slot-2-TX
AD 1C	CHAN-RX	1	CHAN-shelf-slot-1-RX

	CHAN-TX	2	CHAN-shelf-slot-1-TX
	EXP-RX	3	LINE-shelf-slot-1-RX
	EXP-TX	4	LINE-shelf-slot-1-TX
	COM-RX	5	LINE-shelf-slot-2-RX
	COM-TX	6	LINE-shelf-slot-2-TX
AD 2C	CHAN-RX	1	CHAN-shelf-slot-1-RX
	CHAN-TX	2	CHAN-shelf-slot-1-TX
	CHAN-RX	3	CHAN-shelf-slot-2-RX
	CHAN-TX	4	CHAN-shelf-slot-2-TX
	EXP-RX	5	LINE-shelf-slot-1-RX
	EXP-TX	6	LINE-shelf-slot-1-TX
	COM-RX	7	LINE-shelf-slot-2-RX
	COM-TX	8	LINE-shelf-slot-2-TX
AD 4C	CHAN-RX	1	CHAN-shelf-slot-1-RX
	CHAN-TX	2	CHAN-shelf-slot-1-TX
	CHAN-RX	3	CHAN-shelf-slot-2-RX
	CHAN-TX	4	CHAN-shelf-slot-2-TX
	CHAN-RX	5	CHAN-shelf-slot-3-RX
	CHAN-TX	6	CHAN-shelf-slot-3-TX
	CHAN-RX	7	CHAN-shelf-slot-4-RX
	CHAN-TX	8	CHAN-shelf-slot-4-TX
	EXP-RX	9	LINE-shelf-slot-1-RX
	EXP-TX	10	LINE-shelf-slot-1-TX
	COM-RX	11	LINE-shelf-slot-2-RX
	COM-TX	12	LINE-shelf-slot-2-TX
32 WSS	ADD-RX	1-32	CHAN-shelf-slot-i-RX (i=1..32)
	PT	33-64	CHAN-shelf-slot-i-PT (i=1..32)

	DROP-TX	69	LINE-shelf-slot-3-TX
	EXP-RX	66	LINE-shelf-slot-2-RX
	RXP-TX	65	LINE-shelf-slot-2-TX
	COM-RX	68	LINE-shelf-slot-1-RX
	COM-TX	67	LINE-shelf-slot-1-TX
40 WSS CO	ADD-RX	1-40	CHAN-shelf-slot-i-RX (i=1..32)
	PT	41-80	CHAN-shelf-slot-i-PT (i=1..32)
	DROP-TX	85	LINE-shelf-slot-3-TX
	EXP-RX	82	LINE-shelf-slot-2-RX
	RXP-TX	81	LINE-shelf-slot-2-TX
	COM-RX	84	LINE-shelf-slot-1-RX
	COM-TX	83	LINE-shelf-slot-1-TX
32 DMXO	CHAN-TX	1-32	CHAN-shelf-slot-i-TX (i=1..32)
	COM-RX	33	LINE-shelf-slot-1-RX
32 MUXO	CHAN RX	1-32	CHAN-shelf-slot-i-RX (i=1..32)
	COM TX	33	LINE-shelf-slot-1-TX
SMR-1	EXP-RX	1	LINE-shelf-slot-1-RX
	EXP-TX	2	LINE-shelf-slot-1-TX
	DC-RX	3	LINE-shelf-slot-2-RX
	DC-TX	4	LINE-shelf-slot-2-TX
	OSC-RX	5	LINE-shelf-slot-3-RX
	OSC-TX	6	LINE-shelf-slot-3-TX
	ADD-RX	7	LINE-shelf-slot-4-RX
	DROP-TX	8	LINE-shelf-slot-4-TX
	LINE-RX	9	LINE-shelf-slot-5-RX
	LINE_TX	10	LINE-shelf-slot-5-TX
SMR-2	DC-RX	1	LINE-shelf-slot-1-RX

