Cisco ONS SONET TL1 Command Guide

Cisco ONS 15454, 15327, 15310-CL, 15600

Product and Documentation Release 5.0
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About this Guide

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

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

Revision History

Date	Notes
03/28/2007	Revision History Table added for the first time
09/04/2007	Updated About this Guide chapter

This section provides the following information:

Document Objectives

This guide explains the use of Transaction Language 1 (TL1) for the Cisco ONS 15454, ONS 15327, ONS 15600 and ONS 15310-CL systems. Use this guide in conjunction with the appropriate publications listed in the Related Documentation section.

Audience

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

Document Organization

This *Cisco ONS SONET TL1 Command Guide, R5.0* is organized into the following chapters:

- Chapter 1, "Getting Started" explains how to gain access to TL1, command syntax, autonomous messages, CTC interoperability, security level privileges associated with each command, command completion behavior, test access configurations, PCA provisioning, FTP software download as well as other procedures and rules.
- Chapter 2, "TL1 Gateway" describes the TL1 Gateway and provides procedures and examples for implementing TL1 Gateway on a four node ring.
- Chapter 3, "TL1 Command Descriptions" lists TL1 commands by card and category and then lists each command and autonomous message supported by the Cisco ONS 15454, ONS 15327, ONS 15600 and ONS 15310-CL along with their applicable parameters.
- Chapter 4, "TL1 Command Components" describes the components of TL1 commands including, default values and access identifiers (AIDs).
- Chapter 5, "Ring Provisioning" provides sample procedures for setting up STS or VT circuits over existing path protection and bidirectional line switch ring (BLSR) configurations.
- Chapter 6, "TL1 Errors" lists TL1 errors supported by the Cisco ONS 15454, ONS 15327, ONS 15600 and ONS 15310-CL.

Related Documentation

Use this *Cisco ONS SONET TL1 Command Guide, R5.0* in conjunction with the following referenced publications:

- *Cisco ONS SONET TL1 Command Quick Reference Guide, R5.0*—Provides input formats and output formats (where applicable) for all R5.0 TL1 commands and autonomous messages.
- *Cisco ONS SONET TL1 for Beginners*—Provides basic beginning instruction for using TL1.
- *Cisco ONS 15454 Procedure Guide*
  Cisco ONS 15327 Procedure Guide
  Cisco ONS 15310 Procedure Guide
  Cisco ONS 15600 Procedure Guide

  Provides procedures and tasks for the corresponding Cisco ONS node and network.

- *Cisco ONS 15454 Reference Manual*
  Cisco ONS 15327 Reference Manual
  Cisco ONS 15310 Reference Manual
  Cisco ONS 15600 Reference Manual

  Provides reference material for the corresponding Cisco ONS node and network.
- *Cisco ONS 15454 Troubleshooting Guide*
  Cisco ONS 15327 Troubleshooting Guide
  Cisco ONS 15310 Troubleshooting Guide
  Cisco ONS 15600 Troubleshooting Guide

  Provides general troubleshooting procedures, alarm descriptions and troubleshooting procedures, and performance monitoring and SNMP parameters.
- *Release Notes for the Cisco ONS 15454 Release 5.0*
  Release Notes for the Cisco ONS 15327 Release 5.0
  Release Notes for the Cisco ONS 15310 Release 5.0
  Release Notes for the Cisco ONS 15600 Release 5.0

  Provides caveats, closed issues, and new feature and functionality information.

Document Conventions

This publication uses the following conventions:

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

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

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

Warning **IMPORTANT SAFETY INSTRUCTIONS**

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device. Statement 1071

SAVE THESE INSTRUCTIONS

Waarschuwing **BELANGRIJKE VEILIGHEIDSINSTRUCTIES**

Dit waarschuwingssymbool betekent gevaar. U verkeert in een situatie die lichamelijk letsel kan veroorzaken. Voordat u aan enige apparatuur gaat werken, dient u zich bewust te zijn van de bij elektrische schakelingen betrokken risico's en dient u op de hoogte te zijn van de standaard praktijken om ongelukken te voorkomen. Gebruik het nummer van de verklaring onderaan de waarschuwing als u een vertaling van de waarschuwing die bij het apparaat wordt geleverd, wilt raadplegen.

BEWAAR DEZE INSTRUCTIES

Varoitus **TÄRKEITÄ TURVALLISUUSOHJEITA**

Tämä varoitusmerkki merkitsee vaaraa. Tilanne voi aiheuttaa ruumiillisia vammoja. Ennen kuin käsittelet laitteistoa, huomioi sähköpiirien käsittelemiseen liittyvät riskit ja tutustu onnettomuuksien yleisiin ehkäisytapoihin. Turvallisuusvaroitusten käännökset löytyvät laitteen mukana toimitettujen käännettyjen turvallisuusvaroitusten joukosta varoitusten lopussa näkyvien lausuntonumeroiden avulla.

SÄILYTÄ NÄMÄ OHJEET

Attention **IMPORTANTES INFORMATIONS DE SÉCURITÉ**

Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant entraîner des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers liés aux circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents. Pour prendre connaissance des traductions des avertissements figurant dans les consignes de sécurité traduites qui accompagnent cet appareil, référez-vous au numéro de l'instruction situé à la fin de chaque avertissement.

CONSERVEZ CES INFORMATIONS

Warnung **WICHTIGE SICHERHEITSHINWEISE**

Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu Verletzungen führen kann. Machen Sie sich vor der Arbeit mit Geräten mit den Gefahren elektrischer Schaltungen und den üblichen Verfahren zur Vorbeugung vor Unfällen vertraut. Suchen Sie mit der am Ende jeder Warnung angegebenen Anweisungsnummer nach der jeweiligen Übersetzung in den übersetzten Sicherheitshinweisen, die zusammen mit diesem Gerät ausgeliefert wurden.

BEWAHREN SIE DIESE HINWEISE GUT AUF.

Avvertenza **IMPORTANTI ISTRUZIONI SULLA SICUREZZA**

Questo simbolo di avvertenza indica un pericolo. La situazione potrebbe causare infortuni alle persone. Prima di intervenire su qualsiasi apparecchiatura, occorre essere al corrente dei pericoli relativi ai circuiti elettrici e conoscere le procedure standard per la prevenzione di incidenti. Utilizzare il numero di istruzione presente alla fine di ciascuna avvertenza per individuare le traduzioni delle avvertenze riportate in questo documento.

CONSERVARE QUESTE ISTRUZIONI

Advarsel **VIKTIGE SIKKERHETSINSTRUKSJONER**

Dette advarselssymbolet betyr fare. Du er i en situasjon som kan føre til skade på person. Før du begynner å arbeide med noe av utstyret, må du være oppmerksom på farene forbundet med elektriske kretser, og kjenne til standardprosedyrer for å forhindre ulykker. Bruk nummeret i slutten av hver advarsel for å finne oversettelsen i de oversatte sikkerhetsadvarslene som fulgte med denne enheten.

TA VARE PÅ DISSE INSTRUKSJONENE

Aviso **INSTRUÇÕES IMPORTANTES DE SEGURANÇA**

Este símbolo de aviso significa perigo. Você está em uma situação que poderá ser causadora de lesões corporais. Antes de iniciar a utilização de qualquer equipamento, tenha conhecimento dos perigos envolvidos no manuseio de circuitos elétricos e familiarize-se com as práticas habituais de prevenção de acidentes. Utilize o número da instrução fornecido ao final de cada aviso para localizar sua tradução nos avisos de segurança traduzidos que acompanham este dispositivo.

GUARDE ESTAS INSTRUÇÕES

¡Advertencia! **INSTRUCCIONES IMPORTANTES DE SEGURIDAD**

Este símbolo de aviso indica peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considere los riesgos de la corriente eléctrica y familiarícese con los procedimientos estándar de prevención de accidentes. Al final de cada advertencia encontrará el número que le ayudará a encontrar el texto traducido en el apartado de traducciones que acompaña a este dispositivo.

GUARDE ESTAS INSTRUCCIONES

Varning! **VIKTIGA SÄKERHETSANVISNINGAR**

Denna varningssignal signalerar fara. Du befinner dig i en situation som kan leda till personskada. Innan du utför arbete på någon utrustning måste du vara medveten om farorna med elkretsar och känna till vanliga förfaranden för att förebygga olyckor. Använd det nummer som finns i slutet av varje varning för att hitta dess översättning i de översatta säkerhetsvarningar som medföljer denna anordning.

SPARA DESSA ANVISNINGAR

Figyelem

FONTOS BIZTONSÁGI ELOÍRÁSOK

Ez a figyelmezeto jel veszélyre utal. Sérülésveszélyt rejto helyzetben van. Mielott bármely berendezésen munkát végezte, legyen figyelemmel az elektromos áramkörök okozta kockázatokra, és ismerkedjen meg a szokásos balesetvédelmi eljárásokkal. A kiadványban szereplo figyelmeztetések fordítása a készülékhez mellékelt biztonsági figyelmeztetések között található; a fordítás az egyes figyelmeztetések végén látható szám alapján keresheto meg.

ORIZZE MEG EZEKET AZ UTASÍTÁSOKAT!

Предупреждение

ВАЖНЫЕ ИНСТРУКЦИИ ПО СОБЛЮДЕНИЮ ТЕХНИКИ БЕЗОПАСНОСТИ

Этот символ предупреждения обозначает опасность. То есть имеет место ситуация, в которой следует опасаться телесных повреждений. Перед эксплуатацией оборудования выясните, каким опасностям может подвергаться пользователь при использовании электрических цепей, и ознакомьтесь с правилами техники безопасности для предотвращения возможных несчастных случаев. Воспользуйтесь номером заявления, приведенным в конце каждого предупреждения, чтобы найти его переведенный вариант в переводе предупреждений по безопасности, прилагаемом к данному устройству.

СОХРАНИТЕ ЭТИ ИНСТРУКЦИИ

警告 重要的安全性说明

此警告符号代表危险。您正处于可能受到严重伤害的工作环境中。在您使用设备开始工作之前，必须充分意识到触电的危险，并熟练掌握防止事故发生的标准工作程序。请根据每项警告结尾提供的声明号码来找到此设备的安全性警告说明的翻译文本。

请保存这些安全性说明

警告 安全上の重要な注意事項

「危険」の意味です。人身事故を予防するための注意事項が記述されています。装置の取り扱い作業を行うときは、電気回路の危険性に注意し、一般的な事故防止策に留意してください。警告の各国語版は、各注意事項の番号を基に、装置に付属の「Translated Safety Warnings」を参照してください。

これらの注意事項を保管しておいてください。

주의 중요 안전 지침

이 경고 기호는 위험을 나타냅니다. 작업자가 신체 부상을 일으킬 수 있는 위험한 환경에 있습니다. 장비에 작업을 수행하기 전에 전기 회로와 관련된 위험을 숙지하고 표준 작업 관례를 숙지하여 사고를 방지하십시오. 각 경고의 마지막 부분에 있는 경고문 번호를 참조하여 이 장치와 함께 제공되는 번역된 안전 경고문에서 해당 번역문을 찾으십시오.

이 지시 사항을 보관하십시오.

Aviso **INSTRUÇÕES IMPORTANTES DE SEGURANÇA**

Este símbolo de aviso significa perigo. Você se encontra em uma situação em que há risco de lesões corporais. Antes de trabalhar com qualquer equipamento, esteja ciente dos riscos que envolvem os circuitos elétricos e familiarize-se com as práticas padrão de prevenção de acidentes. Use o número da declaração fornecido ao final de cada aviso para localizar sua tradução nos avisos de segurança traduzidos que acompanham o dispositivo.

GUARDE ESTAS INSTRUÇÕES

Advarsel **VIGTIGE SIKKERHEDSANVISNINGER**

Dette advarselssymbol betyder fare. Du befinder dig i en situation med risiko for legemesbeskadigelse. Før du begynder arbejde på udstyr, skal du være opmærksom på de involverede risici, der er ved elektriske kredsløb, og du skal sætte dig ind i standardprocedurer til undgåelse af ulykker. Brug erklæringsnummeret efter hver advarsel for at finde oversættelsen i de oversatte advarsler, der fulgte med denne enhed.

GEM DISSE ANVISNINGER

تحذير **إرشادات الأمان الهامة**

يوضح رمز التحذير هذا وجود خطر. وهذا يعني أنك متواجد في مكان قد ينتج عنه التعرض لإصابات. قبل بدء العمل، احذر مخاطر التعرض للصدمات الكهربائية وكن على علم بالإجراءات القياسية للحيلولة دون وقوع أي حوادث. استخدم رقم البيان الموجود في أخر كل تحذير لتحديد مكان ترجمته داخل تحذيرات الأمان المترجمة التي تأتي مع الجهاز.
قم بحفظ هذه الإرشادات

Upozorenje **VAŽNE SIGURNOSNE NAPOMENE**

Ovaj simbol upozorenja predstavlja opasnost. Nalazite se u situaciji koja može prouzročiti tjelesne ozljede. Prije rada s bilo kojim uređajem, morate razumjeti opasnosti vezane uz električne sklopove, te biti upoznati sa standardnim načinima izbjegavanja nesreća. U prevedenim sigurnosnim upozorenjima, priloženima uz uređaj, možete prema broju koji se nalazi uz pojedino upozorenje pronaći i njegov prijevod.

SAČUVAJTE OVE UPUTE

Upozornění **DŮLEŽITÉ BEZPEČNOSTNÍ POKYNY**

Tento upozorňující symbol označuje nebezpečí. Jste v situaci, která by mohla způsobit nebezpečí úrazu. Před prací na jakémkoliv vybavení si uvědomte nebezpečí související s elektrickými obvody a seznamte se se standardními opatřeními pro předcházení úrazům. Podle čísla na konci každého upozornění vyhledejte jeho překlad v přeložených bezpečnostních upozorněních, která jsou přiložena k zařízení.

USCHOVEJTE TYTO POKYNY

Προειδοποίηση

ΣΗΜΑΝΤΙΚΕΣ ΟΔΗΓΙΕΣ ΑΣΦΑΛΕΙΑΣ

Αυτό το προειδοποιητικό σύμβολο σημαίνει κίνδυνο. Βρίσκεστε σε κατάσταση που μπορεί να προκαλέσει τραυματισμό. Πριν εργαστείτε σε οποιοδήποτε εξοπλισμό, να έχετε υπόψη σας τους κινδύνους που σχετίζονται με τα ηλεκτρικά κυκλώματα και να έχετε εξοικειωθεί με τις συνήθεις πρακτικές για την αποφυγή ατυχημάτων. Χρησιμοποιήστε τον αριθμό δήλωσης που παρέχεται στο τέλος κάθε προειδοποίησης, για να εντοπίσετε τη μετάφρασή της στις μεταφρασμένες προειδοποιήσεις ασφαλείας που συνοδεύουν τη συσκευή.

ΦΥΛΑΞΤΕ ΑΥΤΕΣ ΤΙΣ ΟΔΗΓΙΕΣ

אזהרה

הוראות בטיחות חשובות

סימן אזהרה זה מסמל סכנה. אתה נמצא במצב העלול לגרום לפציעה. לפני שתעבוד עם ציוד כלשהו, עליך להיות מודע לסכנות הכרוכות במעגלים חשמליים ולהכיר את הנהלים המקובלים למניעת תאונות. השתמש במספר ההוראה המסופק בסופה של כל אזהרה כד לאתר את התרגום באזהרות הבטיחות המתורגמות שמצורפות להתקן.

שמור הוראות אלה

Opomena

ВАЖНИ БЕЗБЕДНОСНИ НАПАТСТВИЈА

Симболот за предупредување значи опасност. Се наоѓате во ситуација што може да предизвика телесни повреди. Пред да работите со опремата, бидете свесни за ризикот што постои кај електричните кола и треба да ги познавате стандардните постапки за спречување на несреќни случаи. Искористете го бројот на изјавата што се наоѓа на крајот на секое предупредување за да го најдете неговиот период во преведените безбедносни предупредувања што се испорачани со уредот.

ЧУВАЈТЕ ГИ ОВИЕ НАПАТСТВИЈА

Ostrzeżenie

WAŻNE INSTRUKCJE DOTYCZĄCE BEZPIECZEŃSTWA

Ten symbol ostrzeżenia oznacza niebezpieczeństwo. Zachodzi sytuacja, która może powodować obrażenia ciała. Przed przystąpieniem do prac przy urządzeniach należy zapoznać się z zagrożeniami związanymi z układami elektrycznymi oraz ze standardowymi środkami zapobiegania wypadkom. Na końcu każdego ostrzeżenia podano numer, na podstawie którego można odszukać tłumaczenie tego ostrzeżenia w dołączonym do urządzenia dokumencie z tłumaczeniami ostrzeżeń.

NINIEJSZE INSTRUKCJE NALEŻY ZACHOWAĆ

Upozornenie

DÔLEŽITÉ BEZPEČNOSTNÉ POKYNY

Tento varovný symbol označuje nebezpečenstvo. Nachádzate sa v situácii s nebezpečenstvom úrazu. Pred prácou na akomkoľvek vybavení si uvedomte nebezpečenstvo súvisiace s elektrickými obvodmi a oboznámte sa so štandardnými opatreniami na predchádzanie úrazom. Podľa čísla na konci každého upozornenia vyhľadajte jeho preklad v preložených bezpečnostných upozorneniach, ktoré sú priložené k zariadeniu.

USCHOVAJTE SI TENTO NÁVOD

Where to Find Safety and Warning Information

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

Obtaining Documentation

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

Cisco.com

You can access the most current Cisco documentation at this URL:

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

You can access the Cisco website at this URL:

http://www.cisco.com

You can access international Cisco websites at this URL:

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

Ordering Documentation

You can find instructions for ordering documentation at this URL:

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

You can order Cisco documentation in these ways:

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

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

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 1 800 553-NETS (6387).

Cisco Optical Networking Product Documentation CD-ROM

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

Documentation Feedback

You can send comments about technical documentation to bug-doc@cisco.com.

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

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

We appreciate your comments.

Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, Cisco Technical Support provides 24-hour-a-day, award-winning technical assistance. The Cisco Technical Support Website on Cisco.com features extensive online support resources. In addition, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not hold a valid Cisco service contract, contact your reseller.

Cisco Technical Support Website

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

http://www.cisco.com/techsupport

Access to all tools on the Cisco Technical Support Website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

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

Note Use the Cisco Product Identification (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support Website by clicking the **Tools & Resources** link under Documentation & Tools. Choose **Cisco Product Identification Tool** from the Alphabetical Index drop-down list, or click the **Cisco Product Identification Tool** link under Alerts & RMAs. The CPI tool offers three search options: by product ID or model name; by tree view; or for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco TAC engineer. The TAC Service Request Tool is located at this URL:

http://www.cisco.com/techsupport/servicerequest

For S1 or S2 service requests or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco TAC engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

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

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)
EMEA: +32 2 704 55 55
USA: 1 800 553-2447

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

http://www.cisco.com/techsupport/contacts

Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

Severity 1 (S1)—Your network is “down,” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Severity 3 (S3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Severity 4 (S4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

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Getting Started

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

Transaction Language 1 (TL1) is a subset of the input and output messages contained in the International Telecommunications Union (ITU) Man-Machine Language (MML). TL1 provides a standard set of messages that can be used for communicating between operating systems and network elements, and personnel and network elements. For more information about TL1, refer to Telcordia document GR-833-CORE, *Network Maintenance: Network Element and Transport Surveillance Messages*.

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

- Setting up TL1 communication
- TL1 command syntax
- Autonomous messages
- TL1 commands by user security
- Provisioning a DS3E card in CTC using TL1
- Provisioning rules for Transponder and Muxponder cards
- CTC interoperability
- Mixed mode timing support
- TL1 command completion behavior
- Test access
- TL1 PCA provisioning
- FTP software download
- Scheduled performance monitoring (PM) Report

1.1 Setting up TL1 Communication

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

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

The TL1 password (PID) is masked when accessing a TL1 session using any of these options. When you logout of any of these options, you are closing a session. The ONS 15454, ONS 15327 and ONS 15310-CL allow a maximum of 20 (19 telnet sessions and one craft session) concurrent TL1 sessions using any one or any combination of the options listed above. The ONS 15600 supports a maximum of 10 concurrent TL1 sessions and two serial connections (A and B) on the two serial port connectors on the Customer Access Panel (CAP). For information on issuing commands to multiple nodes, see Chapter 2, "TL1 Gateway."

1.1.1 Open a TL1 session

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

Open a TL1 Session Via CTC

Step 1 From the PC connected to the ONS node, start Netscape 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 Type the Activate User command in the TL1 request window to open a TL1 session:

ACT-USER:[<TID>]:<UID>:<CTAG>::<PID>; and press **Enter**.

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

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

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

Open a TL1 Session Via Telnet

To communicate with the ONS NE using TL1 commands using a telnet session over a craft interface or a LAN connection, you can choose from several ports.

- Port number 3083 is a telnet port that uses the telnet protocol and associated telnet escape sequences.
- Port number 2361 is an alternative telnet port.
- Port number 3082 is a raw TCP/IP port; it will not echo and it will not prompt the user.

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

Step 2 At the DOS command prompt type:

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

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

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

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

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

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

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

Open a TL1 Session Via Craft Interface

ONS 15454, ONS 15327 and ONS 15310-CL

The TCC2/TCC2P, XTC and 15310-CL-CTX cards have two built-in interface ports for accessing the ONS 15454, ONS 15327 and ONS 15310-CL respectively. With one RJ-45 LAN connection you can access the system using a standard browser interface. In the browser interface, you can perform local and remote Operations, Administration, Maintenance, and Provisioning (OAM&P) functions and open a VT100 emulation window to enter TL1 commands. If a browser is not available, you can access the system using a nine-pin RS-232 port. The RS-232 port supports VT100 emulation such that TL1 commands may be entered directly without a browser.

Step 1 Connect the serial cable to the RS-232 port on the active TCC2/TCC2P, XTC or 15310-CL-CTX card.

Step 2 Configure the terminal emulation software (Hyperterminal):

a. Terminal emulation = vt100

b. Bits per second = 9600

c. Parity = None

d. Stop BITS = 1

e. Flow control = None

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

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

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

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

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

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

ONS 15600

The TSC card has one RJ-45 port of the faceplate. The RJ-45 port allows you to access the system using a standard web browser. You must use the RJ-45 port on the active TSC. While using the web browser, you can perform local and remote Operations, Administration, Maintenance and Provisioning (OAM&P) functions.

If a browser is not available, you can access the system using one of the two RS-232 ports on the Customer Access Panel (CAP). Each RS-232 port supports VT100 emulation so that you can enter TL1 commands directly without using a web browser. Each RS-232 port supports its own TL1 session.

Because the CAP RS-232 port is set up as a DTE interface, you must use a 3-pair swapping null modem adapter so that the TXD/RXC, DSR/DTR, and CTS/RTS pins are swapped when connecting to the serial ports. The null modem adapter connects the CAP RS-232 port (male configuration) and the serial cable (female configuration). Table 1-1 lists the null modem adapter pin assignments.

Table 1-1 Null Modem Adapter Pin Assignments

TSC Signal	From Pin at TSC (DTE)	To Pin at Second DTE
NC[1]	1	NC
RXD	2	3
TXD	3	2
DTR	4	6
GND	5	5
DSR	6	4
RTS	7	8
CTS	8	7
NC	9	NC

1. NC is Not Connected.

Step 1 Attach a 3-pair swapping null modem adapter to the RS-232 port on the CAP.

Step 2 Connect a serial cable to the null modem adapter, and to the serial port on your PC or workstation.

Step 3 Complete one of the following:

- If you are using a PC, configure the terminal emulation software (Hyperterminal):
  - Terminal emulation = vt100

  - Bits per second = 9600
  - Parity = None
  - Stop BITS = 1
  - Flow control = None
- If you are using a UNIX workstation, connect from X-windows or the terminal using the tip command:

  tip -9600 /dev/ttyb (or ttya depending on where serial cable is connected)

Step 4 Press **Enter**. A > prompt appears.

Step 5 At the > prompt, type the Activate User command to open a TL1 session:

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

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

Step 6 Type the Cancel User command to close a TL1 session:

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

1.2 TL1 Command Syntax

TL1 commands conform to the following syntax:

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

where:

“a” is the command code

“b” is the target identifier (TID)

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

“d” is the correlation tag (CTAG)

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

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

The TID is a unique name given to each system when it is installed. The name identifies the particular NE (in this case, the ONS 15454, ONS 15327, ONS 15310-CL, and ONS 15600), to which each command is directed. The value of TID can be any TL1 identifier or text string, but it is limited to 20 characters. An identifier contains any number of letters or digits but must start with a letter. A text string is any alphanumeric or punctuation character enclosed in double-quotes. The presence of the TID is required in all input commands, but its value can be null (represented by two successive colons). The TID can be null when the operating system directly communicates with the target NE. The recommended value for the TID, when it is used, is the target’s CLLI code. To establish the TID for a node, use the Provisioning > General tabs in 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 comprised of identifiers (alphanumeric, beginning with a letter) or decimal numerals (a string of decimal digits with an optional non-trailing ".").

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

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

1.2.1 Command Recall Keys

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 GNE and the ENE. To recall the last command issued, press **Ctrl-R**. Each time Ctrl-R is pressed, a previously-issued command is displayed. To recall commands in the forward direction, press **Ctrl-F**.

Once a command has been recalled, you can use the Backspace key to edit the command as necessary. Cursor keys (i.e., 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 (i.e., telnet <hostname> 3083).

The CTC TL1 session has its own means for recalling previously issued commands as described in the "Open a TL1 Session Via CTC" section on page 1-2.

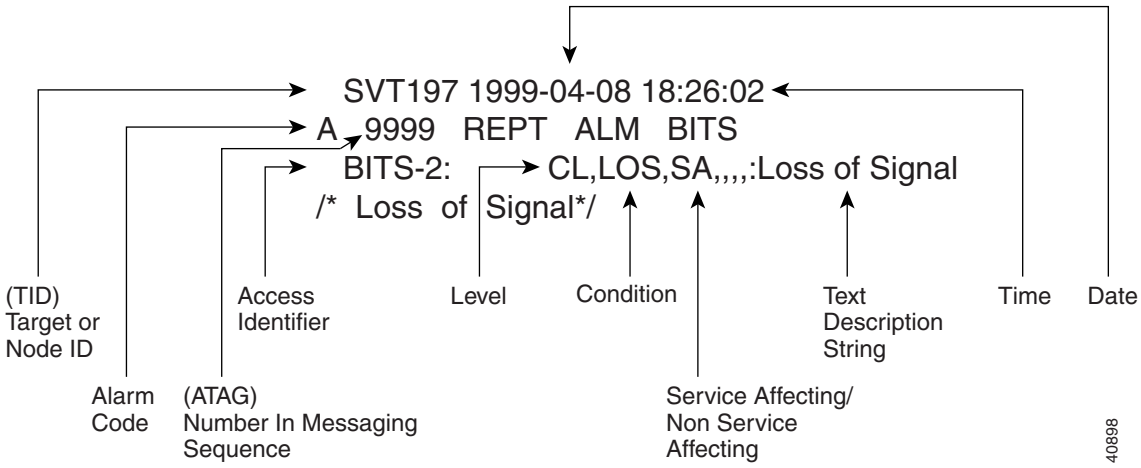
1.3 Autonomous Messages

Autonomous 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 via other commands. Because you do not issue autonomous messages to the NE, they do not include input formats or input examples.

The autonomous TL1 messages are included in Chapter 3, "TL1 Command Descriptions" and listed alphabetically. Figure 1-1 shows the autonomous message format. The autonomous message tag (ATAG) is used for message sequencing. The number is incremented by one for each autonomous message sent by the 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 Figure 1-1.

Figure 1-1 Autonomous Message Format



1.3.1 Alarm Codes

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

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

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

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

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

For more information about alarms, see Chapter 6, "TL1 Errors."

1.4 TL1 Commands by User Security

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

Table 1-2 Command Access

Command	Superuser	Provisioning	Maintenance	Retrieve
ALW-MSG-SECU	X			
ALW-USER-SECU	X			

Table 1-2 Command Access (continued)

Command	Superuser	Provisioning	Maintenance	Retrieve
APPLY	X			
CANC-USER-SECU	X			
CLR-COND-SECU	X			
COPY-RFILE	X			
DLT-USER-SECU	X			
ED-DAT	X			
ED-USER-SECU	X			
ENT-USER-SECU	X			
INH-MSG-SECU	X			
INH-USER-SECU	X			
REPT EVT SECU	X			
RTRV-DFLT-SECU	X			
RTRV-USER-SECU	X			
SET-ATTR-SECUDFLT	X			
DLT-*-*	X	X		
ED-*-*	X	X		
ENT-*-*	X	X		
SET-*-*	X	X		
SET-TOD	X	X		
INIT-*-*	X	X	X	
OPR-*-*	X	X	X	
RLS-*-*	X	X	X	
RMV-*-*	X	X	X	
RST-*-*	X	X	X	
SW-*-*	X	X	X	
ACT-*-*	X	X	X	X
ALW-*-*	X	X	X	X
CANC-*-*	X	X	X	X
ED-PID	X	X	X	X
INH-*-*	X	X	X	X
REPT * *[1]	X	X	X	X
RTRV-*-*	X	X	X	X

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

User security levels limit the amount of time a user can leave the system idle before the TL1 session is locked to prevent unauthorized users from making changes. Higher security levels have shorter time outs. Starting with Release 4.0, time outs can be provisioned (by a Superuser) from CTC. If provisioned,

it only affects users who are not currently logged in. A user that is logged in has to log out and log back in before the new timeouts will take affect. A Superuser can provision security levels via TL1 with the SET-ATTR-SECUDFLT command.

Table 1-3 shows security levels and their default time outs.

Table 1-3 Security Default Time Outs

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

1.5 Rules for Framing Type Autoprovisioning in CTC Versus TL1

The DS3/DS3E/DS3XM/DS3I/DS1cards can autosense framing and set the format accordingly; however, this framing autosense feature can only be set using CTC. Use CTC to set the FMT attribute on DS3/DS3E/DS3XM/DS3I/DS1cards to autoprovision. The FMT field will blank out for a few seconds while the card is determining the framing mode received by that particular port. The FMT field is then set accordingly to unframed, M23, or CBit. If the card is not present (pre-provisioned), setting the FMT field to autoprovision will result in the FMT field defaulting to unframed.

The TL1 interface does not support the autoprovision option for the DS3/DS3E/DS3XM/DS3I/DS1cards; the TL1 interface only supports unframed, M23, or CBit. If autoprovision is selected from CTC and at the same time the TL1 command RTRV-T3 is issued, the TL1 output will indicate the FMT field as unframed during the time period that the card (if present) is autosensing the frame format. If the card is not present (pre-provisioned), the response of the RTRV-T3 command (after CTC sets the FMT to autoprovision) will indicate the FMT field as unframed.

1.6 Provisioning Rules for Transponder and Muxponder Cards

This section provides provisioning rules associated with the following cards and 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

1.6.1 PPM Provisioning Rules

1. Card must be provisioned.

TL1 commands to provision are:

- ENT/DLT-EQPT

  Example of provisioning PPM on Slot-2, first PPM:

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

1.6.2 Payload Provisioning Rules

1. PPM must first be provisioned.
2. Changing the payload data type requires:
   a. All ports being edited must be in the OOS-MA,DSBLD state because this change is traffic affecting.
   b. All ports being edited must not have any DCC termination.
   c. All ports being edited must not be part of any timing source.
   d. The section trace mode of all ports being edited must be OFF.
   e. For all regeneration and retiming (2R) payload types, trunk ports must not have GCC termination or OTN/FEC enabled.
   f. Payload cannot be changed if any ports being edited are part of a Y Cable protection group.
   g. Only the transponder card can be used for the 10GigE payload. Termination mode must be set to Transparent-AIS or Transparent-Squelch (TXP_MR_10E only).
3. To set the payload to other than OC3/12/48/192/STM1/4/16/64, the termination mode must be set to Transparent-AIS or Transparent-Squelch (TXP_MR_10E only). For fibre-channel cards and all 2R payload types the termination mode is not applicable and must be set to Transparent (AIS or Squelch).
4. Changing payload while in a regeneration group requires first unprovisioning the regeneration group, unprovisioning the payload, reprovisioning the payload, and then reprovisioning the regeneration group.

TL1 commands to provision are:

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

  Examples of provisioning payload:

  ENT-OC12

  ENT-10GIGE

  ED-2GFC

- ENT/DLT/ED-EQPT

  Example of setting termination mode:

  ENT-EQPT::SLOT-1:116::TXP-MR-10E:CARDMODE=DWDM-TRANS-AIS;

1.6.3 OCn Payloads Provisioning Parameters

SONET/SDH payloads are supported by DWDM cards according to Table 1-4. These payloads are configurable only for the Section and Line layers. STS layers cannot be provisioned or retrieved.

Table 1-4 Payload/Card Mode Support

Card Type	Payload	Card Mode
TXP-MR-10G	OC192	DWDM-LINE
	10GIGE	DWDM-SECTION DWDM-TRANS-AIS DWDM-TRANS-AIS with REGEN group
	OC192, 10GIGE	Does not support PPM. Card mode not applicable.
MXP-2.5G-10G	OC48	DWDM-LINE DWDM-SECTION DWDM-TRANS-AIS
TXP-MR-2.5G and TXPP-MR-2.5G	1GIGE, 1GF, 1GFICON, 2GFICON, ESCON, ISC1, ISC3, ETRCLO, DV6000, HDTV, D1VIDEO	DWDM-TRANS-AIS with REGEN group. Must be DWDM-TRANS-AIS. Requires the DWRAP and FEC disabled on the network/OCH ports.
	OC3, OC12, OC48	DWDM-LINE, DWDM-SECTION, DWDM-TRANS-AIS
TXP-MR-10E	OC192	DWDM-LINE, DWDM-SECTION, DWDM-TRANS-AIS, DWDM-TRANS-SSQUELCH
	10GIGE, 10GFC	DWDM-TRANS-AIS, DWDM-TRANS-SQUELCH, With REGEN group it must be DWDM-TRANS-AIS, DWDM-TRANS-SQUELCH
MXP-2.5G-10E	OC48	DWDM-SECTION, DWDM-TRANS-AIS, DWDM-TRANS-SQUELCH
MXP-MR-2.5G AND MXPP-MR-2.5G	Port-1: 1GFC, 1GFICON, GIGE Port-2: 1GFC, 2GFC, 1GFICON, 2GFICON, GIGE[1]	FCGE[2]

1. 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.
2. ESCON and mixed card modes are not supported.

The configuration parameters for OCn ports can be retrieved/edited using the ED-<OCN_TYPE> and RTRV-<OCN_TYPE> commands. The following is a list of restrictions when using the ED/RTRV-<OCN_TYPE> command parameters:

- DCC/LDCC parameters are used to enable/disable SDCC/LDCC functionality respectively.

- Synchronization parameters are applicable only to cards supporting synchronization: MXP-2.5G-10G, TXP-MR-10E, and MXP-2.5G-10E. Only SYNMSG and SENDDUS parameters are supported.
- Signal fail/signal degrade can be provisioned using SDBER and SFBER parameters respectively.
- 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 parameters can be provisioned using the EXPTRC, TRC, INCTRC, TRCMODE and TRCFORMAT parameters.

1.6.4 Termination Mode Provisioning Rules

1. This is a card-level operation.
2. Only applicable to payload types: OC3/12/48/192/STM1/4/16/64.
3. Changing termination mode requires:
   a. All ports must be in OOS state because this change is traffic-affecting.
   b. All ports must not have DCC termination (GCC is not applicable).
   c. The 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, rules a. to d. are applied to the peer's slot.
4. Section and line termination mode is supported for the following payloads: OC3/12/48/192/STM1/4/16/64.
5. You cannot change the termination mode if the port is part of a Y Cable protection or regeneration group.
6. Termination mode provisioning does not apply to the MXP_MR_2.5G and MXPP_MR_2.5G cards.

TL1 commands to provision are:

- ENT/ED-EQPT

  Examples of setting termination mode:

  ED-EQPT::SLOT-1:116:::CARDMODE=DWDM-LINE;

1.6.5 Wavelength Provisioning Rules

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

4. In order to receive the mismatch alarm notification you need to explicitly provision the wavelength and not use the first tunable wavelength.

TL1 commands to provision are:

- ENT/ED-EQPT

  Example of setting card-level wavelength:

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

1.6.6 Regeneration Group Provisioning Rules

1. The protect and unprotected version of the Transponder card can be used in a regeneration group.
2. When the protect version of the Transponder card is used as a regeneration group, the LOCKOUT_OF_PROTECTION, inhibit switching command will be issued on the working trunk port.
3. You cannot unlock the inhibit switching command until the regeneration group is unprovisioned for the protect Transponder.
4. Regeneration group provisioning will be denied if there is a FORCE or MANUAL switching command already provisioned on the trunk ports for the protect Transponder.
5. A regeneration group enables the continuation of the client signal across multiple spans.
6. Provisioning a regeneration group requires:
   a. Peer-slot must not be itself.
   b. Peer-slot must at least be preprovisioned.
   c. Peer-slot must not be part of another regeneration group.
   d. Peer-slot must not be part of a Y Cable protection group.
   e. Same card type.
   f. Same payload type and data rate.
   g. Same G.709 OTN status.
   h. Same FEC status.
   i. Termination mode has to be set to transparent (AIS or SQUELCH) mode.

TL1 commands to provision are:

- ED/ENT-EQPT

  Example of setting card-level regeneration group:

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

1.6.7 DCC/GCC Provisioning Rules

1. The DCC can be provisioned on the client port of a Transponder and Muxponder card.
2. All 2R payload types do not support GCC.
3. Provisioning a DCC requires:
   a. Payload data type is set to OC3/12/48/192/STM1/4/16/64.

   b. Termination mode is set to line/section terminated if the card supports provisionable termination mode.

4. The DCC can be provisioned on the trunk line provided that G.709 is provisionable and G.709 OTN status is turned off:
   a. To provision a GCC on the trunk port the G.709 should be enabled.
   b. To provision a DCC on the trunk port the G.709 should be disabled.
5. Only the working client port in a Y Cable protection scheme is allowed to be provisioned with DCC.
6. Only the working trunk port in a splitter protection scheme can be provisioned with DCC or GCC.

The TL1 commands to provision are:

- ED-(OCn, nGIGE, nGFC)

  Example of provisioning DCC/GCC:

  ED-OC192::FAC-1-1-1:100:::COMM=DCC:OOS,AINS;

- ED-OCH

  Example of provisioning DCC/GCC:

  ED-OCH::CHAN-6-2:114::COMM=GCC:OOS,AINS;

1.6.8 G.709 OTN, FEC and OTN SDBER/SFBER Provisioning Rules

1. The G.709 OTN, FEC and OTN SDBER/SFBER can only be provisioned on the trunk port.
2. All 2R (transparent) payload types (HDTV, passthrough) do not support G.709 OTN or FEC.
3. To enable the G.709 OTN status:
   a. All trunk ports must be in OOS state.
   b. All trunk ports must not have any SDCC provisioned.
4. In order to disable G.709:
   a. All trunk ports must be in OOS state.
   b. All trunk ports must not have any GCC or active trail trace identification (TTI) mode provisioned.
5. FEC status can be enabled only if G.709 is enabled.
6. To change FEC status, it requires:
   a. All trunk ports must be in OOS state.
7. Only G.709 OTN, FEC status, SDBER/SFBER setting on the working trunk port can be changed in the protected version of the Transponder. The value provisioned on the working trunk port will be reflected on the protect trunk port.
8. G.709 OTN Pane is only provisionable in non-2R (or unframed) payload type.
9. when G.709 is turned on OTN SFBER value is always set to 1E-5 and no other BER values are provisionable.

The TL1 commands to provision are:

- ED-OCH

  Example of provisioning G.709, FEC and OTN SDBER/SFBER:

  ED-OCH::CHAN-6-2:114:::OSDBER=1E-6,DWRAP=Y,FEC=Y,:OOS,AINS;

1.6.9 Synchronization Provisioning Rules

1. The Transponder is through-timed (passthrough) and:
   a. Cannot be used for a timing source (TXP_MR_10G, TXP_MR_2.5G and TXPP_MR_2.5G).
   b. TXP_MR_10E can be used as a time reference (only the client port, not the trunk port).
   c. MXP_MR_2.5G and MXPP_MR_2.5G card trunk ports can be used as a timing source.
2. Only Muxponder ports can be used for a timing source. Trunk port is only allowed as a timing reference if G.709 is off and the termination mode is line or section.
3. For Muxponder cards, all client ports are available for timing source irrespective of termination mode.

The TL1 commands to provision are:

- ENT/ED-OCn

  Example of setting port-level synchronization attributes:

  ED-OC48::FAC-1-1-1:CTAG:::SYNCMSG=Y,SENDDUS=N:;

- ED-OCH

  Example of setting port-level synchronization attributes:

  ED-OCH::CHAN-6-2:114:::SYNCMSG=N,SENDDUS=Y;:

1.6.10 Section Trace Provisioning (J0) Rules

1. The client and trunk ports only support the section trace if the payload is OC3/12/48/192/STM1/4/16/64.
2. The client and the trunk ports support the section trace only in line/section terminated mode.
3. In line termination mode the supported trace modes are:
   a. MANUAL and MANUAL_NO_AIS trace modes.
4. in section termination mode the supported trace mode is only:
   a. MANUAL_NO_AIS trace mode.
5. The section trace supports 1 or 16 bytes length trace format.
6. The trace mode of AUTO and AUTO-NO-AIS are not supported.
7. No trace is applicable for 2R (unframed) payload types, for example, DV-6000, HDTV, and ESCON.
8. The section trace received string should be displayed when the card is in transparent-AIS or TRANSPARENT-SQUELCH termination mode and the payload is OC3/12/48/192/STM1/4/16/64..
9. When the client port is configured in a Y Cable protection group the received string is always retrieved from the active client port.
10. If the line is Y Cable protected trace can only be provisioned on the working 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.
11. The MXP_2.5G_10E card is used for client test connection on client ports. For the trunk port the TTI is used.
12. The TXP_MR_10E card is used to test connections on client trunk ports.

13. On MXP_MR_2.5G/MXPP_MR_2.5G the trunk port section trace may be provisioned following the rules for line terminated SONET.

The TL1 commands to provision are:

- ED-OCn for trace provisioning of client ports provisioned for OCn payload.

  Example of provisioning port-level trace:

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

- ED-TRC-OCH for trace provisioning of trunk/OCH DWDM ports.

  Example of provisioning port-level trace:

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

1.6.11 Trail Trace Identification Provisioning Rules

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

The TL1 commands to provision are:

- ED-TRC-OCH

  Example of provisioning port-level trace:

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

1.6.12 PM and Alarm Threshold Provisioning Rules

1. When framing type is unframed, for example, HDTV, DV6000:
   a. Only optics threshold provisioning and PM are applicable.
   b. Depending on ESCON SFP type, optics threshold provisioning and PM are or are not supported.
2. Optics PM supports only Near End, 15MIN and 1DAY interval buckets.
3. When framing type is FIBRE CHANNEL and ETHERNET (for example,1GFC, 1G Ethernet):
   a. Only 8B10B threshold provisioning and PM are available. (Applicable only to TXP_MR_2.5G/TXPP_MR_2.5G and MXP_2.5G_10G/TXP_MR_10G cards).
   b. 2G Fibre Channel does not support 8B10B threshold provisioning and PM.
4. 8B10B applies to both Tx and Rx directions. (Applicable only to TXP_MR_2.5G/TXPP_MR_2.5G and MXP_2.5G_10G/TXP_MR_10G cards).

5. 8B10B PM supports only Near End, 15MIN and 1DAY interval buckets.
6. 8B10B layer is not used for MXP_2.5G_10E and TXP_MR_10E cards.
7. When framing type is SONET/SDH:
   a. All monitored PM parameter terminology will follow the current chassis type.
8. The OTN thresholds are only applicable if G.709 OTN status is enabled.
9. The FEC thresholds are only applicable if the G.709 and FEC are enabled.
10. If the line is configured in a Y Cable or splitter protection group, only the working line thresholds can be provisioned. The working line thresholds will be reflected on the protect line thresholds. This rule applies for all threshold types including G.709 OTN and FEC thresholds.
11. Payload PM can be independently retrieved for both the working and protect port.

The TL1 commands to provision are:

- SET-TH-(OCn, nGIGE, nGFC, OCH)

  Examples of port-level threshold setting:

  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;
- RTRV-PM-(OCn, nGIGE, nGFC, OCH)

  Examples of port-level threshold setting:

  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:

1.6.13 Y Cable Protection Group Provisioning Rules

1. A Y cable protection group can be created between the client ports of two unprotected Transponders only.
2. While in Y cable protection a transponder cannot be part of a regeneration group.
3. Only the working client port can be provisioned with SDCC.
4. Y Cable cannot be provisioned for a protect version of the TXP_MR_2.5G card.
5. Only with the working ports (not the protect) can be provisioned with DCC and timing reference.

The TL1 commands to provision are:

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

  Examples of Y Cable provisioning:

  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;

1.6.14 Splitter Protection Group Provisioning Rules

Note Splitter protection group provisioning rules apply only to the protect version of the Transponder card.

1. Splitter protection group cannot be created or deleted.
2. Splitter protection group is created automatically when a protect Transponder card is provisioned.
3. The only editable attributes are: Revertive, Revertivetime and Transponder mode.