	DC-TX	2	LINE-shelf-slot-1-TX
	OSC-RX	3	LINE-shelf-slot-2-RX
	OSC-TX	4	LINE-shelf-slot-2-TX
	ADD-RX	5	LINE-shelf-slot-3-RX
	DROP-TX	6	LINE-shelf-slot-3-TX
	LINE-RX	7	LINE-shelf-slot-4-RX
	LINE_TX	8	LINE-shelf-slot-4-TX
	EXP-TX-1	9	LINE-shelf-slot-5-TX
	EXP-RX-2	10	LINE-shelf-slot-6-RX
	EXP-RX-3	11	LINE-shelf-slot-7-RX
	EXP-RX-4	12	LINE-shelf-slot-8-RX
10x10G-LC	CXP [port 11]	CXP 11-2…11or 11-2…11	VLINE-SL-1-1-i (i=2…11)
100G-LC-C	CXP [port 1]	CXP 1-2…11 or 1-2…11	VLINE-SL-1-1-i (i=2…11)
16-AD-FS	DEG1-4 RX 1-2	1	LINE-[shelf]-[line]-1-RX
	DEG1-4 TX 1-1	2	LINE-[shelf]-[line]-1-TX
	DEG1-4 RX 1-8	7	LINE-[shelf]-[line]-4-RX
	DEG1-4 TX 1-7	8	LINE-[shelf]-[line]-4-TX
	UPG#1 RX 2-9		LINE-[shelf]-[line]-5-RX
	UPG#1 RX 2-1		LINE-[shelf]-[line]-5-TX
SMR 20 FS	COM-TX	1	Not applicable as COM port is not physically present on the faceplate of the SMR20 card
	COM-RX	2	Not applicable as COM port is not physically present on the faceplate of the SMR20 card

	OSC-TX	3	LINE-[shelf]-[slot]-1-TX
	OSC-RX	4	LINE-[shelf]-[slot]-1-RX
	LINE-TX	5	LINE-[shelf]-[slot]-2-TX
	LINE-RX	6	LINE-[shelf]-[slot]-2-RX
	EXP-TX	7	LINE-[shelf]-[slot]-3-TX
CFP-LC	CFP-1	CFP 1-1…10 or 1-1…10	VLINE-SL-1-1-i (i=1…10)
	CFP-2	CFP 2-1…10 or 2-1…10	VLINE-SL-2-1-i (i=1…10)

PSHELF

The PSHELF AID is used to provision passive shelf corresponding to a fiber shuffle.

The format is: PSHELF -<PSHELFID>.

Table 28-43 PSHELF

Pattern	Description
ALL	All the passive shelves on the NE.
PSHELF-{1-126}	Specific passive shelf corresponding to a fiber shuffle.

PSUNIT

Passive unit provisioned under a passive shelf of a fiber shuffle.

The format is: PSUNIT-<Passive Shelf Id>-<Passive Slot of the Fiber Shuffle>.

Table 28-44 PSUNIT

Pattern	Description
ALL	All the passive units on the fiber shuffle.
PSUNIT-{1-126}-{1-14}	Specific passive unit provisioned under a fiber shuffle.

PSLINE

OTS port of a passive unit provisioned under a fiber shuffle.

The format is: PSLINE-<Passive Shelf Id>-<Passive Slot of the Fiber Shuffle>-<Port Number>-<Direction>.

Table 28-45 PSLINE

Pattern	Description
ALL	All the OTS ports of all the passive units under a fiber shuffle.
PSLINE-{1-126}-{1-14}-{1-32}-{TX/RX}	Specific passive OTS port of a passive unit under a fiber shuffle.

FPSLINE

OTS port of a passive unit provisioned under a fiber shuffle used to create an OCHNC circuit on flex packages.

The format is: FPSLINE-<Passive Shelf Id>-<Passive Slot of the Fiber Shuffle>-<Port Number>-<Direction>-<Circuit Label>.

Table 28-46 FPSLINE

Pattern	Description
ALL	All the OTS ports of all the passive units under a fiber shuffle.
FPSLINE-{1-126}-{1-14}-{1-32}-{TX/RX}-{LABEL}	Specific passive OTS port of a passive unit under a fiber shuffle.

PSUSB

PSUSB AID is used to provision daisy chain between fiber shuffles.

The format is: PSUSB-<Passive Shelf >-<Passive USB number of the Fiber Shuffle/Passive Slot of Fiber Shuffle>.

Table 28-47 PSUSB

Pattern	Description
ALL	All the USB ports on a fiber shuffle.
PSUSB-{1-126}-{1-14}	Specific USB port on a fiber shuffle that is used to connect to another fiber shuffle.

Chapter 28: Conditions

This chapter lists the conditions for TL1 commands and autonomous messages for the Cisco NCS 2000 Series. These conditions are listed below.