The TL1 commands to provision are:

- ED-FFP-OCH

  Example of editing splitter protection group attributes:

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

1.6.15 Loopback Provisioning Rules

1. Loopback can be provisioned on the client and trunk ports.
2. Both terminal and facility loopback types can be provisioned.
3. Loopback is not applicable when framing type is UNFRAMED (HDTV, DV6000).
4. For the protect transponder the following loopback rules apply to the trunk ports:
   a. Only one loopback is allowed to be provisioned at the trunk ports at any given time.
   b. Loopback is allowed if the sibling trunk port is OOS-MT.
   c. Provisioning a loopback on a trunk port will trigger the Inhibit Switching Command LOCKOUT_OF_PROTECTION or LOCKOUT_OF_WORKING depending on whether the working or the protect is placed in a loopback.
   d. Once a loopback is provisioned on a trunk port, both the trunk ports will transmit the signal of the loopback port.
   e. A loopback will be denied if there is a FORCE or MANUAL switching command in place on the trunk ports.
   f. You cannot remove the Inhibit Switching command issued as a result of the loopback. This Inhibit Switching command will be removed only when the loopback is removed.

The TL1 commands to provision are:

- ED-FFP-OCH

  Example of editing splitter protection group attributes:

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

1.6.16 Automatic Laser Shutdown Provisioning Rules

1. ALS can be provisioned on the client and trunk ports.
2. If the trunk port is configured in a splitter protection group only the working trunk can be provisioned for ALS. However, provisioning on the working trunk port will be reflected on the protect port.
3. For the protected Transponder, ALS mode will only take effect when both ports receive LOS.

The TL1 commands to provision are:

- ED-ALS

  Example of editing ALS attributes:

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

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

  Example of editing ALS attributes:

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

1.6.17 Port State Model Provisioning Rules

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

The TL1 commands to provision are:

- ED-(OCn, nGIGE, nGFC, OCH)

  Example of editing Port State:

  ED-OC48::FAC-6-1-1:114::::OOS,AINS;

  ED-10GIGE::FAC-6-1:114::::OOS,AINS;

  ED-OCH::CHAN-6-1:114::::IS;

1.6.18 SONET-Related Provisioning Rules

1. The SD/SFBER can only be provisioned on the working trunk port (OCH) for the protect Transponder card. Values set at the working port will be reflected on the trunk port.

The TL1 commands to provision are:

- ED-OCH

  Example of editing 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:OOS,AINS;

1.6.19 Overhead Circuit Provisioning Rules

1. LOW/EOW is possible between the AIC-I, OCn and TXP/TXPP cards in any combination in line-terminated mode.
2. F1/D4-D12 UDC:
   a. Not possible between TXP/TXPP and AIC-I cards in line-terminated mode.
   b. Not possible between TXP/TXPP and OCn cards in line-terminated mode.
   c. Possible between OCn ports.
3. All OH bytes are passed across client and DWDM ports in transparent mode.
4. SDCC/LDCC tunneling is not possible in line-terminated mode.
5. No end-to-end OH circuit provisioning. In R5.0 you can stitch them at each node.
6. For MXP_MR_2.5G and MXPP_MR_2.5G cards these rules apply to the trunk port only.

1.6.20 Hardware Limitation Rules

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

1.7 Mixed Mode Timing Support

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

1.8 TL1 Command Completion Behavior

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

1.8.1 General Rules

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

1.8.1.1 Explicit List of AIDs - No Wildcards

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

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

1.8.1.2 Implicit List of AIDs - Single AID With Wildcard

If a set of AIDs is implied by the use of the ALL modifier on a single AID, then follow the same rules as in the "1.8.1.1 Explicit List of AIDs - No Wildcards" section on page 1-22. The caveat is that the implicit list only includes AIDs that apply to the command:

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

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

1.8.1.3 Explicit List Grouped With Implicit List

If the set of AIDs is comprised of two subsets, one set including explicitly stated AIDs and the other set implied by one or more AID(s) with the ALL modifier, then follow the rules of the"1.8.1.1 Explicit List of AIDs - No Wildcards" section on page 1-22 and the "1.8.1.2 Implicit List of AIDs - Single AID With Wildcard" section on page 1-22, respectively.

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

1.8.2 Command Completion Behavior for Retrieval of Cross-Connections

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

1.8.2.1 Explicit List of AIDs - No Wildcards

For an explicit list of AIDs on a RTRV-CRS command, an error code will be returned for each AID that fails validation (e.g. the user specifies STS-N-13 when SLOT-N only contains an OC-12) or for each AID where no matching cross-connection is found. To determine the completion code, follow the rules from the "1.8.1.1 Explicit List of AIDs - No Wildcards" section on page 1-22. If the result is either PRTL or COMPLD, then a list of matching cross-connections will accompany the response.

1.8.2.2 Implicit List of AIDs - Single AID With Wildcard

If a set of AIDs is implied by the use of the ALL modifier on a single AID, then follow the same AID expansion rule as defined in the example from the "1.8.1.2 Implicit List of AIDs - Single AID With Wildcard" section on page 1-22. Then apply the following rules to the set:

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

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

1.8.2.3 Explicit List Grouped With Implicit List

When you have determined the implicit list, apply the rules from the "1.8.2.2 Implicit List of AIDs - Single AID With Wildcard" section on page 1-23 to the implicit list and the rules from the "1.8.2.1 Explicit List of AIDs - No Wildcards" section on page 1-23 to the explicit list. Apply the following logic to the results from the two subsets:

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

1.9 Test Access

Note Test access applies to the ONS 15454, ONS 15327 and ONS 15600. Test access does not apply to the ONS 15310-CL.

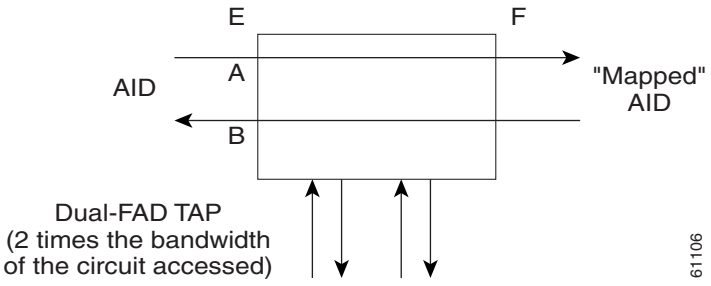
The test access (TACC) feature allows a third-party Broadband Remote Test Unit (BRTU) to create non-intrusive test access points (TAPs) to monitor the circuits on the ONS 15454, ONS 15327 and ONS 15600 for errors. The test access feature also allows the circuit to be split (intrusive), so that the transmission paths can be tested for bit errors via the use of various bit test patterns. The two BRTUs supported by the ONS 15454, ONS 15327 and ONS 15600 are the Hekimian/Spirent BRTU-93 (6750) and the TTC/Acterna Centest 650.

The test access functionality provides TL1 commands for creating and deleting TAPs, connecting or disconnecting TAPs to circuit cross-connects and changing the mode of test access on the ONS 15454, ONS 15327 and ONS 15600. You can view test access information in CTC; in node view click the **Maintenance > Test Access** tabs.

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

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

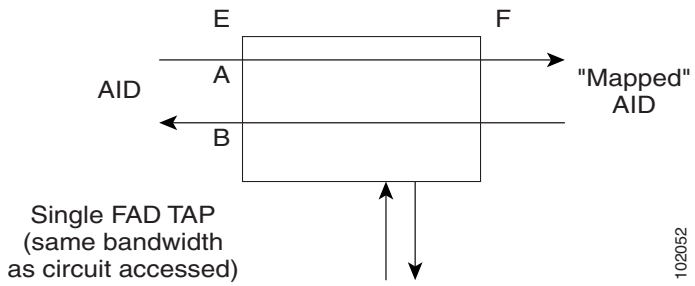
Figure 1-2 Circuit With No Access Dual FAD TAP



A dual FAD (facility access digroup) TAP uses twice the bandwidth of the circuit under test. This can be specified by the TAPTYPE parameter as shown in ED-<MOD2> command syntax in the "1.9.2 TAP Creation and Deletion" section on page 1-26. The values are SINGLE/DUAL. It defaults to DUAL.

A single FAD TAP uses half the bandwidth as that of the dual FAD i.e., it will use the same bandwidth as the circuit accessed for the TAP creation. This can be specified by the TAPTYPE parameter as shown in the "1.9.2 TAP Creation and Deletion" section on page 1-26. The values are SINGLE/DUAL. The MONEF, SPLTEF, LOOPEF modes are not supported by Single FAD TAPs (Figure 1-3).

Figure 1-3 Circuit With No Access Single FAD TAP



1.9.1 Test Access Terminology

BRTU—Broadband remote test unit

DFAD—Dual facility access digroup

FAD—Facility access digroup

FAP—Facility access path

LOOPE—Split/loop access on A and B paths equipment side

LOOPF—Split/loop access on A and B paths facility side

MONE—Monitor access with signal detector on A path

MONF—Monitor access with signal detector on B path

MONEF—Monitor access with signal detector on A and B paths

QRS—Quasi-random signal (bit test pattern)

SPLTA—Split access on A path with signal detector from equipment, QRS on facility side

SPLTB—Split access on B path with signal detector from equipment, QRS on equipment side

SPLTE—Split access on A and B paths with signal detector from equipment, QRS on equipment side

SPLTF—Split access on A and B paths with signal detector from equipment, QRS on facility side

SPLTEF—Split access on A and B paths for testing in both equipment and facility directions

TACC—Test access

TAP—Test access path/point

Path Naming Conventions:

E—Equipment test access point direction

F—Facility test access point direction

A—Transmission path (the direction of transmission on the A pair is from E to F)

B—Transmission path (the transmission direction for the B pair is from F to E)

1.9.2 TAP Creation and Deletion

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

1.9.2.1 ED-<rr>

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

Input Format:

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

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

Notes:

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

The following list applies to TAP numbers:

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

1.9.2.2 ED-T1

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

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

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

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

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

1.9.2.3 ED-T3

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

The command in Example 1-2 creates a T3 DFAD on FAC-2-1 and FAC-2-2.

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

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

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

1.9.2.4 ED-DS1

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

The command in Example 1-3 creates DFAD on DS1-2-1-1 and DS1-2-1-2.

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

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

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

1.9.2.5 ED-STSn

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

The command in Example 1-4 creates a TAP on STS-5-1 and STS-5-2.

Example 1-4 ED-STS1::STS-5-1:12:::TACCC=4

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

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

The command in Example 1-5 creates an STS24C dual TAP on STS-6-1 and STS-6-25.

Example 1-5 ED-STS24C::STS-6-1:12:::TACC=5:

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

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

1.9.2.6 ED-VT1

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

The command in Example 1-6 creates a VT TAP on VT1-1-1-1-1 and VT1-1-1-2-1.

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

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

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

1.9.3 Connect Test Access Points

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

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

Connect the port/STS/VT defined by <AID> to the port/STS/VT defined by the <TAP> number. The mode of test access to the circuit/cross-connect is specified by <MD>. The modes can be either of monitor (non-intrusive), split or loop (intrusive) modes. The various modes are described in the "1.9.9 Test Access Mode Definitions" section on page 1-33.

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

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

Error Codes Supported:

RTBY—Requested TAP busy

RTEN—Requested TAP does not exist

SCAT—Circuit is already connected to another TAP

SRCN—Requested condition already exists

IIAC—Invalid access identifier (AID)

EANS—Access not supported

SRAC—Requested access configuration is invalid

The command in Example 1-7 creates a connection between TAP with number one and the port/facility FAC-1-3 with access mode as MONE. The various modes are described in the "1.9.9 Test Access Mode Definitions" section on page 1-33.

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

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

1.9.4 Change Access Mode

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

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

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

Error codes supported:

SRCN—Requested condition already exists

SRAC—Requested access configuration is invalid

RTEN—Requested TAP does not exist

The command in Example 1-8 changes the access mode of TAP 1 to LOOPE.

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

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

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

Note This command generates a REPT DBCHG message.

1.9.5 Retrieve Test Access Point Information

1.9.5.1 RTRV-<rr>

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.

The RTRV-<rr> command retrieves TAP information. See the "3.2.234 RTRV-TACC" section on page 3-672 for more information.

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

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

Example 1-9 RTRV-T1::FAC-1-1:12;

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

Parameter definitions:

- <TID> the node name which is optional
- <TAP> number from 1–999 identifying the TAP. Returned by the CONN-TACC command. If a TAP is 0, the TAP is deleted. <TAP> is an integer
- <CTAG> required identifier or number limited to six ASCII characters that correlates a response with a command
- <AID> can be a TL1 identifier such as STS-<slot>-<starting sts> VT-<slot>-<sts>-<group>-<vt>. For T1 and T3 the facility <AIDs> are used. See the "4.5 Access Identifiers" section on page 4-17 for a list of all AIDs
- <MD> defines the monitor or split mode: MONE, MONF, MONEF, SPLTE, SPLTF, LOOPE, LOOPF, SPLTA, SPLTB, SPLTEF (SPLTE, SPLTF, LOOPE, and LOOPF require an external QRS input signal)
- <TACC> specific block should be set to TACC=n where n is the desired TAP number. <TACC> marks the STS or VT as used for test access

1.9.5.2 RTRV-TACC

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

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

Example 1-10 RTRV-TACC:CISCO:241:CTAG;

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

Parameter Definitions:

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

1.9.6 Disconnect Test Access Points

TAPs can be disconnected in the following ways:

- Issue the DISC-TACC command
- Delete or modify accessed connection
- Drop the TL1 session for any reason, including logout or a dropped telnet session
- Switch or reset a TCC2/TCC2P or XTC

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

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

The command in Example 1-11 disconnects TAP 1 from the circuit/cross-connect under test.

Example 1-11 DISC-TACC::1:12;

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

Note This command generates a REPT DBCHG message.

Error codes supported:

SADC—Already disconnected

SRTN—Unable to release TAP

1.9.7 Delete Test Access Points

The command in Example 1-12 deletes a TAP.

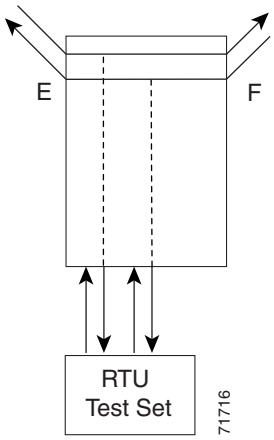
Example 1-12 ED-<STS_PATH>:[<[TID>]:<AID>:<CTAG>:::TACC=0:;

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

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

1.9.8 Test Access Configurations

Figure 1-4 Single Node View (Node 1)



Example 1-13 ED-STS1::STS-1-1:90:::TACC=1:;

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

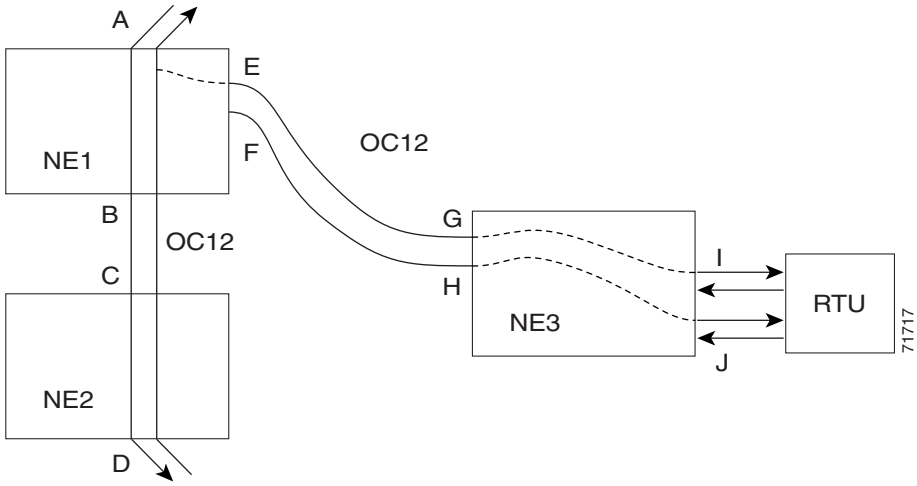
Example 1-14 CONN-TACC-STS1::<AID for E or F depending on MD>:91::TAP-1:MONE

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

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

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

Figure 1-5 Multi-Node View (MONE Example)



On NE3:

Example 1-15 ENT-CRS-STS1::<AID I-G>:100::2WAY; A connection, not a TAP. CTAG is 100.
ENT-CRS-STS1::<AID J-H>:101::2WAY; Second connection, not a TAP.

On NE1:

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

Example 1-16 ED-STS1::STS-1-1:TACC=4; Creates TAP with STS-1-1 and STS-1-2 through NE1. TAP number assigned is 4.

Example 1-17 CONN-TACC-STS1::<AID A or B>:102::4:<MD> Connects TAP 4 to the circuit.

Note The I and J connections above are TAPs in Figure 1-4, but normal connections in the Figure 1-5 configuration.

1.9.9 Test Access Mode Definitions

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

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

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

Figure 1-6 Circuit With No Access (Dual FAD TAP)

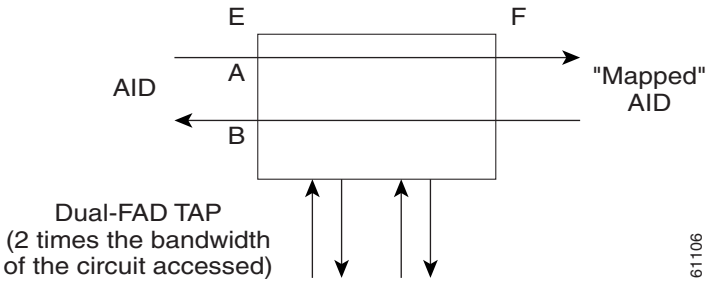
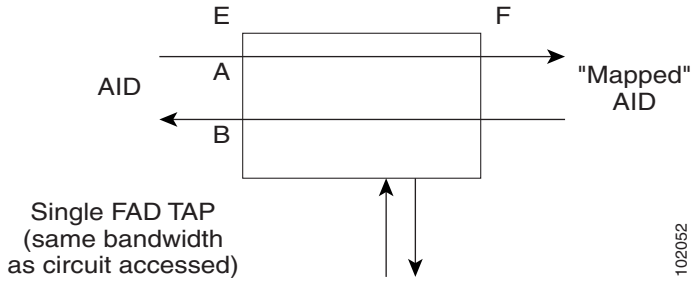


Figure 1-7 Circuit With No Access (Single FAD TAP)



1.9.9.1 MONE

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

Figure 1-8 MONE Access Single TAP

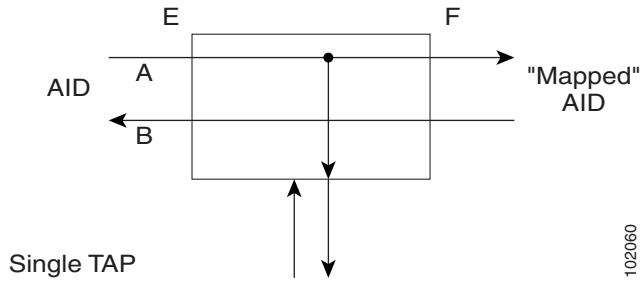
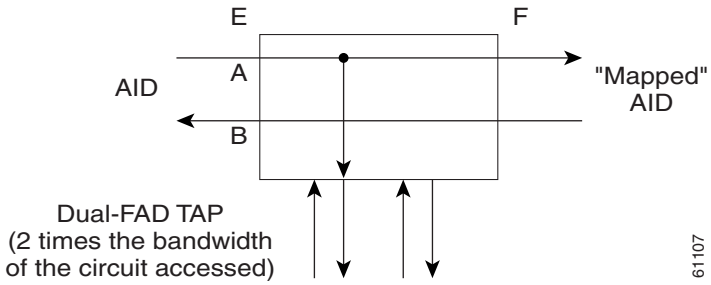


Figure 1-9 MONE Access Dual TAP



1.9.9.2 MONF

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

Figure 1-10 MONF Access Single TAP

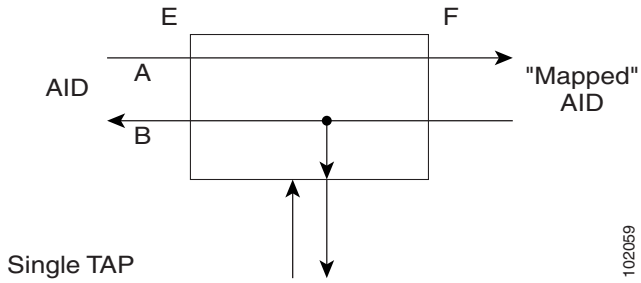
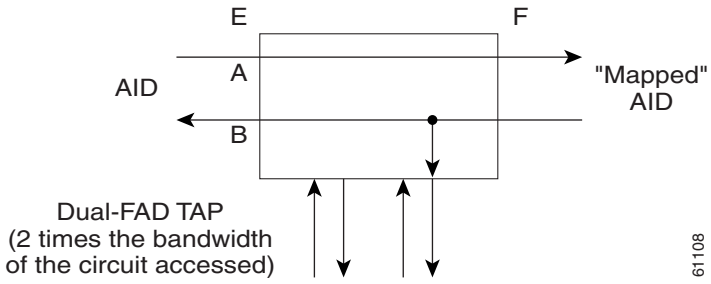


Figure 1-11 MONF Access Dual TAP



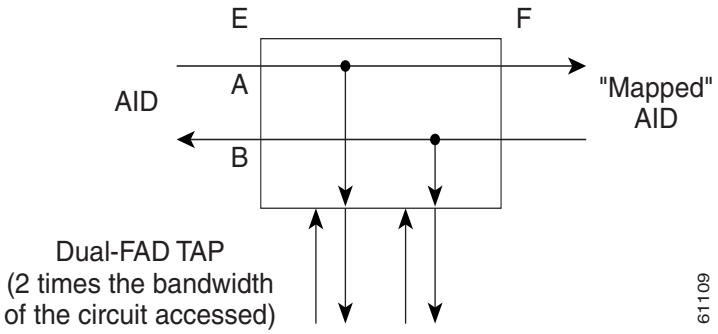
Note The MONE and SPLTA modes are applicable to unidirectional circuits from E to F. The MONF and SPLTB modes are applicable to unidirectional circuits from F to E.

1.9.9.3 MONEF

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

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

Figure 1-12 MONEF Access Dual TAP



1.9.9.4 SPLTE

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

Figure 1-13 SPLTE Access Single TAP

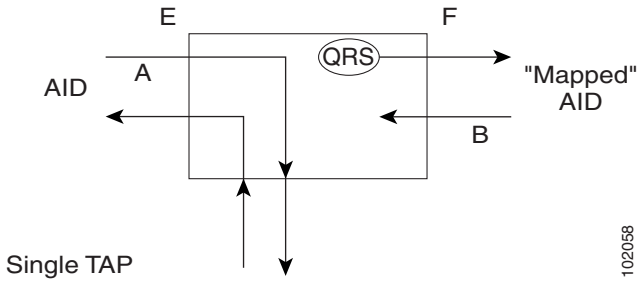
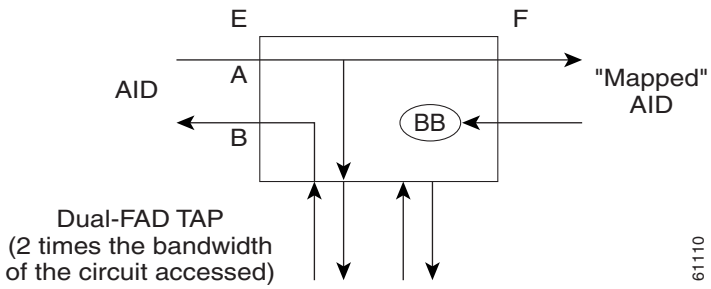


Figure 1-14 SPLTE Access Dual TAP



1.9.9.5 SPLTF

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

Figure 1-15 SPLTF Access Single TAP

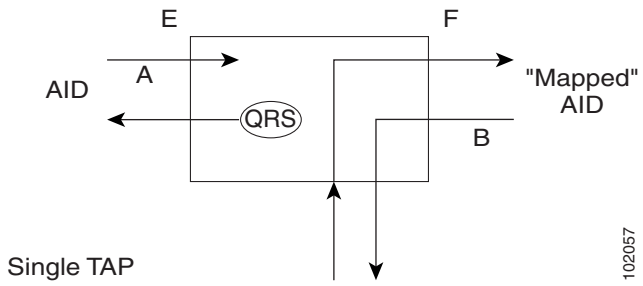
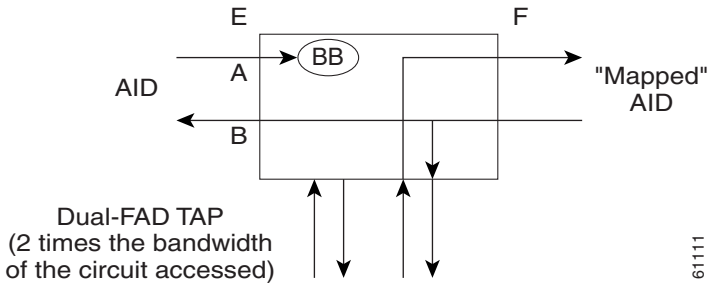


Figure 1-16 SPLTF Access Dual TAP

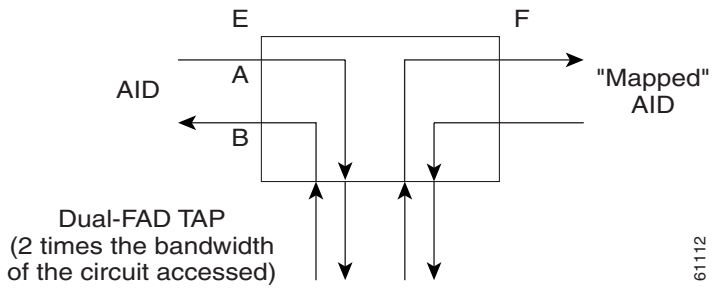


1.9.9.6 SPLTEF

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

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

Figure 1-17 SPLTEF Access Dual TAP



1.9.9.7 LOOPE

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

Figure 1-18 LOOPE Access Single TAP

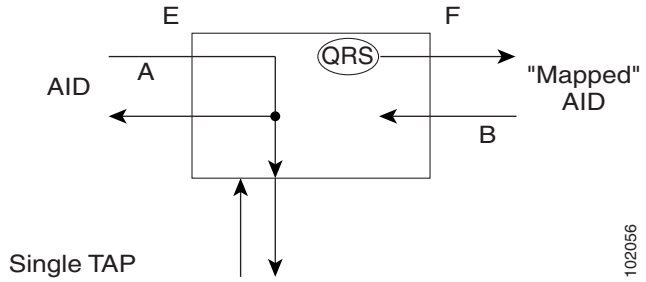
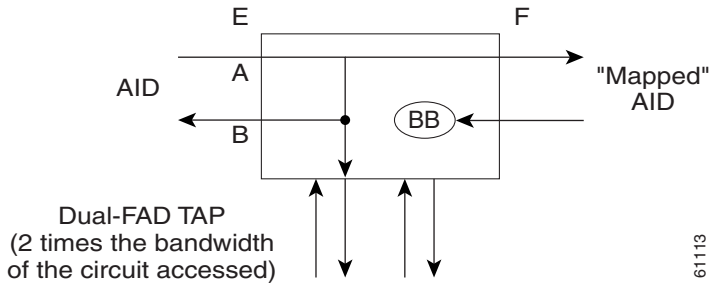


Figure 1-19 LOOPE Access Dual TAP



1.9.9.8 LOOPF

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

Figure 1-20 LOOPF Access Single TAP

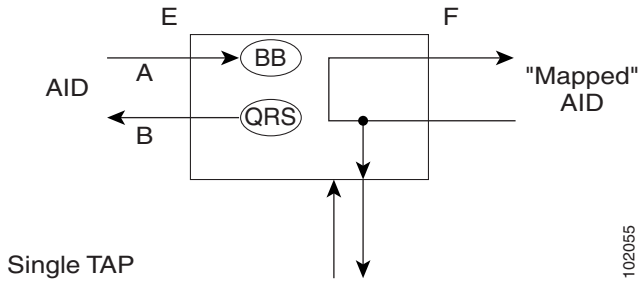
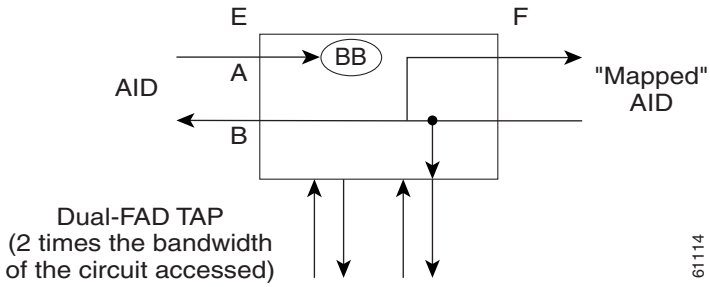


Figure 1-21 LOOPF Access Dual TAP



1.9.9.9 SPLTA

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

Figure 1-22 SPLTA Access Single TAP

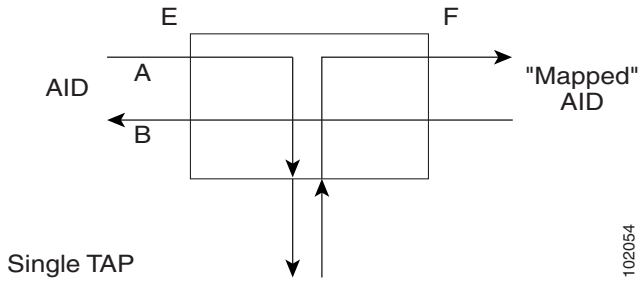
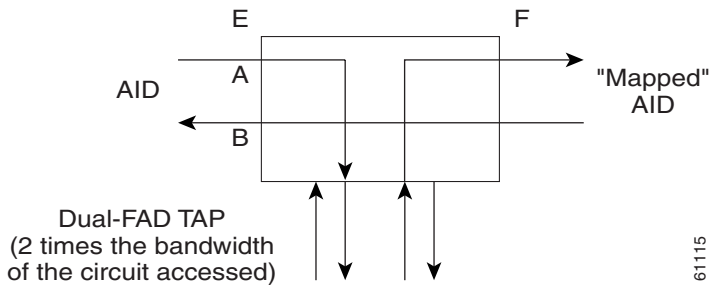


Figure 1-23 SPLTA Access Dual TAP



1.9.9.10 SPLTB

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

Figure 1-24 SPLTB Access Single TAP

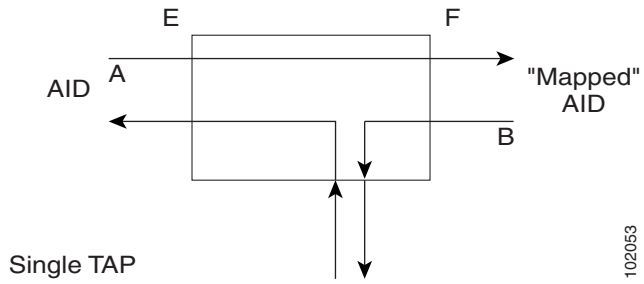
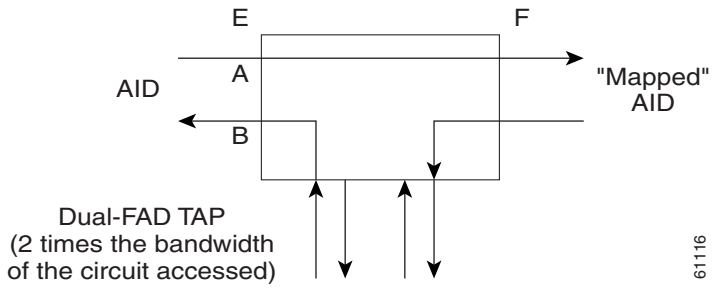


Figure 1-25 SPLTB Access Dual TAP



1.9.10 Unmapped AID Test Access Point Connections

The ONS 15454, ONS 15327 and ONS 15600 supports connections to unmapped AIDs (unmapped circuits). The TAPs can be connected to an unmapped AID, i.e. an AID that does not have a cross-connect on it. The access modes supported are: MONE, SPLTE, and LOOPE.

Example 1-18 creates a TAP on STS-5-1 and STS-5-2.

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

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

Example 1-19 creates an unmapped AID connection with the MONE access mode.

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

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

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

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

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

Examples:

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

1.9.10.1 1-Way Circuit

Example 1-20 ENT-CRS-STS1::STS-5-1,STS-5-2:12::1WAY;

```
   DV9-99 1970-07-01 20:29:06
M 12 COMPLD;
```

Example 1-21 CONN-TACC-STS1::STS-5-1:12::1:MD=MONF;

```
   DV9-99 1970-01-01 20:29:47
M 12 DENY
   EANS
  STS-5-1
/*INCORRECT TAP MODE*/
```

The <AID> specified in the above CONN-TACC command is the source AID for the 1-way circuit. In this case only MONE and SPLTA modes are allowed because there is no B path in the case of a 1-way circuit (see Table 1-5 on page 1-42).

Example 1-22 CONN-TACC-STS1::STS-5-1:12::1:MD=MONE;
DV9-99 1970-01-01 20:30:09
M 12 COMPLD

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

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

Example 1-24 CONN-TACC-STS1::STS-5-2:12::1:MD=MONF;
DV9-99 1970-01-01 20:30:32
M 12 COMPLD

Notes:

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

1.9.10.2 2-Way Circuits

For 2-way circuits all the modes are allowed as shown in Table 1-5 and the same applies for UPSR_UPSR and path protection circuit types. In the case of UPSR_UPSR and path protection circuits the working path is connected irrespective of which path is currently active.

1.9.10.3 Unmapped AID

As explained in the "1.9.10 Unmapped AID Test Access Point Connections" section on page 1-40, connections can be made to an <AID> without a cross-connect on it. The modes supported are MONE, SPLTE and LOOPE as shown in Table 1-5.

Table 1-5 Modes Supported by Circuit Type

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

Table 1-5 Modes Supported by Circuit Type

	MONE	MONF	MONEF	SPLTE	SPLTF	SPLTEF	LOOPE	LOOPF	SPLTA	SPLTB
UPSR_DROP UPSR_DC UPSR_EN (from F)		X								X
UPSR_UPSR	X	X	X	X	X	X	X	X	X	X
Unmapped AID	X			X			X			

Notes:

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

1.10 TL1 PCA Provisioning

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

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

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

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

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

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

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

1.10.1 Provision a PCA Cross-Connection

Input format for provisioning a PCA cross-connection:

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

STS= all the STS bandwidth cross-connections.

VT1=VT1_5 cross-connection.

Input example of provisioning an STS3C PCA cross-connection:

Example 1-26 ENT-CRS-STS3C::STS-1-1,STS-2-1:123::2WAYPCA;

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

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

1.10.2 Retrieve a PCA Cross-Connection

Input Format for retrieving a PCA cross-connection:

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

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

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

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

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

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

Example 1-29 "<FROM>,<TO>:2WAYPCA"

1.11 FTP Software Download

Note FTP software download applies to the ONS 15454, ONS 15327 and ONS 15310-CL.

Note FTP timeout is 30 seconds and is not configurable.

The file transfer protocol (FTP) software download feature downloads a software package to the inactive flash partition residing on either the TCC2/TCC2P, XTC or 15310-CL-CTX card. FTP software download provides for simplex and duplex TCC2/TCC2P, XTC or 15310-CL-CTX card downloads, success and failure status, and in-progress status at 20% increments.

1.11.1 COPY-RFILE

The COPY-RFILE command downloads a new software package from the location specified by the FTP URL into the inactive flash partition residing on either the TCC2/TCC2P, XTC or 15310-CL-CTX card. COPY-RFILE can also be used to backup and restore the database file.

Note Since Release 5.0, 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'.

Input format:

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

where:

- SRC is the type of file being transferred
- <XFERTYPE> is the file transfer protocol
- <SRC1> specifies the source of the file to be transferred. Only the FTP URL is supported. In a non-firewall environment the format for the URL is: “FTP://FTTPUSER[:FTP_PASSWORD]]@FTP_HOST_IP[:FTP_PORT] /PACKAGE_PATH[:TYPE=I]”

  where:

  – FTP_USER is the userid to connect to the computer with the package file
  – FTP_PASSWORD is the password used to connect to the computer with the package file
  – FTP_HOST_IP is the IP address of the computer with the package file, DNS lookup of hostnames is not supported
  – 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 a “@” character. The first IP address should be for the computer where the package file is stored. Subsequent IP addresses are for firewall computers moving outward toward the edge of the network until the final IP address listed is the computer that outside users use to first access the network.

    For example, if your topology is:

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

the FTP URL is:

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

SRC1 is a String

- DEST specifies the destination of the file to be transferred. The comments for the SRC parameter are also valid here. DEST is a string
- If OVWRT is YES, then files are overwritten. Currently only YES is supported. Using a NO value for OVWRT will result in an error message.

Notes:

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

1.11.2 APPLY

The APPLY command can activate or revert software depending on the version of software loaded on the active and protect flash. An error is returned if attempting to activate to an older software load or trying to revert to a newer software load. If this command is successful the appropriate flash is selected and the TCC2/TCC2P2, XTC or 15310-CL-CTX card will reboot.

Input format:

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

where:

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

1.11.3 REPT EVT FXFR

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

Note:

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

Output format:

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

where:

- <FILENAME> indicates the transferred file path name and is a string. When a package is being transferred between the FTP server and the controller cards, the filename field will contain the string "active". Following this transfer, if there is a second controller card on the node, the file will be copied over to the second card. While this is happening, REPT EVT FXFR messages will be generated with a filename of "standby".
- <FXFR_STATUS> indicates the file transferred status: Start, IP (in progress), or COMPLD.
- <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

1.11.4 Downloading New Software

The following procedure downloads new software to the TCC2/TCC2P, XTC or 15310-CL-CTX card using TL1.

Download New Software

Note Only Superusers can download and activate software.

Step 1 Copy the new software package (15454-0340-X02E-2804.pkg) to an FTP host.

Step 2 Establish a TL1 session with the target NE.

Step 3 Login with the ACT-USER command.

Step 4 Check the working and protect software on the NE by issuing the RTRV-NE-GEN command.

Input example:

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

Output example:

Example 1-34

```
   VA454-94 1970-01-06 22:22:12
M 1  COMPLD
  "IPADDR=10.82.87.94,IPMASK=255.255.255.224,DEFRTR=10.82.86.1,
   ETHIPADDR=10.82.87.94,ETHIPMASK=255.255.255.224,NAME=VA454-94,
   SWER=3.40.00,LOAD=03.40-002G-14.21,PROTSWVER=4.00.00,
   PROTLOAD=04.00-X02G-25.07,DEFDESC=\"FACTORY DEFAULTS\""
;
```

Step 5 Issue the COPY-RFILE command. This command will initiate the download process. Refer to the "1.11.1 COPY-RFILE" section on page 1-45 for command syntax.

In the following example the package is located in "/%2FUSR/CET/VINTARA" in the host 10.77.22.199. The userid and passwords are TL1 and CISCO454. The directory path of the package is similar to what you will see during an FTP session.

Example 1-35 COPY-RFILE::RFILE-PKG:CTAG::TYPE=SWDL,SRC="FTP://TL1:CISCO454@10.77.29.199/%2FUSR/CET/VINTARA/15454-0340-X02E-2804.PKG";

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

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

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

Example 1-36

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

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

Example 1-37

```
   DEV208 1970-01-10 11:52:15
A  2818,2818 REPT EVT FXFR
   "ACTIVE START"
;
```

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

Example 1-38

```
   DEV208 1970-01--10 11:52:15
*  2817.2817 REPT ALM EQPT
   "SLOT-7:MN,SFTWDOWN,NSA,,,,:\"SOFTWARE DOWNLOAD IN PROGRESS\",TCC"
;
```

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

Example 1-39 RTRV-NE-GEN

```
   VA454-94 1970-01-06 22:22;12
M  1  COMPLD
   "IPADDR=10.82.87.94,IPMASK=255.255.255.224,DEFRTR=10.82.86.1,
   ETHIPADDR=10.82.87.94,EHTIPMASK=255.255.255.224,NAME=VA454-94,
   SWVER=3.40.00,LOAD=03.40-002G-14-21,PROTSWVER=NONE,
   PROTLOAD=DOWNLOADINPROGRESS,DEFDESC=\:FACTORY DEFAULTS\""
;
```

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

Example 1-40

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

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

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

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

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

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

```
   VA454-94 1970-01-06 22:22:12
M  1  COMPLD
   "IPADDR=10.82.87.94,IPMASK=255.255.255.224,DEFRTR=10.82.86.1,
   ETHIPADDR=10.82.87.94,EHTIPMASK=255.255.254.0,NAME=VA454-94,
   SWVER=3.40.00,LOAD=03.40-002G-14-21,PROTSWVER=4.00.00,
   PROTLOAD=03.40-X02E-28.04,DEFDESC=\FACTORY DEFAULTS\""
;
```

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

Example 1-42

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

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

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

1.11.5 Activating New Software

After the software is successfully downloaded, the new software which resides in the protect load must be activated to run on the NE. The APPLY command can be used to activate and revert depending on the version of the protect software and the newly downloaded software (refer to the "1.11.2 APPLY" section on page 1-46 for correct APPLY syntax).

Activate New Software

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

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

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

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

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

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

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

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

1.11.6 Remote Software Download/Activation Using the GNE

In a network with SDCC-connected ONS 15454, ONS 15327 and ONS 15310-CLs remote download and activation are possible using the GNE/ENE feature supported in TL1. The GNE must be connected by a LAN and the remaining ENEs can download the new software package through fiber from the GNE.

For remote software downloading, complete the steps in the "Download New Software" procedure on page 1-47 and the "Activate New Software" procedure on page 1-50, but ensure that the TID in each command is filled with the ENE node name.

Each GNE can support 11 (TCC2/TCC2P) or 6 (XTC or 15310-CL-CTX) concurrent communication gateway sessions and up to a maximum of 176 (TCC2/TCC2P) or 96 (XTC or 15310-CL-CTX) ENEs/GNE. For more information on TL1 Gateway, see Chapter 2, "TL1 Gateway."

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

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

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

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

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

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

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

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

1.12 Scheduled PM Report

Scheduled performance monitoring (PM) report is a feature that extends the capability of PM reporting for the Cisco ONS 15454, ONS 15327, ONS 15310-CL and ONS 15600. With scheduled PM report the system automatically and periodically generates the PM report of any specified facility or cross-connection.

Note The current maximum number of schedules allowed to be created for an NE is 1000. If this number of schedules has been created for the NE, an error message "Reach Limits Of MAX Schedules Allowed. Can Not Add More" will be returned if trying to create more schedules on the NE.

Note Identical schedules for an NE is not allowed. Two schedules are considered identical if they have the same AID, MOD2 type, performance monitor type, performance monitor level, location, direction and time period.

Note An error message "Duplicate Schedule" is returned if you create a schedule which is a duplicate of an existing schedule. However, if the existing schedule expires (with the parameter <NUMINVL> equal to zero when retrieved by the RTRV-PMSCHED command which means no more performance monitoring report to be sent), then the new schedule with the identical parameter will replace the existing schedule.

Note When you create a PM schedule, the minimum report interval should not be less than five minutes.

See each command description for command formats and syntax:

- SCHED-PMREPT-<MOD2> on page 3-722
- ALW-PMREPT-ALL on page 3-51
- RTRV-PMSCHED-<MOD2> on page 3-617
- RTRV-PMSCHED-ALL on page 3-622
- INH-PMREPT-ALL on page 3-254
- REPT PM <MOD2> on page 3-343

1.12.1 Create a PM Schedule and Receive an Autonomous PM Report

1. Issue the SCHED-PMREPT-<MOD2> command to create a PM schedule.
2. Issue the ALW-PMREPT-ALL command to allow the current TL1 session to be able to receive the autonomous PM report.

1.12.2 Manage PM Schedules

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

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

3. Retrieve all the PM schedules created on the node by issuing the RTRV-PMSCHED-ALL command. Retrieve a particular MOD2 type of PM schedule by issuing the RTRV-PMSCHED-<MOD2> command.

   Note The system will not automatically delete the schedules that are expired (for example, a schedule is created to report PM 10 times. After 10 PM reports are sent, the schedule is expired). The expired schedule can be identified by its <NUMINVL> field (equal to zero) in the response of RTRV-PMSCHED.

1.12.3 Enable or Disable a TL1 Session to Receive Autonomous PM Reports

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

Note By default, a TL1 session is disabled to receive PM reports. The ALW-PMREPT-ALL command enables a TL1 user to receive all the scheduled PM reports from the system, regardless of whether or not the schedule is created by this TL1 user or by any other TL1 user.

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

1.13 Remote Monitoring-Managed PMs

This section describes the retrieval, threshold setting, threshold crossing alerts (TCAs) and scheduled performance monitoring (PM) reporting for all the remote monitoring (RMON)-managed PM data in the Cisco ONS 15454, 15327, 15310-CL and 15600.

The cards that support RMON PMs include: G1000-2/G1000-4, ML1000-2/ML100T-12, FC_MR-4, ASAP-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 standard SNMP/RMON MIB, and also include other statistic types managed by RMON, for example, the fibre channel statistic 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.

Note 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.

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

1.13.1 RTRV-PM-<MOD2>

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

The TL1 modifiers FSTE/GIGE/POS are used to retrieve the RMON-managed Ethernet PM, if the Ethernet port is a FSTE/GIGE/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 mondate and montime in the output will be the last time the counters were cleared. RAW-DATA will be 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 will be returned.

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

See the "3.2.216 RTRV-PM-<MOD2>" section on page 3-603 for a full command description.