Conditions include any problem detected on the Cisco NCS 2000 Series. They can include standing or transient notifications. A snapshot of all current raised, standing conditions on the network, node, or card can be retrieved in the Cisco Transport Controller (CTC) Conditions window or using the RTRV-COND commands. (In addition, some but not all cleared conditions are also found in the History tab in CTC.)

Table 28-1 Conditions

Condition	Description
AIS	Alarm Indication Signal
AIS-L	Alarm Indication Signal—Line
ALS	Automatic Laser Shutdown
AMPLI-INIT	Optical Amplifier Initialization
APC-DISABLED	Automatic Power Control Disabled
APC-FAIL	Automatic Power Control Failure
APSB	Byte Failure
APSC-IMP	Improper Automatic Protection Switch (APS) Code
APSCDFLTK	Default K Byte
APSCINCON	Inconsistent APS Code
APSCM	Protection Switching Channel Match Failure
APSCNMIS	Node ID Mismatch
APSIMP	APS Invalid Mode
APSMM	APS Mode Mismatch
AS-CMD	Alarms Suppressed By User Command
AS-MT	Alarms Suppressed For Maintenance
AU-AIS	AIS—Administration Unit—Alarm Indication Signal
AU-LOF	LOF—Administration Unit—Loss of Multi Frame

AU-LOP	LOP—Administration Unit—Loss of Pointer
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-SNCP	Automatic SNCP Switch caused by AIS
AUTOSW-LOP-SNCP	Automatic SNCP Switch Caused By LOP
AUTOSW-PDI-SNCP	Automatic SNCP Switch Caused By PDI
AUTOSW-SDBER-SNCP	Automatic SNCP Switch Caused By SDBER
AUTOSW-SFBER-SNCP	Automatic SNCP Switch Caused By SFBER
AUTOSW-UNEQ-SNCP	Automatic SNCP Switch Caused By UNEQ
AWG-DEG	AWG Temperature Degrade
AWG-FAIL	AWG Temperature Failure
AWG-OVERTEMP	AWG Over-Temperature
AWG-WARM-UP	AWG Warm Up
BAT-FAIL	Battery Failure
BAT-HGH-VLT	High Volt
BAT-LOW-VLT	Low Volt
BKUPMEMP	Primary Non-Volatile Backup Memory Failure
CARLOSS	Carrier Loss On The LAN
CASETEMP-DEG	Case Temperature Degrade

CKTDOWN	Signaling unable to set up 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
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
E3-ISD	E3 Idle Condition
EHIBATVG	Extreme High Volt

ELWBATVG	Extreme Low Volt
EOC	RS-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 Configuration
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
FAILTOSW-HO	Failure To Switch To Protection—High Order Path
FAILTOSW-LO	Failure To Switch To Protection—Low Order 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-E1-MULTLOS	Far end multiple E1 LOS detected on E3
FE-E1-NSA	Far end E1 eqpt fail non service affecting
FE-E1-SA	Far end E1 eqpt fail service affecting
FE-E1-SNGLLOS	Far end signal E1 LOS
FE-E3-NSA	Far end E3 eqpt fail non service affecting
FE-E3-SA	Far end E3 eqpt fail 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-ALL	Far End Lockout Of Protection—All Spans
FE-LOCKOUTOFPR-RING	Far End Lockout Of Protection—Ring
FE-LOCKOUTOFPR-SPAN	Far End Lockout Of Protection—Span
FE-LOCKOUTOFWK-RING	Far End Lockout Of Working—Ring
FE-LOCKOUTOFWK-SPAN	Far End Lockout Of Working—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
FE-SDPRLF	APS Channel—Far End Protection Line Signal Degrade
FEC-MISM	FEC Mismatch
FEPRLF	Far End Protection Line Failure
FIBERTEMP-DEG	Fiber Temperature Degrade
FORCED-REQ	Forced Switch Request
FORCED-REQ-RING	Forced Switch Request On Ring
FORCED-REQ-SPAN	Forced Switch Request On Span
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
GAIN-HDEG	Optical Amplifier Gain Degrade High
GAIN-HFAIL	Optical Amplifier Gain Failure High
GAIN-LDEG	Optical Amplifier Gain Degrade Low
GAIN-LFAIL	Optical Amplifier Gain Failure Low
GCC-EOC	GCC Termination Failure
GE-OOSYNC	Gigabit Ethernet Out of Sync
HI-LASERBIAS	Equipment High Laser Bias
HI-RXPOWER	Equipment High Receive Power
HI-TXPOWER	Equipment High Transmit Power
HITEMP	High Temperature
HLDOVRSYNC	Holdover Synchronization Mode
HP-RFI	Remote Failure Indication—High Order—Remote Failure/Alarm Indication
HP-TIM	High Order—Trace Identifier Mismatch Failure
HP-UNEQ	Signal Label Mismatch Failure (SLMF)—Unequipped High Order—Path Unequipped
I-HITEMP	Industrial High Temperature
IMPROPRMVL	Improper Removal
INC-GFP-OUTOFFRAME	Out Of Frame Detected by Generic Framing Protocol (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-SYNCLOSS	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
LAN-POL-REV	Lan Connection Polarity Reversed
LASER-APR	Laser Auto Power Reduction
LASERBIAS-DEG	Laser Bias Degrade
LASERBIAS-FAIL	Laser Bias Failure
LASEREOL	Laser Approaching End of Life
LASERTEMP-DEG	Laser Temperature Degrade
LKOUTPR-R	Lockout Of Protection—Ring
LKOUTPR-S	Lockout Of Protection—Span
LKOUTWK-R	Lockout Of Working—Ring
LKOUTWK-S	Lockout Of Working—Span