Input Format

RTRV-PM-<MOD2>:[<TID>]:<AID>:<CTAG>::[<MONTYPE>],[<MONLEV>],[<lSTM>],[<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"
;
```

Table 1-6 shows the error messages associated with the RTRV-PM-<MOD2> command.

Table 1-6 Error Messages for RTRV-PM-<MOD2>

Error Code	Description	Scenario When the Error Message is Sent
IDNV	TMPER Type Not Supported	When the TMPER parameter specified is not applicable for the MOD2 type. For example, 1-MIN is not applicable for OC48 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.

1.13.2 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) will be 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.

See the "3.2.90 ENT-RMONTH-<MOD2_RMON>" section on page 3-234 for a full command description.

Input Format

ENT-RMONTH-<MOD2>:[<TID>]:<AID>:<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:TID:FAC-2-1:123::ETHERSTATSOCTETS,,,,100:RISE=1000, FALL=100,SAMPLE=DELTA,STARTUP=RISING-OR-LTING;

Table 1-7 shows the error messages associated with the ENT-RMONTH-<MOD2_RMON> command.

Table 1-7 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/falling threshold is less than 0, or the falling threshold is greater than or equal to 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 already is a threshold created with the exact parameters.

1.13.3 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.

See the "3.2.29 DLT-RMONTH-<MOD2_RMON>" section on page 3-88 for a full command description.

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:TID:FAC-2-1:123::ETHERSTATSOCTETS,,,,100:RISE=1000,FALL=100, SAMPLE=DELTA,STARTUP=BOTH;

Table 1-8 shows the error messages associated with the DLT-RMONTH-<MOD2_RMON> command.

Table 1-8 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/falling threshold is less than 0, or the falling threshold is greater than or equal to 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 trying to delete does not exist.

1.13.4 RTRV-RMONTH-<MOD2_RMON>

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

See the "3.2.226 RTRV-RMONTH-<MOD2_RMON>" section on page 3-642 for a full command description.

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, for the etherStatsOctets statistics type, defined in the RMON threshold table.

RTRV-RMONTH-GIGE:TID: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"
;
```

Table 1-9 shows the error messages associated with the DLT-RMONTH-<MOD2_RMON> command.

Table 1-9 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/falling threshold is less than 0, or the falling threshold is greater than or equal to 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 trying to delete does not exist.

1.13.5 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 are generated when crossing the RISING or FALLING threshold.

The table index for 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.

See the "3.2.130 REPT EVT <MOD2ALM>" section on page 3-316 for a full message description.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:<CONDTYPE>,[<CONDEFF>],[<OCRDAT>],[<OCRTM>],[<LOCN>],,[<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"
;
```

1.13.6 INIT-REG-<MOD2>

This command initializes the performance monitoring (PM) registers.

This command applies to G1000, 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>.

See the "3.2.106 INIT-REG-<MOD2>" section on page 3-261 for the command description.

1.13.7 SCHED-PMREPT-<MOD2>

This command schedules/reschedules the NE to report the performance monitoring data.

The three accumulation time periods form RMON statistics are: 1-MIN, 1-HR and RAW-DATA.

See the "3.2.247 SCHED-PMREPT-<MOD2>" section on page 3-722 for a full command description.

1.13.8 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.

See the "3.2.218 RTRV-PMSCHED-<MOD2>" section on page 3-617 for a full command description.

1.13.9 REPT PM <MOD2>

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>.

See the "3.2.140 REPT PM <MOD2>" section on page 3-343 for a full message description.

1.13.10 REPT DBCHG

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

1. ENT-RMONTH-<MOD2>
2. DLT-RMONTH-<MOD2>

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

See the "3.2.129 REPT DBCHG" section on page 3-314 for a full message description.

1.13.11 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 request for comment (RFC)1757.

Unlike the PM of other SONET entities (such as STS path, OCn), 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 etherStatsUndersizePkts stats type --- T-etherStatsUndersizePkts-HT for the rising threshold, and T-etherStatsUndersizePkts-LT for the falling threshold.

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

1.13.12 Enumerated types

1.13.12.1 TMPER

Table 1-10 TMPER Type

Values	Description
1-DAY	Performance Parameter Accumulation Interval Length - Every 24 Hours. For SONET PM data (line/session/path), only 1 day of history data is available. For RMON managed data stats, there are 7 days of history data are available.
15-MIN	Performance Parameter Accumulation Interval Length - Every 15 Minutes. 32 history data are available.
1-MIN	Performance Parameter Accumulation Interval Length - Every 1 minute. Only applicable to RMON stats. 60 history data are available.
1-HR	Performance Parameter Accumulation Interval Length - Every 1 Hours. Only applicable to RMON stats. 24 history data are available.
RAW-DATA	The data shown is accumulated starting from the last time the counters are cleared. This is only applicable to RMON managed PMs.

1.13.12.2 SAMPLE_TYPE

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

Table 1-11 SAMPLE_TYPE

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

1.13.12.3 STARTUP_TYPE

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

Table 1-12 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-LTING	Generate the event when the sample is crossing the rising threshold, or it is crossing the falling threshold.

1.13.13 Notes for DWDM Card Types

For the following cards:

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

The PM for their client port and/or chunk port (OCH) can include both the RMON-managed PM and the SONET PM when their client payload is provisioned as 1GFC/2GFC/10GFC/1GFICON/2GFICON/GIGE/10GIGE.

1.13.13.1 Client Port of DWDM Cards

When the client port of a DWDM card is provisioned as 1GFC/2GFC/10GFC/1GFICON/2GFICON/GIGE/10GIGE, the applicable PM for the client port includes both the RMON-managed PM and the SONET 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 SONET optics PM. When the LOCN or DIRN parameter is specified it would only apply to the SONET optics PM.
- Because 1-MIN, 1-HR or RAW-DATA are not applicable to SONET optics PM, no SONET optics PM would be returned in the output of RTRV-PM. If RAW-DATA is specified in the input of the INIT-REG command, no SONET optics 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 SONET optics 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.
- A SONET optics PM montype cannot be specified in the input of the INIT-REG command only the SONET optics PM counters will be cleared. When the ALL montype is specified, both the RMON and the SONET optics PM counters will be cleared.
- The commands used to manage RMON thresholds (ENT-RMONTH, DLT-RMONT and RTRV-RMONTH) are only applicable to the RMON PM of the client port. The SONET optics 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 SONET optics PM threshold:

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

1.13.13.2 OCH Port of the DWDM Card

The OCH port of the TXP_MR_10G and TXP_MR_10E cards include the RMON-managed 8B10B PM as well as the other SONET PM when their client port is provisioned as GIGE/10GIGE or 1GFC/2GFC/10GFC.

The RTRV-PM-OCH, INIT-REG-OCH, SCHED-PMREPT-OCH and REPT PM OCH commands will have similar behaviors as mentioned in the "1.13.13.1 Client Port of DWDM Cards" section on page 1-60.

TL1 Gateway

This chapter describes the TL1 Gateway and provides procedures and examples for implementing TL1 Gateway on the Cisco ONS 15454, 15327, 15310-CL and 15600.

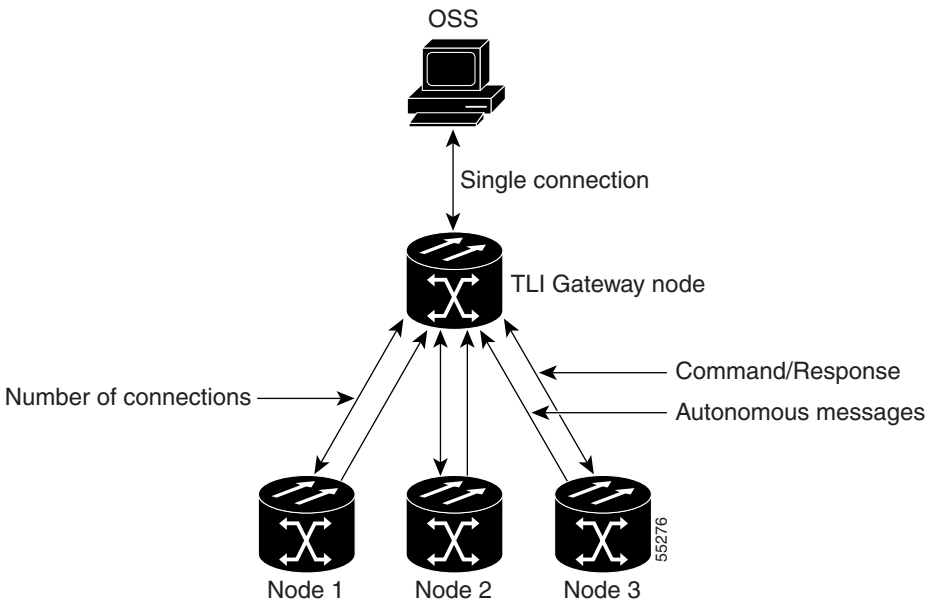
2.1 Gateway Network Element Topology

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

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

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

Figure 2-1 Example of a GNE Topology



ONS 15454, ONS 15327 and ONS 15310-CL Gateway

With the TCC2/TCC2P card on an ONS 15454, each GNE can support eleven (10+1) concurrent gateway communication sessions (connections from an OS to the GNE). Ten of these sessions are via the LAN (wire-wrap, active TCC2/TCC2P LAN port, or DCC) and the eleventh session is reserved for the active TCC2/TCC2P serial port. With the XTC card on an ONS 15327, or a 15310-CL-CTX card on an ONS 15310-CL each GNE can support six (5+1) concurrent gateway communication sessions. Five of these sessions are via the LAN (wire wrap, active XTC/15310-CL-CTX LAN port or DCC) and the sixth session is reserved for the active XTC/15310-CL-CTX serial port.

Each GNE can support 11 (TCC2/TCC2P) or 6 (XTC/15310-CL-CTX) concurrent communication gateway sessions and up to a maximum of 176 (TCC2/TCC2P) or 96 (XTC/15310-CL-CTX) ENEs/GNE. You can dynamically distribute the ENEs to balance the number of concurrent gateway communication sessions versus the number of NEs on the DCC. The GNE treats the 11 (10+1 for TCC2/TCC2P) or 6 (5+1 for XTC/15310-CL-CTX) concurrent gateway communication sessions and 176 (TCC2/TCC2P) or 96 (XTC/15310-CL-CTX) ENEs/GNE limit as a resource pool (Table 2-1) and continues to allocate resources until the pool is exhausted (see Table 2-2 for allocation examples). When the pool is exhausted the GNE returns an “All Gateways in Use” message or an “All ENE Connections in Use” message.

ONS 15600 Gateway

Each GNE can support 12 concurrent gateway communication sessions (connections from an OS to the GNE) available via the LAN (CAP, TSC, or DCC). The GNE can support 10 telnet sessions and 2 serial port sessions.

Note To issue commands to specific nodes in the network, enter a unique node name in the TID field in each TL1 message. The TID field is synonymous with the name of the node and is the second token in a TL1 command.

Table 2-1 Gateway Resource Pool

Number of GNEs	Number of GNE Sessions	Number of ENEs
1 (Cisco ONS 15454)	11 (10+1) TCC2/TCC2P	176 (dynamically allocated)
1 (Cisco ONS 15327)	6 (5+1) XTC	96 (dynamically allocated)
1 (Cisco ONS 15310-CL)	6 (5+1) 15310-CL-CTX	96 (dynamically allocated)
1 (Cisco ONS 15600)	12 (10+2) TSC	192 (dynamically allocated)

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

Number of GNE Communication Sessions	Number of ENEs
Values 1 through 6 apply to the TCC2/TCC2P, XTC, 15310-CL-CTX and TSC cards	
1	16
2	32
3	48
4	64
5	80
6	96
Values 7 through 11 apply to the TCC2/TCC2P and TSC cards only	
7	112
8	128
9	144
10	160
11	176
Value 12 applies to the TSC card only	
12	192

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

2.2 Implementing TL1 Gateway

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

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

Figure 2-2 Four-Node Ring Without TL1 Gateway

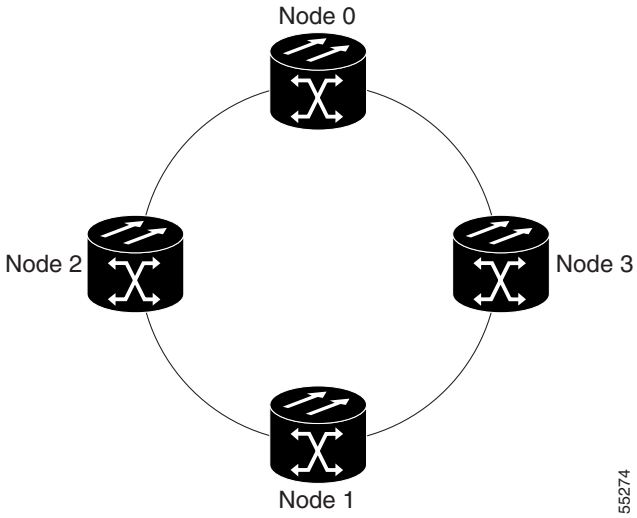
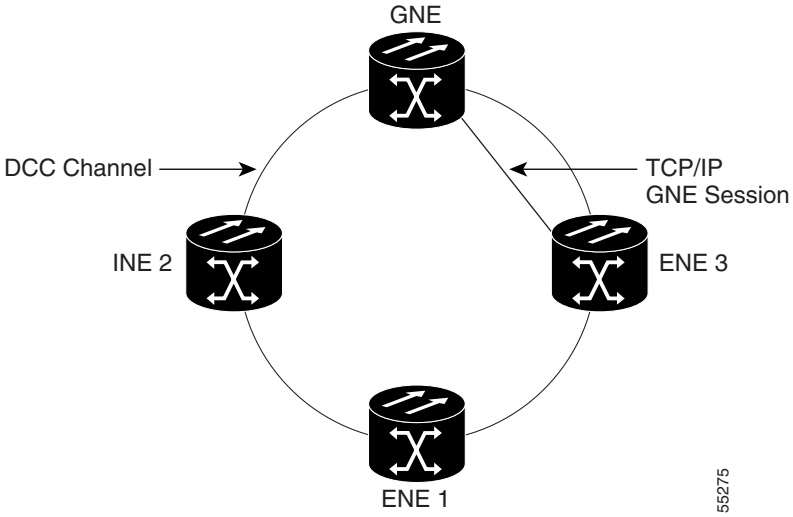


Figure 2-3 Four-Node Ring With TL1 Gateway



Log Into a Remote ENE

Step 1 Telnet or serial port to Node 0, which will become the GNE.

Step 2 To connect to the ENE 1 node, enter the TL1 login command using the following input example:

ACT-USER:NODE1:USERNAME:1234:PASSWORD;

The GNE forwards the login to ENE 1. After successful login, ENE 1 sends a COMPLD response.

Step 3 When you are logged into ENE 1, enter the following TL1 login command to connect to ENE 3:

ACT-USER:NODE3:USERNAME:1234:PASSWORD;

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

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

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

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

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

Receive Autonomous Messages from the Remote ENE

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

Log Out of a Remote ENE

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

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

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

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

CHAPTER 3

TL1 Command Descriptions

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

This chapter provides specific information on TL1 commands and autonomous messages for the Cisco ONS 15454, ONS 15327, ONS 15600, and ONS 15310-CL, Release 5.0, including:

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

For information on command components, such as access identifiers, see Chapter 4, "TL1 Command Components."

3.1 TL1 Commands by Card and Category

Table 3-1 contains commands and autonomous messages applicable to the Cisco ONS 15454, 15327, 15310-CL, and 15600 and their corresponding cards and categories.

Table 3-1 SONET TL1 Commands by Card and Category

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
ACT-USER	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security
ALW-MSG-ALL	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	System
ALW-MSG-DBCHG	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Log
ALW-MSG-SECU	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security
ALW-PMREPT-ALL	—	—	15310-CL-CTX	TSC	Performance
ALW-SWDX-EQPT	XCVT/XC10G	—	—	—	Equipment

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
ALW-SWTOPROTN-EQPT	EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12	—	—	—	Equipment
ALW-SWTOWKG-EQPT	EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12	—	—	—	Equipment
ALW-USER-SECU	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security
APPLY	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Software Download
CANC	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security
CANC-USER	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security
CANC-USER-SECU	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security
CHG-ACCMD-<MOD_TACC>	EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192	OC3-4 OC12 OC48 XTC	—	OC48-16 OC192-4 ASAP-4	Troubleshooting and Test Access
CLR-COND-SECU	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security
CONN-TACC-<MOD_TACC>	EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192	OC3-4 OC12 OC48 XTC	—	OC48-16 OC192-4 ASAP-4	Troubleshooting and Test Access

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
COPY-IOSCFG	ML1000-2,/ML100T-12	—	—	—	IOS
COPY-RFILE	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	System
DISC-TACC	EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192	OC3-4 OC12 OC48 XTC	—	OC48-16 OC192-4 ASAP-4	Troubleshooting and Test Access
DLT-<MOD1PAYLOAD>	MXP_2.5G_10G TXP_MR_2.5G TXPP_MR_2.5G MXP_2.5G_10E TXP_MR_10E MXP_MR_2.5G MXPP_MR_2.5G	—	15310-CL-CTX	ASAP-4	Ports
DLT-<MOD_RING>	OC12/OC12-4 OC48/OC48AS OC192	OC12 OC48	—	OC48-16 OC192-4 ASAP-4	BLSR
DLT-CRS-<PATH>	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 FC_MR-4	G1000-2 OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Cross Connections
DLT-EQPT	All	All	All	All	Equipment

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
DLT-FFP-<MOD2DWDMPAYLOAD>	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	—	—	—	DWDM
DLT-FFP-<OCN_TYPE>	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192	OC3-4 OC12 OC48	15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Protection
DLT-LNK-<MOD2O>	AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32/WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE	—	—	—	DWDM
DLT-LNKTERM	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32/WSS-32 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	OC3-4 OC12 OC48	15310-CL-CTX	OC48-16 OC192-4	Provisionable Patchcords
DLT-OSC	OSCM/OSC-CMS OPT-BST	—	—	—	DWDM

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
DLT-RMONTH-<MOD2_RMON>	G1000-4 CE-100T-8 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 FC_MR-4	G1000-2	CE100T-8 ML-100T-8	—	Performance
DLT-ROLL-<MOD_PATH>	—	—	—	OC48-16 OC192-4 ASAP-4	Bridge and Roll
DLT-ROUTE	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	System
DLT-TRAPTABLE	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	System
DLT-USER-SECU	TCC2, TCC2P	XTC	15310-CL-CTX	TSC	Security
DLT-VCG	ML1000-2,/ML100T-12 CE-100T-8 FC_MR-4	—	—	—	VCAT
DLT-WLEN	AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32/WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE	—	—	—	DWDM
ED-<GIGE_TYPE>	TXP_MR_2.5G TXPP_MR_2.5G TXP_MR_10E MXP_MR_2.5G MXPP_MR_2.5G	—	—	ASAP-4	Ports
ED-<MOD1FCPAYLOAD>	FC_MR-4	—	—	—	Ports
ED-<MOD1FICONPAYLOAD>	FC_MR-4	—	—	—	Ports
ED-<MOD2DWDMPAYLOAD>	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	—	—	—	DWDM

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
ED-<MOD_PATH>	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 FC_MR-4	G1000-2 OC3-4 OC12 OC48	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Paths
ED-<MOD_RING>	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192	OC3-4 OC12 OC48	—	OC48-16 OC192-4 ASAP-4	BLSR
ED-<OCN_TYPE>	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 OSCM/OSC-CMS	OC3-4 OC12 OC48	15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Ports
ED-ALS	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	—	15310-CL-CTX	—	Ports
ED-APC	TCC2/TCC2P	—	—	—	DWDM
ED-BITS	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Synchronization
ED-CMD-SECU	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
ED-CRS-<PATH>	G1000-4 ML1000-2 ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 FC_MR-4	G1000-2 OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Cross Connections
ED-DAT	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	System
ED-DS1	DS3XM-6/DS3XM-12	—	—	—	Ports
ED-EC1	EC1	—	—	—	Ports

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
ED-EQPT	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 E100T/E1000 AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE 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 FC_MR-4	G1000-2 OC-3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4 SSXC TSC	Equipment
ED-FFP-<MOD2DWDMPAYLOAD>	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	—	—	—	DWDM

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
ED-FFP-<OCN_TYPE>	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192	OC3-4 OC12 OC48	15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Protection
ED-FFP-OCH	TXPP_MR_2.5G	—	—	—	DWDM
ED-FSTE	CE-100T-8	—	CE-100T-8	ML-100T-8	Ports
ED-G1000	G1000-4	G1000-2	—	—	Ports
ED-GFP	CE-100T-8 FC_MR-4	—	CE-100T-8 ML-100T-8	ASAP-4	Ports
ED-HDLC	—	—	—	ASAP-4	Ports
ED-LNK-<MOD2O>	AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE	—	—	—	DWDM
ED-LNKTERM	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 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	OC3-4 OC12 OC48	15310-CL-CTX	—	Provisionable Patchcords
ED-NE-GEN	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	System
ED-NE-PATH	TCC2/TCC2P	XTC	15310-CL-CTX	—	System
ED-NE-SYNCN	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Synchronization

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
ED-OCH	AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 MXP_2.5G_10G TXP_MR_10G TXP_MR_2.5G TXPP_MR_2.5G	—	—	—	DWDM
ED-OMS	AD-1B/AD-4B MD-4	—	—	—	DWDM
ED-OSC	OSCM/OSC-CMS OPT-BST	—	—	—	DWDM
ED-OTS	AD-1B/AD-4B AD-1C/AD-2C/AD-4C MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE	—	—	—	DWDM
ED-PID	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security
ED-POS	CE-100T-8	—	CE-100T-8 ML-100T-8	ASAP-4	Ports
ED-SLV-WDMANS	TCC2/TCC2P	—	—	—	DWDM
ED-SYNCN	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 TCC2/TCC2P OSCM/OSC-CMS MXP_2.5G_10G	OC3-4 OC12 OC48 XTC	15310-CL-CTX	OC48-16 OC192-4 ASAP-4 TSC	Synchronization
ED-T1	DS1/DS1N	XTC	15310-CL-CTX	—	Ports
ED-T3	DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM-6/DS3XM-12	XTC	15310-CL-CTX		Ports
ED-TRAPTABLE	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	System
ED-TRC-OCH	MXP_2.5G_10G TXP_MR_10G TXP_MR_2.5G TXPP_MR_2.5G	—	—	—	DWDM

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
ED-USER-SECU	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security
ED-VCG	CE-100T-8 FC_MR-4	—	—	—	VCAT
ED-WDMANS	AD-1B/AD-4B AD-1C/AD-2C/AD-4C MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE	—	—	—	DWDM
ED-WLEN	AD-1B/AD-4B AD-1C/AD-2C/AD-4C MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE	—	—	—	DWDM
ENT-<MOD1PAYLOAD>	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	—	15310-CL-CTX	ASAP-4	Ports
ENT-<MOD_RING>	OC12/OC12-4 OC48/OC48AS OC192	OC12 OC48	—	OC48-16 OC192-4 ASAP-4	BLSR
ENT-CRS-<PATH>	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 FC_MR-4	OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Cross Connections

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
ENT-EQPT	All	All	All	All	Equipment
ENT-FFP-<MOD2DWDMPAYLOAD>	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	—	—	—	DWDM
ENT-FFP-<OCN_TYPE>	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192	OC3-4 OC12 OC48	15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Protection
ENT-LNK-<MOD2O>	AD-1B/AD-4B AD-1C/AD-2C/AD-4C MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE	—	—	—	DWDM
ENT-LNKTERM	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 AD-1C/AD-2C/AD-4C MUX-32/DMX-32 WSS-32 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	OC3-4 OC12 OC48	15310-CL-CTX	—	Provisionable Patchcords
ENT-OSC	OSCM/OSC-CMS OPT-BST	—	—	—	DWDM

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
ENT-RMONTH-<MOD2_RMON>	G1000-4 CE-100T-8 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 FC_MR-4	G1000-2	15310-CL-CTX	—	Performance
ENT-ROLL-<MOD_PATH>	—	—	—	OC48-16 OC192-4 ASAP-4	Bridge and Roll
ENT-ROUTE	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	System
ENT-TRAPTABLE	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	System
ENT-USER-SECU	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security
ENT-VCG	ML-1000-2/ML100T-12 CE-100T-8 FC_MR-4	—	—	—	VCAT
ENT-WLEN	AD-1B/AD-4B AD-1C/AD-2C/AD-4C MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE	—	—	—	DWDM
EX-SW-<OCN_BLSR>	OC3-8 OC12/OC12-4 OC48/OC48AS OC192	OC12 OC48	—	OC48-16 OC192-4 ASAP-4	BLSR
INH-MSG-ALL	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	System
INH-MSG-DBCHG	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Log
INH-MSG-SECU	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security
INH-PMREPT-ALL	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Performance
INH-SWDX-EQPT	XCVT/XC10G	—	—	—	Equipment
INH-SWTOPROTN-EQPT	XCVT/XC10G	—	—	—	Equipment
INH-SWTOWKG-EQPT	XCVT/XC10G	—	—	—	Equipment
INH-USER-SECU	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
INIT-REG-<MOD2>	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 AD-1B/AD-4B AD-1C/AD-2C/AD-4C MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE 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 FC_MR-4	G1000-2 OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Performance

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
INIT-SYS	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 E100T/E1000T TCC2/TCC2P XCVT/XC10G AICI/AIC 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 FC_MR-4	G1000-2 OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	System
OPR-ACO-ALL	AICI/AIC	XTC	15310-CL-CTX	TSC	Environment
OPR-ALS	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	—	15310-CL-CTX	—	Ports
OPR-APC	TCC2/TCC2P	—	—	—	DWDM
OPR-EXT-CONT	AICI/AIC	XTC	15310-CL-CTX	TSC	Environment
OPR-LASER-OTS	OPT-BST/OPT-PRE	—	—	—	DWDM

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
OPR-LNK	AD-1B/AD-4B AD-1C/AD-2C/AD-4C MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE	—	—	—	DWDM
OPR-LPBK-<MOD2>	G1000-4 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 MXP_2.5G_10G TXP_MR_10G TXP_MR_2.5G TXPP_MR_2.5G	G1000-2 OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Troubleshooting and Test Access
OPR-PROTNSW-<MOD2DWDMPAYLOAD>	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	—	—	—	DWDM
OPR-PROTNSW-<OCN_TYPE>	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192	OC3-4 OC12 OC48	15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Protection
OPR-PROTNSW-<PATH>	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192	OC3-4 OC12 OC48	15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Protection
OPR-PROTNSW-OCH	TXPP_MR_2.5G	—	—	—	DWDM
OPR-SLV-WDMANS	TCC2/TCC2P	—	—	—	DWDM

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
OPR-SYNCNSW	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Synchronization
OPR-WDMANS	AD-1B/AD-4B AD-1C/AD-2C/AD-4C MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE	—	—	—	DWDM
REPT ALM BITS	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Synchronization
REPT ALM COM	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Fault
REPT ALM ENV	AICI/ACI	XTC	15310-CL-CTX	TSC	Environment
REPT ALM EQPT	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 E100T/E1000 TCC2/TCC2P XCVT/XC10G AICI/AIC 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 FC_MR-4	G1000-2 OC3-4 OC12 OC48 XTC	15310-CL-CTX	OC48-16 OC192-4 ASAP-4 SSXC TSC	Equipment
REPT ALM SECU	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
REPT ALM SYNCN	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Synchronization
REPT DBCHG	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 E100T/E1000 TCC2/TCC2P XCVT/XC10G AICI/AIC 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 FC_MR-4	G1000-2 OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4 SSXC TSC	Log
REPT EVT <MOD2ALM>	All	All	CE-100T-8 ML100T-8	OC48-16 OC192-4 ASAP-4	Fault
REPT EVT BITS	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Synchronization
REPT EVT COM	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Fault
REPT EVT ENV	AICI/AIC	XTC	15310-CL-CTX	TSC	Environment

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
REPT EVT EQPT	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 E100T/E1000 TCC2/TCC2P XCVT/XC10G AICI/AIC 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 FC_MR-4	All	All	All	Equipment
REPT EVT FXFR	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	File Transfer
REPT EVT IOSCFG	ML1000-2/ML100T-12	—	—	—	File Transfer
REPT EVT SECU	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security
REPT EVT SESSION	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security
REPT EVT SYNCN	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 TCC2/TCC2P	OC3-4 OC12 OC48 XTC	15310-CL-CTX	OC48-16 OC192-4 ASAP-4 TSC	Synchronization

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
REPT PM <MOD2>	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE 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 FC_MR-4	G1000-2 OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Performance
REPT SW	XCVT/XC10G	—	15310-CL-CTX	SSXC	Protection
RLS-EXT-CONT	AICI/AIC	XTC	15310-CL-CTX	TSC	Environment
RLS-LASER-OTS	OPT-BST/OPT-PRE	—	—	—	DWDM

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RLS-LPBK-<MOD2>	G1000-4 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192	G1000-2 OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Troubleshooting and Test Access
RLS-PROTNSW-<MOD2DWDMPAYLOAD>	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	—	—	—	DWDM
RLS-PROTNSW-<OCN_TYPE>	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192	OC3-4 OC12 OC48	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Protection
RLS-PROTNSW-<PATH>	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192	OC3-4 OC12 OC48 XTC	15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Protection
RLS-PROTNSW-OCH	TXPP_MR_2.5G	—	—	—	DWDM
RLS-SYNCNSW	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Synchronization

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RMV-<MOD2>	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE 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 FC_MR-4	G1000-2 OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4 TSC	Facility

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RST-<MOD2>	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE 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 FC_MR-4	G1000-2 OC3-4 OC12 OC48	CE-100T-8 ML-100T-8	OC48-16 OC192-4 ASAP-4	Facility
RTRV-<MOD1FCPAYLOAD>	FC_MR-4	—	—	—	Ports
RTRV-<MOD1FICONPAYLOAD>	FC_MR-4	—	—	—	Ports
RTRV-<MOD2DWDMPAYLOAD>	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	—	—	—	DWDM

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RTRV-<MOD_RING>	OC12/OC12-4 OC48/OC48AS OC192	OC12 OC48	—	OC48-16 OC192-4 ASAP-4	BLSR
RTRV-<OCN_TYPE>	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 OSCM/OSC-CMS	OC3-4 OC12 OC48	15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Ports
RTRV-<PATH>	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 FC_MR-4	G1000-2 OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Path
RTRV-10GIGE	MXP_2.5G_10E TXP_MR_10E	—	—	—	Ports

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RTRV-ALM-<MOD2ALM>	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 E100T/E1000 TCC2/TCC2P XCVT/XC10G AICI/AIC 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 FC_MR-4	G1000-2 OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Fault
RTRV-ALM-ALL	All	All	All	All	Fault
RTRV-ALM-BITS	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Synchronization
RTRV-ALM-ENV	AICI/AIC	XTC	15310-CL-CTX	TSC	Environment
RTRV-ALM-EQPT	All	All	All	All	Equipment
RTRV-ALM-SYNCN	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 TCC2/TCC2P MXP_2.5G_10G	OC3-4 OC12 OC48 XTC	15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Synchronization

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RTRV-ALMTH-<MOD2>	AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE MXP_2.5G_10G TXP_MR_10G TXP_MR_2.5G TXPP_MR_2.5G	—	—	—	DWDM
RTRV-ALMTH-EQPT	EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE MXP_2.5G_10G TXP_MR_10G TXP_MR_2.5G TXPP_MR_2.5G	OC3-4 OC12 OC48	CE-100T-8 ML-100T-8 15310-CL-CTX	—	Equipment
RTRV-ALS	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	—	15310-CL-CTX	—	Ports
RTRV-APC	TCC2/TCC2P	—	—	—	DWDM

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RTRV-ATTR-CONT	AICI/AIC	XTC	15310-CL-CTX	TSC	Environment
RTRV-ATTR-ENV	AICI/AIC	XTC	15310-CL-CTX	TSC	Environment
RTRV-BITS	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Synchronization
RTRV-CMD-SECU	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security
RTRV-COND-<MOD2ALM>	All	All	All	OC48-16 OC192-4 ASAP-4	Fault
RTRV-COND-ALL	All	All	All	All	Fault
RTRV-COND-BITS	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Synchronization
RTRV-COND-ENV	AICI/AIC	XTC	15310-CL-CTX	TSC	Environment

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RTRV-COND-EQPT	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 E100T/E1000 XCVT/XC10G AICI/AIC AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE 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 FC_MR-4	All	All	All	Equipment
RTRV-COND-SYNCN	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 TCC2/TCC2P	OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4 TSC	Synchronization

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RTRV-CRS	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 FC_MR-4	G1000-2 OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Cross Connections
RTRV-CRS-<PATH>	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 FC_MR-4	G1000-2 OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Cross Connections
RTRV-DFLT-SECU	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security
RTRV-DS1	DS3XM/DS3XM-12	—	—	—	Ports
RTRV-DWDM	MXP_2.5G_10G TXP_MR_10G TXP_MR_2.5G TXPP_MR_2.5G	—	—	—	DWDM
RTRV-EC1	EC1	—	15310-CL-CTX	—	Ports
RTRV-EQPT	All	All	All	All	Equipment
RTRV-ESCON	TXP_MR_2.5G TXPP_MR_2.5G	—	—	—	Ports
RTRV-EXT-CONT	AICI/AIC	XTC	15310-CL-CTX	TSC	Environment

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RTRV-FAC	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 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 FC_MR-4	G1000-2 OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Ports
RTRV-FFP-<MOD2DWDMPAYLOAD>	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 FC_MR-4	—	—	—	DWDM
RTRV-FFP-<OCN_TYPE>	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192	OC3-4 OC12 OC48	15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Protection
RTRV-FFP-OCH	TXPP_MR_2.5G	—	—	—	DWDM
RTRV-FSTE	ML100T-12 CE-100T-8	—	CE-100T-8 ML-100T-8	—	Ports

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RTRV-G1000	G1000-4	G1000-2 OC3-4 OC12 OC48 XTC	—	—	Ports
RTRV-GFP	CE-100T-8	—	CE-100T-8 ML-100T-8	ASAP-4	Ports
RTRV-GIGE	ML1000-2 TXP_MR_2.5G TXPP_MR_2.5G MXP_MR_2.5G MXPP_MR_2.5G	—	—	ASAP-4	Ports
RTRV-HDLC	—	—	—	ASAP-4	Ports
RTRV-HDR	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	System
RTRV-INV	All	All	All	All	System
RTRV-LNK	AD-1B/AD-4B AD-1C/AD-2C/AD-4C MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE	—	—	—	DWDM
RTRV-LNK-<MOD2O>	AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE	—	—	—	DWDM

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RTRV-LNKTERM	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 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 FC_MR-4	OC3-4 OC12 OC48	15310-CL-CTX	—	Provisionable Patchcords
RTRV-LOG	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Log
RTRV-MAP-NETWORK	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Network
RTRV-NE-APC	TCC2/TCC2P	—	—	—	DWDM
RTRV-NE-GEN	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	System
RTRV-NE-IPMAP	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192	OC3-4 OC12 OC48	15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Network
RTRV-NE-PATH	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 TCC2/TCC2P FC_MR-4	G1000-2 OC3-4 OC12 OC48 XTC	15310-CL-CTX	—	System
RTRV-NE-SYNCN	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Synchronization

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RTRV-NETYPE	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	System
RTRV-NE-WDMANS	TCC2/TCC2P	—	—	—	DWDM
RTRV-OCH	AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 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	—	—	—	DWDM
RTRV-OMS	AD-1B/AD-4B MD-4	—	—	—	DWDM
RTRV-OPM	WSS-32	—	—	—	DWDM
RTRV-OSC	OSCM/OSC-CMS OPT-PRE	—	—	—	DWDM
RTRV-OTS	AD-1B/AD-4B AD-1C/AD-2C/AD-4C MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE	—	—	—	DWDM

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RTRV-PM-<MOD2>	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 AICI/AIC AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE 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 FC_MR-4	G1000-2 OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Performance
RTRV-PMMODE-<STS_PATH>	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE	OC3-4 OC12 OC48	15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Performance

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RTRV-PMSCHED-<MOD2>	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE 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 FC_MR-4	G1000-2 OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Performance

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RTRV-PMSCHED-ALL	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE 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 FC_MR-4	G1000-2 OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Performance
RTRV-POS	ML1000-2/ML100T-12 CE-100T-8	—	CE-100T-8 ML-100T-8	ASAP-4	Ports
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>	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	—	—	—	DWDM

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RTRV-PROTNSW-<OCN_TYPE>	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 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	OC3-4 OC12 OC48	15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Protection
RTRV-PROTNSW-<PATH>	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 FC_MR-4	OC3-4 OC12 OC48 XTC	15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Protection
RTRV-PROTNSW-OCH	TXPP_MR_2.5G MXPP_MR_2.5G	—	—	—	DWDM
RTRV-PTHTRC-<PATH>	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC48AS OC192 FC_MR-4	G1000-2 OC3-4 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Protection

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RTRV-RMONTH-<MOD2_RMON>	G1000-4 CE-100T-8 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 FC_MR-4	G1000-2	CE-100T-8 ML-100T-8	—	Performance
RTRV-ROLL-<MOD_PATH>	—	—	—	OC48-16 OC192-4 ASAP-4	Bridge and Roll
RTRV-ROUTE	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	System
RTRV-SLV-WDMANS	TCC2/TCC2P	—	—	—	DWDM
RTRV-STS	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 FC_MR-4	G1000-2 OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Paths
RTRV-SYNCN	TCC2/TCC2P OSCM/OSC-CMS MXP_2.5G_10G	XTC	15310-CL-CTX	TSC	Synchronization
RTRV-T1	DS1/DS1N	XTC	15310-CL-CTX	—	Ports
RTRV-T3	DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12	XTC	15310-CL-CTX	—	Ports

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RTRV-TACC	EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192	OC3-4 OC12 OC48 XTC	—	OC48-16 OC192-4 ASAP-4	Troubleshooting and Test Access
RTRV-TH-<MOD2>	EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE 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	OC3-4 OC12 OC48 XTC	15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Performance

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RTRV-TH-ALL	EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE 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	OC3-4 OC12 OC48 XTC	15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Performance
RTRV-TOD	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	System
RTRV-TRAPTABLE	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	System
RTRV-TRC-<OCN_BLSR>	OC12/OC12-4 OC48/OC48AS OC192	OC12 OC48	—	—	BLSR
RTRV-TRC-OCH	MXP_2.5G_10G TXP_MR_10G TXP_MR_2.5G TXPP_MR_2.5G	—	—	—	DWDM
RTRV-USER-SECU	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security
RTRV-VCG	ML1000-2/ML100T-12 CE-100T-8 FC_MR-4	—	CE-100T-8 ML-100T-8	—	VCAT

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
RTRV-VT	CE-100T-8 DS1/DS1N DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192	OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	—	PATHS
RTRV-WDMANS	AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE	—	—	—	DWDM
RTRV-WLEN	AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE	—	—	—	DWDM

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
SCHED-PMREPT-<MOD2>	G1000-4 ML1000-2/ML100T-12 CE-100T-8 EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE 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 FC_MR-4	G1000-2 OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Performance
SET-ALMTH-<MOD2>	AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE MXP_2.5G_10G TXP_MR_10G TXP_MR_2.5G TXPP_MR_2.5G	—	—	—	DWDM

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
SET-ALMTH-EQPT	EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE MXP_2.5G_10G TXP_MR_10G TXP_MR_2.5G TXPP_MR_2.5G	OC3-4 OC12 OC48	15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Equipment
SET-ATTR-CONT	AICI/AIC	XTC	15310-CL-CTX	TSC	Environment
SET-ATTR-ENV	AICI/AIC	XTC	15310-CL-CTX	TSC	Environment
SET-ATTR-SECUDFLT	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	Security
SET-PMMODE-<STS_PATH>	OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192	OC3-4 OC12 OC48	15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Performance

Table 3-1 SONET TL1 Commands by Card and Category (continued)

Command	ONS 15454 Card	ONS 15327 Card	ONS 15310-CL Card	ONS 15600 Card	Category
SET-TH-<MOD2>	EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12 OC3/OC3-8 OC12/OC12-4 OC48/OC48AS OC192 AD-1B/AD-4B AD-1C/AD-2C/AD-4C MD-4 MUX-32/DMX-32 WSS-32 OSCM/OSC-CMS OPT-BST/OPT-PRE 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 FC_MR-4	OC3-4 OC12 OC48 XTC	CE-100T-8 ML-100T-8 15310-CL-CTX	OC48-16 OC192-4 ASAP-4	Performance
SET-TOD	TCC2/TCC2P	XTC	15310-CL-CTX	TSC	System
SW-DX-EQPT	XCVT/XC10G	—	—	SSXC	Equipment
SW-TOPROTN-EQPT	EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12	—	—	—	Equipment
SW-TOWKG-EQPT	EC1 DS1/DS1N DS3/DS3N DS3E/DS3NE DS3-EC1-48 DS3XM/DS3XM-12	—	—	—	Equipment

3.2 TL1 Commands

The commands and autonomous messages used for ONS 15454, 15327, 15600 and 15310-CL are described in detail in this section and are listed alphabetically according to the first alpha character of the command string.

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

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

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

Note TL1 commands that are entered incorrectly are not completed.

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

3.2.1 ACT-USER

Activate User

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command opens a session with the Network Element (NE).

Notes:

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

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

   a. The syntax of the userid (first [STRING]) and the password (second [STRING]) are not checked.

b. Invalid syntax for both the userid and password is permitted, but the user can only log in if the userid/password match what is in the database.

c. The userid and password cannot exceed 10 characters.

3. For the ACT-USER command, it is required that no error code be transmitted except to convey that the login is granted or denied. Per TR-835, Appendix A, Section A.2:

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

Starting with Release 4.6, the following feature can be turned on or off and the default is off: A new user must change his or her password after establishing a session for the first time before continuing. All TL1 commands except for ED-PID and CANC-USER will be denied until the password is changed. Once the password has been changed, a user can execute any command that his security level allows. If the user logs out without changing his password each following session will DENY all commands, except ED-PID and CANC-USER, until the password is changed.

Category Security

Security N/A

Related Commands

ALW-MSG-ALL	INH-MSG-SECU	RTRV-DFLT-SECU
ALW-MSG-DBCHG	INH-USER-SECU	RTRV-HDR
ALW-MSG-SECU	INIT-SYS	RTRV-INV
ALW-USER-SECU	REPT ALM SECU	RTRV-NE-GEN
CANC	REPT EVT SECU	RTRV-NE-IPMAP
CANC-USER	REPT EVT SESSION	RTRV-NE-PATH
CANC-USER-SECU	RTRV-CMD-SECU	RTRV-NE-SYNCN
CLR-COND-SECU	ED-NE-SYNCN	RTRV-NE-WDMANS
DLT-USER-SECU	ED-PID	RTRV-TOD
ED-CMD-SECU	ED-USER-SECU	RTRV-USER-SECU
ED-DAT	ENT-USER-SECU	SET-ATTR-SECUDFLT
ED-NE-GEN	INH-MSG-ALL	SET-TOD
ED-NE-PATH	INH-MSG-DBCHG	

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

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

Input Parameters

Table 3-2 ACT-USER Input Parameters

Parameter and Values	Description
UID	The user identifier (userid) of the person logged in. UID can be any combination of up to 10 alphanumeric characters. String. 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 be displayed as asterisks (*). String. Must not be null

Output Format

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

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "TERRI:2003-01-02 14-04-49,0"
;
```

Output Parameters

Table 3-3 ACT-USER Output Parameters

Parameter and Values	Description
UID	The user identifier (userid) of the person logged in. UID can be any combination of up to 10 alphanumeric characters. String. Must not be null
LASTLOGINTIME	The date and time of the last successful connection to the NE (not including current login). String
UNSUCCESSFULLOGINS	The number of unsuccessful login attempts since the last successful login. Integer

Errors

Errors are listed in Table 6-1 on page 6-1.

3.2.2 ALW-MSG-ALL

Allow Message All

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

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

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

Category

System

Security

Retrieve

Related Commands

ACT-USER	INH-MSG-ALL	RTRV-NE-IPMAP
ALW-MSG-DBCHG	INH-MSG-DBCHG	RTRV-NE-PATH
ALW-MSG-SECU	INH-MSG-SECU	RTRV-NE-SYNCN
ED-DAT	INIT-SYS	RTRV-NE-WDMANS
ED-NE-GEN	RTRV-HDR	RTRV-TOD
ED-NE-PATH	RTRV-INV	SET-TOD
ED-NE-SYNCN	RTRV-NE-GEN	

Input Format

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

Input Example

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

Input Parameters

Table 3-4 ALW-MSG-ALL Input Parameters

Parameter and Values	Description
AID	Access identifier. Support is limited to AID ALL. String

Errors

Errors are listed in Table 6-1 on page 6-1.

3.2.3 ALW-MSG-DBCHG

Allow Database Change Message

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

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

Note This command is not defined in the GR.

Category

Log

Security

Retrieve

Related Commands

ACT-USER	INH-MSG-DBCHG	RTRV-NE-GEN
ALW-MSG-ALL	INH-MSG-SECU	RTRV-NE-IPMAP
ALW-MSG-SECU	INIT-SYS	RTRV-NE-PATH
ED-DAT	REPT DBCHG	RTRV-NE-SYNCN
ED-NE-GEN	RTRV-HDR	RTRV-NE-WDMANS
ED-NE-PATH	RTRV-INV	RTRV-TOD
ED-NE-SYNCN	RTRV-LOG	SET-TOD
INH-MSG-ALL		

Input Format

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

Input Example

ALW-MSG-DBCHG:CISCO::123;

Input Parameters

Table 3-5 ALW-MSG-DBCHG Input Parameters

Parameter and Values	Description
—	

Errors

Errors are listed in Table 6-1 on page 6-1.

3.2.4 ALW-MSG-SECU

Allow Message Security

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command enables REPT EVT SECU and REPT ALM SECU autonomous messages.

Category

Security

Security

Superuser

Related Commands

ACT-USER	ED-NE-SYNCN	RTRV-DFLT-SECU
ALW-MSG-ALL	ED-PID	RTRV-HDR
ALW-MSG-DBCHG	ED-USER-SECU	RTRV-INV
ALW-USER-SECU	ENT-USER-SECU	RTRV-NE-GEN
CANC	INH-MSG-ALL	RTRV-NE-IPMAP
CANC-USER	INH-MSG-DBCHG	RTRV-NE-PATH
CANC-USER-SECU	INH-MSG-SECU	RTRV-NE-SYNCN
CLR-COND-SECU	INH-USER-SECU	RTRV-NE-WDMANS
DLT-USER-SECU	INIT-SYS REPT	RTRV-TOD
ED-CMD-SECU	ALM SECU	RTRV-USER-SECU
ED-DAT	REPT EVT SECU	SET-ATTR-SECUDFLT
ED-NE-GEN	REPT EVT SESSION	SET-TOD
ED-NE-PATH	RTRV-CMD-SECU	

Input Format

ALW-MSG-SECU:[<TID>]::<CTAG>;

Input Example

ALW-MSG-SECU:PETALUMA::123;

Input Parameters

Table 3-6 ALW-MSG-SECU Input Parameters

Parameter and Values	Description
—	

Errors

Errors are listed in Table 6-1 on page 6-1.

3.2.5 ALW-PMREPT-ALL

Allow Performance Report All

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

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

Category

Performance

Security

Retrieve

Related Commands

INH-PMREPT-ALL	RTRV-PMMODE-<STS_PATH>	RTRV-TH-ALL
INIT-REG-<MOD2>	RTRV-PMSCHED-<MOD2>	SCHED-PMREPT-<MOD2>
REPT PM <MOD2>	RTRV-PMSCHED-ALL	SET-PMMODE-<STS_PATH>
RTRV-PM-<MOD2>	RTRV-TH-<MOD2>	SET-TH-<MOD2>

Input Format

ALW-PMREPT-ALL:[<TID>]::<CTAG>;

Input Example

ALW-PMREPT-ALL:CISCONODE::123;

Input Parameters

Table 3-7 ALW-PMREPT-ALL Input Parameters

Parameter and Values	Description
—	

Errors

Errors are listed in Table 6-1 on page 6-1.

3.2.6 ALW-SWDX-EQPT

Allow Switch Duplex Equipment

Usage Guidelines

Cisco ONS 15454

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

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

Note This command applies to the XCVT and XC10G equipment units only in this release.

Category

Equipment

Security

Maintenance

Related Commands

ALW-SWTOPROTN-EQPT
ALW-SWTOWKG-EQPT
DLT-EQPT
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-EQPT
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FFP-OCH
ENT-EQPT
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
EX-SW-<OCN_BLSR>
INH-SWDX-EQPT
INH-SWTOPROTN-EQPT
INH-SWTOWKG-EQPT
OPR-PROTNSW-<OCN_TYPE>
REPT ALM EQPT
REPT EVT EQPT
REPT SW
RLS-PROTNSW-<OCN_TYPE>
RTRV-ALM-EQPT
RTRV-ALMTH-EQPT
RTRV-COND-EQPT
RTRV-EQPT
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FFP-OCH
RTRV-PROTNSW-<OCN_TYPE>
SET-ALMTH-EQPT
SW-DX-EQPT
SW-TOPROTN-EQPT
SW-TOWKG-EQPT

Input Format

ALW-SWDX-EQPT:[<TID>]:<AID>:<CTAG>[::];

Input Example ALW-SWDX-EQPT:CISCO:SLOT-8:1234;

Input Parameters

Table 3-8 ALW-SWDX-EQPT Input Parameters

Parameter and Values	Description
AID	Access identifier for XCVT/XC10G from the "EQPT" section on page 4-43

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.7 ALW-SWTOPROTN-EQPT

Allow Switch to Protection Equipment

Usage Guidelines Cisco ONS 15454

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

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

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

Notes:

1. This command only supports one value of the <DIRN> parameter - BTH. A command with any other value is considered an incorrect use of the command. An IDNV (Input, Data Not Valid) error message should be responsed.
2. This command is not used for the common control (TCC2/TCC2P or XCVT/XC10G) cards. A command on a common control card will receive an IIAC (Input, Invalid Access Identifier) error message. To use the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
3. This command is not used for SONET (OCN) cards. A command on a SONET card will receive an IIAC (Input, Invalid Access identifier) error message. To use a SONET card switching command, use OPR-PROTNSW and RLS-PROTNSW commands.
4. If this command is used on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message should be responsed.
5. If this command is used on a card that is not in the inhibit state, the SAAL (Status, Already Allowed) error message should be responsed.
6. The following situation(s) are allowed and will not generate any error response: Sending this command to missing cards so long as none of the previous error conditions apply.

Category Equipment

Security Maintenance

Related Commands

ALW-SWDX-EQPT
ALW-SWTOWKG-EQPT
DLT-EQPT
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-EQPT
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FFP-OCH
ENT-EQPT
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
EX-SW-<OCN_BLSR>
INH-SWDX-EQPT
INH-SWTOPROTN-EQPT
INH-SWTOWKG-EQPT
OPR-PROTNSW-<OCN_TYPE>
REPT ALM EQPT
REPT EVT EQPT
REPT SW
RLS-PROTNSW-<OCN_TYPE>
RTRV-ALM-EQPT
RTRV-ALMTH-EQPT
RTRV-COND-EQPT
RTRV-EQPT
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FFP-OCH
RTRV-PROTNSW-<OCN_TYPE>
SET-ALMTH-EQPT
SW-DX-EQPT
SW-TOPROTN-EQPT
SW-TOWKG-EQPT

Input Format ALW-SWTOPROTN-EQPT:[<TID>]:<AID>:<CTAG>[::<DIRN>];

Input Example ALW-SWTOPROTN-EQPT:CISCO:SLOT-2:123::BTH;

Input Parameters

Table 3-9 ALW-SWTOPROTN-EQPT Input Parameters

Parameter and Values	Description
AID	Access identifier. This parameter can either be the protection unit for which carrying traffic is to be allowed (release of lockout) or the working unit for which switching to protect is to be allowed (release of lock on). Values are in the "EQPT" section on page 4-43
DIRN	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

Table 3-9 ALW-SWTOPROTN-EQPT Input Parameters (continued)

Parameter and Values	Description
	Parameter type is DIRECTION—transmit and receive directions
• BTH	Both transmit and receive directions

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.8 ALW-SWTOWKG-EQPT

Allow Switch to Working Equipment

Usage Guidelines Cisco ONS 15454

This command allows automatic or manual switching of an equipment unit back to a working status. Use the INH-SWTOWKG-EQPT command to inhibit an NE from switching to working. ALW-SWTOWKG-EQPT is used for non-SONET line cards (e.g. DS1, DS3, DS3XM, and EC1). DS1 and DS3 cards have 1:1 and 1:N equipment protection. DS3XM and EC1 cards have only 1:1 equipment protection.

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

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

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

Notes:

1. This command only supports one value of the <DIRN> parameter - BTH. A command with any other value is considered an incorrect use of the command. An IDNV (Input, Data Not Valid) error message should be responsed.
2. This command is not used for the common control (TCC2/TCC2P or XCVT/XC10G) cards. A command on a common control card will receive an IIAC (Input, Invalid Access Identifier) error message. To use the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
3. This command is not used for SONET (OCN) cards. A command on a SONET card will receive an IIAC (Input, Invalid Access Identifier) error message. To use a SONET card switching command, use the OPR-PROTNSW and RLS-PROTNSW commands.
4. If this command is used on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message should be responsed.
5. If this command is used on a card that is not in the inhibit state, the SAAL (Status, Already Allowed) error message should be responsed.

6. The following situation(s) are allowed and will not generate any error response: sending this command to missing cards as long as none of the previous error conditions apply.

Category Equipment

Security Maintenance

Related Commands

ALW-SWDX-EQPT	REPT ALM EQPT
ALW-SWTOPROTN-EQPT	REPT EVT EQPT
DLT-EQPT	REPT SW
DLT-FFP-<MOD2DWDMPAYLOAD>	RLS-PROTNSW-<OCN_TYPE>
DLT-FFP-<OCN_TYPE>	RTRV-ALM-EQPT
ED-EQPT	RTRV-ALMTH-EQPT
ED-FFP-<MOD2DWDMPAYLOAD>	RTRV-COND-EQPT
ED-FFP-<OCN_TYPE>	RTRV-EQPT
ED-FFP-OCH	RTRV-FFP-<MOD2DWDMPAYLOAD>
ENT-EQPT	RTRV-FFP-<OCN_TYPE>
ENT-FFP-<MOD2DWDMPAYLOAD>	RTRV-FFP-OCH
ENT-FFP-<OCN_TYPE>	RTRV-PROTNSW-<OCN_TYPE>
EX-SW-<OCN_BLSR>	SET-ALMTH-EQPT
INH-SWDX-EQPT	SW-DX-EQPT
INH-SWTOPROTN-EQPT	SW-TOPROTN-EQPT
INH-SWTOWKG-EQPT	SW-TOWKG-EQPT
OPR-PROTNSW-<OCN_TYPE>	

Input Format ALW-SWTOWKG-EQPT:[<TID>]:<AID>:<CTAG>[::<DIRN>];

Input Example ALW-SWTOWKG-EQPT:CISCO:SLOT-2:123::BTH;

Input Parameters

Table 3-10 ALW-SWTOWKG-EQPT Input Parameters

Parameter and Values	Description
AID	Access identifier. This parameter can either be the protection unit for which carrying traffic is to be allowed (release of lockout) or the working unit for which switching to protect is to be allowed (release of lock on). Values are in the "EQPT" section on page 4-43
DIRN	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 Parameter type is DIRECTION—transmit and receive directions
• BTH	Both transmit and receive directions

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.9 ALW-USER-SECU

Allow User Security

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command enables a userid that has been disabled using the INH-USER-SECU command so the user can reestablish a session with the NE.

Category Security

Security Superuser

Related Commands

ACT-USER	ED-CMD-SECU	REPT EVT SECU
ALW-MSG-SECU	ED-PID	REPT EVT SESSION
CANC	ED-USER-SECU	RTRV-CMD-SECU
CANC-USER	ENT-USER-SECU	RTRV-DFLT-SECU
CANC-USER-SECU	INH-MSG-SECU	RTRV-USER-SECU
CLR-COND-SECU	INH-USER-SECU	SET-ATTR-SECUDFLT
DLT-USER-SECU	REPT ALM SECU	

Input Format ALW-USER-SECU:[<TID>]::<CTAG>::<UID>;

Input Example ALW-USER-SECU:PETALUMA::123::UID;

Input Parameters

Table 3-11 ALW-USER-SECU Input Parameters

Parameter and Values	Description
UID	The user identifier (userid) of the person logged in. UID can be a list of userids separated by "&". The keyword ALL may not be used to specify all users on an NE. String

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.10 APPLY

Apply

Usage Guidelines Cisco ONS 15454, 15327, 15310-CL

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

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

Category File Transfer

Security Superuser

Related Commands

COPY-RFILE REPT EVT FXFR

Input Format APPLY:[<TID>]::<CTAG>[::<MEM_SW_TYPE>];

Input Example APPLY:CISCO::123::ACT;

Input Parameters

Table 3-12 APPLY Input Parameters

Parameter and Values	Description
MEM_SW_TYPE	Memory switch action during the software upgrade
	Parameter type is DL_TYPE—indicates software download type
• ACT	Activates to a newer software load during the software download
• RVRT	Reverts to an older software load during software download

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.11 CANC

Cancel

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

Reports the occurrence of a session timeout event.

CANC is an autonomous message transmitted by the NE to a user when a session established by that user is terminated because no messages were exchanged for a long period of time, a timeout. There is a default timeout period based on the user's privilege/security level. Beginning with Release 4.0 timeouts can be provisioned through CTC. Beginning with Release 4.6, timeouts can be provisioned with the SET-ATTR-SECUDFLT command. The default timeouts based on privilege/security level are: superuser [SUPER] has the timeout period of 15 minutes, the Provision user [PROV] has the timeout period of 30 minutes, the Maintenance [MAINT] user has the timeout period of 60 minutes, the Retrieve user [RTRV] has no timeout.

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

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

Category Security

Security Retrieve

Related Commands

ACT-USER	ED-CMD-SECU	REPT EVT SECU
ALW-MSG-SECU	ED-PID	REPT EVT SESSION
ALW-USER-SECU	ED-USER-SECU	RTRV-CMD-SECU
CANC-USER	ENT-USER-SECU	RTRV-DFLT-SECU
CANC-USER-SECU	INH-MSG-SECU	RTRV-USER-SECU
CLR-COND-SECU	INH-USER-SECU	SET-ATTR-SECUDFLT
DLT-USER-SECU	REPT ALM SECU	

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

Table 3-13 CANC Output Parameters

Parameter and Values	Description
UID	The user identifier (userid) of the person logged in. Refers to the userid of a user whose session is terminated due to timeout. String

3.2.12 CANC-USER

Cancel User

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

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

Note The USERID field of this command is a mandatory field.

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

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

Category

Security

Security Retrieve

Related Commands

ACT-USER	ED-CMD-SECU	REPT EVT SECU
ALW-MSG-SECU	ED-PID	REPT EVT SESSION
ALW-USER-SECU	ED-USER-SECU	RTRV-CMD-SECU
CANC	ENT-USER-SECU	RTRV-DFLT-SECU
CANC-USER-SECU	INH-MSG-SECU	RTRV-USER-SECU
CLR-COND-SECU	INH-USER-SECU	SET-ATTR-SECUDFLT
DLT-USER-SECU	REPT ALM SECU	

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

Input Example CANC-USER:PETALUMA:TERRI:101;

Input Parameters

Table 3-14 CANC-USER Input Parameters

Parameter and Values	Description
USERID	Identifies the user to the system. USERID can be up to 10 alphanumeric characters. String

Errors Errors are listed in Table 6-1 on page 6-1Table 6-1 on page 6-1.

3.2.13 CANC-USER-SECU

Cancel User Security

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command forces a user off of the NE.

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

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

Category Security

Security Superuser

Related Commands

ACT-USER	ED-CMD-SECU	REPT EVT SECU
ALW-MSG-SECU	ED-PID	REPT EVT SESSION
ALW-USER-SECU	ED-USER-SECU	RTRV-CMD-SECU
CANC	ENT-USER-SECU	RTRV-DFLT-SECU
CANC-USER	INH-MSG-SECU	RTRV-USER-SECU
CLR-COND-SECU	INH-USER-SECU	SET-ATTR-SECUDFLT
DLT-USER-SECU	REPT ALM SECU	

Input Format CANC-USER-SECU:[<TID>]:<UID>:<CTAG>;

Input Example CANC-USER-SECU:PETALUMA:CISCO10:100;

Input Parameters

Table 3-15 CANC-USER-SECU Input Parameters

Parameter and Values	Description
UID	The user identifier (userid) of the person logged in. UID can be a list of userids separated by “&”. The keyword ALL may not be used to specify all users on an NE. String

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.14 CHG-ACCMD-<MOD_TACC>

Change Test Access Mode (DS1, STS1, STS12C, STS18C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

Usage Guidelines

Cisco ONS 15454, 15327, 15600

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

This command changes the test access (TACC) mode for the circuit being tested. For more information on TACC, refer to the "Test Access" section on page 1-24.

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

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

Notes:

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

Category

Troubleshooting and Test Access

Security

Maintenance

Related Commands

CONN-TACC-<MOD_TACC> DISC-TACC RTRV-TACC

Input Format

CHG-ACCMD-<MOD_TACC>:[<TID>]:<TAP>: <CTAG>::<MD>;

Input Example

CHG-ACCMD-STS1:CISCO:8:123::MONE;

Input Parameters

Table 3-16 CHG-ACCMD-<MOD_TACC> Input Parameters

Parameter and Values	Description
TAP	The Test Access Path number. TAP number must be an integer with a range of 1 to 999. 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 QRS input signal.) Single FAD Test Access does not support MONEF, SPLTEF & SPLTAB modes Parameter type is TACC_MODE—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

Table 3-16 CHG-ACCMD-<MOD_TACC> Input Parameters (continued)

Parameter and Values	Description
• 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

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.15 CLR-COND-SECU

Clear security condition

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command clears the specified standing condition.

Note In R5.0, only INTRUSION-PSWD is supported.

Category Security

Security Provisioning

Related Commands

ACT-USER	REPT ALM ENV	RTRV-ALM-ALL
ALW-MSG-SECU	REPT ALM EQPT	RTRV-ALM-BITS
ALW-USER-SECU	REPT ALM SECU	RTRV-ALM-ENV
CANC	REPT ALM SYNCN	RTRV-ALM-EQPT
CANC-USER	REPT EVT <MOD2ALM>	RTRV-ALM-SYNCN
CANC-USER-SECU	REPT EVT BITS	RTRV-CMD-SECU
DLT-USER-SECU	REPT EVT COM	RTRV-COND-<MOD2ALM>
ED-CMD-SECU	REPT EVT ENV	RTRV-COND-ALL
ED-PID	REPT EVT EQPT	RTRV-COND-BITS
ED-USER-SECU	REPT EVT FXFR	RTRV-COND-ENV
ENT-USER-SECU	REPT EVT IOSCFG	RTRV-COND-EQPT
INH-MSG-SECU	REPT EVT SECU	RTRV-COND-SYNCN
INH-USER-SECU	REPT EVT SESSION	RTRV-DFLT-SECU
REPT ALM <MOD2ALM>	REPT EVT SYNCN	RTRV-USER-SECU
REPT ALM BITS	RTRV-ALM-<MOD2ALM>	SET-ATTR-SECUDFLT
REPT ALM COM		

Input Format

CLR-COND-SECU:[<TID>]::<CTAG>[::<SECUALMTYPE>];

Input Example

CLR-COND-SECU:CISCO::123::INTRUSION-PSWD:

Input Parameters

Table 3-17 CLR-COND-SECU Input Parameters

Parameter and Values	Description
SECUALMTYPE	Secure alarm type. Defaults to INTRUSION-PSWD
	Parameter type is SECUALMTYPE—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.

Errors

Errors are listed in Table 6-1 on page 6-1.

3.2.16 CONN-TACC-<MOD_TACC>

Connect Test Access (DS1, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

Usage Guidelines

Cisco ONS 15454, 15327, 15600

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

This command connects the STS or VT defined by AID to the STS specified by the TAP number. For more information on TACC, refer to the "Test Access" section on page 1-24.

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

Notes:

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

Category

Troubleshooting and Test Access

Security

Provisioning

Related Commands

DISC-TACC	OPR-LPBK-<MOD2>	RTRV-TACC
EX-SW-<OCN_BLSR>	RLS-LPBK-<MOD2>	

Input Format CONN-TACC-<MOD_TACC>:[<TID>]:<SRC>:<CTAG>::<TAP>:MD=<MD>;

Input Example CONN-TACC-STS1:CISCO:STS-2-1-4:123::8:MD=MONE;

Input Parameters

Table 3-18 CONN-TACC-<MOD_TACC> Input Parameters

Parameter and Values	Description
SRC	Source AID from the "ALL" section on page 4-17. SRC must not be null
TAP	The Test Access Path number. The TAP number is used to identify all messages between TSC and NE until the access point is released. TAP number must be an integer with a range of 1 to 999. TAP must not be null
MD	The test access mode. (SPLTE, SPLTF, LOOPE and LOOPF require an external QRS input signal.) Single FAD Test Access does not support MONEF, SPLTEF & SPLTAB modes. MD must not be null
	Parameter type is TACC_MODE—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

Table 3-18 CONN-TACC-<MOD_TACC> Input Parameters (continued)

Parameter and Values	Description
• 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

Table 3-19 CONN-TACC-<MOD_TACC> Output Parameters

Parameter and Values	Description
TAP	The Test Access Path number. The TAP number is used to identify all messages between TSC and NE until the access point is released. TAP number must be an integer with a range of 1 to 999

Errors

Errors are listed in Table 6-1 on page 6-1.

3.2.17 COPY-IOSCFG

Copy IOS Config File

Usage Guidelines

Cisco ONS 15454

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

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

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

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

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

Note FTP timeout is 30 seconds and is not configurable.

Notes:

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

   In a non-firewall environment, the format of the URL should be "FTP://[FTPUSER[:FTPPASSWORD]]@FTPHOST/PACKAGE_PATH" where:
   <FTPUSER> is the userid to connect to the computer with the package file
   <FTPPASSWORD> is the password used to connect to the computer with the package file
   <FTPHOST> is the IP address of the computer with the package file, DNS lookup of hostnames is not supported
   <PACKAGE_PATH> is the long path name to the package file

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

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

For example: if your topology is “FTPHOST <-> GNE3 <->GNE2 <-> GNE1 <-> ENE”, your FTP URL will be:
FTP://FTPUSER:FTPPASSWORD@FTPHOST@GNE3@GNE2@GNE1/PACKAGE_PATH

Category File Transfer

Security Provisioning

Related Commands

REPT EVT IOSCFG

Input Format

COPY-IOSCFG:[<TID>]:<AID>:<CTAG>::SRC=<SRC>,DEST=<DEST>;

Input Example

COPY-IOSCFG::SLOT-1:CTAG::SRC=“LONG_FTP_PATH”,DEST=“STARTUP”;

Input Parameters

Table 3-20 COPY-IOSCFG Input Parameters

Parameter and Values	Description
AID	Access identifier. Specifies the slot number of the card where the IOS configuration file belongs. AID is from the “EQPT” section on page 4-43
SRC	Source AID. Specifies where the IOS configuration file is copied from. String
DEST	Specifies where the IOS configuration file is copied to. String

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.18 COPY-RFILE

Copy File

Usage Guidelines

Cisco ONS 15454, 15327, 15310-CL

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

Note Since Release 5.0, 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.

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

- Userid is the userid to connect to the computer with the package file or system database.
- Password is the password used to connect to the computer with the package file or system database.
- Hostname is the hostname or IP address of the computer with the package file or system database.
- PACKAGE_PATH is the long path name to the package file starting from the home directory of the logged-in user.

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

Example:

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

Notes:

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

Category

File Transfer

Security

Superuser

Related Commands

APPLY REPT EVT FXFR

Input Format

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

Input Example

COPY-RFILE:HERNDON:RFILE-PKG:703::TYPE=SWDL,SRC="LONG_FTP_PATH",
DEST="LONG_FTP_PATH",OVWRT=YES,FTTD="FTTD_URI";

Input Parameters

Table 3-21 COPY-RFILE Input Parameters

Parameter and Values	Description
SRC	Source AID. The type of file being transferred. From the AID "RFILE" section on page 4-50
XFERTYPE	The file transfer protocol
	Parameter type is TX_TYPE—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)

Table 3-21 COPY-RFILE Input Parameters (continued)

Parameter and Values	Description
SRC1	Specifies the source of the file to be transferred. Only the FTP URL is supported. In a non-firewall environment the format of the URL should be: "FTP://FTP_USER[:FTP_PASSWORD]]@FTP_HOST_IP[:FTP_PORT], /PACKAGE_PATH[;TYPE=I]" where: • <FTP_USER> is the userid to connect to the computer with the package file • <FTP_PASSWORD> is the password used to connect to the computer with the package file • <FTP_HOST_IP> is the IP address of the computer with the package file, DNS lookup of hostnames is not supported • <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. **Note** Userid and password are optional if the user does not need to log into the host computer. The password may be optional if the user does not need to log in. All the other portions of the URL are required, including the initial "FTP://" string. In a firewall environment, the hostname should be replaced with a list of IP addresses each separated by a @ character. The first IP address should be for the machine where the package file is stored. Subsequent IP addresses should then be for firewall machines moving outwards towards the edge of the network, until the final IP address listed is the machine that outside users first access the network. 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 String
DEST	Specifies the destination of the file to be transferred. The comments for the SRC parameter (above) are also valid for DEST. String
OVWRT	If OVWRT is YES, then files should be overwritten. If OVWRT is NO, then 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 Parameter type is YES_NO—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

Table 3-21 COPY-RFILE Input Parameters (continued)

Parameter and Values	Description
• YES	Yes
FTTD	The format of the URI should be "FTTD://[FTTD_USER][:FTTD_PASSWORD]]@FTTD_HOST_TID" where: • FTTD_USER is the userid 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 NSAP names are not supported. String

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.19 DISC-TACC

Disconnect Test Access

Usage Guidelines Cisco ONS 15454, 15327, 15600

This command disconnects the TAP and puts the connection back to its original state (no splits). For more information on TACC, refer to the "Test Access" section on page 1-24.

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

Notes:

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

Category Troubleshooting and Test Access

Security Maintenance

Related Commands

CONN-TACC-<MOD_TACC>	OPR-LPBK-<MOD2>	RTRV-TACC
EX-SW-<OCN_BLSR>	RLS-LPBK-<MOD2>	

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

Input Example

DISC-TACC:CISCO:8:123;

Input Parameters

Table 3-22 DISC-TACC Input Parameters

Parameter and Values	Description
TAP	The Test Access Path number. TAP number must be an integer with a range of 1 to 999. String **Note** This command only supports disconnecting one TAP at a time

Errors

Errors are listed in Table 6-1 on page 6-1.

3.2.20 DLT-<MOD1PAYLOAD>

Delete (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, EC1, ESCON, ETRCLO, GIGE, HDTV, ISC1, OC12, OC192, OC3, OC48, T3)

Usage Guidelines

Cisco ONS 15454, 15310-CL, 15600

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

This command deletes the specified port.

Category

Ports

Security

Provisioning

Related Commands

DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

DLT-<MOD1PAYLOAD>:[<TID>]:<AID>:<CTAG>[::::];

Input Example

DLT-GIGE:TID:FAC-5-1:1;

Input Parameters

Table 3-23 DLT-<MOD1PAYLOAD> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.21 DLT-<MOD_RING>

Delete (BLSR)

Usage Guidelines Cisco ONS 15454, 15327, 15600

Note ONS 15327 and 15600 do not support four-fiber BLSR.

This command deletes the BLSR of the NE.

Error conditions:

1. If the system fails on getting IOR, a SROG (Status, Get IOR Failed) error message is returned.
2. If the AID is invalid, an IIAC (Invalid AID) error message is returned.
3. If the BLSR does not exist, a SRQN (BLSR Does Not Exist) error message is returned.
4. The ALL AID is invalid for this command.
5. The list AID format is supported in this release (R5.0).
6. The SROF (Facility Not Provisioned) or (Cannot Access BLSR) error message will be returned for the invalid query.
7. If the BLSR is in use, a SROF (BLSR In Use) error message is returned.
8. The SRQN (BLSR Deletion Failed) error message is returned for the invalid deletion query.

Category BLSR

Security Provisioning

Related Commands

ED-<MOD_RING>	EX-SW-<OCN_BLSR>	RTRV-TRC-<OCN_BLSR>
ENT-<MOD_RING>	RTRV-<MOD_RING>	

Input Format DLT-<MOD_RING>:[<TID>]:<AID>:<CTAG>[:::];

Input Example

DLT-BLSR:PETALUMA:BLSR-2:123;

Input Parameters

Table 3-24 DLT-<MOD_RING> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "AidUnionId1" section on page 4-29. Identifies the BLSR of the NE. ALL or BLSR-ALL AID is not allowed for editing BLSR

Errors

Errors are listed in Table 6-1 on page 6-1.

3.2.22 DLT-CRS-<PATH>

Delete Cross Connection (STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VT1, VT2)

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

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

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

Notes:

1. The fields after CTAG (trailing colons) are optional.
2. For the 1-way cross-connections the AIDs must be in the same order as originally entered; for the 2-way cross-connections, either order will work.
3. This command does not support deleting multiple STS cross-connections.
4. Using "&" in the AID field of this command can delete an path protection STS cross-connection.
   a. The following command is used to delete a 1-way selector or 2-way selector and bridge with:

      from points: F1, F2

      to points: T1

      DLT-CRS-{STS_PATH}:[<TID>]:F1&F2,T1:<CTAG>;

   b. The following command is used to delete a 1-way bridge or 2-way selector and bridge with:

      from point: F1

      to points: T1, T2

      DLT-CRS-{STS_PATH}:[<TID>]:F1,T1&T2:<CTAG>;

   c. The following command is used to delete a 1-way or 2-way subtending path protection connection with:

      from point: F1, F2

      to points: T1, T2

DLT-CRS-{STS_PATH}:[<TID>]:F1&F2,T1&T2:<CTAG>;

d. The AID format in the deletion command is the same as the AID format in the retrieved response message. For example, if the output of any retrieved AID is "F1&F2,T1:CCT,STS3C", the deletion command with the AID format (F1&F2,T1) is required to delete this cross-connection.

e. The following command is used to delete a path protection IDRI 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.

f. The following command is used to delete a path protection 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.

5. All A&B AIDs in the TL1 cross-connection command are in the format of WorkingAID&ProtectAID.
6. You can experience some implementation behavior problems if additional drops have been added to the connection object.
7. The facility AID is only valid for slots holding the G1000-4 card.
8. The virtual facility AID (VFAC) is only valid on slots holding an ML-Series card.
9. 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 be displayed.

Category

Cross Connections

Security

Provisioning

Related Commands

ED-CRS-<PATH> RTRV-CRS RTRV-CRS-<PATH>
ENT-CRS-<PATH>

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=CKTID,CMDMDE=CMDMDE;

Input Parameters

Table 3-25 DLT-CRS-PATH Input Parameters

Parameter and Values	Description
SRC	Source AID from the "CrossConnectId1" section on page 4-36
DST	Destination AID from the "CrossConnectId1" section on page 4-36
CKTID	String
CMDMDE	Command Mode. The FRCD mode of operation is applicable to delete a VCAT member cross- connect from IS-NR or OOS-AU,AINS service state Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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

Errors

Errors are listed in Table 6-1 on page 6-1.

3.2.23 DLT-EQPT

Delete Equipment

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command deletes a card from the NE.

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

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

Error conditions for deleting equipment may be:

1. 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 or a DCC/GCC/OSC termination or provisionable patchcord termination.
   - If any of its facilities is being used as a synchronization source.

2. If a card is not provisioned, an error message will be returned.

Category Equipment

Security Provisioning

Related Commands

ALW-SWDX-EQPT	NH-SWTOPROTN-EQPT	RTRV-COND-EQPT
ALW-SWTOPROTN-EQPT	INH-SWTOWKG-EQPT	RTRV-EQPT
ALW-SWTOWKG-EQPT	REPT ALM EQPT	SET-ALMTH-EQPT
ED-EQPT	REPT EVT EQPT	SW-DX-EQPT
ENT-EQPT	RTRV-ALM-EQPT	SW-TOPROTN-EQPT
INH-SWDX-EQPT	RTRV-ALMTH-EQPT	SW-TOWKG-EQPT

Input Format DLT-EQPT:[<TID>]:<AID>:<CTAG>[:::];

Input Example DLT-EQPT:SONOMA:SLOT-1:104;

Input Parameters

Table 3-26 DLT-EQPT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "EQPT" section on page 4-43. Identifies an equipment unit (slot) to act on

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.24 DLT-FFP-<MOD2DWDMPAYLOAD>

Delete Facility Protection Group (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, HDTV, ISC1)

Usage Guidelines Cisco ONS 15454

This command deletes Y cable protection on client facilities.

Category DWDM

Security Provisioning

Related Commands

ALW-SWDX-EQPT
ALW-SWTOPROTN-EQPT
ALW-SWTOWKG-EQPT
DLT-FFP-<OCN_TYPE>
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FFP-OCH
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
EX-SW-<OCN_BLSR>
INH-SWDX-EQPT
INH-SWTOPROTN-EQPT
INH-SWTOWKG-EQPT
OPR-PROTNSW-<OCN_TYPE>
REPT SW
RLS-PROTNSW-<OCN_TYPE>
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FFP-OCH
RTRV-PROTNSW-<OCN_TYPE>
SW-DX-EQPT
SW-TOPROTN-EQPT
SW-TOWKG-EQPT

Input Format DLT-FFP-<MOD2DWDMPAYLOAD>:[<TID>]:<WORKAID>,<PROTAID>:<CTAG>[:::];

Input Example DLT-FFP-HDTV:CISCO:FAC-1-1-1,FAC-2-1-1:100;

Input Parameters

Table 3-27 DLT-FFP-<MOD2DWDMPAYLOAD> Input Parameters

Parameter and Values	Description
WORKAID	The working facility AID from the "FACILITY" section on page 4-45
PROTAID	The protecting facility AID from the "FACILITY" section on page 4-45

Errors Errors are listed in Table 6-1 on page 6-1

3.2.25 DLT-FFP-<OCN_TYPE>

Delete Facility Protection Group (OC3, OC12, OC48, OC192)

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

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

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

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

Category Protection

Security Provisioning

Related Commands

ALW-SWDX-EQPT
ALW-SWTOPROTN-EQPT
ALW-SWTOWKG-EQPT
DLT-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FFP-OCH
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
EX-SW-<OCN_BLSR>
INH-SWDX-EQPT
INH-SWTOPROTN-EQPT
INH-SWTOWKG-EQPT
OPR-PROTNSW-<OCN_TYPE>
REPT SW
RLS-PROTNSW-<OCN_TYPE>
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FFP-OCH
RTRV-PROTNSW-<OCN_TYPE>
SW-DX-EQPT
SW-TOPROTN-EQPT
SW-TOWKG-EQPT

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

Table 3-28 DLT-FFP-<OCN_TYPE> Input Parameters

Parameter and Values	Description
WORK	The working facility AID from the "FACILITY" section on page 4-45
PROTECT	The protect facility AID from the "FACILITY" section on page 4-45

Errors Errors are listed in Table 6-1 on page 6-1

3.2.26 DLT-LNK-<MOD2O>

Delete Optical Link (OCH, OMS, OTS)

Usage Guidelines

Cisco ONS 15454

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

Category

DWDM

Security

Provisioning

Related Commands

ED-DWDM	ED-TRC-OCH	RTRV-LNK-<MOD2O>
ED-FFP-OCH	OPR-LASER-OTS	RTRV-OCH
ED-LNK-<MOD2O>	OPR-PROTNSW-OCH	RTRV-OMS
ED-OCH	RLS-LASER-OTS	RTRV-OTS
ED-OMS	RLS-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-OTS	RTRV-DWDM	RTRV-TRC-OCH
ENT-LNK-<MOD2O>	RTRV-FFP-OCH	

Input Format

DLT-LNK-<MOD2O>:[<TID>]:<FROM>,<TO>:<CTAG>;

Input Example

DLT-LNK-OMS:PENNGROVE:BAND-6-1-TX,BAND-13-1-RX:114;

Input Parameters

Table 3-29 DLT-LNK-<MOD2O> Input Parameters

Parameter and Values	Description
FROM	The identifier at one end of the optical link from the AID "BAND" section on page 4-29
TO	The identifier at the other end of the optical link from the AID "BAND" section on page 4-29

Errors

Errors are listed in Table 6-1 on page 6-1.

3.2.27 DLT-LNKTERM

Delete a Provisionable Patchcord Termination

Usage Guidelines

Cisco ONS 15454, 15310-CL

This command deletes a provisionable patchcord termination present on a node. All termination points of a link/provisionable patchcord have to be deleted for the link to be deleted fully.

Notes:

1. This command accepts multiple AIDs, but does not accept the ALL AID.
2. A suitable error will be responsed if the link termination does not exist.

Category

Provisionable Patchcords

Security

Provisioning

Related Commands

DLT-LNK-<MOD2O>	ED-WLEN	RTRV-FFP-OCH
DLT-OSC	ENT-LNK-<MOD2O>	RTRV-LNK-<MOD2O>
DLT-WLEN	ENT-LNKTERM	RTRV-LNKTERM
ED-APC	ENT-OSC	RTRV-NE-APC
ED-CLNT	ENT-WLEN	RTRV-NE-WDMANS
ED-DWDM	OPR-APC	RTRV-OCH
ED-FFP-OCH	OPR-LASER-OTS	RTRV-OMS
ED-LNK-<MOD2O>	OPR-PROTNSW-OCH	RTRV-OPM
ED-LNKTERM	OPR-SLV-WDMANS	RTRV-OSC
ED-OCH	OPR-WDMANS	RTRV-OTS
ED-OMS	RLS-LASER-OTS	RTRV-PROTNSW-OCH
ED-OSC	RLS-PROTNSW-OCH	TRV-SLV-WDMANS
ED-OTS	RTRV-APC	RTRV-TRC-OCH
ED-SLV-WDMANS	RTRV-CLNT	RTRV-WDMANS
ED-TRC-OCH	RTRV-DWDM	RTRV-WLEN
ED-WDMANS	RTRV-ESCON	

Input Format

DLT-LNKTERM:[<TID>]:<AID>:<CTAG>;

Input Example

DLT-LNKTERM::LNKTERM-1:CTAG;

Input Parameters

Table 3-30 DLT-LNKTERM Input Parameters

Parameter and Values	Description
AID	Access identifier from the "LNKTERM" section on page 4-48. Indicates a link (provisionable patchcord) termination on the local node.

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.28 DLT-OSC

Delete OSC

Usage Guidelines Cisco ONS 15454

This command deletes the OSC group of the NE.

Category DWDM

Security Provisioning

Related Commands

ENT-OSC	ED-OSC	RTRV-OSC

Input Format DLT-OSC:[<TID>]:<AID>:<CTAG>;

Input Example DLT-OSC:PENNGROVE:OSC-1:114;

Input Parameters

Table 3-31 DLT-OSC Input Parameters

Parameter and Values	Description
AID	Access identifier from the "OSC" section on page 4-49. Identifies the OSC group of the NE

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.29 DLT-RMONTH-<MOD2_RMON>

Delete Remote Monitoring Threshold (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, FSTE, G1000, GFPOS, GIGE, OCH, POS)

Usage Guidelines

Cisco ONS 15454, 15327, 15310-CL

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

This command deletes a threshold entry in the RMON alarm table. Because there can be multiple thresholds created for a particular montype, you must specify all the necessary parameters for the specific threshold you want to delete.

Category

Performance

Security

Provisioning

Related Commands

ALW-PMREPT-ALL	RTRV-PMMODE-<STS_PATH>	RTRV-TH-ALL
ENT-RMONTH-<MOD2_RMON>	RTRV-PMSCHED-<MOD2>	SCHED-PMREPT-<MOD2>
INH-PMREPT-ALL	RTRV-PMSCHED-ALL	SET-PMMODE-<STS_PATH>
INIT-REG-<MOD2>	RTRV-RMONTH-<MOD2_RMON>	SET-TH-<MOD2>
RTRV-PM-<MOD2>	RTRV-TH-<MOD2>	

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;

Input Parameters

Table 3-32 DLT-RMONTH-<MOD2_RMON> Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "FACILITY" section on page 4-45. AID for the facility that manages the data statistics
MONTYPE	Monitored type. Type of RMON monitored data statistics
	Parameter type is ALL_MONTYPE—monitoring type list
• AISSP	Alarm Indication Signal Seconds—Path
• BBE-PM	OTN—Background Block Errors—Path Monitor Point

Table 3-32 DLT-RMONTH-<MOD2_RMON> Input Parameters (continued)

Parameter and Values	Description
• BBE-SM	OTN—Background Block Errors—Section Monitor Point
• BBER-PM	OTN—Background Block Error Ratio—Path Monitor Point expressed as 1/10th of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as 1/10th of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• 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
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• 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
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as 1/10th of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as 1/10th of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• FCP	Failure Count—Line
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in uA
• LBCL-MIN	Max Laser Bias current in uA
• LBCN	Normalized Laser Bias Current for OC3-8

Table 3-32 DLT-RMONTH-<MOD2_RMON> Input Parameters (continued)

Parameter and Values	Description
• LBCN-MAX	Maximum value for LBCN
• LOSSL	Loss of Signal Seconds—Line
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OBED	FEC—One Bit Errors Detected
• OPR-AVG	Average Receive Power in 1/10 uW
• OPR-MAX	Maximum Receive Power in 1/10 uW
• OPR-MIN	Minimum Receive Power in 1/10 uW
• 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 1/10 uW
• OPT-MAX	Maximum Transmit Power in 1/10 uW
• OPT-MIN	Minimum Transmit Power in 1/10uW
• 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 1/10th of dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in 1/10th of dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in 1/10th of dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SES-PM	OTN—Severely Errored Second—Path
• SES-SM	OTN—Severely Errored Second—Section Monitor Point

Table 3-32 DLT-RMONTH-<MOD2_RMON> Input Parameters (continued)

Parameter and Values	Description
• 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
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as 1/10th of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as 1/10th of a percentage
• SESS	Severely Errored Second—Section
• SESV	Severely Errored Second—VT Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second - Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• 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 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 Parameter type is SAMPLE_TYPE—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 Parameter type is STARTUP_TYPE—indicates whether an event will be generated when the first valid sample is crossing the rising or falling threshold

Table 3-32 DLT-RMONTH-<MOD2_RMON> Input Parameters (continued)

Parameter and Values	Description
• 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

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.30 DLT-ROLL-<MOD_PATH>

Delete Roll (STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VC12, VC3, VT1, VT2)

Usage Guidelines Cisco ONS 15600

This command deletes an attempted rolling operation of a facility or completes an attempted rolling operation.

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

Category STS Paths

Security Provisioning

Related Commands

DLT-CRS-<PATH>	ENT-ROLL-<MOD_PATH>	RTRV-NE-PATH
ED-<MOD_PATH>	OPR-PROTNSW-<PATH>	RTRV-PROTNSW-<PATH>
ED-CRS-<PATH>	RLS-PROTNSW-<PATH>	RTRV-PTHTRC-<PATH>
ED-NE-PATH	RTRV-<PATH>	RTRV-ROLL-<MOD_PATH>
ENT-CRS-<PATH>	RTRV-CRS-<PATH>	

Input Format DLT-ROLL-<MOD_PATH>:[<TID>]:<SRC>,<DST>:<CTAG>:::WHY=<WHY>;

Input Example DLT-ROLL-STS1:CISCO:STS-1-1-1,STS-2-1-1:6:::WHY=STOP;

Input Parameters

Table 3-33 DLT-ROLL-<MOD_PATH> Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "STS" section on page 4-50. 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 non-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
DST	Destination AID from the "STS" section on page 4-50. 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 non-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
WHY	The reason for deletion Parameter type is WHY—reason for deletion
• END	Drop the leg to be rolled; the leg that is identified by the RFROM in the ENT-ROLL command
• STOP	The rolling operation will be deleted and reverted to the previous configuration

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.31 DLT-ROUTE

Delete Route

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command deletes the static routes.

Category System

Security Provisioning

Related Commands

ENT-ROUTE RTRV-ROUTE

Input Format DLT-ROUTE:[<TID>]::<CTAG>::<DESTIP>,<IPMASK>;

Input Example DLT-ROUTE:CISCO::123::10.64.72.57,255.255.255.0;

Input Parameters

Table 3-34 DLT-ROUTE Input Parameters

Parameter and Values	Description
DESTIP	Destination tip. String
IPMASK	IP mask. String

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.32 DLT-TRAPTABLE

Delete Trap Table

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command deletes an SNMP trap destination entry. Entering ALL will delete the whole table.

Category System

Security Provisioning

Related Commands

ACT-USER
ALW-MSG-ALL
ALW-MSG-DBCHG
ALW-MSG-SECU
COPY-RFILE
ED-DAT
ED-NE-GEN
ED-NE-PATH
ED-NE-SYNCN
ED-TRAPTABLE
ENT-TRAPTABLE
INH-MSG-ALL
INH-MSG-DBCHG
INH-MSG-SECU
INIT-SYS
REPT EVT FXFR
RTRV-HDR
RTRV-INV
RTRV-MAP-NETWORK
RTRV-NE-APC
RTRV-NE-GEN
RTRV-NE-IPMAP
RTRV-NE-PATH
RTRV-NE-SYNCN
RTRV-NE-WDMANS
RTRV-TOD
RTRV-TRAPTABLE
SET-TOD

Input Format

DLT-TRAPTABLE:[<TID>]:<AID>:<CTAG>;

Input Example

DLT-TRAPTABLE::1.2.3.4:1;

Input Parameters

Table 3-35 DLT-TRAPTABLE Input Parameters

Parameter and Values	Description
AID	Access identifier from the "IPADDR" section on page 4-47. IP address identifies the trap destination. Only numeric IP addresses are allowed

Errors

Errors are listed in Table 6-1 on page 6-1.

3.2.33 DLT-USER-SECU

Delete User Security

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

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

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

For the DLT-USER-SECU command:

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

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

Category

Security

Security

Superuser

Related Commands

ACT-USER	ED-CMD-SECU	REPT EVT SECU
ALW-MSG-SECU	ED-PID	REPT EVT SESSION
ALW-USER-SECU	ED-USER-SECU	RTRV-CMD-SECU
CANC	ENT-USER-SECU	RTRV-DFLT-SECU
CANC-USER	INH-MSG-SECU	RTRV-USER-SECU
CANC-USER-SECU	INH-USER-SECU	SET-ATTR-SECUDFLT
CLR-COND-SECU	REPT ALM SECU	

Input Format

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

Input Example

DLT-USER-SECU:PETALUMA:CISCO15:123;

Input Parameters

Table 3-36 DLT-USER-SECU Input Parameters

Parameter and Values	Description
UID	User identifier. Can be up to 10 alphanumeric characters. String

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.34 DLT-VCG

Delete Virtual Concatenated Group

Usage Guidelines

Cisco ONS 15454, 15310-CL

This command deletes a VCG object.