LMP-HELLODOWN	Link Management Protocol (LMP) Hello FSM to Control Channel down
LMP-NDFAIL	LMP Neighbor Discovery has failed
LO-RXPOWER	Equipment Low Receive Power
LO-TXPOWER	Equipment Low Transmit 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
LOCKOUTOFPR	Lockout Of Protection
LOF	Loss Of Frame
LOM	Loss of Multi-Frame
LOS	Loss Of Signal
LOS-CONT	Loss Of Continuity
LP-PLM	Signal Label Mismatch Failure (SLMF)—PLM Low Order—Path Label Mismatch
LP-RFI	RFI—Low Order—Remote Failure/Alarm Indication
LP-TIM	TIM Low Order—Trace Identifier Mismatch Failure
LP-UNEQ	Signal Label Mismatch Failure (SLMF)—Unequipped Low Order—Path Unequipped
LPBKCRS	Cross-connect Loopback
LPBKDS1FEAC	DS1 Loopback Due To Far End Alarm and Control (FEAC) Command
LPBKDS3FEAC	DS3 Loopback Due To FEAC Command
LPBKDS3FEAC-CMD	DS3 Loopback Command Sent To Far End

LPBKE1FEAC	E1 loopback due to FEAC command
LPBKE3FEAC	E3 loopback due to FEAC command
LPBKE3FEAC-CMD	E3 loopback command sent to far end
LPBKFACILITY	Facility Loopback
LPBKTERMINAL	Terminal Loopback
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
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)
MS-AIS	AIS—Multiplex Section—Alarm Indication Signal
MS-EOC	Multiplex Section DCC Termination Failure
MS-RFI	RFI—Multiplex Section—Remote Failure/Alarm Indication
MSSP-OOSYNC	Procedural Error—MS-SPRing out of sync
NO-CONFIG	No Startup Configuration
NTWTPINC	Network Topology Incomplete

OCHNC-ACTIV-FAIL	Optical Channel Activation Failure
OCHNC-DEACTIV-FAIL	Optical Channel Deactivation 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 —Performance Monitoring (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
OPWR-HDEG	Optical Power Degrade High
OPWR-HFAIL	Optical Power Failure High
OPWR-LDEG	Optical Power Degrade Low
OPWR-LFAIL	Optical Power Failure Low
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
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
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	Bit Error Rate (BER) Threshold Exceeded For Signal Degrade—Line
SDBER-EXCEED-HO	BER Threshold Exceeded For Signal Degrade—High Order