Category

VCAT

Security

Provisioning

Related Commands

ED-VCG	ENT-VCG	RTRV-VCG

Input Format DLT-VCG:[<TID>]:<SRC>:<CTAG>:::[CMDMDE=<CMDMDE>][:];

Input Example DLT-VCG:NODE1:FAC-1-1:1234:::CMDMDE=FRCD;

Input Parameters

Table 3-37 DLT-VCG Input Parameters

Parameter and Values	Description
SRC	Source AID from the "FACILITY" section on page 4-45. ML-Series cards use VFAC AID and FC_MR-4 cards use FAC AID
CMDMDE	Command execution mode, forced or normal. FRCD deletes all the VCG members and member cross-connects of a VCG Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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

Errors Errors are listed in Table 6-1 on page 6-1

3.2.35 DLT-WLEN

Delete Wavelength

Usage Guidelines Cisco ONS 15454

This command deletes the provisioned wavelength (WLEN).

Note:

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

Category DWDM

Security Provisioning

Related Commands

DLT-LNK-<MOD2O>	ED-WLEN	RTRV-FFP-OCH
DLT-LNKTERM	ENT-LNK-<MOD2O>	RTRV-LNK-<MOD2O>
DLT-OSC	ENT-LNKTERM	RTRV-LNKTERM
ED-APC	ENT-OSC	RTRV-NE-APC
ED-CLNT	ENT-WLEN	RTRV-NE-WDMANS
ED-DWDM	OPR-APC	RTRV-OCH
ED-FFP-OCH	OPR-LASER-OTS	RTRV-OMS
ED-LNK-<MOD2O>	OPR-PROTNSW-OCH	RTRV-OPM
ED-LNKTERM	OPR-SLV-WDMANS	RTRV-OSC
ED-OCH	OPR-WDMANS	RTRV-OTS
ED-OMS	RLS-LASER-OTS	RTRV-PROTNSW-OCH
ED-OSC	RLS-PROTNSW-OCH	RTRV-SLV-WDMANS
ED-OTS	RTRV-APC	RTRV-TRC-OCH
ED-SLV-WDMANS	RTRV-CLNT	RTRV-WDMANS
ED-TRC-OCH	RTRV-DWDM	RTRV-WLEN
ED-WDMANS	RTRV-ESCON	

Input Format

DLT-WLEN:[<TID>]:<AID>:<CTAG>[:::CMDMDE=<CMDMDE>];

Input Example

DLT-WLEN:PENNGROVE:WLEN-W_E-1530.33:114:::CMDMDE=NORM;

Input Parameters

Table 3-38 DLT-WLEN Input Parameters

Parameter and Values	Description
AID	Access identifier from the "WLEN" section on page 4-59. The wavelength AID per ring direction
CMDMDE	Command execution mode. NORM for normal (default) and FRCD for forced. FRCD will override any safeguards that normally reject a request to delete and in service resource Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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

Errors Errors are listed in Table 6-1 on page 6-1

3.2.36 ED-<GIGE_TYPE>

Edit (10GIGE, GIGE)

Usage Guidelines Cisco ONS 15454, 15600

This command edits Ethernet facility attributes.

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

Category Ports

Security Provisioning

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

ED-<GIGE_TYPE>:[<TID>]:<AID>:<CTAG>:::[NAME=<NAME>,][MACADDR=<MACADDR>,][CMDMDE=<CMDMDE>]:<PST>,[<SST>];

Input Example

ED-GIGE:CISCO:FAC-1-1:123:::NAME="GIGE PORT",MACADDR=00-0E-AA-BB-CC-FF,CMDMDE=CMDMDE:IS,AINS;

Input Parameters

Table 3-39 ED-<GIGE_TYPE> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
NAME	Port name. String
MACADDR	String
CMDMDE	Command execution mode. NORM for normal (default) and FRCD for forced. FRCD will override any safeguards that normally reject a request to delete and in service resource
	Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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
PST	Primary state
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service
SST	Secondary state
	Parameter type is SST—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

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.37 ED-<MOD1FCPAYLOAD>

Edit (1GFC, 2GFC)

Usage Guidelines

Cisco ONS 15454

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

This command edits the attributes related with the Fiber Channel facility. The state OOS,AINS is not supported on the FC port.

Category

Ports

Security

Provisioning

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

ED-<MOD1FCPAYLOAD>:[<TID>]:<AID>:<CTAG>:::[LINKRCVRY=<LINKRCVRY>,]
[DISTEXTN=<DISTEXTN>,][AUTODETECTION=<AUTODETECTION>,]
[LINKCREDITS=<LINKCREDITS>,][MFS=<MFS>,][NAME=<NAME>,]
[CMDMDE=<CMDMDE>,][SOAK=<SOAK>]:[<PST>],[<SST>];

Input Example

ED-1GFC:CISCO:FAC-6-1:1:::LINKRCVRY=Y,DISTEXTN=NONE,AUTODETECTION=Y,
LINKCREDITS=10,MFS=2148,NAME="FC PORT",CMDMDE=CMDMDE,SOAK=32:OOS,MT;

Input Parameters

Table 3-40 ED-<MOD1FCPAYLOAD> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
LINKRCVRY	Link recovery
	Parameter type is ON_OFF—disable or enable 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
	Parameter type is DISTANCE_EXTENSION—distance extension
• B2B	Buffer to buffer flow control
• NONE	No distance extension
AUTODETECTION	Autodetection. Turns autodetection on or off
	Parameter type is ON_OFF—disable or enable 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. Integer
MFS	Maximum frame size. Integer
NAME	String
CMDMDE	Command execution mode, forced or normal. FRCD deletes all the VCG members and member cross-connects of a VCG
	Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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
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). Integer
PST	Primary state

Table 3-40 ED-<MOD1FCPAYLOAD> Input Parameters (continued)

Parameter and Values	Description
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service
SST	Secondary state
	Parameter type is SST—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

Errors Errors are listed in Table 6-1 on page 6-1

3.2.38 ED-<MOD1FICONPAYLOAD>

Edit (1GFICON, 2GFICON)

Usage Guidelines Cisco ONS 15454

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

This command edits the attributes related with the FICON payload facility. The state OOS,AINS is not supported on the FICON port.

Category Ports

Security Provisioning

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

ED-<MOD1FICONPAYLOAD>:[<TID>]:<AID>:<CTAG>:::[LINKRCVRY=<LINKRCVRY>,]
[DISTEXTN=<DISTEXTN>,][AUTODETECTION=<AUTODETECTION>,]
[LINKCREDITS=<LINKCREDITS>,][MFS=<MFS>,][NAME=<NAME>,]
[CMDMDE=<CMDMDE>,][SOAK=<SOAK>]:<PST>,<SST>;

Input Example

ED-1GFICON:CISCO:FAC-6-1:1:::LINKRCVRY=Y,DISTEXTN=NONE,AUTODETECTION=Y, LINKCREDITS=10,MFS=2148,NAME="FC PORT",CMDMDE=CMDMDE,SOAK=32:OOS,MT;

Input Parameters

Table 3-41 ED-<MOD1FICONPAYLOAD> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
LINKRCVRY	Link recovery
	Parameter type is ON_OFF—disable or enable 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
	Parameter type is DISTANCE_EXTENSION—distance extension
• B2B	Buffer to buffer flow control
• NONE	No distance extension
AUTODETECTION	Autodetection. Turns autodetection on or off
	Parameter type is ON_OFF—disable or enable 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. Integer
MFS	Maximum frame size. Integer
NAME	String
CMDMDE	Command execution mode, forced or normal. FRCD deletes all the VCG members and member cross-connects of a VCG
	Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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
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). Integer
PST	Primary state

Table 3-41 ED-<MOD1FICONPAYLOAD> Input Parameters (continued)

Parameter and Values	Description
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service
SST	Secondary state
	Parameter type is SST—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

Errors Errors are listed in Table 6-1 on page 6-1

3.2.39 ED-<MOD2DWDMPAYLOAD>

Edit (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, HDTV, ISC1)

Usage Guidelines Cisco ONS 15454

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

This command edits the operating parameters for a DWDM client facility.

Category DWDM

Security Provisioning

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

ED-<MOD2DWDMPAYLOAD>:[<TID>]:<AID>:<CTAG>:::[NAME=<NAME>,]
[CMDMDE=<CMDMDE>]:<PST>,[<SST>];

Input Example

ED-HDTV::FAC-1-1-1:1:::NAME=“PORT NAME”,CMDMDE=CMDMDE:IS,AINS;

Input Parameters

Table 3-42 ED-<MOD2DWDMPAYLOAD> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
LINKCREDITS	Number of link credits. If autodetection is set to off the value of the link credits will be used to configure the hardware. Integer
NAME	String
CMDMDE	Command execution mode, forced or normal. FRCD deletes all the VCG members and member cross-connects of a VCG
	Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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
PST	Primary state
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service
SST	Secondary state
	Parameter type is SST—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

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.40 ED-<MOD_PATH>

Edit (STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VC12, VC3, VT1, VT2)

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

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

The SFBER, SDBER, RVRTV, and RVTM parameters only apply to path protection at the STS path level.

SFBER and SDBER also apply to the VT path level on the 15310-CL.

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

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

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

The TACC parameter edits an existing single STS or VT and changes it to a test access point. When an editing command on TACC is executed, it assigns the STS or VT for the first 2-way connection and STS+1 as the second 2-way connection. For single FAD test access only a single STS/VT is used for the TAP creation. For more information on TACC, refer to the "Test Access" section on page 1-24.

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

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

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

Error conditions:

1. If sending this command to edit SFBER, SDBER, RVRTV or RVTM for the non-path protection STS path, an error message will be returned.
2. If sending this command to edit the EXPTRC string with the AUTO path trace mode (TRCMODE=AUTO), an error message will be returned.

3. If sending this command to edit TRC on any card other than DS3(N)E, DS1(N), and DS3XM cards, an error message (TRC-not allowed for monitor paths. Incorrect card type.) will be returned.
4. This command is allowed to edit EXPTRC on DS1(N), DS3(N)E, DS3XM, EC1, OC3, OC48AS, and OC192 cards.
5. If sending this command to edit both TACC and any other attribute(s), the (Parameters Not compatible) error message will be returned.
6. If sending this command to edit TACC on an AID with cross-connections, an error message (STS in Use) will be returned.
7. TACC creation will also be denied on the protect ports/cards for 1:1, 1:N, and 1+1.
8. The VFAC AID is only valid on slots containing an M-series (M4000-2, M400T-12, M3000-1, M300T-8) card. TACC is not supported for the M-series cards.
9. After the BLSR switching, provisioning of the J1 trace string or trace mode is not allowed on the protection path.
10. TACC creation is allowed on PCA for two-fiber and four-fiber BLSR.
11. TACC is not supported on G1000, MXP_2.5_10G/TXP_MR-10G, ML1000-2 and ML100T-12 cards.
12. HOLDOFFTIMER is not specific to a path. It is applicable to the path protection selector. If HOLDOFFTIMER is changed on one path associated with the selector, the HOLDOFFTIMER of the other path associated with the same selector is also changed.
13. In R5.0, the ED-VT1 command is only supported to edit the J2 path trace on the VT1.5 cross-connection of the DS3XM-12 card.
14. The test set physical connection setup via ED-T3/DS1/STS1/VT1 of the DS3XM-12 card is only allowed on the physical front ports (PORTED ports, ports 1-12), which are the monitoring ports.
    a. 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 setup a physical connection with the test set because there is no next available port to be the monitoring port.
    b. The TACC disconnection (DISC-TACC) and the test access mode change command (CHG-TACC) follow the same requirement as Step a. above, but it is applied on the ported ports of the DS3XM-12 card.
    c. 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.
15. 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.
16. The VT1.5 J2 path trace provisioning is supported on the DS3XM-12 card VT1.5 path via the ED-VT1, RTRV-VT1 and RTRV-PTHTRC-VT1 commands.
17. Test Access and J2 path trace are not supported on the 15310-CL platform.

Category Paths

Security

Provisioning

Related Commands

DLT-CRS-<PATH>	ENT-CRS-<PATH>	RTRV-CRS-<PATH>
DLT-ROLL-<MOD_PATH>	ENT-ROLL-<MOD_PATH>	RTRV-NE-PATH
ED-CRS-<PATH>	OPR-PROTNSW-<PATH>	RTRV-PROTNSW-<PATH>
ED-NE-PATH	RLS-PROTNSW-<PATH>	RTRV-PTHTRC-<PATH>
ED-ROLL-<MOD_PATH>	RTRV-<PATH>	RTRV-ROLL-<MOD_PATH>

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>],[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,TACC=8,TAPTYPE=SINGLE,CMDMDE=CMDMDE:IS,AINS;

Input Parameters

Table 3-43 ED-<MOD_PATH> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "CrossConnectId1" section on page 4-36
SFBER	Signal failure threshold. Applies only to path protection. Applies to STS-level paths in SONET (STSn) and to VT-level paths on the ONS 15310-CL
	Parameter type is SF_BER—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. Applies to STS-level paths in SONET (STSn) and to VT-level paths on the ONS 15310-CL
	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

Table 3-43 ED-<MOD_PATH> Input Parameters (continued)

Parameter and Values	Description
• 1E-9	SDBER is 1E-9
RVRTV	Revertive mode. The value Y indicates that the protection switching system reverts service to the original line after restoration. The value N indicates that the 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 Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time. RVTM is not allowed to be set while "RVRTV" is N. Only applies to path protection 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) Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
HOLDOFFTIMER	Hold off timer for path protection DRI. Values must be within 0 and 10000 milliseconds (0 - 10 seconds), with increments of 100 milliseconds 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 card on the ONS 15454. 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 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). Applicable to VT-level paths for the DS3XM-12 card on the ONS 15454. String
TRCMODE	Path trace mode. Applicable only to STS-level Paths in SONET (STSn). Defaults to the OFF mode. **Note** The ONS 15600 does not support MAN and AUTO. 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

Table 3-43 ED-<MOD_PATH> Input Parameters (continued)

Parameter and Values	Description
• 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
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. Integer
TAPTYPE	TAP type
	Parameter type is TAPTYPE—test access point type
• DUAL	Dual FAD
• SINGLE	Single FAD
CMDMDE	Command mode
	Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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
PST	Primary state
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service
SST	Secondary state
	Parameter type is SST—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

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.41 ED-<MOD_RING>

Edit Bidirectional Line Switched Ring

Usage Guidelines Cisco ONS 15454, 15327, 15600

This command edits the BLSR attributes.

ONS 15327 and 15600 do not support four-fiber BLSR.

The RVRTV, RVTM, SRVRTV, SRVTM, NODEID, and RINGID attributes can be edited for the 4-Fiber BLSR.

The RVRTV, RVTM, NODEID, and RINGID attributes can be edited for the 2-Fiber BLSR.

Error conditions:

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

Category BLSR

Security Provisioning

Related Commands

DLT-<MOD_RING>	EX-SW-<OCN_BLSR>	RTRV-TRC-<OCN_BLSR>
ENT-<MOD_RING>	RTRV-<MOD_RING>	

Input Format

ED-<MOD_RING>:[<TID>]:<AID>:<CTAG>:::[RINGID=<RINGID>,][NODEID=<NODEID>,][RVRTV=<RVRTV>,][RVTM=<RVTM>,][SRVRTV=<SRVRTV>,][SRVTM=<SRVTM>][:];

Input Example

ED-BLSR:PETALUMA:BLSR-43:123:::RINGID=43,NODEID=3,RVRTV=Y,RVTM=2.0,SRVRTV=Y,SRVTM=5.0;

Input Parameters

Table 3-44 ED-<MOD_RING> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "AidUnionId1" section on page 4-29. Identifies the BLSR of the NE. ALL or BLSR-ALL AID is not allowed for editing a BLSR
RINGID	The BLSR ID of the NE up to six characters. Valid characters are A-Z and 0-9. String
NODEID	The BLSR node ID of the NE. NODEID ranges from 0 to 31. Integer
RVRTV	Revertive mode. The value Y indicates that the protection switching system reverts service to the original line after restoration. The value N indicates that the 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
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time. RVTM is not allowed to be set while "RVRTV" is N
	Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
SRVRTV	The span revertive mode for four-fiber BLSR only.
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
SRVTM	The span revertive time for four-fiber BLSR only. SRVTM is not allowed to be set while SRVRTV is N
	Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.42 ED-<OCN_TYPE>

Edit (OC3, OC12, OC48, OC192)

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

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

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

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

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

UNI-C DCC provisioning notes:

1. The attributes DCC(Y/N) and mode (SONET/SDH) remain the same in the ED/RTRV-OCN commands when the DCC is used for UNI-C, in which case the port attribute UNIC is enables (UNIC=Y).
2. UNI-C DCC termination cannot be deleted by the regular DCC de-provisioning command.
3. If the DCC is created under regular SONET provisioning, and this port is used by UNI-C, the port is converted as a UNI-C DCC automatically.
4. De-provisioning UNI-C IF/IB IPCC will free up DCC termination automatically.
5. The parameters ALSMODE, ALSCRINT and ALSRCPW are valid only for OC3-8, OC-192, and OC48ELR cards.
6. SDCC/LDCC termination cannot be unprovisioned if a provisionable patchcord termination end point is provisioned on the port.
7. SSM selectable (admssm) and synchronization messaging for output (syncmsgout) are not applicable to ONS 15600.

Category

Ports

Security

Provisioning

Related Commands

DLT-FFP-<OCN_TYPE>	ENT-FFP-<OCN_TYPE>	RTRV-G1000
ED-DS1	OPR-PROTNSW-<OCN_TYPE>	RTRV-GFP
ED-EC1	RLS-PROTNSW-<OCN_TYPE>	RTRV-GIGE
ED-FFP-<OCN_TYPE>	RTRV-<OCN_TYPE>	RTRV-HDLC
ED-G1000	RTRV-DS1	RTRV-POS
ED-GFP	RTRV-EC1	RTRV-PROTNSW-<OCN_TYPE>
ED-HDLC	RTRV-FAC	RTRV-T1
ED-T1	RTRV-FFP-<OCN_TYPE>	RTRV-T3
ED-T3	RTRV-FSTE	RTRV-TRC-<OCN_TYPE>
ED-TRC-<OCN_TYPE>		

Input Format

ED-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>:::[DCC=<DCC>,][AREA=<AREA>,]
[SYNCMSG=<SYNCMSG>,][SENDDUS=<SENDDUS>,][PJMON=<PJMON>,]
[SFBER=<SFBER>,][SDBER=<SDBER>,][MODE=<MODE>,][MUX=<MUX>,][SOAK=<SOAK>,
[OSPF=<OSPF>,][LDCC=<LDCC>,][NAME=<NAME>,][CMDMDE=<CMDMDE>,]
[EXPTRC=<EXPTRC>,][TRC=<TRC>,][TRCMODE=<TRCMODE>,]
[TRCFROMAT=<TRCFROMAT>,][ADMSSM=<ADMSSM>,]
[SYNCMSGOUT=<SYNCMSGOUT>]:<PST>,[<SST>];

Input Example

ED-OC48:PENNGROVE:FAC-6-1:114:::DCC=Y,AREA=10.92.63.1,SYNCMSG=N,SENDDUS=N,
PJMON=48,SFBER=1E-4,SDBER=1E-6,MODE=SONET,MUX=E2,SOAK=10,OSPF=Y,LDCC=N,
NAME="OCN PORT",CMDMDE=CMDMDE,EXPTRC="AAA",TRC="AAA",TRCMODE=MAN,
TRCFROMAT=16-BYTE,ADMSSM=PRS,SYNCMSGOUT=N:IS,AINS;

Input Parameters

Table 3-45 ED-<OCN_TYPE> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
DCC	Indicates whether or not the section DCC is to be used. Identifies the section DCC connection of the port
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
AREA	The area ID and shows up only if the DCC is enabled. String
SYNCMSG	Synchronization status message
	Parameter type is EXT_RING—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

Table 3-45 ED-<OCN_TYPE> Input Parameters (continued)

Parameter and Values	Description
SENDDUS	The facility will send the DUS (Don't use for Synchronization) value as the sync status message for that facility
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
PJMON	Identifies an OCn port PJMON. Integer
SFBER	Signal failure threshold
	Parameter type is SF_BER—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
	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
MODE	OCn port mode
	Parameter type is OPTICAL_MODE—the facility's optical mode
• SDH	SDH/ETSI optical mode using European/International format
• SONET	SONET/ANSI optical mode using the American format
MUX	BLSR extension byte (supported only on the OC48AS card)
	Parameter type is MUX_TYPE—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). Integer
OSFP	The open shortest path first discovery

Table 3-45 ED-<OCN_TYPE> Input Parameters (continued)

Parameter and Values	Description
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
LDCC	The line DCC connection on the port
	Parameter type is EXT_RING—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	String
CMDMDE	Command Mode. The FRCD mode of operation is applicable to delete a VCAT member cross- connect from IS-NR or OOS-AU,AINS service state
	Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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
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 card on the ONS 15454. 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 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). Applicable to VT-level paths for the DS3XM-12 card on the ONS 15454. String
TRCMODE	Path trace mode. Applicable only to STS-level Paths in SONET (STSn). Defaults to the OFF mode
	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

Table 3-45 ED-<OCN_TYPE> Input Parameters (continued)

Parameter and Values	Description
• 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	Trace message size
	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	SSM selectable value. It will only be displayed when SSM is disabled
	Parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL—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)
SYNCMSGOUT	Controls SSM output for an OCn port
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
PST	Primary state
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service
SST	Secondary state
	Parameter type is SST—provides additional information pertaining to PST and PSTQ
• AINS	Automatic in service
• DSBLD	Disabled

Table 3-45 ED-<OCN_TYPE> Input Parameters (continued)

Parameter and Values	Description
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.43 ED-ALS

Edit Automatic Laser Shutdown

Usage Guidelines Cisco ONS 15454, 15310-CL

This command is used to modify the ALS attributes of an OC-N facility and all the facilities that support the ALS feature. For MXP_2.5G_10E, TXP_MR_10E, MXP_2.5G_10G, TXP_MR_10G, TXP_MR_2.5G, and TXPP_MR_2.5G cards this command is used to modify the ALS parameter of the OC48 and OC192 ports.

Category Ports

Security Provisioning

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

ED-ALS:[<TID>]:<SRC>:<CTAG>:::[ALSMODE=<ALSMODE>,][ALSRCINT=<ALSRCINT>,][ALSRCPW=<ALSRCPW>];

Input Example

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

Input Parameters

Table 3-46 ED-ALS Input Parameters

Parameter and Values	Description
SRC	Access identifier from the "AidUnionId" section on page 4-25
ALSMODE	ALS is enabled or disabled
	Parameter type is ALS_MODE—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. Integer
ALSRCPW	ALS recovery pulse width. The range is 2.0 to 100.00 seconds, in increments of 100 ms. Float

Errors Errors are listed in Table 6-1 on page 6-1

3.2.44 ED-APC

Edit Amplification Power Control

Usage Guidelines Cisco ONS 15454

This command is used to modify the APC application attributes. The default value for an optional parameter is the NE default value. The value may not be the current value for the parameter. Use a RTRV-xx command to retrieve the current value.

Category DWDM

Security Provisioning

Related Commands

DLT-LNK-<MOD2O>	ED-WLEN	RTRV-FFP-OCH
DLT-LNKTERM	ENT-LNK-<MOD2O>	RTRV-LNK-<MOD2O>
DLT-OSC	ENT-LNKTERM	RTRV-LNKTERM
DLT-WLEN	ENT-OSC	RTRV-NE-APC
ED-CLNT	ENT-WLEN	RTRV-NE-WDMANS
ED-DWDM	OPR-APC	RTRV-OCH
ED-FFP-OCH	OPR-LASER-OTS	RTRV-OMS
ED-LNK-<MOD2O>	OPR-PROTNSW-OCH	RTRV-OPM
ED-LNKTERM	OPR-SLV-WDMANS	RTRV-OSC
ED-OCH	OPR-WDMANS	RTRV-OTS
ED-OMS	RLS-LASER-OTS	RTRV-PROTNSW-OCH
ED-OSC	RLS-PROTNSW-OCH	RTRV-SLV-WDMANS
ED-OTS	RTRV-APC	RTRV-TRC-OCH
ED-SLV-WDMANS	RTRV-CLNT	RTRV-WDMANS
ED-TRC-OCH	RTRV-DWDM	RTRV-WLEN
ED-WDMANS	RTRV-ESCON	

Input Format

ED-APC:[<TID>]::<CTAG>[:::APCENABLE=<APCENABLE>];

Input Example

ED-APC:PENNGROVE::CTAG:::APCENABLE=N;

Input Parameters

Table 3-47 ED-APC Input Parameters

Parameter and Values	Description
APCENABLE	The enable/disable of the APC application. Default is N Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.45 ED-BITS

Edit Building Integrated Timing Supply

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command edits the BITS reference attributes.

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. SSM selectable (ADMSSM) is not applicable to ONS 15600.

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, issue the RTRV-XX command.

Category. Synchronization

Security Provisioning

Related Commands

ED-NE-SYNCN	REPT EVT BITS	RTRV-BITS
ED-SYNCN	REPT EVT SYNCN	RTRV-COND-BITS
OPR-SYNCNSW	RLS-SYNCNSW	RTRV-COND-SYNCN
REPT ALM BITS	RTRV-ALM-BITS	RTRV-NE-SYNCN
REPT ALM SYNCN	RTRV-ALM-SYNCN	RTRV-SYNCN

Input Format

ED-BITS:[<TID>]:<AID>:<CTAG>:::[LINECDE=<LINECDE>,][FMT=<FMT>,][LBO=<LBO>,] [SYNCMSG=<SYNCMSG>,][AISTHRSHLD=<AISTHRSHLD>,][SABIT=<SABIT>,] [IMPEDANCE=<IMPEDANCE>,][BITSFAC=<BITSFAC>,][ADMSSM=<ADMSSM>][:<PST>];

Input Example

ED-BITS:SONOMA:BITS-2:779:::LINECDE=AMI,FMT=ESF,LBO=0-133,SYNCMSG=N, AISTHRSHLD=PRS,SABIT=BYTE-5,IMPEDANCE=120-OHM,BITSFAC=T1,ADMSSM=PRS:IS;

Input Parameters

Table 3-48 ED-BITS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "BITS" section on page 4-29
LINECDE	Line code
	Parameter type is LINE_CODE—line code
• AMI	Line code value is AMI
• B8ZS	Line code value is B8ZS (bipolar with three-zero substitution)
FMT	Digital signal frame format
	Parameter type is FRAME_FORMAT—frame format for a T1 port
• D4	Frame format is D4
• ESF	Frame format is ESF
• UNFRAMED	Frame format is unframed

Table 3-48 ED-BITS Input Parameters (continued)

Parameter and Values	Description
LBO	Line build out settings. BITS line build out. Default value is 0 to 133. Integer
	Parameter type is BITS_LineBuildOut—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 on (Y)
	Parameter type is EXT_RING—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	Alarm indication signal threshold
	Parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL—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
	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

Table 3-48 ED-BITS Input Parameters (continued)

Parameter and Values	Description
	Parameter type is IMPEDANCE—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
	Parameter type is BITS_FAC—BITS facility rate. 64 k and 6 MHz are only applicable to the ONS 15454
• 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.
	Note Not applicable for ONS 15600
	Parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL—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	Primary state
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service

Errors Errors are listed in Table 6-1 on page 6-1

3.2.46 ED-CMD-SECU

Edit Command Security

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

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

Category

Security

Security

Provisioning

Related Commands

ACT-USER	REPT ALM SECU	REPT EVT SECU
ALW-MSG-SECU	DLT-USER-SECU	REPT EVT SESSION
ALW-USER-SECU	ED-PID	RTRV-CMD-SECU
CANC	ED-USER-SECU	RTRV-DFLT-SECU
CANC-USER	ENT-USER-SECU	RTRV-USER-SECU
CANC-USER-SECU	INH-MSG-SECU	SET-ATTR-SECUDFLT
CLR-COND-SECU	INH-USER-SECU	

Input Format

ED-CMD-SECU:[<TID>]:<AID>:<CTAG>::<CAP>;

Input Example

ED-CMD-SECU::INIT-REG:1::SU;

Input Parameters

Table 3-49 ED-CMD-SECU Input Parameters

Parameter and Values	Description
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 may include all commands. Only INIT-REG will be supported. String. Must not be null
CAP	Command access privilege. Must not be null

Table 3-49 ED-CMD-SECU Input Parameters (continued)

Parameter and Values	Description
	Parameter type is PRIVILEGE—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

Errors Errors are listed in Table 6-1 on page 6-1

3.2.47 ED-CRS-<PATH>

Edit Cross Connect (STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VT1, VT2)

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

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

This command edits a cross-connection.

Notes:

1. ADD and REMOVE cannot be used together. The example provided is for informational purposes only. ADD and REMOVE are mutually exclusive.
2. Add/Remove drops is possible only on ONEWAY, UPSR_DROP, UPSR_DC, and UPSR_EN type of cross-connects (one-way only).
3. Traditional cross-connections cannot be upgraded to DRI cross-connections using the ED_CRS command.
4. 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 be displayed.

Category Cross Connections

Security Provisioning

Related Commands

DLT-CRS-<PATH> RTRV-CRS RTRV-CRS-<PATH>
ENT-CRS-<PATH>

Input Format

ED-CRS-<PATH>:[<TID>]:<SRC>,<DST>:<CTAG>:::[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=CMDMDE:IS,AINS;

Input Parameters

Table 3-50 ED-CRS-<PATH> Input Parameters

Parameter and Values	Description
SRC	Source AID from the "CrossConnectId1" section on page 4-36
DST	Destination AID from the "CrossConnectId1" section on page 4-36
ADD	AID from the "AidUnionId" section on page 4-25
REMOVE	AID from the "AidUnionId" section on page 4-25
CKTID	String
CMDMDE	Command Mode. The FRCD mode of operation is applicable only if the PST=OOS and SST=DSBLD Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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
PST	Primary state Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service
SST	Secondary state Parameter type is SST—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

Table 3-50 ED-CRS-<PATH> Input Parameters (continued)

Parameter and Values	Description
• UAS	Unassigned
• UEQ	Unequipped

Errors Errors are listed in Table 6-1 on page 6-1

3.2.48 ED-DAT

Edit Date and Time

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command edits the date and the time

Category System

Security Provisioning

Related Commands

ACT-USER	INH-MSG-ALL	RTRV-NE-IPMAP
ALW-MSG-ALL	INH-MSG-DBCHG	RTRV-NE-PATH
ALW-MSG-DBCHG	INH-MSG-SECU	RTRV-NE-SYNCN
ALW-MSG-SECU	INIT-SYS	RTRV-NE-WDMANS
ED-NE-GEN	RTRV-HDR	RTRV-TOD
ED-NE-PATH	RTRV-INV	SET-TOD
ED-NE-SYNCN	RTRV-NE-GEN	

Input Format ED-DAT:[<TID>]::<CTAG>::[<DATE>],[<TIME>];

Input Example ED-DAT:CISCO::1234::99-12-21,14-35-15;

Input Parameters

Table 3-51 ED-DAT Input Parameters

Parameter and Values	Description
DATE	Date. String
TIME	Time. String

Errors Errors are listed in Table 6-1 on page 6-1

3.2.49 ED-DS1

Edit DS1

Usage Guidelines Cisco ONS 15454

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

Notes:

1. This command is not allowed if the card is a protecting card.
2. Both the MODE and FMT fields of this command apply to the DS3XM-12 card only.
3. 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.
4. For pre-provisioning the DS3XM-12 card, the DS1 frame format defaults to UNFRAMED.
5. For the DS3XM-12 card, the DS1 configurable attributes (PM, TH, alarm, etc.) only apply on the ported ports (1-12) 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.
6. The test set physical connection setup via ED-T3/DS1/STS1/VT1 of the DS3XM-12 card is only allowed on the physical front ports (PORTED ports, ports 1-12), which are the monitoring ports.
   a. 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 setup a physical connection with the test set because there is no next available port to be the monitoring port.
   b. The TACC disconnection (DISC-TACC) and the test access mode change command (CHG-TACC) follow the same requirement as Step a. above, but it is applied on the ported ports of the DS3XM-12 card.
   c. 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.
7. 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.

Category Ports

Security Provisioning

Related Commands

DLT-FFP-<OCN_TYPE>	ENT-FFP-<OCN_TYPE>	RTRV-G1000
ED-<OCN_TYPE>	OPR-PROTNSW-<OCN_TYPE>	RTRV-GFP
ED-EC1	RLS-PROTNSW-<OCN_TYPE>	RTRV-GIGE
ED-FFP-<OCN_TYPE>	RTRV-<OCN_TYPE>	RTRV-HDLC
ED-G1000	RTRV-DS1	RTRV-POS
ED-GFP	RTRV-EC1	RTRV-PROTNSW-<OCN_TYPE>
ED-HDLC	RTRV-FAC	RTRV-T1
ED-T1	RTRV-FFP-<OCN_TYPE>	RTRV-T3
ED-T3	RTRV-FSTE	RTRV-TRC-<OCN_TYPE>
ED-TRC-<OCN_TYPE>		

Input Format ED-DS1:[<TID>]:<AID>:<CTAG>:::[TACC=<TACC>,][TAPTYPE=<TAPTYPE>,] [MODE=<MODE>,][FMT=<FMT>];

Input Example ED-DS1:PETALUMA:DS1-2-1-6-12:123:::TACC=8,TAPTYPE=DUAL,MODE=FDL,FMT=ESF;

Input Parameters

Table 3-52 ED-DS1 Input Parameters

Parameter and Values	Description
AID	Access identifier from the "DS1" section on page 4-42
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. Integer
TAPTYPE	TAP type
	Parameter type is TAPTYPE—test access point type
• DUAL	Dual FAD
• SINGLE	Single FAD
MODE	Mode with which the command is to be implemented. DS1 path mode of the DS3XM-12 card. Defaults to FDL
	Parameter type is DS1MODE—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

Table 3-52 ED-DS1 Input Parameters (continued)

Parameter and Values	Description
FMT	Digital signal format. The DS1 path frame format of the DS3XM-12 card. Defaults to UNFRAMED
	Parameter type is FRAME_FORMAT—frame format for a T1 port
• D4	Frame format is D4
• ESF	Frame format is ESF
• UNFRAMED	Frame format is unframed

Errors Errors are listed in Table 6-1 on page 6-1

3.2.50 ED-EC1

Edit Electrical Carrier

Usage Guidelines

Cisco ONS 15454

This command edits the attributes of an EC1.

Notes:

1. This command is not allowed if the card is a protecting card.
2. AISONLPBK is only applicable for the ONS 15310-CL.

Category Ports

Security Provisioning

Related Commands

DLT-FFP-<OCN_TYPE>	ENT-FFP-<OCN_TYPE>	RTRV-G1000
ED-<OCN_TYPE>	OPR-PROTNSW-<OCN_TYPE>	RTRV-GFP
ED-DS1	RLS-PROTNSW-<OCN_TYPE>	RTRV-GIGE
ED-FFP-<OCN_TYPE>	RTRV-<OCN_TYPE>	RTRV-HDLC
ED-G1000	RTRV-DS1	RTRV-POS
ED-GFP	RTRV-EC1	RTRV-PROTNSW-<OCN_TYPE>
ED-HDLC	RTRV-FAC	RTRV-T1
ED-T1	RTRV-FFP-<OCN_TYPE>	RTRV-T3
ED-T3	RTRV-FSTE	RTRV-TRC-<OCN_TYPE>
ED-TRC-<OCN_TYPE>		

Input Format

ED-EC1:[<TID>]:<AID>:<CTAG>:::[PJMON=<PJMON>,][LBO=<LBO>,][SOAK=<SOAK>,][SFBER=<SFBER>,][SDBER=<SDBER>,][NAME=<NAME>,][CMDMDE=<CMDMDE>]:<PST>,[<SST>];

Input Example

ED-EC1:CISCO:FAC-1-1:123:::PJMON=0,LBO=0-225,SOAK=10,SFBER=1E-4,SDBER=1E-6,NAME=“EC1 PORT”,CMDMDE=CMDMDE:IS,AINS;

Input Parameters

Table 3-53 ED-EC1 Input Parameters

Parameter and Values	Description
AID	Access identifier from the “FACILITY” section on page 4-45
PJMON	A SONET pointer number (0 or 1) of an EC1 port. Integer
LBO	Line build out settings. Integer
	Parameter type is E_LBO—electrical signal line buildout
• 0–225	Electrical signal line buildout range is 0–225
• 226–450	Electrical signal line buildout range is 226–450
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). Integer
SFBER	Signal failure threshold
	Parameter type is SF_BER—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
	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
NAME	String
CMDMDE	Command Mode
	Parameter type is CMDMDE—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 in which the command would normally be denied

Table 3-53 ED-EC1 Input Parameters (continued)

Parameter and Values	Description
• FRC D	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
PST	Primary state
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service
SST	Secondary state
	Parameter type is SST—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

Errors Errors are listed in Table 6-1 on page 6-1

3.2.51 ED-EQPT

Edit Equipment

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

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

The PROTID parameter indicates the unique identifier of the protection group (the protect card). “NULL” is a special value of the PROTID parameter and indicates absence of a protection group. For 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.

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.

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

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

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

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

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

The ED-EQPT command can be successfully executed on an already provisioned card to add 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). Once provisioned, the equipment type cannot be edited either.

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

1:1 protection group

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

1:N protection group

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

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

1. Editing the PRTYPE or PROTID (non-NULL value) parameters.
2. Editing RVRTV or RVTM when no protection group exists.
3. Editing RVRTV for 1:N protection.
4. Failed to remove, currently switched to protect.
5. The CARDMODE provisioning is allowed on the DS3XM-12 and ML-Series cards
   a. The DS3XM's provisioning is based on the XCON type and DS3XM-12's location. For example:

      The DS3XM-12 card in the lower speed I/O slot with the XCVT/XC10G card only allows the DS3XM-12-STS12 CARDMODE. Other cases allow the CARDMODE to be DS3XM-12-STS-48
   b. There is no card reboot if the CARDMODE is changed on the DS3XM-12 card.
   c. The DS3XM-12 card can be upgraded or downgraded by changing the CARDMODE with the ED-EQPT command.
6. If the command mode (CMDMDE) is set to forced (FRCD) during the creation of a 1:1 or 1:N protection group, all cards must be physically plugged in and in the service state (IS). If the cards are not physically plugged in, then the command is denied with an appropriate error message. When the command mode is set to normal (NORM) (which is the default) the cards do not have to be physically plugged in and in the service state.
7. If the command mode is set to forced (FRCD) during the removal of a card in a 1:1 or 1:N protection group, there must be no cross-connects (i.e., services) present on the card. If there are cross-connects present on the card, the command is denied with an appropriate error message. If the command mode is set to normal (NORM) (which is the default), it does not require that cross-connects be deleted on the card.

Category Equipment

Security Provisioning

Related Commands

ALW-SWDX-EQPT	INH-SWTOPROTN-EQPT	RTRV-COND-EQPT
ALW-SWTOPROTN-EQPT	INH-SWTOWKG-EQPT	RTRV-EQPT
ALW-SWTOWKG-EQPT	REPT ALM EQPT	SET-ALMTH-EQPT
DLT-EQPT	REPT EVT EQPT	SW-DX-EQPT
ENT-EQPT	RTRV-ALM-EQPT	SW-TOPROTN-EQPT
INH-SWDX-EQPT	RTRV-ALMTH-EQPT	SW-TOWKG-EQPT

Input Format

ED-EQPT:[<TID>]:<AID>:<CTAG>:::[PROTID=<PROTID>,][PRTYPE=<PRTYPE>,]
[RVRTV=<RVRTV>,][RVTM=<RVTM>,][CMDMDE=<CMDMDE>,]
[CARDMODE=<CARDMODE>,][PEERID=<PEERID>,][REGENNAME=<REGENNAME>,]
[PWL=<PWL>]:[<PST>],[<SST>];

Input Example

ED-EQPT:CISCO:SLOT-2:123:::PROTID=SLOT-1,PRTYPE=1-1,RVRTV=Y,RVTM=9.0,
CMDMDE=FRCD,CARDMODE=DS3XM12-STS48,PEERID=SLOT-2,
REGENNAME="THIS GROUP",PWL=1530.33:OOS,MT;

Input Parameters

Table 3-54 ED-EQPT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "EQPT" section on page 4-43
PROTID	Protecting card slot number of the protection group from the "PRSLOT" section on page 4-49
PRTYPE	Protection group type
	Parameter type is PROTECTION_GROUP—protection group type
• 1-1	1 to 1 protection group
• 1-N	1 to N protection group

Table 3-54 ED-EQPT Input Parameters (continued)

Parameter and Values	Description
RVRTV	Revertive mode. The value Y indicates that the protection switching system reverts service to the original line after restoration. The value N indicates that the 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 Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
CMDMDE	Command mode. Only applicable when creating or deleting a protection group (1:1 or 1:N) and/or adding cards to an existing protection group (1:N). Default is NORM. If creating or adding cards to a protection group, specifying FRCD requires the card to be physically plugged in and in the service state (IS). If removing cards from a protection group (1:N) or deleting the protection group (1:1, 1:N), specifying FRCD requires that there are no cross-connects (services) on the card Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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
CARDMODE	Card mode **Note** The card will reboot after the mode changes so the mode change request will not go through if all the ports on the card are not in OOS mode. TL1 will not set a default CARD_MODE value at the management interface level if no PWL value is given Parameter type is CARDMODE—card mode. Card mode is applicable to cards that have multiple capabilities, for example, the ML card can operate in two distinct modes: Linear Mapper Mode and L2/L3 Mode
• DS3XM12-STS12	The DS3XM-12 card in the STS12 back plane rate mode
• DS3XM12-STS48	The DS3XM-12 card in the STS48 back plane rate mode
• DWDM-LINE	Line terminating mode
• DWDM-SEC	Section terminating mode

Table 3-54 ED-EQPT Input Parameters (continued)

Parameter and Values	Description
• 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
• MXPMR25G-FCGE	Fibre channel or GIGE mode for the MXP-MR-2.5G card
PEERID	The regeneration peer slot from the "EQPT" section on page 4-43
REGENNAME	The name of a regeneration group. String
PWL	Provisioned wavelength. TL1 will not set a default PWL value at the management level if no PWL value is given
	Parameter type is OPTICAL_WLEN—optical wavelength
• 1530.33	Wavelength 1
• 1531.12	Wavelength 2
• 1531.90	Wavelength 3
• 1532.68	Wavelength 4
• 1534.25	Wavelength 5
• 1535.04	Wavelength 6
• 1535.82	Wavelength 7
• 1536.61	Wavelength 8
• 1538.19	Wavelength 9
• 1538.98	Wavelength 10
• 1539.77	Wavelength 11
• 1540.56	Wavelength 12
• 1542.14	Wavelength 13
• 1542.94	Wavelength 14
• 1543.73	Wavelength 15
• 1544.53	Wavelength 16
• 1546.12	Wavelength 17
• 1546.92	Wavelength 18
• 1547.72	Wavelength 19
• 1548.51	Wavelength 20
• 1550.12	Wavelength 21
• 1550.92	Wavelength 22
• 1551.72	Wavelength 23
• 1552.52	Wavelength 24

Table 3-54 ED-EQPT Input Parameters (continued)

Parameter and Values	Description
• 1554.13	Wavelength 25
• 1554.94	Wavelength 26
• 1555.75	Wavelength 27
• 1556.55	Wavelength 28
• 1558.17	Wavelength 29
• 1558.98	Wavelength 30
• 1559.79	Wavelength 31
• 1560.61	Wavelength 32
• USE-TWL1	Use Tunable Wavelength 1
PST	Primary state
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service
SST	Secondary state
	Parameter type is SST—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

Errors Errors are listed in Table 6-1 on page 6-1

3.2.52 ED-FFP-<MOD2DWDMPAYLOAD>

Edit Facility Protection Group (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, HDTV, ISC1)

Usage Guidelines Cisco ONS 15454

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

Category DWDM

Security Provisioning

Related Commands

ALW-SWDX-EQPT
ALW-SWTOPROTN-EQPT
ALW-SWTOWKG-EQPT
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-FFP-<OCN_TYPE>
ED-FFP-OCH
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
EX-SW-<OCN_BLSR>
INH-SWDX-EQPT
INH-SWTOPROTN-EQPT
INH-SWTOWKG-EQPT
OPR-PROTNSW-<OCN_TYPE>
REPT SW
RLS-PROTNSW-<OCN_TYPE>
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FFP-OCH
RTRV-PROTNSW-<OCN_TYPE>
SW-DX-EQPT
SW-TOPROTN-EQPT
SW-TOWKG-EQPT

Input Format

ED-FFP-<MOD2DWDMPAYLOAD>:[<TID>]:<AID>:<CTAG>:::[PROTID=<PROTID>,][RVRTV=<RVRTV>,][RVTM=<RVTM>,][PSDIRN=<PSDIRN>][:];

Input Example

ED-FFP-CLNT:CISCO:FAC-1-1:100:::PROTID=DC-METRO,RVRTV=N,RVTM=1.0,PSDIRN=BI;

Input Parameters

Table 3-55 ED-FFP-<MOD2DWDMPAYLOAD> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
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. String

Table 3-55 ED-FFP-<MOD2DWDMPAYLOAD> Input Parameters (continued)

Parameter and Values	Description
RVRTV	Revertive mode. The value Y indicates that the protection switching system reverts service to the original line after restoration. The value N indicates that the 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
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time. RVTM is not allowed to be set while "RVRTV" is N. Only applies to path protection
	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 BI-DIRECTIONAL switching
	Parameter type is UNI_BI—unidirectional switch operations
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching

Errors Errors are listed in Table 6-1 on page 6-1

3.2.53 ED-FFP-<OCN_TYPE>

Edit Facility Protection Group (OC3, OC12, OC48, OC192)

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

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

This command edits the optical facility protection.

Note This command can be used on both protecting and working AIDs. Optimized 1+1 and related attributes are only applicable to the ONS 15454.

Category Protection

Security

Provisioning

Related Commands

ALW-SWDX-EQPT
ALW-SWTOPROTN-EQPT
ALW-SWTOWKG-EQPT
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<OCN_TYPE>
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-OCH
ED-G1000
ED-GFP
ED-HDLC
ED-T1
ED-T3
ED-TRC-<OCN_TYPE>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
EX-SW-<OCN_BLSR>
INH-SWDX-EQPT
INH-SWTOPROTN-EQPT
INH-SWTOWKG-EQPT
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FFP-OCH
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-POS
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TRC-<OCN_TYPE>
SW-DX-EQPT
SW-TOPROTN-EQPT
SW-TOWKG-EQPT
OPR-PROTNSW-<OCN_TYPE>
REPT SW
RLS-PROTNSW-<OCN_TYPE>
RTRV-<OCN_TYPE>
RTRV-DS1
RTRV-EC1
RTRV-FAC

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

Table 3-56 ED-FFP-<OCN_TYPE> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
PROTAID	The protection group identifier (protection group name). PROTAID can have a maximum length of 32 characters. String
RVRTV	Revertive mode. The value Y indicates that the protection switching system reverts service to the original line after restoration. The value N indicates that the 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
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time
	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
	Parameter type is TRANS_MODE—G1000 transponder mode
• BI	Bidirectional
• NONE	Not in transponder mode
• UNI	Unidirectional
VRGRDTM	Verification guard timer. Only applicable to optimized 1+1
	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
	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 to 5.0	1 second to 5 seconds
RCGRDTM	Recovery guard timer. Only applicable to optimized 1+1
	Parameter type is RECOVERY_GUARD_TIMER—optimized 1+1 recovery guard timer
• 0.0	0 seconds
• 0.05	50 ms

Table 3-56 ED-FFP-<OCN_TYPE> Input Parameters (continued)

Parameter and Values	Description
• 0.1	100 ms
• 0.5	500 ms
• 1.0 to 10.0	1 second to 10 seconds

Errors Errors are listed in Table 6-1 on page 6-1

3.2.54 ED-FFP-OCH

Edit Facility Protection Group Optical Channel

Usage Guidelines Cisco ONS 15454

This command changes the provisioning for the default protection group on the DWDM port of a TXP_MR_2.5G and TXPP_MR_2.5G card.

Category DWDM

Security Provisioning

Related Commands

ALW-SWDX-EQPT	OPR-LASER-OTS
ALW-SWTOPROTN-EQPT	OPR-PROTNSW-<OCN_TYPE>
ALW-SWTOWKG-EQPT	OPR-PROTNSW-OCH
DLT-FFP-<MOD2DWDMPAYLOAD>	REPT SW
DLT-FFP-<OCN_TYPE>	RLS-LASER-OTS
DLT-LNK-<MOD2O>	RLS-PROTNSW-<OCN_TYPE>
ED-DWDM	RLS-PROTNSW-OCH
ED-FFP-<MOD2DWDMPAYLOAD>	RTRV-DWDM
ED-FFP-<OCN_TYPE>	RTRV-FFP-<MOD2DWDMPAYLOAD>
ED-LNK-<MOD2O>	RTRV-FFP-<OCN_TYPE>
ED-OCH	RTRV-FFP-OCH
ED-OMS	RTRV-LNK-<MOD2O>
ED-OTS	RTRV-OCH
ED-TRC-OCH	RTRV-OMS
ENT-FFP-<MOD2DWDMPAYLOAD>	RTRV-OTS
ENT-FFP-<OCN_TYPE>	RTRV-PROTNSW-<OCN_TYPE>
ENT-LNK-<MOD2O>	RTRV-PROTNSW-OCH
EX-SW-<OCN_BLSR>	RTRV-TRC-OCH
INH-SWDX-EQPT	SW-DX-EQPT
INH-SWTOPROTN-EQPT	SW-TOPROTN-EQPT
INH-SWTOWKG-EQPT	SW-TOWKG-EQPT

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

Table 3-57 ED-FFP-OCH Input Parameters

Parameter and Values	Description
AID	Access identifier from the "CHANNEL" section on page 4-30
PROTAID	The protection group identifier (protection group name). String

Table 3-57 ED-FFP-OCH Input Parameters (continued)

Parameter and Values	Description
RVRTV	Revertive mode. The value Y indicates that the protection switching system reverts service to the original line after restoration. The value N indicates that the 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
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time
	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
	Parameter type is TRANS_MODE—G1000 transponder mode
• BI	Bidirectional
• NONE	Not in transponder mode
• UNI	Unidirectional

Errors Errors are listed in Table 6-1 on page 6-1

3.2.55 ED-FSTE

Edit Fast Ethernet

Usage Guidelines Cisco ONS 15454, 15310-CL

This command edits the front end port information of the fast (10/100 Mbps) Ethernet card.

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, issue the RTRV-XX command to retrieve them.

Category Ports

Security Provisioning

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

ED-FSTE:[<TID>]:<AID>:<CTAG>:::[FLOW=<FLOW>,][EXPDUPLEX=<EXPDUPLEX>,][EXPSPEED=<EXPSPEED>,][VLANCOS=<VLANCOS>,][IPTOS=<IPTOS>,][NAME=<NAME>,][CMDMDE=<CMDMDE>,][SOAK=<SOAK>]:<PST>,[<SST>];

Input Example

ED-FSTE:CISCO:FAC-1-1:123:::FLOW=FLOW,EXPDUPLEX=EXPDUPLEX, EXPSPEED=EXPSPEED, VLANCOS=VLANCOS,IPTOS=IPTOS, NAME="FSTE PORT",CMDMDE=CMDMDE,SOAK=32:IS,AINS;

Input Parameters

Table 3-58 ED-FSTE Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
FLOW	Flow control
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
EXPDUPLEX	Ethernet duplex mode
	Parameter type is ETHER_DUPLEX—duplex mode
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode
EXPSPEED	Ethernet speed
	Parameter type is ETHER_SPEED—Ethernet speed
• 100_MBPS	100 Mbps
• 10_GBPS	10 Gbps
• 10_MBPS	10 Mbps
• 1_GBPS	1 Gbps
• AUTO	Auto
VLANCOS	Priority queing threshold based on VLAN class of service of incoming Ethernet packets. Default value is 1175. Integer
IPTOS	Priority queing threshold based on IP type of service of incoming Ethernet packets. Default value is 368Integer
NAME	Name. String
CMDMDE	Command Mode. The FRCD mode of operation is applicable to delete a VCAT member cross- connect from IS-NR or OOS-AU,AINS service state
	Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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

Table 3-58 ED-FSTE Input Parameters (continued)

Parameter and Values	Description
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). Integer
PST	Primary state
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service
SST	Secondary state
	Parameter type is SST—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

Errors Errors are listed in Table 6-1 on page 6-1

3.2.56 ED-G1000

Edit G1000

Usage Guidelines Cisco ONS 15454

This command edits the attributes related to a G1000 port.

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, issue the RTRV-XX command.

Category Ports

Security Provisioning

Related Commands

DLT-FFP-<OCN_TYPE>	ENT-FFP-<OCN_TYPE>	RTRV-G1000
ED-<OCN_TYPE>	OPR-PROTNSW-<OCN_TYPE>	RTRV-GFP
ED-DS1	RLS-PROTNSW-<OCN_TYPE>	RTRV-GIGE
ED-EC1	RTRV-<OCN_TYPE>	RTRV-HDLC
ED-FFP-<OCN_TYPE>	RTRV-DS1	RTRV-POS
ED-GFP	RTRV-EC1	RTRV-PROTNSW-<OCN_TYPE>
ED-HDLC	RTRV-FAC	RTRV-T1
ED-T1	RTRV-FFP-<OCN_TYPE>	RTRV-T3
ED-T3	RTRV-FSTE	RTRV-TRC-<OCN_TYPE>
ED-TRC-<OCN_TYPE>		

Input Format

ED-G1000:[<TID>]:<AID>:<CTAG>:::[MFS=<MFS>,][FLOW=<FLOW>,]
[LOWMRK=<LOWMRK>,][HIWMRK=<HIWMRK>,][AUTONEG=<AUTONEG>,]
[NAME=<NAME>,][ENCAP=<ENCAP>,][CMDMDE=<CMDMDE>,]
[SOAK=<SOAK>]:<PST>,[<SST>];

Input Example

ED-G1000:TID:FAC-1-1:CTAG:::MFS=1548,FLOW=Y,LOWMRK=20,HIWMRK=492,
AUTONEG=Y,NAME="G1000 PORT",CMDMDE=CMDMDE,SOAK=32:IS,DSBLD;

Input Parameters

Table 3-59 ED-G1000 Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
MFS	Maximum frame size
	Parameter type is MFS_TYPE—maximum frame size used by an Ethernet card
• 1548	Normal frame size
• JUMBO	Jumbo frame size
FLOW	Flow control
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
LOWMRK	Low watermark value. Integer. Defaults to 25
HIWMRK	High watermark value. Integer. Defaults to 485
AUTONEG	Automatic negotiation
	Parameter type is EXT_RING—indicates if the ring supports the extended K1/K2/K3 protocol
• N	The ring does not support the extended K1/K2/K3 protocol

Table 3-59 ED-G1000 Input Parameters (continued)

Parameter and Values	Description
• Y	The ring does support the extended K1/K2/K3 protocol
NAME	Name. String
CMDMDE	Command execution mode, forced or normal. FRCD deletes all the VCG members and member cross-connects of a VCG Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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
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). Integer. Defaults to 32
ENCAP	Encapsulation. String
PST	Primary state Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service
SST	Secondary state Parameter type is SST—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

Errors Errors are listed in Table 6-1 on page 6-1

3.2.57 ED-GFP

Edit Generic Framing Protocol

Usage Guidelines

Cisco ONS 15454, 15310-CL, 15600

This command applies to the ONS 15454 CE-100T-8 card, the ONS 15454 FC_MR-4 card, and the 15310-CL CE-100T-8 card.

Category

Ports

Security

Provisioning

Related Commands

DLT-FFP-<OCN_TYPE>	ENT-FFP-<OCN_TYPE>	RTRV-G1000
ED-<OCN_TYPE>	OPR-PROTNSW-<OCN_TYPE>	RTRV-GFP
ED-DS1	RLS-PROTNSW-<OCN_TYPE>	RTRV-GIGE
ED-EC1	RTRV-<OCN_TYPE>	RTRV-HDLC
ED-FFP-<OCN_TYPE>	RTRV-DS1	RTRV-POS
ED-G1000	RTRV-EC1	RTRV-PROTNSW-<OCN_TYPE>
ED-HDLC	RTRV-FAC	RTRV-T1
ED-T1	RTRV-FFP-<OCN_TYPE>	RTRV-T3
ED-T3	RTRV-FSTE	RTRV-TRC-<OCN_TYPE>
ED-TRC-<OCN_TYPE>		

Input Format

ED-GFP:[<TID>]:<AID>:<CTAG>:::[FCS=<FCS>,][AUTOTHGFPBUF=<AUTOTHGFPBUF>,][GFPBUF=<GFPBUF>,][FILTER=<FILTER>];

Input Example

ED-GFP:CISCO:VFAC-1-0:123:::FCS=N,AUTOTHGFPBUF=Y,GFPBUF=16,FILTER=EGRESS;

Input Parameters

Table 3-60 ED-GFP Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45.
	Note VFAC AID is used for the CE-100T-8 cards on 15310-CL and 15454. ML-100T-8 GFP management is done via the IOS CLI and not via the TL1 interface. FAC AID is used for 15454 FC_MR-4
FCS	Payload frame check sequence
	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	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
FILTER	Parameter type is GFP_FILTER—filter feature in GFP
• EGRESS	Activate filter feature on egress port
• NONE	Turn off filter feature

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.58 ED-HDLC

Edit High-Level Data Link Control

Usage Guidelines

Cisco ONS 15600

This command edits HDLC-related attributes for HDLC-encapsulated payloads.

Category

Ports

Security

Provisioning

Related Commands

DLT-FFP-<OCN_TYPE>	ENT-FFP-<OCN_TYPE>	RTRV-G1000
ED-<OCN_TYPE>	OPR-PROTNSW-<OCN_TYPE>	RTRV-GFP
ED-DS1	RLS-PROTNSW-<OCN_TYPE>	RTRV-GIGE
ED-EC1	RTRV-<OCN_TYPE>	RTRV-HDLC
ED-FFP-<OCN_TYPE>	RTRV-DS1	RTRV-POS
ED-G1000	RTRV-EC1	RTRV-PROTNSW-<OCN_TYPE>
ED-GFP	RTRV-FAC	RTRV-T1
ED-T1	RTRV-FFP-<OCN_TYPE>	RTRV-T3
ED-T3	RTRV-FSTE	RTRV-TRC-<OCN_TYPE>
ED-TRC-<OCN_TYPE>		

Input Format

ED-HDLC:[<TID>]:<SRC>:<CTAG>[:::FCS=<FCS>];

Input Example

ED-HDLC:TID:VFAC-SLOT-PORT:CTAG:::FCS=FCS-16;

Input Parameters

Table 3-61 ED-HDLC Input Parameters

Parameter and Values	Description
SRC	Access identifier from the "FACILITY" section on page 4-45. The ONS 15600 ASAP card uses the VFAC AID
FCS	Payload frame check sequence
	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

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.59 ED-LNK-<MOD2O>

Edit Link (OCH, OMS, OTS)

Usage Guidelines

Cisco ONS 15454

This command edits an optical link state.

Category DWDM

Security Provisioning

Related Commands

DLT-LNK-<MOD2O>	ENT-LNK-<MOD2O>	RTRV-LNK-<MOD2O>
ED-DWDM	OPR-LASER-OTS	RTRV-OCH
ED-FFP-OCH	OPR-PROTNSW-OCH	RTRV-OMS
ED-OCH	RLS-LASER-OTS	RTRV-OTS
ED-OMS	RLS-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-OTS	RTRV-DWDM	RTRV-TRC-OCH
ED-TRC-OCH	RTRV-FFP-OCH	

Input Format ED-LNK-<MOD2O>:[<TID>]:<FROM>,<TO>:<CTAG>:::[CMDMDE=<CMDMDE>]:<PST>,[<SST>];

Input Example ED-LNK-OMS:PENNGROVE:BAND-6-1-TX,BAND-13-1-RX:114:::CMDMDE=CMDMDE:IS,AINS;

Input Parameters

Table 3-62 ED-LNK-<MODO> Input Parameters

Parameter and Values	Description
FROM	Identifier at one end of the optical link from the "BAND" section on page 4-29
TO	Identifier at the other end of the optical link from the "BAND" section on page 4-29
CMDMDE	Command Mode. The FRCD mode of operation is applicable to delete a VCAT member cross- connect from IS-NR or OOS-AU,AINS service state Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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

Table 3-62 ED-LNK-<MODO> Input Parameters (continued)

Parameter and Values	Description
PST	Primary state
	Note PST is not supported for OCH provisioning.
	Parameter type is PST—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.
	Parameter type is SST—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

Errors Errors are listed in Table 6-1 on page 6-1

3.2.60 ED-LNKTERM

Edit Provisionable Patchcord Termination

Usage Guidelines Cisco ONS 15454, 15327, 15310-CL

This command edits the attributes of a provisionable patchcord that has already been created. Only the remote end attributes (REMOTENODE, REMOTELNKTERMID) can be edited.

Notes:

1. 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 the above restriction will lead to an error message being responsed.
2. If the provisionable patchcord termination does not exist, an error message will be responsed.
3. This command does not accept multiple and ALL AIDs.

Category Provisionable Patchcords

Security Provisioning

Related Commands

DLT-LNK-<MOD2O>	ED-WDMANS	RTRV-FFP-OCH
DLT-LNKTERM	ED-WLEN	RTRV-LNK-<MOD2O>
DLT-OSC	ENT-LNK-<MOD2O>	RTRV-LNKTERM
DLT-WLEN	ENT-LNKTERM	RTRV-NE-WDMANS
ED-DWDM	ENT-OSC	RTRV-OCH
ED-FFP-OCH	ENT-WLEN	RTRV-OMS
ED-LNK-<MOD2O>	OPR-LASER-OTS	RTRV-OSC
ED-OCH	OPR-PROTNSW-OCH	RTRV-OTS
ED-OMS	OPR-SLV-WDMANS	RTRV-PROTNSW-OCH
ED-OSC	OPR-WDMANS	RTRV-SLV-WDMANS
ED-OTS	RLS-LASER-OTS	RTRV-TRC-OCH
ED-SLV-WDMANS	RLS-PROTNSW-OCH	RTRV-WDMANS
ED-TRC-OCH	RTRV-DWDM	RTRV-WLEN

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

Table 3-63 ED-LNKTERM Input Parameters

Parameter and Values	Description
AID	Access identifier from the "LNKTERM" section on page 4-48. 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. 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

Errors Errors are listed in Table 6-1 on page 6-1

3.2.61 ED-NE-GEN

Edit Network Element General

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command edits the node attributes of the NE.

Notes:

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

Caution Changing the IPADDR, IPMASK, or IIOP Port will cause a reset of the TCC2/TCC2P.

Note 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 System

Security Superuser

Related Commands

ACT-USER	INH-MSG-ALL	RTRV-NE-IPMAP
ALW-MSG-ALL	INH-MSG-DBCHG	RTRV-NE-PATH
ALW-MSG-DBCHG	INH-MSG-SECU	RTRV-NE-SYNCN
ALW-MSG-SECU	INIT-SYS	RTRV-NE-WDMANS
ED-DAT	RTRV-HDR	RTRV-TOD
ED-NE-PATH	RTRV-INV	SET-TOD
ED-NE-SYNCN	RTRV-NE-GEN	

Input Format

ED-NE-GEN:[<TID>]::<CTAG>:::[NAME=<NAME>,][IPADDR=<IPADDR>,]
[IPMASK=<IPMASK>,][DEFRTR=<DEFRTR>,][IIOPPORT=<IIOPPORT>,][NTP=<NTP>,]
[ETHIPADDR=<ETHIPADDR>,][ETHIPMASK=<ETHIPMASK>];

Input Example

ED-NE-GEN:CISCO::123:::NAME=NODENAME,IPADDR=192.168.100.52,
IPMASK=255.255.255.0,DEFRTR=192.168.100.1,IIOPPORT=57790,
NTP=192.168.100.52,ETHIPADDR=172.20.208.225,ETHIPMASK=255.255.255.0;

Input Parameters

Table 3-64 ED-NE-GEN Input Parameters

Parameter and Values	Description
NAME	Node name. String
IPADDR	Node IP address. String
IPMASK	Node IP mask. String
DEFRTR	Node default router. String
IIOPPORT	Node IIOP port. Integer
NTP	Node NTP timing origin address. String

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.62 ED-NE-PATH

Edit Network Element Paths

Usage Guidelines

Cisco ONS 15454, 15327, 15310-CL

This command edits the path attributes of the NE.

Category

System

Security

Provisioning

Related Commands

ACT-USER	INH-MSG-ALL	RTRV-NE-IPMAP
ALW-MSG-ALL	INH-MSG-DBCHG	RTRV-NE-PATH
ALW-MSG-DBCHG	INH-MSG-SECU	RTRV-NE-SYNCN
ALW-MSG-SECU	INIT-SYS	RTRV-NE-WDMANS
ED-DAT	RTRV-HDR	RTRV-TOD
ED-NE-GEN	RTRV-INV	SET-TOD
ED-NE-SYNCN	RTRV-NE-GEN	

Input Format ED-NE-PATH:[<TID>]::<CTAG>[:::PDIP=<PDIP>];

Input Example ED-NE-PATH:::CTAG:::PDIP=Y;

Input Parameters

Table 3-65 ED-NE-PATH Input Parameters

Parameter and Values	Description
PDIP	Flag used to indicate whether PDI-P should be generated on the outgoing VT structured STSs
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute

Errors Errors are listed in Table 6-1 on page 6-1

3.2.63 ED-NE-SYNCN

Edit Network Element Synchronization

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command edits the synchronization attributes of the NE.

Notes:

1. Although mixed mode timing is supported in this release, it is not recommended. See the "Mixed Mode Timing Support" section on page 1-21 for more information.
2. The existing external and line modes have the same functionality in all ONS 15454 4.x and 5.x releases:

   External mode: the node derives its timing from the BITS inputs.

   Line mode: the node derives its timing from the SONET line(s).

   Mixed mode: the node derives its timing from the BITS input or SONET lines.

Category Synchronization

Security Provisioning

Related Commands

ACT-USER	INIT-SYS	RTRV-COND-SYNCN
ALW-MSG-ALL	OPR-SYNCNSW	RTRV-HDR
ALW-MSG-DBCHG	REPT ALM BITS	RTRV-INV
ALW-MSG-SECU	REPT ALM SYNCN	RTRV-NE-GEN
ED-BITS	REPT EVT BITS	RTRV-NE-IPMAP
ED-DAT	REPT EVT SYNCN	RTRV-NE-PATH
ED-NE-GEN	RLS-SYNCNSW	RTRV-NE-SYNCN
ED-NE-PATH	RTRV-ALM-BITS	RTRV-NE-WDMANS
ED-SYNCN	RTRV-ALM-SYNCN	RTRV-SYNCN
INH-MSG-ALL	RTRV-BITS	RTRV-TOD
INH-MSG-DBCHG	RTRV-COND-BITS	SET-TOD
INH-MSG-SECU		

Input Format

ED-NE-SYNCN:[<TID>]::<CTAG>:::[TMMD=<TMMD>,][SSMGEN=<SSMGEN>,][QRES=<QRES>,][RVRTV=<RVRTV>,][RVTM=<RVTM>];

Input Example

ED-NE-SYNCN:CISCO::123:::TMMD=LINE,SSMGEN=GEN1,QRES=ABOVE-PRS,RVRTV=Y,RVTM=8.0;

Input Parameters

Table 3-66 ED-NE-SYNCN Input Parameters

Parameter and Values	Description
TMMD	Timing mode. A null value is equivalent to ALL Parameter type is TIMING_MODE—timing mode for the current node
• EXTERNAL	The node derives its clock from the BITS input
• LINE	The node derives it's clock from the SONET lines
• MIXED	The node derives it's clock from the mixed timing mode
SSMGEN	Synchronization status message set. A null value is equivalent to ALL 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 Parameter type is SYNC_QUALITY_LEVEL—network synchronization quality level
• ABOVE-PRS	Better than primary reference source. Valid setting for Generation-1 and Generation-2 SSM Set

Table 3-66 ED-NE-SYNCN Input Parameters (continued)

Parameter and Values	Description
• 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 the protection switching system reverts service to the original line after restoration. The value N indicates that the 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
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time. A null value is equivalent to ALL
	Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes

Errors Errors are listed in Table 6-1 on page 6-1

3.2.64 ED-OCH

Edit Optical Channel (OCH)

Usage Guidelines Cisco ONS 15454

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

See the "Provisioning Rules for Transponder and Muxponder Cards" section on page 1-10 for specific card provisioning rules.

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

Category

DWDM

Security

Provisioning

Related Commands

DLT-LNK-<MOD2O>	ENT-LNK-<MOD2O>	RTRV-LNK-<MOD2O>
ED-DWDM	OPR-LASER-OTS	RTRV-OCH
ED-FFP-OCH	OPR-PROTNSW-OCH	RTRV-OMS
ED-LNK-<MOD2O>	RLS-LASER-OTS	RTRV-OTS
ED-OMS	RLS-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-OTS	RTRV-DWDM	RTRV-TRC-OCH
ED-TRC-OCH	RTRV-FFP-OCH	

Input Format

ED-OCH:[<TID>]:<AID>:<CTAG>:::[RDIRN=<RDIRN>,][EXPWLEN=<EXPWLEN>,]
[VOAATTN=<VOAATTN>,][VOAPWR=<VOAPWR>,][CALOPWR=<CALOPWR>,]
[CHPOWER=<CHPOWER>,][NAME=<PORTNAME>,][SFBER=<SFBER>,][SDBER=<SDBER>,]
[COMM=<COMM>,][GCCRATE=<GCCRATE>,][OSDBER=<OSDBER>,][DWRAP=<DWRAP>,]
[FEC=<FEC>,][PAYLOADMAP=<PAYLOADMAP>,][MACADDR=<MACADDR>,]
[SYNCMSG=<SYNCMSG>,][SENDDUS=<SENDDUS>,][SOAK=<SOAK>,][OSPF=<OSPF>,]
[CMDMDE=<CMDMDE>]:<PST>,[<SST>];

Input Example

ED-OCH:CISCO: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,
COMM=DCC,GCCRATE=192K,OSDBER=1E-6,DWRAP=Y,FEC=STD,PAYLOADMAP=ASYNCH,
MACADDR=00-0E-AA-BB-CC-DD,SYNCMSG=N,SENDDUS=Y,SOAK=10,OSPF=Y,
CMDMDE=CMDMDE:IS,AINS;

Input Parameters

Table 3-67 ED-OCH Input Parameters

Parameter and Values	Description
AID	Access identifier from the "CHANNEL" section on page 4-30
RDIRN	Ring directionality of the optical line Parameter type is RDIRN_MODE—the optical ring directionality

Table 3-67 ED-OCH Input Parameters (continued)

Parameter and Values	Description
• 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)
EXPWLEN	Optical wavelength for this port. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards Parameter type is OPTICAL_WLEN—optical wavelength
• 1530.33	Wavelength 1
• 1531.12	Wavelength 2
• 1531.90	Wavelength 3
• 1532.68	Wavelength 4
• 1534.25	Wavelength 5
• 1535.04	Wavelength 6
• 1535.82	Wavelength 7
• 1536.61	Wavelength 8
• 1538.19	Wavelength 9
• 1538.98	Wavelength 10
• 1539.77	Wavelength 11
• 1540.56	Wavelength 12
• 1542.14	Wavelength 13
• 1542.94	Wavelength 14
• 1543.73	Wavelength 15
• 1544.53	Wavelength 16
• 1546.12	Wavelength 17
• 1546.92	Wavelength 18
• 1547.72	Wavelength 19
• 1548.51	Wavelength 20
• 1550.12	Wavelength 21
• 1550.92	Wavelength 22
• 1551.72	Wavelength 23
• 1552.52	Wavelength 24
• 1554.13	Wavelength 25
• 1554.94	Wavelength 26
• 1555.75	Wavelength 27
• 1556.55	Wavelength 28
• 1558.17	Wavelength 29
• 1558.98	Wavelength 30

Table 3-67 ED-OCH Input Parameters (continued)

Parameter and Values	Description
• 1559.79	Wavelength 31
• 1560.61	Wavelength 32
• USE-TWL1	Use Tunable Wavelength 1
VOAATTN	The value of calibrated attenuation for the VOA. It is expressed in dBm. For the following cards: optical service channel, optical amplifier, dispersion compensation units, multiplexor and demultiplexor and OADM, the range is 0.0 to +30.0. Not supported for TXP or MXP cards. Float
VOAPWR	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: optical service channel, optical amplifier, dispersion compensation units, multiplexor and demultiplexor and OADM. 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. Applicable only to the following cards: optical service channel, optical amplifier, dispersion compensation units, multiplexor and demultiplexor and OADM. Defaults to 0 dBm. Float
CHPOWER	The value of per channel optical power expected to the OCH drop port of an AD-4C unit. CHPOWER is a float expressed in dBm
	Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
PORTNAME	Port name. String
SFBER	Signal failure threshold for the SONET payload. Can only be provisioned on the working port
	Parameter type is SF_BER—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 for the SONET payload. Can only be provisioned on the working port
	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

Table 3-67 ED-OCH Input Parameters (continued)

Parameter and Values	Description
COMM	The GCC or DCC is enabled or disabled. The GCC can be enabled only if the digital wrapper has been enabled for the card. The default is NONE. Rules for an MXP_2.5G_10G/TXP_MR_10G client port are; only the DCC can be provisioned, if the termination mode is not transparent and the payload is SONET. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the DCC can be enabled only if the G.709 is not enabled and if the payload is SONET and the termination mode is not transparent. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the GCC can be enabled if there is no DCC and the G.709 flag is enabled. On a TXP/MXP DWDM port, the DCC/GCC can be disabled only if there are no provisionable patchcord terminations provisioned on the trunk port Parameter type is COMM_TYPE—out of band communications channel termination type
• DCC	Section DCC type
• GCC	Generic communication channel (OTN) type
• NONE	Disable DCC or GCC if enabled
GCCRATE	The data rate of the GCC traffic. The default is 192Kbps. For MXP_2.5G_10G/TXP_MR_10G cards this applies only to the DWDM port. **Note** The 576K option is not supported for this release (R5.0) Parameter type is GCCRATE—the data rate of the GCC traffic
• 192K	192 kbps
• 576K	576 kbps
DWRAP	The G.709 digital wrapper. It is either on or off. The system default is ON. For MXP_2.5G_10G/TXP_MR_10G cards, this applies only to the DWDM port. To enable G.709: • there should be no GCC on the DWDM port • the payload (in which the card is configured) should not be UNFRAMED To disable G.709: • 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 • none of the client ports on the card should be part of a Y cable protection group (muxponder only) Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute

Table 3-67 ED-OCH Input Parameters (continued)

Parameter and Values	Description
FEC	Forward error correction. It can be enabled only if the G.709 is turned ON. It is either off or enabled in standard or enhanced mode. The system default is standard FE enabled. The FEC level PM and thresholds apply if the FEC is turned ON
	Parameter type is FEC_MODE—specifies the type of forward error correction
• ENH	Enhanced FEC is enabled
• OFF	FEC is disabled
• STD	Standard FEC is enabled
PAYLOADMAP	The type of payload mapping. It can be enabled only if the G.709 is turned ON and FEC is enabled
	Parameter type is PAYLOAD_MAPPING—payload mapping mode
• ASYNCH	Asynchronous mapping mode
• ODU	ODU multiplex structure mode
• SYNCH	Synchronous mapping mode
MACADDR	MAC address for the 10GigE payload. String
SYNCMSG	The facility be enabled to provide the synchronization clock. This does not apply to the TXPD-10G card. This applies to an MXPD-10G card, only if the payload is SONET/SDH and the card termination mode is as follows: TRANSPARENT - All Client ports are available for all timing selections. All Trunk ports are not available. LINE - All ports are available for all-timing selections
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
SENDDUS	The facility sends out a Do not Use for Sync message. This does not apply to the TXPD-10G card. This applies to an MXPD-10G card, only if the payload is SONET/SDH and the card termination mode is as follows: TRANSPARENT- All Client ports are available for all timing selections. All Trunk ports are not available. LINE - All ports are available for all-timing selections
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
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). Integer
OSPF	Open shortest path first
	Parameter type is EXT_RING—indicates if the ring supports the extended K1/K2/K3 protocol

Table 3-67 ED-OCH Input Parameters (continued)

Parameter and Values	Description
• N	The ring does not support the extended K1/K2/K3 protocol
• Y	The ring does support the extended K1/K2/K3 protocol
CMDMDE	Command mode
	Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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
PST	Primary state
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service
SST	Secondary state
	Parameter type is SST—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

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.65 ED-OMS

Edit Optical Multiplex Section (OMS)

Usage Guidelines

Cisco ONS 15454

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

Category

DWDM

Security

Provisioning

Related Commands

DLT-LNK-<MOD2O>	ENT-LNK-<MOD2O>	RTRV-LNK-<MOD2O>
ED-DWDM	OPR-LASER-OTS	RTRV-OCH
ED-FFP-OCH	OPR-PROTNSW-OCH	RTRV-OMS
ED-LNK-<MOD2O>	RLS-LASER-OTS	RTRV-OTS
ED-OCH	RLS-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-OTS	RTRV-DWDM	RTRV-TRC-OCH
ED-TRC-OCH	RTRV-FFP-OCH	

Input Format

ED-OMS:[<TID>]:<AID>:<CTAG>:::[RDIRN=<RDIRN>,][EXPBAND=<EXPBAND>,]
[VOAATTN=<VOAATTN>,][VOAPWR=<VOAPWR>,][CALOPWR=<CALOPWR>,]
[CHPOWER=<CHPOWER>,][NAME=<NAME>,][CMDMDE=<CMDMDE>]:<PST>,[<SST>];

Input Example

ED-OMS:PENNGROVE:BAND-6-1:114:::RDIRN=W-E,EXPBAND=1530.32-1532.68,
VOAATTN=2.5,VOAPWR=7.5,CALOPWR=0.0,CHPOWER=2.0,NAME="OMSPORT",
CMDMDE=CMDMDE:IS,AINS;

Input Parameters

Table 3-68 ED-OMS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "BAND" section on page 4-29
RDIRN	Ring directionality of the optical line
	Parameter type is RDIRN_MODE—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 band for this port

Table 3-68 ED-OMS Input Parameters (continued)

Parameter and Values	Description
	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. Float
VOAPWR	The value of calibrated output power that the VOA is going to set as a result of its attenuation. 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. Float
CHPOWER	The value of per channel optical power. Float expressed in dBm
	Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
NAME	Port name. String
CMDMDE	Command mode
	Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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
PST	Primary state
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service
SST	Secondary state
	Parameter type is SST—provides additional information pertaining to PST and PSTQ

Table 3-68 ED-OMS Input Parameters (continued)

Parameter and Values	Description
• 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

Errors Errors are listed in Table 6-1 on page 6-1

3.2.66 ED-OSC

Edit Optical Service Channel (OSC)

Usage Guidelines Cisco ONS 15454

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

Category DWDM

Security Provisioning

Related Commands

DLT-LNK-<MOD2O>	ED-WDMANS	RTRV-FFP-OCH
DLT-LNKTERM	ED-WLEN	RTRV-LNK-<MOD2O>
DLT-OSC	ENT-LNK-<MOD2O>	RTRV-LNKTERM
DLT-WLEN	ENT-LNKTERM	RTRV-NE-WDMANS
ED-DWDM	ENT-OSC	RTRV-OCH
ED-FFP-OCH	ENT-WLEN	RTRV-OMS
ED-LNK-<MOD2O>	OPR-LASER-OTS	RTRV-OSC
ED-LNKTERM	OPR-PROTNSW-OCH	RTRV-OTS
ED-OCH	OPR-SLV-WDMANS	RTRV-PROTNSW-OCH
ED-OMS	OPR-WDMANS	RTRV-SLV-WDMANS
ED-OTS	RLS-LASER-OTS	RTRV-TRC-OCH
ED-SLV-WDMANS	RLS-PROTNSW-OCH	RTRV-WDMANS
ED-TRC-OCH	RTRV-DWDM	RTRV-WLEN

Input Format

ED-OSC:[<TID>]:<AID>:<CTAG>:::[RINGID=<RINGID>,][NODEID=<NODEID>];

Input Example

ED-OSC:PENNGROVE:OSC-1:114:::RINGID=1,NODEID=10;

Input Parameters

Table 3-69 ED-OSC Input Parameters

Parameter and Values	Description
AID	Access identifier from the "OSC" section on page 4-49
RINGID	The OSC ring ID of the NE up to six characters. Valid characters are A-Z and 0-9. String. Default value is "# of AID OSC-#". Integer
NODEID	The OSC node ID of the NE. NODEID ranges from 0 to 31. Integer

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.67 ED-OTS

Edit Optical Transport Section (OTS)

Usage Guidelines

Cisco ONS 15454

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

Category

DWDM

Security

Provisioning

Related Commands

DLT-LNK-<MOD2O>	ENT-LNK-<MOD2O>	RTRV-LNK-<MOD2O>
ED-DWDM	OPR-LASER-OTS	RTRV-OCH
ED-FFP-OCH	OPR-PROTNSW-OCH	RTRV-OMS
ED-LNK-<MOD2O>	RLS-LASER-OTS	RTRV-OTS
ED-OCH	RLS-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-OMS	RTRV-DWDM	RTRV-TRC-OCH
ED-TRC-OCH	RTRV-FFP-OCH	

Input Format

ED-OTS:[<TID>]:<AID>:<CTAG>:::[RDIRN=<RDIRN>,][VOAATTN=<VOAATTN>,] [VOAPWR=<VOAPWR>,][OFFSET=<OFFSET>,][CALTILT=<CALTILT>,][OSRI=<OSRI>,] [AMPLMODE=<AMPLMODE>,][CHPOWER=<CHPOWER>,][EXPGAIN=<EXPGAIN>,] [NAME=<NAME>,][CMDMDE=<CMDMDE>]:<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,AMPLMODE=GAIN,CHPOWER=10.0,EXPGAIN=-5.0, NAME="OTS PORT",CMDMDE=CMDMDE:IS,AINS;

Input Parameters

Table 3-70 ED-OTS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "LINE" section on page 4-47
RDIRN	Ring directionality of the optical line
	Parameter type is RDIRN_MODE—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. Float
VOAPWR	The value of calibrated output power that the VOA is going to set as a result of its attenuation. Float
OFFSET	The calibration value of the optical power added to the calculated reference value. Defaults to 0 dBm. Float
CALTILT	The amplifier calibration tilt offset to be added to the calculated reference value. Defaults to 0 dBm. Float. Optional
OSRI	OSRI enabled or disabled. Present only on a port where the safety is supported. Optional
	Parameter type is ON_OFF—disable or enable an attribute

Table 3-70 ED-OTS Input Parameters (continued)

Parameter and Values	Description
• N	Disable an attribute
• Y	Enable an attribute
AMPLMODE	The optical amplification control mode
	Parameter type is AMPL_MODE—defines amplifier control mode
• GAIN	The amplifier always maintains a fixed gain
• POWER	The amplifier maintains the output power to a fixed value
CHPOWER	The per channel optical power. Float
EXPGAIN	The gain expected value to be reached from an amplifier when the node is part of a DWDM access network. Float
NAME	The name of the port. String
CMDMDE	Command mode
	Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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
PST	Primary state
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service
SST	Secondary state
	Parameter type is SST—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

Errors Errors are listed in Table 6-1 on page 6-1

3.2.68 ED-PID

Edit Password

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

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

Notes:

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

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

   the syntax of OLDPID is not checked. The NEWPID is required to follow Telcordia standards (i.e., 10 characters maximum including 1 letter, 1 number, and any one of the following characters: #, %, or +). The OLDPID must match what is in the database.
4. You must use the ED-USER-SECU command to change the default password (empty) for the CISCO15 superuser.
5. The ED-PID command cannot be used to change the empty password to a valid password.

Category Security

Security Retrieve

Related Commands

ACT-USER	DLT-USER-SECU	REPT EVT SECU
ALW-MSG-SECU	ED-CMD-SECU	REPT EVT SESSION
ALW-USER-SECU	ED-USER-SECU	RTRV-CMD-SECU
CANC	ENT-USER-SECU	RTRV-DFLT-SECU
CANC-USER	INH-MSG-SECU	RTRV-USER-SECU
CANC-USER-SECU	INH-USER-SECU	SET-ATTR-SECUDFLT
CLR-COND-SECU	REPT ALM SECU	

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

Input Example ED-PID:CISCO:UID:123::OLDPWD,NEWPWD;

Input Parameters

Table 3-71 ED-PID Input Parameters

Parameter and Values	Description
UID	User identifier. Up to 10 alphanumeric characters. String
OLDPID	The user's old password. Up to 10 alphanumeric characters. Passwords are encrypted and will be displayed as asterisks (*). String
NEWPID	The user's new password. Up to 10 alphanumeric characters. Passwords are encrypted and will be displayed as asterisks (*). String

Errors Errors are listed in Table 6-1 on page 6-1

3.2.69 ED-POS

Edit Packet Over SONET

Usage Guidelines Cisco ONS 15454, 15310-CL

Note This command is supported for the ONS 15454 CE-100T-8 card, and the ONS 15310-CL ML-100T-8 and CE-100T-8 cards.

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, issue the RTRV-XX command to retrieve them. ED-POS cannot set ENCAP and PST/SST.

Category Ports

Security Provisioning

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

ED-POS:[<TID>]:<AID>:<CTAG>:::[ENCAP=<ENCAP>,][NAME=<NAME>,]
[CMDMDE=<CMDMDE>,][SOAK=<SOAK>]:<PST>,[<SST>];

Input Example

ED-POS:CISCO:VFAC-2-0:123:::ENCAP=HDLC,NAME=NAME,CMDMDE=CMDMDE,
SOAK=32:IS,AINS;

Input Parameters

Table 3-72 ED-POS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
ENCAP	Encapsulation
	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	Port name. String
CMDMDE	Command Mode. The FRCD mode of operation is applicable to delete a VCAT member cross- connect from IS-NR or OOS-AU,AINS service state
	Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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
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). Integer
PST	Primary state
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	Inservice
• OOS	Out of service
SST	Secondary state
	Parameter type is SST—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

Table 3-72 ED-POS Input Parameters (continued)

Parameter and Values	Description
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

Errors Errors are listed in Table 6-1 on page 6-1

3.2.70 ED-SLV-WDMANS

Edit Span Loss Verification Wavelength Division Multiplexing Automatic Node Setup

Usage Guidelines Cisco ONS 15454

This command edits the expected span loss verification.

Category DWDM

Security Provisioning

Related Commands

DLT-LNK-<MOD2O>	ED-WDMANS	RTRV-FFP-OCH
DLT-LNKTERM	ED-WLEN	RTRV-LNK-<MOD2O>
DLT-OSC	ENT-LNK-<MOD2O>	RTRV-LNKTERM
DLT-WLEN	ENT-LNKTERM	RTRV-NE-WDMANS
ED-DWDM	ENT-OSC	RTRV-OCH
ED-FFP-OCH	ENT-WLEN	RTRV-OMS
ED-LNK-<MOD2O>	OPR-LASER-OTS	RTRV-OSC
ED-LNKTERM	OPR-PROTNSW-OCH	RTRV-OTS
ED-OCH	OPR-SLV-WDMANS	RTRV-PROTNSW-OCH
ED-OMS	OPR-WDMANS	RTRV-SLV-WDMANS
ED-OSC	RLS-LASER-OTS	RTRV-TRC-OCH
ED-OTS	RLS-PROTNSW-OCH	RTRV-WDMANS
ED-TRC-OCH	RTRV-DWDM	RTRV-WLEN

Input Format ED-SLV-WDMANS:[<TID>]:<AID>:<CTAG>:::[HIGHSLVEXP=<HIGHSLVEXP>,] [LOWSLVEXP=<LOWSLVEXP>];

Input Example

ED-SLV-WDMANS:VA454-22:WDMANS-E:116:::HIGHSLVEXP=10.0,LOWSLVEXP=5.0;

Input Parameters

Table 3-73 ED-SLV-WDMANS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "WDMANS" section on page 4-59
HIGHSLVEXP	The high range value of the expected span loss verification. Float
LOWSLVEXP	The low range value of the expected span loss verification. Float

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.71 ED-SYNCN

Edit Synchronization

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

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

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

Category

Synchronization

Security

Provisioning

Related Commands

ED-BITS	REPT EVT BITS	RTRV-BITS
ED-NE-SYNCN	REPT EVT SYNCN	RTRV-COND-BITS
OPR-SYNCNSW	RLS-SYNCNSW	RTRV-COND-SYNCN
REPT ALM BITS	RTRV-ALM-BITS	RTRV-NE-SYNCN
REPT ALM SYNCN	RTRV-ALM-SYNCN	RTRV-SYNCN

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

Table 3-74 ED-SYNCN Input Parameters

Parameter and Values	Description
AID	Access identifier from the "SYNC_REF" section on page 4-56
PRI	Primary reference of the synchronization from the "SYN_SRC" section on page 4-55
SEC	Secondary reference of the synchronization from the "SYN_SRC" section on page 4-55
THIRD	Third reference of the synchronization from the"SYN_SRC" section on page 4-55

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.72 ED-T1

Edit Digital Signal Facility

Usage Guidelines

Cisco ONS 15454, 15327, 15310-CL

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

Notes:

1. The T1 facilities on the ONS 15327 and 15310-CL are on the XTC/15310-CL-CTX card.
2. This command is not allowed if the card is a protecting card.
3. If sending this command to edit TACC and any other attribute(s), and the port having the cross-connection, the (Parameters Not compatible) error message will be returned.
4. Editing TACC via an ED-xxx command is only allowed when there is no circuit/cross-connection on this port and the port/VT does not have a test access point (TAP or TACC number). Otherwise, an error message (e.g. VT in Use) will be returned.
5. TACC creation will also be denied on the protect ports/cards.