SF	Signal Failure
SF-L	BER Threshold Exceeded For Signal Failure—Line
SFBER-EXCEED-HO	BER Threshold Exceeded For Signal Failure—High Order
SFTWDOWN	Software Download In Progress
SH-INS-LOSS-VAR-DEG-HIGH	Shutter Insertion Loss Variation Degrade High
SH-INS-LOSS-VAR-DEG-LOW	Shutter Insertion Loss Variation Degrade Low
SHUTTER-OPEN	Shutter Open
SNTP-HOST	Simple Network time Protocol (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
SQUELCH	Ring Is Squelching Traffic
SQUELCH-PATH	Squelching Path
SQUELCHED	Equipment Squelched
SSM-DUS	Do Not Use For Synchronization
SSM-FAIL	Failed To Receive Synchronization Status Message
SSM-LNC	ITU-T G.812—Local Node Clock traceable
SSM-OFF	Synchronization Status Messages Are Disabled On This Interface
SSM-PRC	ITU-T G.811—Primary Reference Clock traceable
SSM-PRS	Stratum 1 Primary Reference Source Traceable
SSM-RES	Reserved For Network Synchronization Use

SSM-NCS-TN	ITU-T G.812—Transit Node Clock traceable
SSM-SETS	ITU-T G.813—Synchronous Equipment Timing Source traceable
SSM-SMC	NCS 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
TPTFAIL	Transport layer failure
TRMT	Transmit Failure

TRMT-MISS	Facility Termination Equipment—Transmitter Missing
TU-AIS	AIS—Tributary Unit—Alarm Indication Signal
TU-LOP	LOP—Tributary Unit—Loss of Pointer
TUNDERRUN	Ethernet Transmit First In First Out Underrun
TX-AIS	Alarm Indication Signal in TX
TX-RAI	Remote Alarm Indication in TX
UNC-WORD	FEC Uncorrected Word
VCG-DEG	VCAT Group Degraded
VCG-DOWN	VCAT Group Down
VOA-HDEG	Variable Optical Attenuator Degrade High
VOA-HFAIL	Variable Optical Attenuator Failure High
VOA-LDEG	Variable Optical Attenuator Degrade Low
VOA-LFAIL	Variable Optical Attenuator Failure Low
KSWPR	Switched To Protection
WTR	Wait To Restore
WVL-MISMATCH	Equipment Wavelength Mismatch

Chapter 29: Modifiers

This chapter describes the modifiers for TL1 commands and autonomous messages for the Cisco NCS 2000 Series.

Modifier Support by Platform

The following table lists the TL1 modifiers supported on the Cisco NCS 2000 Series. The commands which include an angle brackets (< >) as part of the input format are called as Modifiers; for example, RTRV-<STM_TYPE>.

Table 29-1 Modifier Support

Modifier	NCS 2002	NCS 2006
10GFC	Yes	Yes
10GIGE	Yes	Yes
40GIGE	Yes	Yes
100GIGE	Yes	Yes
1GFC	Yes	Yes
1GFICON	Yes	Yes
2GFC	Yes	Yes
4GFC	Yes	Yes
2GFICON	Yes	Yes
5GIB	Yes	Yes
8GFC	Yes	Yes
3GVIDEO	Yes	Yes
AUTO	Yes	Yes
CHGRP	Yes	Yes
D1VIDEO	Yes	Yes
DS1	Yes	Yes
DV6000	Yes	Yes
DVBASI	Yes	Yes
E100	Yes	Yes
E1000	Yes	Yes
EC1	Yes	Yes

FSTE	Yes	Yes
G1000	Yes	Yes
GIGE	Yes	Yes
HDLC	Yes	Yes
HDSDI	Yes	Yes
HDTV	Yes	Yes
ISC1	Yes	Yes
ISC3STP1G	Yes	Yes
ISC3STP2G	Yes	Yes
MSISC	Yes	Yes
OC12	Yes	Yes
OC192	Yes	Yes
OC3	Yes	Yes
OC48	Yes	Yes
OC768	Yes	Yes
OCH	Yes	Yes
ODU0	Yes	Yes
OMS	Yes	Yes
OTL	Yes	Yes
OTS	Yes	Yes
OTU1	Yes	Yes
OTU2	Yes	Yes
OTU3	Yes	Yes
OTU4	Yes	Yes
POS	Yes	Yes
REP	Yes	Yes
SDSDI	Yes	Yes

STS1	Yes	Yes
STS12C	Yes	Yes
STS192C	Yes	Yes
STS24C	Yes	Yes
STS18C	Yes	Yes
STS36C	Yes	Yes
STS3C	Yes	Yes
STS48C	Yes	Yes
STS6C	Yes	Yes
STS9C	Yes	Yes
T1	Yes	Yes
T3	Yes	Yes
VT1	Yes	Yes