Category

Ports

Security

Provisioning

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

ED-T1:[<TID>]:<AID>:<CTAG>:::[LINECDE=<LINECDE>,][FMT=<FMT>,][LBO=<LBO>,]
[TACC=<TACC>,][TAPTYPE=<TAPTYPE>,][SOAK=<SOAK>,][SFBER=<SFBER>,]
[SDBER=<SDBER>,][SYNCMSG=<SYNCMSG>,][SENDDUS=<SENDDUS>,]
[RETIME=<RETIME>,][NAME=<NAME>,][CMDMDE=<CMDMDE>]:<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,
RETIME=Y,NAME="T1 PORT",CMDMDE=CMDMDE:IS,AINS;

Input Parameters

Table 3-75 ED-T1 Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
LINECDE	Line code
	Parameter type is LINE_CODE—line code
• AMI	Line code value is AMI
• B8ZS	Line code value is B8ZS (bipolar with three-zero substitution)
FMT	Digital signal frame format
	Parameter type is FRAME_FORMAT—frame format for a T1 port
• D4	Frame format is D4
• ESF	Frame format is ESF
• UNFRAMED	Frame format is unframed
LBO	Line build out settings. Integer
	Parameter type is LINE_BUILDOUT—Line buildout
• 0–131	Line buildout range is 0–131
• 132–262	Line buildout range is 132–262
• 263–393	Line buildout range is 263–393
• 394–524	Line buildout range is 394–524
• 525–655	Line buildout range is 525–655
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. Integer
TAPTYPE	TAP type. Defaults to DUAL
	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). Integer
SFBER	The port signal failure threshold
	Parameter type is SF_BER—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
	Parameter type is SD_BER—the threshold for declaring signal degrade on a facility or path
• 1E-5	SDBER is 1E-5

Table 3-75 ED-T1 Input Parameters (continued)

Parameter and Values	Description
• 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. **Note** For ONS 15310-CL, SYNCMSG defaults to N. SYNCMSG is not supported on the ONS 15454 or 15327 Parameter type is YES_NO—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
SENDDUS	The facility will send the DUS (Don't use for Synchronization) value as the sync status message for that facility **Note** For ONS 15310-CL, SENDDUS is optional and defaults to N. SENDDUS is not supported on the ONS 15454 or 15327 Parameter type is YES_NO—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
RETIME	Indicates if retiming is needed. **Note** For ONS 15310-CL, RETIME is optional and defaults to N. RETIME is not supported on the ONS 15454 or 15327 Parameter type is YES_NO—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
NAME	Name. String
CMDMDE	Command mode Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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

Table 3-75 ED-T1 Input Parameters (continued)

Parameter and Values	Description
PST	Primary state
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service
SST	Secondary state
	Parameter type is SST—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

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.73 ED-T3

Edit DS facility

Usage Guidelines

Cisco ONS 15454, 15327, 15310-CL

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

Notes:

1. The T3 facilities on the ONS 15327 and 15310-CL are on the XTC/15310-CL-CTX card.
2. This command is not allowed if the card is a protecting card.
3. Both FMT and Line code are not supported for T3/DS3 facility. They are supported on both the DS3XM and DS3E card. The unframed value of the framing format is only supported on the DS3E facility.
4. If sending this command to edit TACC and any other attribute(s), and the port having the cross-connection or the port/VT has a test access point (TAP or TACC number), the (Parameters Not compatible) error message will be returned.

5. Editing TACC via an ED-xxx command is only allowed when there is no circuit/cross-connection on the port and the port/VT does not have a test access point (TAP or TACC number). Otherwise, an error message (VT in Use) will be returned.
6. TACC creation will also be denied on the protect ports/cards.
7. Automatic application of loopbacks originating from the far end can be initiated on the T3 ports of a DS3E, DS3NE, or DS3XM card.
8. 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. The AUTOPROVISION is not considered a valid DS3 framing type. It is only used to trigger an autosense and subsequent auto provisioning 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.
9. For the DS3XM-12 card, the DS3/T3 configurable attributes (PM, TH, alarm, etc.) only apply on the ported ports (1-12) 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.
10. For the DS3XM-12 card, if the admin state is already set for a portless port the state setting operation over its associated ported port is an invalid operation.
11. The test set physical connection setup via ED-T3/DS1/STS1/VT1 of the DS3XM-12 card is only allowed on the physical front ports (PORTED ports, ports 1-12), which are the monitoring ports.
    a. 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 setup a physical connection with the test set because there is no next available port to be the monitoring port.
    b. The TACC disconnection (DISC-TACC) command and the test access mode change (CHG-TACC) command follow the same requirement as in note 11a. above, but applied on the ported ports of the DS3XM-12 card.
    c. The test access connection setup (CONN-TACC) command has monitored points which can be portless ports. This command is applied on both ported and portless ports of the DS3XM-12 card.
12. 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.

Category Ports

Security Provisioning

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

ED-T3:[<TID>]:<AID>:<CTAG>:::[FMT=<FMT>,][LINECDE=<LINECDE>,][LBO=<LBO>,][INHFELPBK=<INHFELPBK>,][TACC=<TACC>,][TAPTYPE=<TAPTYPE>,][SOAK=<SOAK>,][SFBER=<SFBER>,][SDBER=<SDBER>,][NAME=<NAME>,][CMDMDE=<CMDMDE>]:<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="T3PORT",
CMDMDE=CMDMDE:IS,AINS;

Input Parameters

Table 3-76 ED-T3 Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
FMT	Digital signal frame format. The unframed value of the framing format is only supported for the DS3E card
	Parameter type is DS_LINE_TYPE—DS123 line type
• C-BIT	C-BIT line type applies to the DS3XM and DS3E cards
• M13	M13 line type applies to the DS3XM and DS3E cards
• UNFRAMED	Line type is unframed. The old DS3 (L3M) and DS3CR cards can only run in unframed mode
LINECDE	Line code
	Parameter type is DS_LINE_CODE—DS123 line code
• B3ZS	Bipolar with three-zero substitution
LBO	Line build out settings. Integer
	Parameter type is E_LBO—electrical signal line buildout
• 0–225	Electrical signal line buildout range is 1–225
• 226–450	Electrical signal line buildout range is 226–450
INHFELPBK	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. Optional
	Parameter type is ON_OFF—disable or enable 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. Integer
TAPTYPE	TAP type. Defaults to DUAL
	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). Integer
SFBER	The port signal failure threshold
	Parameter type is SF_BER—the threshold for declaring signal failure on a facility or path

Table 3-76 ED-T3 Input Parameters (continued)

Parameter and Values	Description
• 1E-3	SFBER is 1E-3
• 1E-4	SFBER is 1E-4
• 1E-5	SFBER is 1E-5
SDBER	Port signal degrade threshold
	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
NAME	Name. String
CMDMDE	Command mode
	Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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
PST	Primary state
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	Inservice
• OOS	Out of service
SST	Secondary state
	Parameter type is SST—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

Errors Errors are listed in Table 6-1 on page 6-1

3.2.74 ED-TRAPTABLE

Edit Trap Table

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command edits a trap destination entry identified by a specific trap destination address.

Category System

Security Provisioning

Related Commands

ACT-USER	ED-NE-SYNCN	RTRV-NE-GEN
ALW-MSG-ALL	ENT-TRAPTABLE	RTRV-NE-IPMAP
ALW-MSG-DBCHG	INH-MSG-ALL	RTRV-NE-PATH
ALW-MSG-SECU	INH-MSG-DBCHG	RTRV-NE-SYNCN
DLT-TRAPTABLE	INH-MSG-SECU	RTRV-NE-WDMANS
ED-DAT	INIT-SYS	RTRV-TOD
ED-NE-GEN	RTRV-HDR	RTRV-TRAPTABLE
ED-NE-PATH	RTRV-INV	SET-TOD

Input Format

ED-TRAPTABLE:[<TID>]:<AID>:<CTAG>::<SKIPPED>:COMMUNITY=<COMMUNITY>,[TRAPPORT=<TRAPPORT>,][TRAPVER=<TRAPVER>];

Input Example

ED-TRAPTABLE::1.2.3.4:1:::COMMUNITY=“PUBLIC”,TRAPPORT=162,TRAPVER=SNMPV1;

Input Parameters

Table 3-77 ED-TRAPTABLE Input Parameters

Parameter and Values	Description
AID	Access identifier from the “IPADDR” section on page 4-47. IP address identifying the trap destination
SKIPPED	String
COMMUNITY	Community name associated to the trap destination. Maximum of 32 characters. String

Table 3-77 ED-TRAPTABLE Input Parameters (continued)

Parameter and Values	Description
TRAPPORT	UDP port number associated with the trap destination. Default to 162. Integer
TRAPVER	SNMP version number. Defaults to SNMPv1
	Parameter type is SNMP_VERSION—SNMP version
• SNMPV1	SNMP version 1 (default)
• SNMPV2	SNMP version 2

Errors Errors are listed in Table 6-1 on page 6-1

3.2.75 ED-TRC-<MOD2DWDMPAYLOAD>

Edit Trace (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, HDTV, ISC1)

Usage Guidelines

Cisco ONS 15454

This command edits trace-related attributes on DWDM client facilities.

See the "Provisioning Rules for Transponder and Muxponder Cards" section on page 1-10 for specific card provisioning rules.

Category DWDM

Security Provisioning

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

ED-TRC-<MOD2DWDMPAYLOAD>:[<TID>]:<SRC>:<CTAG>:::[EXPTRC=<EXPTRC>,][TRC=<TRC>,][TRCMODE=<TRCMODE>,][TRCLEVEL=<TRCLEVEL>,][TRCFORMAT=<TRCFORMAT>][:];

Input Example

ED-TRC-HDTV:CISCO:FAC-1-1-1:10:::EXPTRC="AAA",TRC="AAA",TRCMODE=MAN,TRCLEVEL=J0,TRCFORMAT=16-BYTE;

Input Parameters

Table 3-78 ED-TRC-<MOD2DWDMPAYLOAD> Input Parameters

Parameter and Values	Description
SRC	Access identifier from the "FACILITY" section on page 4-45. Must not be null
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. 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. A null value is equivalent to ALL
	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
TRCLEVEL	The trace level to be managed. A null value is equivalent to ALL. String
TRCFORMAT	Trace message size. A null value is equivalent to ALL
	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

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.76 ED-TRC-OCH

Edit Trace Optical Channel Facilities

Usage Guidelines

Cisco ONS 15454

The command edits trace-related optical channel facilities.

See the "Provisioning Rules for Transponder and Muxponder Cards" section on page 1-10 for specific card provisioning rules.

Category

DWDM

Security

Provisioning

Related Commands

DLT-LNK-<MOD2O>	ED-WDMANS	RTRV-FFP-OCH
DLT-LNKTERM	ED-WLEN	RTRV-LNK-<MOD2O>
DLT-OSC	ENT-LNK-<MOD2O>	RTRV-LNKTERM
DLT-WLEN	ENT-LNKTERM	RTRV-NE-WDMANS
ED-DWDM	ENT-OSC	RTRV-OCH
ED-FFP-OCH	ENT-WLEN	RTRV-OMS
ED-LNK-<MOD2O>	OPR-LASER-OTS	RTRV-OSC
ED-LNKTERM	OPR-PROTNSW-OCH	RTRV-OTS
ED-OCH	OPR-WDMANS	RTRV-PROTNSW-OCH
ED-OMS	RLS-LASER-OTS	RTRV-TRC-OCH
ED-OSC	RLS-PROTNSW-OCH	RTRV-WDMANS
ED-OTS	RTRV-DWDM	RTRV-WLEN

Input Format

ED-TRC-OCH:[<TID>]:<SRC>:<CTAG>:::[EXPTRC=<EXPTRC>,][TRC=<TRC>,] [TRCMODE=<TRCMODE>,][TRCLEVEL=<TRCLEVEL>,][TRCFORMAT=<TRCFORMAT>][:];

Input Example

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

Input Parameters

Table 3-79 ED-TRC-OCH Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "CHANNEL" section on page 4-30
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. 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
	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
TRCLEVEL	The trace level to be managed. String
TRCFORMAT	Trace message size
	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

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.77 ED-USER-SECU

Edit User Security

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command edits a user's privileges, password, or ID. Only a Superuser may perform this operation. Privilege levels are described in the ENT-USER-SECU command.

Notes:

1. Passwords are masked for the following security commands: ACT-USER, ED-PID, ENT-USER-SECU and ED-USER-SECU. Access to a TL1 session via any means will have the password masked. The CTC Request History and Message Log will also show the masked commands. When a password-masked command is re-issued by double-clicking the command from CTC Request History, the password will still be masked in the CTC Request History and Message Log. The actual password that was previously issued will be sent to the NE. To use a former command as a template only, single-click the command in CTC Request History. The command will be placed in the Command Request text box, where you can edit the appropriate fields prior to re-issuing it.
2. Although the CTC allows both <UID> and <PID> of up to 20 characters, the CTC-entered users (<UID>, <PID>) are not valid TL1 users (e.g., if issuing an ACT-USER command and using the CTC-entered <UID> that is greater than 10 characters long, TL1 will respond with DENY.
3. For the ED-USER-SECU command;

   ED-USER-SECU:[TID]:<UID>:[CTAG]::[<NEWUID>],[<NEWPID>],,[<UAP>]:;

   a. If the <NEWPID> is specified, the syntax is checked.
   b. The syntax of <UID> is not checked.
   c. Old users can change their password without changing their userid, but the new password must meet the new requirements.
   d. The <NEWPID> is required when changing the <USERID>.
4. In this release (R5.0), when <NEWUID> is specified, <NEWPID> (and the <UAP>) become mandatory, but it is possible to change a USERID without changing the password by providing the same password. A user cannot keep his old password if the old password does not meet the new syntax requirements. For example:

   – <USERID> = CISCO2345
   <PASSWORD>=CISCO#234 /*PASSWORD ALREADY MEETS REQUIREMENTS*/

   ED-USER-SECU::CISCO2345:1::CISCO3456,CISCO#234,,PROV;

   TCCP 1970-01-02 13:15:35 M 1 COMPLD ;

   – <NEWUSERID> = CISCO60
   <USERID> = CISCO40 <PASSWORD>=CISCO40 /*PASSWORD DOES NOT MEET REQUIREMENTS*/

   ED-USER-SECU::CISCO40:1::CISCO60,CISCO40,,PROV;

   BRONCOS4 1970-01-02 13:14:24 M 1 DENY IIFM /* INVALID PASSWORD */ ;
5. The ED-USER-SECU command should be used to change the default password (empty) for the CISCO15 default superuser.
6. The ED-PID command cannot be used to change the empty password to a valid password.

Category Security

Security Superuser

Related Commands

ACT-USER	DLT-USER-SECU	REPT EVT SECU
ALW-MSG-SECU	ED-CMD-SECU	REPT EVT SESSION
ALW-USER-SECU	ED-PID	RTRV-CMD-SECU
CANC	ENT-USER-SECU	RTRV-DFLT-SECU
CANC-USER	INH-MSG-SECU	RTRV-USER-SECU
CANC-USER-SECU	INH-USER-SECU	SET-ATTR-SECUDFLT
CLR-COND-SECU	REPT ALM SECU	

Input Format ED-USER-SECU:[<TID>]:<UID>:<CTAG>::[<NEWUID>],[<NEWPID>],,[<UAP>][:];

Input Example ED-USER-SECU:PETALUMA:CISCO15:123::NEWUID,NEWPID,,MAINT;

Input Parameters

Table 3-80 ED-USER-SECU Input Parameters

Parameter and Values	Description
UID	User's identifier. Minimum UID is 6 characters. Maximum UID is 10 characters. String
NEWUID	User's new identifier. Minimum UID is 6 characters. Maximum UID is 10 characters. String
NEWPID	User's new password. Minimum UID is 6 characters. Maximum UID is 10 characters. String
UAP	User's access privilege
	Parameter type is PRIVILEGE—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

Errors Errors are listed in Table 6-1 on page 6-1

3.2.78 ED-VCG

Edit Virtual Concatenated Group

Usage Guidelines

Cisco ONS 15454, 15310-CL

This command edits the attributes of a VCG.

Category

VCAT

Security

Provisioning

Related Commands

DLT-VCG ENT-VCG RTRV-VCG

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

Table 3-81 ED-VCG Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "FACILITY" section on page 4-45
TXCOUNT	Number of members in the 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. Integer
NAME	Name of the VCAT group. Maximum length is 64 characters. String.

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.79 ED-WDMANS

Edit Wavelength Division Multiplexing Automatic Node Setup

Usage Guidelines

Cisco ONS 15454

This command edits the optical node setup application (AONS) attributes.

Category

DWDM

Security

Provisioning

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-FFP-OCH
DLT-LNKTERM	ED-WLEN	RTRV-LNK-<MOD2O>
DLT-OSC	ENT-LNK-<MOD2O>	RTRV-LNKTERM
DLT-WLEN	ENT-LNKTERM	RTRV-NE-WDMANS
ED-DWDM	ENT-OSC	RTRV-OCH
ED-FFP-OCH	ENT-WLEN	RTRV-OMS
ED-LNK-<MOD2O>	OPR-LASER-OTS	RTRV-OSC
ED-LNKTERM	OPR-PROTNSW-OCH	RTRV-OTS
ED-OCH	OPR-WDMANS	RTRV-PROTNSW-OCH
ED-OMS	RLS-LASER-OTS	RTRV-TRC-OCH
ED-OSC	RLS-PROTNSW-OCH	RTRV-WDMANS
ED-OTS	RTRV-DWDM	RTRV-WLEN

Input Format

ED-WDMANS:[<TID>]:<AID>:<CTAG>:::[POWER-IN=<POWERIN>,]
[POWER-OUT=<POWEROUT>,][POWER-EXP=<POWEREXP>,]
[POWER-DROP=<POWERDROP>,][SYS-TYPE=<SYSTYPE>,][RING-TYPE=<RINGTYPE>];

Input Example

ED-WDMANS:PENNGROVE:WDMANS-W:114:::POWER-IN=10.0,POWER-OUT=10.0,
POWER-EXP=10.0,POWER-DROP=10.0,SYS-TYPE=SMF-28-SR,RING-TYPE=METRO-CORE;

Input Parameters

Table 3-82 ED-WDMANS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "WDMANS" section on page 4-59
POWERIN	Input power for OADM section or Mux/Demux for terminal nodes. Float
POWEROUT	Output power for OADM section or Mux/Demux for terminal nodes. Float
POWEREXP	Express power for OADM section. Float
POWERDROP	Drop power for Mux/Demux section of a HUB or TERMINAL NE. Float
NTWTYPE	Network type where a DWDM node is installed
	Parameter type is DWDM_RING_TYPE—network type where NE is installed
• METRO-ACCESS	The network where a DWDM node is installed is a metro access network
• METRO-CORE	The network where a DWDM node is installed is a metro core network
• NONE	A node that does not have a standard DWDM configuration

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.80 ED-WLEN

Edit Wavelength

Usage Guidelines

Cisco ONS 15454

This command edits WLEN (wavelength) provisioning.

Notes:

1. The fields after CTAG (trailing colons) are optional.
2. This command does not support multiple editing of WLEN provisioning.
3. CKTID is a string of ASCII characters. The maximum length of a CKTID can be 48. If CKTID is EMPTY or NULL this field will not be displayed.

Category

DWDM

Security

Provisioning

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-FFP-OCH
DLT-LNKTERM	ED-WLEN	RTRV-LNK-<MOD2O>
DLT-OSC	ENT-LNK-<MOD2O>	RTRV-LNKTERM
DLT-WDMANS	ENT-LNKTERM	RTRV-NE-WDMANS
ED-DWDM	ENT-OSC	RTRV-OCH
ED-FFP-OCH	ENT-WLEN	RTRV-OMS
ED-LNK-<MOD2O>	OPR-LASER-OTS	RTRV-OSC
ED-LNKTERM	OPR-PROTNSW-OCH	RTRV-OTS
ED-OCH	OPR-WDMANS	RTRV-PROTNSW-OCH
ED-OMS	RLS-LASER-OTS	RTRV-TRC-OCH
ED-OSC	RLS-PROTNSW-OCH	RTRV-WDMANS
ED-OTS	RTRV-DWDM	RTRV-WLEN

Input Format

ED-WLEN:[<TID>]:<AID>:<CTAG>:::[SIZE=<SIZE>,][CKTID=<CKTID>,][CMDMDE=<CMDMDE>]:<PST>,[<SST>];

Input Example

ED-WLEN:PENNGROVE:WLEN-W-ADD-1530.33:1:::SIZE=NOT-SPEC,CKTID=CKTID,CMDMDE=CMDMDE:IS,AINS;

Input Parameters

Table 3-83 ED-WLEN Input Parameters

Parameter and Values	Description
AID	Access identifier from the "WLEN" section on page 4-59
SIZE	Size of the switching network
	Parameter type is CIRCUIT_SIZE—the DWDM circuit size used on a wavelength
• 10G-FEC	The circuit size is 10 Gbps with FEC
• 10G-NO-FEC	The circuit size is10 Gbps without FEC
• 2G5-FEC	The circuit size is 2.5 Gbps with FEC
• 2G5-NO-FEC	The circuit size is 2.5 Gbps without FEC
• MULTI-RATE	The circuit size is supports multi-rate
• NOT-SPEC	The circuit size is not equipment specific
CKTID	Circuit ID. String

Table 3-83 ED-WLEN Input Parameters (continued)

Parameter and Values	Description
CMDMDE	Command execution mode, forced or normal. FRCD is only applicable if the PST=OOS and SST=DSBLD
	Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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
PST	Primary state
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	Inservice
• OOS	Out of service
SST	Secondary state
	Parameter type is SST—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

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.81 ENT-<MOD1PAYLOAD>

Enter (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, EC1, ESCON, ETRCLO, GIGE, HDTV, ISC1, OC12, OC192, OC3, OC48, T3)

Usage Guidelines

Cisco ONS 15454, 15310-CL, 15600

Note Support is limited to ports with PPMs (pluggable port modules).

This command creates a specified port.

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

Category

Ports

Security

Provisioning

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

ENT-<MOD1PAYLOAD>:[<TID>]:<AID>:<CTAG>[::::];

Input Example

ENT-GIGE:TID:FAC-5-1:1;

Input Parameters

Table 3-84 ENT-<MOD1PAYLOAD> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.82 ENT-<MOD_RING>

Enter BLSR

Usage Guidelines Cisco ONS 15454, 15327, 15600

This command creates either a two-fiber or four-fiber BLSR.

Note The ONS 15327 and 15600 do not support four-fiber BLSR.

Note <RINGID> defaults to the string of the AID format of BLSR-string.

Input examples:

Four-fiber BLSR:

ENT-BLSR:TID:BLSR-N02ABC:CTAG:::RINGID=N02ABC,NODEID=3,MODE=4F,RVRTV=Y, RVTM=5.0,SRVRTV=Y,SRVTM=5.0,EASTWORK=FAC-5-1,WESTWORK=FAC-6-1, EASTPROT=FAC-12-1,WESTPROT=FAC-13-1;

Two-fiber BLSR:

ENT-BLSR:TID:BLSR-N04EFG:CTAG:::RINGID=N04EFG,NODEID=6,MODE=2F,RVRTV=Y, RVTM=5.0,EASTWORK=FAC-5-1,WESTWORK=FAC-6-1;

Error conditions:

1. If RINGID is different from the string presented in the AID format, an IIAC (RingId Does Not Match With AID) error message is returned.
2. Both <EASTPROT> and <WESTPROT> are optional, but required for 4-fiber BLSR creation.
3. If sending this command to create a BLSR with an out of range nodeid or ringid, an IIAC (Invalid NodeId) or (Invalid RingId) error message will be returned.
4. If sending this command to create 4-fiber BLSR on OC12 cards, or 2-fiber BLSR on OC3 cards, an IIAC (Input, Invalid work/prot port) error message will be returned.
5. If sending this command to create a BLSR on an NE that already has five BLSRs, a SRQN (BLSR Creation Failed) error message will be returned because one NE is only allowed to have up to five BLSRs in this release (R5.0).
6. If sending this command to create a BLSR on a port with 1+1, a SRQN (BLSR Creation Failed) error message will be returned.

7. If the system fails on getting IOR, an SROF (Get IOR Failed) error message is returned.
8. If the AID is invalid, an IIAC (Invalid AID) error message is returned.
9. The ALL AID is invalid for this command.
10. If any facility requested in this command is in use, an SPLD (Facility is Busy) error message is returned.
11. The SRQN (BLSR Creation Failed) error message is returned for an invalid creation query.
12. If sending this command to provision the mode with an invalid BLSR mode, an IIDT (Invalid BLSR Mode) error message is returned.
13. If sending this command to modify SRVRTV or SRVTM on the two-fiber BLSR, an IDNV (Invalid Data for 2F-BLSR) error message is returned.
14. If sending this command to provision the nodeid with invalid data, an IIAC (Invalid NodeId) error message is returned.
15. If sending this command to provision the ringid with invalid data, an IIAC (Invalid RingId) error message is returned.
16. If sending this command with invalid working AID, an IIDT (Invalid BLSR Working Facility) error message is returned.
17. If sending this command with invalid protection AID, an IIDT (Invalid BLSR Protect Facility) error message is returned.
18. If changing the BLSR nodeid with a duplicated ID, a SROF (Cannot Set NodeId) error message is returned.

Category BLSR

Security Provisioning

Related Commands

DLT-<MOD_RING>	EX-SW-<OCN_BLSR>	RTRV-TRC-<OCN_BLSR>
ED-<MOD_RING>	RTRV-<MOD_RING>	

Input Format ENT-<MOD_RING>:[<TID>]:<AID>:<CTAG>:::[RINGID=<RINGID>,]NODEID=<NODEID>, MODE=<MODE>,[RVRTV=<RVRTV>,][RVTM=<RVTM>,][SRVRTV=<SRVRTV>,] [SRVTM=<SRVTM>,]EASTWORK=<EASTWORK>,WESTWORK=<WESTWORK>, [EASTPROT=<EASTPROT>,][WESTPROT=<WESTPROT>];

Input Example ENT-BLSR:PETALUMA:BLSR-2:123:::RINGID=2,NODEID=1,MODE=4F,RVRTV=Y,RVTM=5.0, SRVRTV=Y,SRVTM=5.0,EASTWORK=FAC-5-1,WESTWORK=FAC-6-1,EASTPROT=FAC-12-1, WESTPROT=FAC-13-1;

Input Parameters

Table 3-85 ENT-<MOD_RING> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "AidUnionId" section on page 4-25. Identifies the BLSR of the NE. ALL or BLSR-ALL AIDs are not allowed for editing BLSR. This command only supports a single BLSR AID
RINGID	The BLSR ID of the NE up to six characters. Valid characters are A-Z and 0-9. String
NODEID	The BLSR node ID of the NE. NODEID ranges from 0 to 31. Integer
MODE	Mode with which the command is to be implemented. Identifies the BLSR mode
	Parameter type is BLSR_MODE—BLSR mode
• 2F	Two-fiber BLSR
• 4F	Four-fiber BLSR
RVRTV	Revertive mode. The value Y indicates that the protection switching system reverts service to the original line after restoration. The value N indicates that the 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
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time. Defaults to 5.0
	Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
SRVRTV	The span revertive mode for four-fiber BLSR only. Defaults to Y
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
SRVTM	The span revertive time for four-fiber BLSR only. Defaults to 5.0
	Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
EASTWORK	East working facility. AID from the "FACILITY" section on page 4-45
WESTWORK	West working facility. AID from the "FACILITY" section on page 4-45
EASTPROT	East protecting facility. AID from the "FACILITY" section on page 4-45
WESTPROT	West protecting facility. AID from the "FACILITY" section on page 4-45

Errors Errors are listed in Table 6-1 on page 6-1

3.2.83 ENT-CRS-<PATH>

Enter STS Cross Connection (STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VT1, VT2)

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command creates an STS cross-connection with a cross-connection type (CCT). See Chapter 5, "Ring Provisioning" for specific ring provisioning procedures.

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

When a path protection cross-connection is created, the path presented by the first AID is configured to be the preferred path. For example, the AID (F1) of the cross-connection (created by ENT-CRS-STS1::F1&F2,T1:123;) is the preferred path.

Notes:

1. The default cross-connection type is 2-way
2. If a path is already in a connection, it cannot be in another connection even if the other is a 1-way and the new one will be 1-way the other direction.
3. This command does not support creating multiple STS cross-connections.
4. The path protection cross STS connection can be created by using "&" in the AID fields of this command.
   a. The following command is used to create a 1-way selector or 2-way selector and bridge with:

      from points: F1, F2

      to points: T1

      ENT-CRS-{STS_PATH}:[<TID>]:F1&F2,T1:<CTAG>::[<CCT>];
   b. The following command is used to create a 1-way bridge or 2-way selector and bridge with:

      from point: F1

      to points: T1, T2

      ENT-CRS-{STS_PATH}:[<TID>]:F1,T1&T2:<CTAG>::[<CCT>];
   c. The following command is used to create a 1-way subtending path protection connection or 2-way subtending path protection connection with:

      from point: F1, F2

      to points: T1, T2

      ENT-CRS-{STS_PATH}:[<TID>]:F1&F2,T1&T2:<CTAG>::[<CCT>];
   d. The following command is used to create a 2-way selector and bridge with:

      from point: F1,F2 (F1 is the working side, F2 is the protect side)

      selector points: S1, S2 (S1 is the working side, S2 is the protect side)

      ENT-CRS-{STS_PATH}:[<TID>]:F1&F2,S1&S2:<CTAG>::2WAY;
   e. The following command is used to create a path protection IDRI Cross-Connection:

ENT-CRS-{STS_PATH}:[<TID>]:A&B,C&D:<CTAG>::2WAYDC;

A–Path on ring X to which traffic from ring Y is bridged

B–Path on ring X to which traffic from the same ring is bridged

C–Path on ring Y to which traffic from ring X is bridged

D–Path on ring Y to which traffic from the same ring is bridged

A, B, C, and D have a positional meaning. Connection type 2WAYDC is used for path protection IDRI cross-connections.

f. The following command is used to create a path protection DRI Cross-Connection:

ENT-CRS-{STS_PATH}:[<TID>]:A&B,C:<CTAG>::2WAYDC;

A–Path on ring X to which traffic from ring Y is bridged

B–Path on ring X to which traffic from the same ring is bridged

C–Traffic to and from ring Y

A, B, C, and D have a positional meaning. Connection type 2WAYDC is used for path protection DRI cross-connections.

5. All A&B AIDs in the TL1 cross-connection command are in the format of WorkingAID&ProtectAID.
6. To establish a cross-connection on a 2-fiber protection path or on a 4-fiber protection channel, the PCA connection type (1WAYPCA or 2WAYPCA) is required.
7. If you send a PCA cross-connection type on the non-PCA AIDs, the IIAC error message is returned.
8. If you send a non-PCA cross-connection type on the PCA AIDs, the IIAC error message is returned.
9. The facility AID is only valid on slots holding a G1000-4 card.
10. The virtual facility AID (VFAC) is only valid on slots holding an M-series card.
11. Both DRITYPE and DRINODE optional fields are introduced in this release (R5.0) 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.
12. The DS3XM-12 card allows portless STS1/VT1.5 cross-connection provisioning on the DS3Xm-12 PORTLESS ports (port number > = 12).
13. 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 be displayed.
14. STS18c and STS36c cross-connects are supported only on the FC_MR-4 card and optical cards.

Category Cross Connections

Security Provisioning

Related Commands

DLT-CRS-<PATH>	ENT-ROLL-<MOD_PATH>	RTRV-CRS-<PATH>
DLT-ROLL-<MOD_PATH>	OPR-PROTNSW-<PATH>	RTRV-NE-PATH
ED-<MOD_PATH>	RLS-PROTNSW-<PATH>	RTRV-PROTNSW-<PATH>
ED-CRS-<PATH>	RTRV-<PATH>	RTRV-PTHTRC-<PATH>
ED-NE-PATH	RTRV-CRS	RTRV-ROLL-<MOD_PATH>

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=CMDMDE:IS,AINS;

Input Parameters

Table 3-86 ED-CRS-< PATH> Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "ALL" section on page 4-17. Listable
DST	Destination AID from the "ALL" section on page 4-17
CCT	Type of connection. Used for specifying one or two-way connections. Default is 2-way
	Parameter type is CCT—type of cross-connect to be created
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	Path protection mcast drop with (1-way) continue
• 1WAYEN	Path protection mcast end node (1-way continue)
• 1WAYMON	A bidirectional connection between the two tributaries
	Note Starting with ONS 15454 R3.0 and ONS 15327 R3.3, 1WAYMON is not supported with TL1. However, it is still supported from CTC. Using CTC you can create 1WAYMON cross-connects and can be retrieved via TL1.
• 1WAYPCA	A unidirectional connection from a source tributary to a destination tributary on the protection path/fiber
• 2WAY	A bidirectional connection between the two tributaries
• 2WAYDC	A Bidirectional Drop and Continue connection applicable only to path protection Traditional and Integrated Dual Ring InterConnections
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber
• DIAG	Diagnostics cross-connect. Supports BERT (BLSR PCA diagnostics cross-connect)

Errors Errors are listed in Table 6-1 on page 6-1

3.2.84 ENT-EQPT

Enter Equipment

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command enters the card type and attributes for a given equipment slot in the NE. It also automatically enters all facilities supported by the card, assigning default values to all facility and path attributes.

The command supports optional parameters: RVTM (revertive time), RVRTV (revertive behavior), PROTID (unique protection ID) and PRTYPE (protection type) for configuring the card in an equipment protection group. PRTYPE can be 1:1 and 1:N. These parameters can only be entered for a working AID. The protect card must already be provisioned before creating the protection group.

1:1 protection involves the odd slot protecting the even slot. The work-protect pair is as follows (2-1, 4-3, 6-5, 16-17, 14-15, 12-13). DS1, DS3, DS3XM, DS3N, DS3E, EC1 and other electrical cards support 1:1 protection. The value of PROTID is the protecting slot and is of the form “slot-x”. This command creates a 1:1 protection group. If the command has the optional parameters for creating a protection group and the protection group cannot be created due to an error condition, provisioning of the equipment fails.

The PROTID slot must be provisioned first.

To create 1:1 with the ENT-EQPT command, the working card should not be provisioned first, so the AID type field should be presented in ENT-EQPT for the AID on this <AID>.

The following is an example for a 1:1 protection group:

ENT-EQPT:[<TID>]:SLOT-1:<CTAG>::DS1;

ENT-EQPT:[<TID>]:SLOT-2:<CTAG>::DS1:PROTID=SLOT-1,PRTYPE=1-1,RVTM=5.0, RVRTV=Y;

1:N protection is always revertive. For 1:N protection, the protect slot can only be Slot 3 or Slot 15. For a protect card in Slot 3, the working cards can be in any of the slots on Bank A. Slot 15 is for protection in Bank B. A DSXN (DS1N or DS3N) card must be provisioned in the protect slot. A 1:1 protection cannot be upgraded to 1:N protection. This command creates a 1:N protection group or adds a new card to an existing 1:N protection group. Multiple working AIDs can be entered in a protection group.

The following is an example of provisioning a 1:N protection group with the ENT-EQPT command:

ENT-EQPT:[<TID>]:SLOT-3:<CTAG>::DS1N;

ENT-EQPT:[<TID>]:SLOT-2&SLOT-1:<CTAG>::DS1:PROTID=SLOT-3,PRTYPE=1-N;

The following is an example of provisioning a 1:N protection group with the ED-EQPT command:

ENT-EQPT:[<TID>]:SLOT-1&SLOT-2:<CTAG>::DS1;

ENT-EQPT:[<TID>]:SLOT-3:<CTAG>::DS1N;

ED-EQPT:[<TID>]:SLOT-2&SLOT-1:<CTAG>:::PROTID=SLOT-1,PRTYPE=1-N;

If the provisioning fails for some AIDs, PRTL responses will be provided indicating failed AIDs. If the provisioning fails for all the AIDs, a DENY response will be provided. For both CMPLD and PRTL responses on creating protection group query, the protection group has been created for the successful AID(s) query.

The following is an example for 1:N protection. The RVRTV parameter is not valid for 1:N protection.

ENT-EQPT:[<TID]>:SLOT-2:<CTAG>:::PROTID=SLOT-3,PRTYPE=1-N,RVTM=5.0;

Both ENT-EQPT and ED-EQPT commands can provision all working AIDs (1-5) together for 1:N by using listed AIDs.

The ENT-EQPT command provisions a new card and adds it to the protection group. The ED-EQPT command adds the already provisioned cards to the protection group.

Protect AID should already be provisioned for either command because protection group parameters are not supported for the protect AID.

The ENT-EQPT command provisions an equipment successfully on an empty slot if the equipment type is compatible with the slot number. This command can have the optional parameters in the “f” block to provision a card as a working card. It has the effect of adding the protection behavior at the time of provisioning itself. For the protection provisioning to succeed, the protect card should have already been provisioned. Trying to execute ENT-EQPT to provision a protection group on an already provisioned card will result in an error.

An example to provision a 1:1 protection group:

ENT-EQPT::SLOT-1:12::DS3; Provisions the protect card

ENT-EQPT::SLOT-2:12::DS3:PROTID=SLOT-1,RVRTV=Y,RVTM=8.0; Provisions a card and adds it to the protection group.

An example to provision a 1:N protection group:

ENT-EQPT::SLOT-3:12::DS3N; Provisions the protect card

ENT-EQPT::SLOT-1:12::DS3:PROTID=SLOT-3,RVTM=7.5,PRTYPE=1-N; Provisions a card and adds it to protection group.

Notes:

1. Sending this command to provision a DS3NE card on Slot {1,2,4,5,6,12,13,14,16,or 17}, the DS3E card type is presented
2. Sending this command to provision a DS3N card on Slot {1,2,4,5,6,12,13,14,16,17}, the DS3 card type is presented
3. Sending this command to provision a DS1N card on Slot-{1,2,4,5,6,12,13,14,16,17}, the DS1 card type is presented

Error conditions for creating 1:1 or 1:N protection groups are:

1. AID sent to a non-working slot; the working cards must be in even slots for 1:1 and in the same bank for 1:N and not in Slot 3 or Slot 15.
2. Invalid AID chosen for protection slot.
3. Working AID is already in protection group.
4. AID is a protect AID.
5. The protect card has a circuit.
6. The equipment type does not match with the allowed AID.
7. The slot is already provisioned.
8. The protecting slot is not provisioned.
9. Multiple working AIDs for 1:1 protection.
10. 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, for example:

a. The DS3XM-12 card in the lower speed I/O slot with the XCVT/XC10G card only allows the DS3XM-12-STS12 CARDMODE. Other cases allow the CARDMODE to be DS3XM-12-STS48.

b. 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.

c. The ML card will be provisioned to default type MAPPER mode.

11. The 1:N (1 <= N <= 7) protection group is allowed on the DS3XM-12 card in an ONS 15454 across two sides (A and B). All the cards in the 1:N protection group must be on the same backplane rate (or CARDMODE).

    a. For 1:N, the protect card must be allocated on either Slot 3 or Slot 15. For 1:1, the protect card must be allocated on the odd slots.

    b. The working DS3XM-12 cards on the opposite side of the shelf as the protection card (either Slot 3 or Slot 15) in a 1:N group can only have portless connections while 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:
    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). According to the above limitation rule, the Slot 12 and Slot 16 cards have to have the portless provisioning only, while the Slot 2 and Slot 4 cards can be either portless or ported provisioning.

12. If the command mode (CMDMDE) is set to forced (FRCD) during the creation of a 1:1 or 1:N protection group, all cards must be physically plugged in and in the service state (IS). If the cards are not physically plugged in, then the command is denied with an appropriate error message. When the command mode is set to normal (NORM) (which is the default) the cards do not have to be physically plugged in and in the service state.

Category Equipment

Security Provisioning

Related Commands

ALW-SWDX-EQPT	INH-SWTOPROTN-EQPT	RTRV-COND-EQPT
ALW-SWTOPROTN-EQPT	INH-SWTOWKG-EQPT	RTRV-EQPT
ALW-SWTOWKG-EQPT	REPT ALM EQPT	SET-ALMTH-EQPT
DLT-EQPT	REPT EVT EQPT	SW-DX-EQPT
ED-EQPT	RTRV-ALM-EQPT	SW-TOPROTN-EQPT
INH-SWDX-EQPT	RTRV-ALMTH-EQPT	SW-TOWKG-EQPT

Input Format

ENT-EQPT:[<TID>]:<AID>:<CTAG>::<AIDTYPE>:[PROTID=<PROTID>,]
[PRTYPE=<PRTYPE>,][RVRTV=<RVRTV>,][RVTM=<RVTM>,][CMDMDE=<CMDMDE>,]
[CARDMODE=<CARDMODE>,][PEERID=<PEERID>,][REGENNAME=<REGENNAME>,]
[PWL=<PWL>][:];

Input Example

ENT-EQPT:PETALUMA:SLOT-12:118::DS3XM-12:PROTID=SLOT-13,PRTYPE=1-1,RVRTV=Y, RVTM=8.5,CMDMDE=FRCD,CARDMODE=DS3XM12-STS12,PEERID=SLOT-3, REGENNAME="REGEN GROUP",PWL=1530.33;

Input Parameters

Table 3-87 ENT-EQPT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "EQPT" section on page 4-43
AIDTYPE	The type of facility, link or other addressable entity targeted by the message
	Parameter type is EQUIPMENT_TYPE—equipment type
• AD-1B	Optical Add/Drop Multiplexed (OADM) 1 Band Filter
• AD-1C	Optical Add/Drop Multiplexed (OADM) 1 Channel Filter
• AD-2C	Optical Add/Drop Multiplexed (OADM) 2 Channels Filter
• AD-4B	Optical Add/Drop Multiplexed (OADM) 4 Bands Filter
• AD-4C	Optical Add/Drop Multiplexed (OADM) 4 Channels Filter
• AIC	AIC card
• AICI	AICI card
• ASAP-4	Any Service Any Port (ASAP) Carrier card with 4 PIM slots
• CE-100T-8	8-Port 100T card on ONS 15454 and ONS 15310-CL
• DMX-32	Optical De/Multiplexed (DMX) 32 channels
• DS1	DS1 card
• DS1N	DS1N card
• DS3	DS3 card
• DS3E	DS3E card
• DS3-EC1-48	DS3-EC1-48 card
• DS3N	DS3N card
• DS3NE	DS3NE card
• DS3XM	DS3XM card
• DS3XM-12	DS3XM-12 card
• E1000T	E1000T card
• E100T	E100T card
• EC1	EC1 card
• FC_MR-4	FC_MR-4 card
• FILLER-CARD	Blank Filler card (ONS 15600)
• G1000-2	2-port G1000 card (ONS 15327)
• G1000-4	4-port G1000 card (ONS 15454)
• MD-4	Optical Multiplexer/Demultiplexer with 4 Channels
• MIC	ONS 15327 MIC card

Table 3-87 ENT-EQPT Input Parameters (continued)

Parameter and Values	Description
• MIC-EXT	ONS 15327 MIC-EXT card
• ML100T-8	15454-LI+ Mapper card
• ML1000-1	ML-Series 1-Port GigE card
• ML1000-2	ML-Series 2-Port GigE card
• ML100T-12	ML-Series 12-Port FSTE card
• MUX-32	Optical Multiplexed (MUX) 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder Card
• OC3	OC3 card
• OC3-8	8-Port OC3 card
• OC12	OC12 card
• OC12-4	4-port OC12 card
• OC48	OC48 card
• OC48_16	16-port OC48 card
• OC192	OC192 card
• OC192-4	4-port OC192 card
• OPT-BST	Optical Booster Amplifier
• OPT-PRE	Optical Pre-Amplifier
• OSC-CSM	Optical Service Channel (OSC) with Combiner/Separator Module (SCM)
• OSCM	Optical Service Channel (OSC) Module
• PIM-4	4-port Pluggable Interface Module (ONS 15600)
• PPM-1	Pluggable Port Module with 1 SFP port (ONS 15600 ASAP, ONS 15454 MXP/MXPP and TXP/TXPP)
• SSXC	Cross Connect card (ONS 15600)
• TCC	TCC card
• TXP-MR-10G	10G Multirate Transponder Card
• TXP-MR-2.5G	Multi-Rate 2.5G Unprotected
• TXPP-MR-2.5G	Multi-Rate 2.5G Protected
• XC10G	XC10G card
• XCVT	XCVT card
• XTC	ONS 15327 XTC card
PROTID	Protecting card slot identifier of the protection group from the "PRSLOT" section on page 4-49 **Note** Not applicable to TXP_MR_10G and MXP_2.5G_10G cards.

Table 3-87 ENT-EQPT Input Parameters (continued)

Parameter and Values	Description
PRTYPE	Protection group type **Note** Not applicable to TXP_MR_10G and MXP_2.5G_10G cards. Parameter type is PROTECTION_GROUP—protection group type
• 1-1	1 to 1 protection
• 1-N	1 to N protection
RVRTV	Revertive mode. The value Y indicates that the protection switching system reverts service to the original line after restoration. The value N indicates that the 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. **Note** Not applicable to TXP_MR_10G and MXP_2.5G_10G cards. Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
CMDMDE	Command Mode. Applicable only when creating 1:1 or 1:N protection groups and/or adding cards to an existing protection group (1:N). If creating or adding cards to a protection group, specifying FRCD requires the card to be physically plugged in and in a ready state (IS). Default is NORM Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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
CARDMODE	Card mode **Note** The card will reboot after the mode changes so the mode change request will not go through if all the ports on the card are not in OOS mode. TL1 will not set a default CARD_MODE value at the management interface level if no PWL value is given

Table 3-87 ENT-EQPT Input Parameters (continued)

Parameter and Values	Description
	Parameter type is CARDMODE—card mode. Card mode is applicable to cards that have multiple capabilities, for example, the ML card can operate in two distinct modes: Linear Mapper Mode and L2/L3 Mode
• DS3XM12-STS12	The DS3XM-12 card in the STS12 back plane rate mode
• DS3XM12-STS48	The DS3XM-12 card in the STS48 back plane rate mode
• DWDM-LINE	Line terminating mode
• DWDM-SEC	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
• MXPMR25G-FCGE	Fibre channel or GIGE mode for the MXP-MR-2.5G card
PEERID	The regeneration peer slot from the "EQPT" section on page 4-43
REGENNAME	Name of a regeneration group. String
PWL	Provisioned wavelength. TL1 will set a default PWL value at the management interface level if now PWL value is given
	Parameter type is OPTICAL_WLEN—optical wavelength
• 1530.33	Wavelength 1
• 1531.12	Wavelength 2
• 1531.90	Wavelength 3
• 1532.68	Wavelength 4
• 1534.25	Wavelength 5
• 1535.04	Wavelength 6
• 1535.82	Wavelength 7
• 1536.61	Wavelength 8
• 1538.19	Wavelength 9
• 1538.98	Wavelength 10
• 1539.77	Wavelength 11
• 1540.56	Wavelength 12
• 1542.14	Wavelength 13
• 1542.94	Wavelength 14
• 1543.73	Wavelength 15
• 1544.53	Wavelength 16
• 1546.12	Wavelength 17

Table 3-87 ENT-EQPT Input Parameters (continued)

Parameter and Values	Description
• 1546.92	Wavelength 18
• 1547.72	Wavelength 19
• 1548.51	Wavelength 20
• 1550.12	Wavelength 21
• 1550.92	Wavelength 22
• 1551.72	Wavelength 23
• 1552.52	Wavelength 24
• 1554.13	Wavelength 25
• 1554.94	Wavelength 26
• 1555.75	Wavelength 27
• 1556.55	Wavelength 28
• 1558.17	Wavelength 29
• 1558.98	Wavelength 30
• 1559.79	Wavelength 31
• 1560.61	Wavelength 32
• USE-TWL1	Use Tunable Wavelength 1

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.85 ENT-FFP-<MOD2DWDMPAYLOAD>

Enter Facility Protection Group (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, HDTV, ISC1, ISC3, PASSTHRU)

Usage Guidelines

Cisco ONS 15454

This command creates Y cable protection on client facilities.

See the "Provisioning Rules for Transponder and Muxponder Cards" section on page 1-10 for specific card provisioning rules.

Category

DWDM

Security

Provisioning

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

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

Table 3-88 ENT-FFP-<MOD2DWDMPAYLOAD> Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "FACILITY" section on page 4-45
DST	Destination access identifier from the "FACILITY" section on page 4-45
PROTTYPE	The type of facility protection
	Parameter type is PROTTYPE—protection type for DWDM client facilities
• Y-CABLE	Y cable protection for the client ports on TXP_MR_10G,/MXP_2.5G_10G and TXP_MR_2.5G/TXPP_MR_2.5G cards
PROTID	Protection group identifier. Defaults to the protecting port AID of the protection group. String that can have a maximum length of 32 characters
RVRTV	Revertive mode. The value Y indicates that the protection switching system reverts service to the original line after restoration. The value N indicates that the 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.
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time. Defaults to 5.0 minutes
	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 does not support bidirectional switching
	Parameter type is UNI_BI—unidirectional and bidirectional switch operations
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.86 ENT-FFP-<OCN_TYPE>

Enter Facility Protection Group (OC3, OC12, OC48, OC192)

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command creates an optical 1+1 protection.

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

Notes:

1. Protect AID must not be provisioned with traffic.
2. Work AID can be provisioned with traffic.
3. PROTID is a string and can have a maximum length of 32 characters.
4. Optimized 1+1 and related attributes are only applicable to ONS 15454.

Category

Protection

Security

Provisioning

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

ENT-FFP-<OCN_TYPE>:[<TID>]:<WORK>,<PROTECT>:<CTAG>:::[PROTID=<PROTID>,]
[RVRTV=<RVRTV>,][RVTM=<RVTM>,][PSDIRN=<PSDIRN>,][OPOTYPE=<OPOTYPE>,]
[VRGRDTM=<VRGRDTM>,][DTGRDTM=<DTGRDTM>,][RCGRDTM=<RCGRDTM>][:];

Input Example

ENT-FFP-OC3:PETALUMA:FAC-2-1,FAC-1-1:1:::PROTID=PROT_NAME,RVRTV=Y,RVTM=1.0,
PSDIRN=BI,OPOTYPE=STANDARD,VRGRDTM=0.5,DTGRDTM=1.0,RCGRDTM=1.0;

Input Parameters

Table 3-89 ENT-FFP-<OCN_TYPE> Input Parameters

Parameter and Values	Description
WORK	Working port from the "FACILITY" section on page 4-45
PROTECT	Protection port from the "FACILITY" section on page 4-45
PROTID	Protection group identifier. Defaults to the protecting port AID of the protection group. If the name has an embedded double quote character, that double quote character has to 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 the protection switching system reverts service to the original line after restoration. The value N indicates that the 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
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time. Defaults to 5.0 minutes
	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
	Parameter type is TRANS_MODE—G1000 transponder mode
• BI	Bidirectional
• NONE	Not in transponder mode
• UNI	Unidirectional
OPOTYPE	One plus one protection type. Can be either standard or optimized 1+1
	Parameter type is ONE_PLUS_ONE—one plus one protection type
• Optimized	Optimized 1+1 **Note** Only applicable to the ONS 15454. The port must be in SDH mode.
• Standard	Standard 1+1
VRGRDTM	Verification guard timer. Only applicable to optimized 1+1
	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
	Parameter type is DETECTION_GUARD_TIMER—optimized 1+1 detection guard timer

Table 3-89 ENT-FFP-<OCN_TYPE> Input Parameters (continued)

Parameter and Values	Description
• 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 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

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.87 ENT-LNK-<MOD2O>

Enter Optical Link (OCH, OMS, OTS)

Usage Guidelines

ONS 15454

This command creates an optical link between two optical connection points. The optical links can be established between two OTS or two OMS of the same band, and two OCH of the same wavelength. The created optical link must be between points belonging to the same ring directionality. An optical link between two OMS or two OCH can be HITLESS if the connection is between two points from one drop to a consecutive add in the logical link.

Category

DWDM

Security

Provisioning

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-FFP-OCH
DLT-LNKTERM	ED-WDMANS	RTRV-LNK-<MOD2O>
DLT-OSC	ED-WLEN	RTRV-LNKTERM
DLT-WLEN	ENT-LNKTERM	RTRV-NE-WDMANS
ED-DWDM	ENT-OSC	RTRV-OCH
ED-FFP-OCH	ENT-WLEN	RTRV-OMS
ED-LNK-<MOD2O>	OPR-LASER-OTS	RTRV-OSC
ED-LNKTERM	OPR-PROTNSW-OCH	RTRV-OTS
ED-OCH	OPR-WDMANS	RTRV-PROTNSW-OCH
ED-OMS	RLS-LASER-OTS	RTRV-TRC-OCH
ED-OSC	RLS-PROTNSW-OCH	RTRV-WDMANS
ED-OTS	RTRV-DWDM	RTRV-WLEN

Input Format

ENT-LNK-<MOD2O>:[<TID>]:<FROM>,<TO>:<CTAG>::::<PST>,[<SST>];

Input Example

ENT-LNK-OMS:PENNGROVE:BAND-6-1-TX,BAND-13-1-RX:114::::OOS,AINS;

Input Parameters

Table 3-90 ED-LNK-<MOD2O> Input Parameters

Parameter and Values	Description
FROM	Identifier at one end of the optical link from the "BAND" section on page 4-29
TO	Identifier at the other end of the optical link from the "BAND" section on page 4-29
PST	Primary state of the entity
	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
	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

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.88 ENT-LNKTERM

Creates a Provisionable Patchcord Termination

Usage Guidelines

Cisco ONS 15454, 15327, 15310-CL

This command creates a provisionable patchcord (PP) termination (virtual link) on a physical interface. A user-provisioned link is needed when the control channel (DCC/GCC) is transparently carried over several physical links, where the physical link cannot be automatically discovered by OSPF due to lack of control channel termination or when the link does not support SONET/SDH.

The error message "Provisioning Rules Failed" will be responsed when the provisioning rules are not satisfied. The following rules must be satisfied while creating a provisionable patchcord termination on a physical interface:

1. For a SONET port:

   a. It must have SDCC termination provisioned. If it is the protect facility in a 1+1 protection group the corresponding working facility must have SDCC termination provisioned.
   b. If it is part of a BLSR the SDCC must be provisioned on all of the working ports of the BLSR.
2. For a TXP/MXP trunk port either G.709 must be enabled or the payload type must be non-SONET/SDH
3. For a TXP/MXP client port a card must be operating in the transparent termination mode.
4. MSTP OCH port

Notes:

1. If the OCn interface is a part of a 1+1 protection group, a separate PP termination can be provisioned on the other (working/protect) interface also.
2. If the client interface is a part of a Y cable protection group, a separate PP termination can be provisioned on the other (working/protect) interface also.
3. If the MXP/TXP trunk interface is a part of a splitter protection group, a separate PP termination can be provisioned on the other (working/protect) interface also.
4. If REMOTENODE is specified as an IP address (or a node name that can be resolved by the GNE) that is different from the local node's IP address/name, this termination is intended to be a part of an inter-node provisionable patchcord.
5. All end points of the provisionable patchcord need to be provisioned correctly (on the local and/or remote node) for it to show as UP in OSPF.
6. Misconfigured or partially configured provisionable patchcords will not cause alarms/events to be generated at either end of the link.
7. No two provisionable patchcord terminations on a node can be configured to have the same remote node PP termination information (i.e., the combination of values for REMOTENODE and REMOTELNKTERMAID attributes for a PP termination must be unique on a single node).
8. All provisionable patchcord terminations on one physical interface must have their remote terminations on a single remote node.
9. The command does not accept multiple and ALL style AIDs.

Category Provisionable Patchcords

Security Provisioning

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-FFP-OCH
DLT-LNKTERM	ED-WDMANS	RTRV-LNK-<MOD2O>
DLT-OSC	ED-WLEN	RTRV-LNKTERM
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-NE-WDMANS
ED-DWDM	ENT-OSC	RTRV-OCH
ED-FFP-OCH	ENT-WLEN	RTRV-OMS
ED-LNK-<MOD2O>	OPR-LASER-OTS	RTRV-OSC
ED-LNKTERM	OPR-PROTNSW-OCH	RTRV-OTS
ED-OCH	OPR-WDMANS	RTRV-PROTNSW-OCH
ED-OMS	RLS-LASER-OTS	RTRV-TRC-OCH
ED-OSC	RLS-PROTNSW-OCH	RTRV-WDMANS
ED-OTS	RTRV-DWDM	RTRV-WLEN

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

Table 3-91 ENT-LNKTERM Input Parameters

Parameter and Values	Description
AID	Access identifier from the "LNKTERM" section on page 4-48. Indicates a link (provisionable patchcord) termination on the local node.
PORT	The local port corresponding to this provisionable patchcord termination from the "CHANNEL" section on page 4-30
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. 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

Errors

Errors are listed in Table 6-1 on page 6-1.

3.2.89 ENT-OSC

Enter Optical Service Channel

Usage Guidelines

ONS 15454

This command creates the OSC (optical service channel) group of the NE.

Note RINGID defaults to the AID number.

Category

DWDM

Security

Provisioning

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-FFP-OCH
DLT-LNKTERM	ED-WDMANS	RTRV-LNK-<MOD2O>
DLT-OSC	ED-WLEN	RTRV-LNKTERM
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-NE-WDMANS
ED-DWDM	ENT-LNKTERM	RTRV-OCH
ED-FFP-OCH	ENT-WLEN	RTRV-OMS
ED-LNK-<MOD2O>	OPR-LASER-OTS	RTRV-OSC RTRV-OTS
ED-LNKTERM	OPR-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-OCH	OPR-WDMANS	RTRV-TRC-OCH
ED-OMS	RLS-LASER-OTS	RTRV-WDMANS
ED-OSC	RLS-PROTNSW-OCH	RTRV-WLEN
ED-OTS	RTRV-DWDM	

Input Format

ENT-OSC:[<TID>]:<AID>:<CTAG>:::[RINGID=<RINGID>,]NODEID=<NODEID>,[EAST=<EAST>,][WEST=<WEST>];

Input Example

ENT-OSC:PENNGROVE:OSC-1:114:::RINGID=10,NODEID=1,EAST=FAC-8-1,WEST=FAC-10-1;

Input Parameters

Table 3-92 ENT-OSC Input Parameters

Parameter and Values	Description
AID	Access identifier from the "OSC" section on page 4-49. Identifies the OSC group of the NE
RINGID	OSC ring ID of the NE. It ranges from 1 to 9999. Default value is "# of AID OSC-#". Integer
NODEID	OSC node ID of the NE. It ranges from 0 to 31. Integer
EAST	The east OC3 facility from the "FACILITY" section on page 4-45. EAST_OC3 is the AID facility. Only one OC3 for the east direction is supported in this release (R5.0). This parameter can be omitted
WEST	The west OC3 facility from the "FACILITY" section on page 4-45. EAST_OC3 is the AID facility. Only one OC3 for the west direction is supported in this release (R5.0). This parameter can be omitted

Errors Errors are listed in Table 6-1 on page 6-1

3.2.90 ENT-RMONTH-<MOD2_RMON>

Enter Remote Monitoring Threshold (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, FSTE, G1000, GFPOS, GIGE, OCH, POS)

Usage Guidelines

Cisco ONS 15454, 15327, 15310-CL

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

This command creates an entry in the RMON alarm table for the threshold of data statistics (GIGE or FC, for example) managed by the RMON engine. After creating the RMON threshold (RMONTH) a 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.

Category Performance

Security Provisioning

Related Commands

ALW-PMREPT-ALL	RTRV-PM-<MOD2>	RTRV-TH-<MOD2>
DLT-RMONTH-<MOD2_RMON>	RTRV-PMMODE-<STS_PATH>	RTRV-TH-ALL
INH-PMREPT-ALL	RTRV-PMSCHED-<MOD2>	SCHED-PMREPT-<MOD2>
INIT-REG-<MOD2>	RTRV-PMSCHED-ALL	SET-PMMODE-<STS_PATH>
REPT PM <MOD2>	RTRV-RMONTH-<MOD2_RMON>	SET-TH-<MOD2>

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

Table 3-93 ENT-RMONTH-<MOD2_RMON> Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "FACILITY" section on page 4-45. AID for the facility that the data statistics are managed by
MONTYPE	Monitored type. Type of RMON monitored data statistics
	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 1/10th of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as 1/10th of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• 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
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point

Table 3-93 ENT-RMONTH-<MOD2_RMON> Input Parameters (continued)

Parameter and Values	Description
• 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
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as 1/10th of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as 1/10th of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• FCP	Failure Count—Line
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in uA
• LBCL-MIN	Max Laser Bias current in uA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-MAX	Maximum value for LBCN
• LOSSL	Loss of Signal Seconds—Line
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OBED	FEC—One Bit Errors Detected
• OPR-AVG	Average Receive Power in 1/10 uW
• OPR-MAX	Maximum Receive Power in 1/10 uW
• OPR-MIN	Minimum Receive Power in 1/10 uW
• 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 1/10 uW
• OPT-MAX	Maximum Transmit Power in 1/10 uW
• OPT-MIN	Minimum Transmit Power in 1/10uW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card

Table 3-93 ENT-RMONTH-<MOD2_RMON> Input Parameters (continued)

Parameter and Values	Description
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in 1/10th of dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in 1/10th of dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in 1/10th of dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Second Path
• SEFS	Severely Errored Framing Second
• SES-PM	OTN—Severely Errored Second—Path
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• 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
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as 1/10th of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as 1/10th of a percentage
• SESS	Severely Errored Second—Section
• SESV	Severely Errored Second—VT Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second - Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path

Table 3-93 ENT-RMONTH-<MOD2_RMON> Input Parameters (continued)

Parameter and Values	Description
• 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 value to be compared to the thresholds
	Parameter type is SAMPLE_TYPE—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
	Parameter type is STARTUP_TYPE—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

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.91 ENT-ROLL-<MOD_PATH>

Enter Roll (STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VC12, VC3, VT1, VT2)

Usage Guidelines Cisco ONS 15600

This 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).

Category STS Paths

Security Provisioning

Related Commands

DLT-CRS-<PATH>	ENT-CRS-<PATH>	RTRV-NE-PATH
ED-<MOD_PATH>	OPR-PROTNSW-<PATH>	RTRV-PROTNSW-<PATH>
ED-CRS-<PATH>	RLS-PROTNSW-<PATH>	RTRV-PTHTRC-<PATH>
ED-NE-PATH	RTRV-<PATH>	RTRV-ROLL-<MOD_PATH>
DLT-ROLL-<MOD_PATH>	RTRV-CRS-<PATH>	

Input Format

ENT-ROLL-<MOD_PATH>:[<TID>]:<SRC>,<DST>:<CTAG>:::RFROM=<RFROM>, RTO=<RTO>,RMODE=<RMODE>,[FORCE=<FORCE>];

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

Table 3-94 ENT-ROLL-<MOD_PATH> Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "STS" section on page 4-50. 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 non-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
DST	Destination AID from the "STS" section on page 4-50. 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 non-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
RFROM	The termination point of the existing cross-connect that is to be rolled. AID from the "STS" section on page 4-50
RTO	The termination point that will become a leg of the new cross-connection. AID from the "STS" section on page 4-50
RMODE	The rolling mode of operation Parameter type is RMODE—roll mode

Table 3-94 ENT-ROLL-<MOD_PATH> Input Parameters (continued)

Parameter and Values	Description
• AUTO	Automatic
• MAN	Manual
FORCE	Forces a valid signal on the path. FORCE can only go from Y to N
	Parameter type is ON_OFF—disable/enable an attribute
• N	Disable an attribute
• Y	Enable an attribute

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.92 ENT-ROUTE

Enter Route

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command creates static routes.

Note There is no DNS service available on the node. Only numeric IP addresses will be accepted.

Category System

Security Provisioning

Related Commands

DLT-ROUTE RTRV-ROUTE

Input Format ENT-ROUTE:[<TID>]::<CTAG>::<DESTIP>,<IPMASK>,<NXTHOP>,<COST>;

Input Example ENT-ROUTE:CISCO::123::10.64.72.57,255.255.255.0,10.64.10.12,2;

Input Parameters

Table 3-95 ENT-ROUTE Input Parameters

Parameter and Values	Description
DESTIP	Destination tip. String
IPMASK	IP mask. String
NXTHOP	Next hop. String
COST	Cost. Integer

Errors Errors are listed in Table 6-1 on page 6-1.

3.2.93 ENT-TRAPTABLE

Enter Trap Table

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command provisions SNMP trap destinations and their associated community, UDP port and SNMP version. The maximum number of trap entries allowed is ten.

Category System

Security Provisioning

Related Commands

ACT-USER	ED-NE-SYNCN	RTRV-NE-GEN
ALW-MSG-ALL	ED-TRAPTABLE	RTRV-NE-IPMAP
ALW-MSG-DBCHG	INH-MSG-ALL	RTRV-NE-PATH
ALW-MSG-SECU	INH-MSG-DBCHG	RTRV-NE-SYNCN
DLT-TRAPTABLE	INH-MSG-SECU	RTRV-NE-WDMANS
ED-DAT	INIT-SYS	RTRV-TOD
ED-NE-GEN	RTRV-HDR	RTRV-TRAPTABLE
ED-NE-PATH	RTRV-INV	SET-TOD

Input Format ENT-TRAPTABLE:[<TID>]:<AID>:<CTAG>::COMMUNITY=<COMMUNITY>, [TRAPPORT=<TRAPPORT>,][TRAPVER=<TRAPVER>];

Input Example ENT-TRAPTABLE::1.2.3.4:1::COMMUNITY=“PRIVATE”,TRAPPORT=162,TRAPVER=SNMPV1;

Input Parameters

Table 3-96 ENT-TRAPTABLE Input Parameters

Parameter and Values	Description
AID	Access identifier from the "IPADDR" section on page 4-47. IP address identifies the trap destination. Only numeric IP addresses are 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. Defaults to 162. Integer
TRAPVER	SNMP version number. Defaults to SNMPv1
	Parameter type is SNMP_VERSION—
• SNMPV1	SNMP Version 1 (Default)
• SNMPV2	SNMP Version 2

Errors

Errors are listed in Table 6-1 on page 6-1.

3.2.94 ENT-USER-SECU

Enter User Security

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command adds a user account. Only a Superuser can do this. Each user is configured as being at one of these four privilege levels:

1. Retrieve [RTRV]: Users with this security level can retrieve information from the node, but cannot modify anything. The default idle time for Retrieve is unlimited.
2. Maintenance [MAINT]: Users 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 Maintenance 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 Provisioning is 30 minutes.
4. Superuser [SUPER]: Users with this security level can perform all PROV user actions, plus creating/deleting user security profiles, setting basic system parameters such as time/date, node name, and IP address, doing database backup & restore. The default idle time for Superuser is 15 minutes.

Notes:

1. Passwords are masked for the following security commands: ACT-USER, ED-PID, ENT-USER-SECU and ED-USER-SECU. Access to a TL1 session via any means will have the password masked. The CTC Request History and Message Log will also show the masked commands. When a password-masked command is re-issued by double-clicking the command from

CTC Request History, the password will still be masked in the CTC Request History and Message Log. The actual password that was previously issued will be sent to the NE. To use a former command as a template only, single-click the command in CTC Request History. The command will be placed in the Command Request text box, where you can edit the appropriate fields prior to re-issuing it.

2. The <UID> can be any combination of up to 10 alphanumeric characters.
3. The <PID> is a string of up to 10 characters where at least 2 characters are non-alphabetic with at least one special character (+, %, or #).
4. Although the CTC allows both <UID> and <PID> of up to 20 characters, the CTC-entered users (<UID> and <PID>) may not be valid TL1 users (e.g. if issuing an ACT-USER command and using the CTC-entered <UID> that is greater than 10 characters long, TL1 will respond with DENY (Can't Login) error message.
5. The TL1 password security is enforced as follows:
   a. The password <PID> cannot be the same as or contain the userid (UID), for example, if the userid is CISCO25 the password cannot be CISCO25#.
   b. The password <PID> must have one non-alphabetic and one special (+, %, or #) character.
   c. There is no password <PID> toggling; for example, if the current password is CISCO25#, the new password cannot be CISCO25#

Category Security

Security Superuser

Related Commands

ACT-USER	DLT-USER-SECU	REPT EVT SECU
ALW-MSG-SECU	ED-CMD-SECU	REPT EVT SESSION
ALW-USER-SECU	ED-PID	RTRV-CMD-SECU
CANC	ED-USER-SECU	RTRV-DFLT-SECU
CANC-USER	INH-MSG-SECU	RTRV-USER-SECU
CANC-USER-SECU	INH-USER-SECU	SET-ATTR-SECUDFLT
CLR-COND-SECU	REPT ALM SECU	

Input Format ENT-USER-SECU:[<TID>]:<UID>:<CTAG>::<PID>,,<UAP>[:];

Input Example ENT-USER-SECU:PETALUMA:CISCO15:123::PSWD11#,,MAINT;

Input Parameters

Table 3-97 ENT-USER-SECU Input Parameters

Parameter and Values	Description
UID	User identifier. The minimum UID size is 6 and the maximum size 10. String
PID	User's password or private identifier. String
UAP	User's access privilege
	Parameter type is PRIVILEGE—security level
• MAINT	Maintenance security level
• PROV	Provision security level
• RTRV	Retrieve security level
• SUPER	Superuser security level

Errors Errors are listed in Table 6-1 on page 6-1

3.2.95 ENT-VCG

Enter Virtual Concatenated Group

Usage Guidelines Cisco ONS 15454, 15310-CL

This command creates a VCG object. VCG on ML-Series cards supports two members and supported subrates are: STS1, STS3C, or STS12C. ML-Series VCG also supports SW-LCAS or NONE. VCG on the FC_MR-4 card supports eight members and the supported subrate is limited to STS3C. The FC_MR-4 card VCG has no LCAS support (NONE). VCG on the ML card supports up to three members at a subrate of STS1 and 64 members at a subrate of VT1.

Category VCAT

Security Provisioning

Related Commands

DLT-VCG ED-VCG RTRV-VCG

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

Table 3-98 ENT-VCG Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "FACILITY" section on page 4-45. 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 common language equipment identifier (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
	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 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. Integer
CCT	Type of connection; one-way or two-way. Cross-connect type for the VCG member cross-connects. Must be the same for all the member cross-connects of a VCG
	Parameter type is CCT—type of cross-connect to be created
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	Path protection mcast drop with (1-way) continue
• 1WAYEN	Path protection mcast end node (1-way continue)

Table 3-98 ENT-VCG Input Parameters (continued)

Parameter and Values	Description
• 1WAYMON	A bidirectional connection between the two tributaries **Note** Starting with ONS 15454 R3.0 and ONS 15327 R3.3, 1WAYMON is not supported with TL1. However, it is still supported from CTC. Using CTC you can create 1WAYMON cross-connects and can be retrieved via TL1.
• 1WAYPCA	A unidirectional connection from a source tributary to a destination tributary on the protection path/fiber
• 2WAY	A bidirectional connection between the two tributaries
• 2WAYDC	A Bidirectional Drop and Continue connection applicable only to path protection Traditional and Integrated Dual Ring InterConnections
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber
• DIAG	Diagnostics cross-connect. Supports BERT (BLSR PCA diagnostics cross-connect)
LCAS	Link capacity adjustment scheme Parameter type is LCAS—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	Buffer type. The default value is DEFAULT. The FC_MR-4 card supports DEFAULT and EXPANDED buffers. Other data cards support DEFAULT buffers only Parameter type is BUFFER_TYPE—buffer type (used in VCAT)
• DEFAULT	Default buffer value
• EXPANDED	Expanded buffer value
NAME	Name of the VCAT group. Defaults to null. Maximum length is 32 characters. String.

Errors Errors are listed in Table 6-1 on page 6-1

3.2.96 ENT-WLEN

Enter Wavelength

Usage Guidelines ONS 15454

This command allocates a wavelength.

Notes:

1. This command does not support allocating multiple wavelengths.
2. CKTID is a string of ASCII characters. The maximum length of CKTID can be 48. If CKTID is EMPTY or NULL this field will not be displayed.

Category

DWDM

Security

Provisioning

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-FFP-OCH
DLT-LNKTERM	ED-WDMANS	RTRV-LNK-<MOD2O>
DLT-OSC	ED-WLEN	RTRV-LNKTERM
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-NE-WDMANS
ED-DWDM	ENT-LNKTERM	RTRV-OCH
ED-FFP-OCH	ENT-OSC	RTRV-OMS
ED-LNK-<MOD2O>	OPR-LASER-OTS	RTRV-OSC
ED-LNKTERM	OPR-PROTNSW-OCH	RTRV-OTS
ED-OCH	OPR-WDMANS	RTRV-PROTNSW-OCH
ED-OMS	RLS-LASER-OTS	RTRV-TRC-OCH
ED-OSC	RLS-PROTNSW-OCH	RTRV-WDMANS
ED-OTS	RTRV-DWDM	RTRV-WLEN

Input Format

ENT-WLEN:[<TID>]:<AID>:<CTAG>::[<WCT>]:[SIZE=<SIZE>],
[CKTID=<CKTID>]:[<PST>[,<SST>]];

Input Example

ENT-WLEN:PENNGROVE:WLEN-W-ADD-1530.33:114::1WAY:SIZE=MULTI-RATE,
CKTID=CKTID:OOS,MT;

Input Parameters

Table 3-99 ENT-WLEN Input Parameters

Parameter and Values	Description
AID	Access identifier from the "WLEN" section on page 4-59
WCT	Wavelength connection type Parameter type is WCT—wavelength connection types

Table 3-99 ENT-WLEN Input Parameters (continued)

Parameter and Values	Description
• 1WAY	A unidirectional wavelength connection for one specified ring direction
• 2WAY	A bidirectional wavelength connection for both ring directions
SIZE	Size of the switching network
	Parameter type is CIRCUIT_SIZE—DWDM circuit size used on a wavelength
• 10G-FEC	Circuit size is 10 Gbps with FEC
• 10G-NO-FEC	Circuit size is 10 Gbps without FEC
• 2G5-FEC	Circuit size is 2.5 Gbps with FEC
• 2G5-NO-FEC	Circuit size is 2.5 Gbps without FEC
• MULTI-RATE	Circuit size supports multi-rate
• NOT-SPEC	Circuit size is not equipment specific
CKTID	String of ASCII characters. The maximum length of CKTID can be 48. If CKTID is EMPTY or NULL this field will not be displayed
PST	Primary state
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service
SST	Secondary state
	Parameter type is SST—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

Errors Errors are listed in Table 6-1 on page 6-1

3.2.97 EX-SW-<OCN_BLSR>

Operate Protection Switch (OC12, OC48, OC192)

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

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command exercises the algorithm for switching from a working facility to a protection facility without actually performing a switch. It is assumed that the facility being exercised is the working unit. The exercise switching success or failure result will be indicated by an automatic alarm.

Exercise switch for the SONET protection line is not supported in this release. If sending this command to the protection unit, an error message will be returned. In addition to all normal INPUT, EQUIPAGE, PRIVILEGE error codes, the following error codes are also included in this command:

SNVS (Status, Not in Valid State)

SROF (Status, Requested Operation Failed)

SSRD (Status, Switch Request Denied)

Notes:

1. If you send the EX-SW-<OCN_BLSR> command to both east and west sides/spans of a two-fiber or four-fiber ring within a short time period (less than 30–45 seconds) the system will only execute one (WEST) side EXER-RING query, and preempt the other (EAST) side query. There will be no event messages reported for the preempted side, and it will be in APS-CLEAR switching state.

   Examples of sending the EX-SW-<OCN_BLSR> command to both east and west sides/spans of a two-fiber or four-fiber ring within a short time period (less than 30–45 seconds) are: (a) A single command with both side/span AIDs (in the list AID format) of the same two-fiber or four-fiber ring or (b) Separate queries (via TL1 or CTC, or TL1 and CTC) on both sides/spans of the same two-fiber or four-fiber ring

2. DIRN is an optional parameter. A NULL value of this parameter defaults to BTH for a two-fiber or four-fiber BLSR protection group.

   DIRN follows these rules:

   - TRMT will always fail for any kind of protection groups
   - For two-fiber and four-fiber BLSR protection groups both the RCV and TRMT direction will fail.
   - Only BTH is a valid parameter. EX-SW-<OCN_TYPE> can be operated only on BLSR protection groups.

Category

BLSR

Security

Maintenance

Related Commands

ALW-SWDX-EQPT
ALW-SWTOPROTN-EQPT
ALW-SWTOWKG-EQPT
CHG-ACCMD-<MOD_TACC>
CONN-TACC-<MOD_TACC>
DISC-TACC
DLT-<MOD_RING>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<MOD_RING>
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FFP-OCH
ENT-<MOD_RING>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INH-SWDX-EQPT
INH-SWTOPROTN-EQPT
INH-SWTOWKG-EQPT
OPR-LPBK-<MOD2>
OPR-PROTNSW-<OCN_TYPE>
REPT SW
RLS-LPBK-<MOD2>
RLS-PROTNSW-<OCN_TYPE>
RTRV-<MOD_RING>
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FFP-OCH
RTRV-PROTNSW-<OCN_TYPE>
RTRV-PTHTRC-<PATH>
RTRV-TACC
RTRV-TRC-<OCN_BLSR>
SW-DX-EQPT
SW-TOPROTN-EQPT
SW-TOWKG-EQPT

Input Format

EX-SW-<OCN_BLSR>:[<TID>]:<AID>:<CTAG>::,<SWITCHTYPE>,[<DIRECTION>];

Input Example

EX-SW-OC48:CISCO:FAC-12-1:123::,SPAN,BTH;

Input Parameters

Table 3-100 EX-SW-<OCN_BLSR> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. Identifies the facility in the NE to which the switch request is directed
SWITCHTYPE	Switch type. Must not be null Parameter type is SWITCH_TYPE—BLSR switch type. MANWKSWBK, MANWKSWPR, FRCDWKSWBK, FRCDWKSWPR, LOCKOUTOFPR, and LOCKOUTOFWK are retrieve-only values for RTRV-PROTNSW-OCn commands. They are not applicable for the OPR-PROTNSW-OCn commands. 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

Table 3-100 EX-SW-<OCN_BLSR> Input Parameters (continued)

Parameter and Values	Description
• 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
DIRECTION	Direction. A null value defaults to RCV
	Parameter type is DIRECTION—transmit and receive direction
• BTH	Both transmit and receive directions
• RCV	Receive direction only
• TRMT	Transmit direction only

Errors Errors are listed in Table 6-1 on page 6-1

3.2.98 INH-MSG-ALL

Inhibit Message All

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command inhibits all REPT ALM and REPT EVT autonomous messages from being transmitted. See the ALW-MSG-ALL to resume these autonomous messages. When a TL1 session starts, the REPT ALM and REPT EVT messages are allowed by default.

Note If this command is used twice in the same session, the SAIN (Already Inhibited) error message is reported.

Category System

Security Retrieve

Related Commands

ACT-USER	ED-NE-SYNCN	RTRV-NE-GEN
ALW-MSG-ALL	ED-TRAPTABLE	RTRV-NE-IPMAP
ALW-MSG-DBCHG	ENT-TRAPTABLE	RTRV-NE-PATH
ALW-MSG-SECU	INH-MSG-DBCHG	RTRV-NE-SYNCN
DLT-TRAPTABLE	INH-MSG-SECU	RTRV-NE-WDMANS
ED-DAT	INIT-SYS	RTRV-TOD
ED-NE-GEN	RTRV-HDR	RTRV-TRAPTABLE
ED-NE-PATH	RTRV-INV	SET-TOD

Input Format INH-MSG-ALL:[<TID>]:[<AID>]:<CTAG>[::,,];

Input Example INH-MSG-ALL:PETALUMA:ALL:550;

Input Parameters

Table 3-101 INH-MSG-ALL Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17

Errors Errors are listed in Table 6-1 on page 6-1

3.2.99 INH-MSG-DBCHG

Inhibit Database Change Message

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command disables REPT DBCHG.

Category Log

Security Retrieve

Related Commands

ACT-USER	ED-NE-SYNCN	RTRV-NE-GEN
ALW-MSG-ALL	ED-TRAPTABLE	RTRV-NE-IPMAP
ALW-MSG-DBCHG	ENT-TRAPTABLE	RTRV-NE-PATH
ALW-MSG-SECU	INH-MSG-ALL	RTRV-NE-SYNCN
DLT-TRAPTABLE	INH-MSG-SECU	RTRV-NE-WDMANS
ED-DAT	INIT-SYS	RTRV-TOD
ED-NE-GEN	RTRV-HDR	RTRV-TRAPTABLE
ED-NE-PATH	RTRV-INV	SET-TOD

Input Format

INH-MSG-DBCHG:[<TID>]::<CTAG>[::,,];

Input Example

INH-MSG-DBCHG:CISCO::123;

Input Parameters

Table 3-102 INH-MSG-DBCHG Input Parameters

Parameter and Values	Description
—	

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.100 INH-MSG-SECU

Inhibit Message Security

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command inhibits the REPT EVT SECU and REPT ALM SECU autonomous messages.

Category

Security

Security

Superuser

Related Commands

ACT-USER	ED-NE-SYNCN	RTRV-NE-GEN
ALW-MSG-ALL	ED-TRAPTABLE	RTRV-NE-IPMAP
ALW-MSG-DBCHG	ENT-TRAPTABLE	RTRV-NE-PATH
ALW-MSG-SECU	INH-MSG-ALL	RTRV-NE-SYNCN
DLT-TRAPTABLE	INH-MSG-DBCHG	RTRV-NE-WDMANS
ED-DAT	INIT-SYS	RTRV-TOD
ED-NE-GEN	RTRV-HDR	RTRV-TRAPTABLE
ED-NE-PATH	RTRV-INV	SET-TOD

Input Format

INH-MSG-SECU:[<TID>]::<CTAG>;

Input Example

INH-MSG-SECU:PETALUMA::123;

Input Parameters

Table 3-103 INH-MSG-SECU Input Parameters

Parameter and Values	Description
—	

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.101 INH-PMREPT-ALL

Inhibit Performance Report All

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command inhibits all scheduled PM reporting. The inhibitance of the PM reporting is session-based, which means the command is only effective to the TL1 session that issues this command. By default, the scheduled PM reporting is inhibited by a TL1 session.

A TL1 session for which PM reports are inhibited will include an INHMSG-PMREPT condition when issuing TL1 command RTRV-COND-ALL.

Category

Performance

Security

Retrieve

Related Commands

ALW-PMREPT-ALL	RTRV-PM-<MOD2>	RTRV-TH-<MOD2>
DLT-RMONTH-<MOD2_RMON>	RTRV-PMMODE-<STS_PATH>	RTRV-TH-ALL
ENT-RMONTH-<MOD2_RMON>	RTRV-PMSCHED-<MOD2>	SCHED-PMREPT-<MOD2>
INIT-REG-<MOD2>	RTRV-PMSCHED-ALL	SET-PMMODE-<STS_PATH>
REPT PM <MOD2>	RTRV-RMONTH-<MOD2_RMON>	SET-TH-<MOD2>

Input Format INH-PMREPT-ALL:[<TID>]::<CTAG>;

Input Example INH-PMREPT-ALL:NE-NAME::123;

Input Parameters

Table 3-104 INH-PMREPT-ALL Input Parameters

Parameter and Values	Description
—	

Errors Errors are listed in Table 6-1 on page 6-1

3.2.102 INH-SWDX-EQPT

Inhibit Switch Duplex Equipment

Usage Guidelines Cisco ONS 15454

This command inhibits automatic or manual switching on a system containing duplex equipment. Use the ALW-SWDX command to release the inhibit. This command is not used for SONET line protection switching. For SONET line/path protection switching commands, use the OPR-PROTNSW and RLS-PROTNSW commands. This command is not used for 1:1 and 1:N equipment protection switching, use ALW-SWTOPROTN, ALW-SWTOWKG, INH-SWTOPROTN, INH-SWTOWKG commands.

Notes:

1. This command applies for XCVT or XC10G equipment units only in this release.
2. When sending this command to a TCC2/TCC2P card, an error message will occur because the NE treats the TCC2/TCC2P as a non-revertive protection group without user control.

Category Equipment

Security Maintenance

Related Commands

ALW-SWDX-EQPT	INH-SWTOPROTN-EQPT	RTRV-COND-EQPT
ALW-SWTOPROTN-EQPT	INH-SWTOWKG-EQPT	RTRV-EQPT
ALW-SWTOWKG-EQPT	REPT ALM EQPT	SET-ALMTH-EQPT
DLT-EQPT	REPT EVT EQPT	SW-DX-EQPT
ED-EQPT	REPT SW	SW-TOPROTN-EQPT
ENT-EQPT	RTRV-ALM-EQPT	SW-TOWKG-EQPT
EX-SW-<OCN_BLSR>	RTRV-ALMTH-EQPT	

Input Format

INH-SWDX-EQPT:[<TID>]:<AID>:<CTAG>[::];

Input Example

INH-SWDX-EQPT:CISCO:SLOT-1:1234;

Input Parameters

Table 3-105 INH-SWDX-EQPT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "EQPT" section on page 4-43. XCVT/XC10G equipment AID (Slot-8 or Slot-10)

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.103 INH-SWTOPROTN-EQPT

Inhibit Switch to Protection Equipment

Usage Guidelines

Cisco ONS 15454

This command inhibits automatic or manual switching of an equipment unit to protection. Use the ALW-SWTOPROTN-EQPT command to release the inhibit.

INH-SWTOPROTN-EQPT is used for non-SONET line cards (e.g. DS1, DS3, DS3XM and EC1 cards). DS1 and DS3 cards have 1:1 and 1:N equipment protection. DS3XM and EC1 cards have only 1:1 equipment protection. When performing a lockout with this command, the traffic will be switched from the unit specified by the AID, unless the working unit being protected has failed or is missing. When performing a lock on with this command and the working unit specified in the AID is in standby, sending this command will also initiate a traffic switch. When traffic is locked on a working unit or locked out of the protection unit with this command, the protection unit will not carry traffic, even if the working unit is pulled from the system.

Sending this command to a working unit in a 1:N protection group does not prevent a protection switch from another working unit in the same protection group. All the working units must be sent this command to prevent a protection switch. If the command is sent only to a subset of the working units, only those working units will have traffic locked on.

The inhibit state is persistent over TCC2/TCC2P side switches and removal/reboot of all the units in the protection group. The inhibit state can, but does not have to be persistent over a complete power cycle of the NE.

The unit specified by the AID will raise the condition of INHSWPR when this command is sent.

Notes:

1. This command only supports one value of the <DIRN> parameter - BTH. A command with any other value is considered an incorrect use of the command. An IDNV (Input, Data Not Valid) error message should be responsed.
2. This command is not used for the common control (TCC2/TCC2P or XCVT/XC10G) cards. A command on a common control card will receive an IIAC (Input, Invalid Access Identifier) error message. To use the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
3. This command is not used for SONET (OCN) cards. A command on a SONET card will receive an IIAC (Input, Invalid Access Identifier) error message. To use a SONET card switching command, use the OPR-PROTNSW and RLS-PROTNSW commands.
4. If this command is used on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message should be received.
5. If this command is used on a card that is already in the inhibit state, the SAIN (Status, Already Inhibited) error message should be received.
6. If sending the inhibit switch to protection command to a working card when the protect card in the same protection group has already raised the condition of INHSWWKG, the SPLD (Status, Protection unit Locked) error message should be responsed.
7. If sending the inhibit switch to protection command to the protect card when a working card in the same protection group has already raised the condition of INHSWWKG, the SWLD (Status, Working unit Locked) error message should be responsed.
8. Sending the inhibit switch to protection command to an active protect card when the peer working card is failed or missing, the SWFA (Status, Working unit Failed) error message should be responsed.
9. The following situation(s) are allowed and will not generate any error response: sending this command to missing cards as long as none of the previous error conditions apply.

Category Equipment

Security Maintenance

Related Commands

ALW-SWDX-EQPT	INH-SWDX-EQPT	RTRV-COND-EQPT
ALW-SWTOPROTN-EQPT	INH-SWTOWKG-EQPT	RTRV-EQPT
ALW-SWTOWKG-EQPT	REPT ALM EQPT	SET-ALMTH-EQPT
DLT-EQPT	REPT EVT EQPT	SW-DX-EQPT
ED-EQPT	REPT SW	SW-TOPROTN-EQPT
ENT-EQPT	RTRV-ALM-EQPT	SW-TOWKG-EQPT
EX-SW-<OCN_BLSR>	RTRV-ALMTH-EQPT	

Input Format

INH-SWTOPROTN-EQPT:[<TID>]:<AID>:<CTAG>[::<DIRN>];

Input Example

INH-SWTOPROTN-EQPT:CISCO:SLOT-2:123::BTH;

Input Parameters

Table 3-106 INH-SWTOPROTN-EQPT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "EQPT" section on page 4-43. This AID can either be the working unit for which switching to protection is inhibited (lock on) or the protection unit for which carrying traffic is to be inhibited (lockout)
DIRN	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 Parameter type is DIRECTION—transmit and receive directions
• BTH	Both transmit and receive directions

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.104 INH-SWTOWKG-EQPT

Inhibit Switch to Working Equipment

Usage Guidelines

Cisco ONS 15454

This command inhibits automatic or manual switching of an equipment unit back to the working unit. Use the ALW-SWTOWKG-EQPT command to release the inhibit.

INH-SWTOWKG-EQPT is used for non-SONET line cards (e.g. DS1, DS3, DS3XM and EC1 cards). DS1 and DS3 cards have 1:1 and 1:N equipment protection. DS3XM and EC1 cards have only 1:1 equipment protection. When performing a lock-out with this command, the traffic will be switched from the unit specified by the AID, unless the protection unit has failed or is missing. When performing a

lock-on with this command and the protection unit specified in the AID is in standby, sending this command will initiate a traffic switch only when there is one working card in the protection group. In the case where there is more than one working card in the protection group, an error will be generated (see error conditions below). When traffic is locked on the protection unit or locked out of a working unit with this command, the working unit will not carry traffic, even if the protection unit is pulled from the system.

The inhibit state is persistent over TCC2/TCC2P side switches and removal/reboot of all the units in the protection group. The inhibit state can but does not have to be persistent over a complete power cycle of the NE.

The unit specified by the AID will raise the condition of INHSWWKG when this command is sent.

Notes:

1. The command only supports one value of the <DIRN> parameter - BTH. A command with any other value is considered an incorrect use of the command. An IDNV (Input, Data Not Valid) error message should be responsed.
2. This command is not used for the common control (TCC2/TCC2P or XCVT/XC10G) cards. A command on a common control card will receive an IIAC (Input, Invalid Access Identifier) error message. To use the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
3. This command is not used for SONET (OCN) cards. A command on a SONET card will receive an IIAC (Input, Invalid Access Identifier) error message. To use a SONET card switching command, use the OPR-PROTNSW and RLS-PROTNSW commands.
4. If this command is used on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message should be received.
5. If this command is used on a card that is already in the inhibit state, the SAIN (Status, Already Inhibited) error message should be received.
6. If sending this command to a working card when the protect card in the same protection group has already raised the condition of INHSWPR, the SPLD (Status, Protection unit Locked) error message should be received.
7. If sending the INH-SWTOWKG command to a protect card when a working card in the same protection group has already raised the condition of INHSWPR, the SWLD (Status, Working unit Locked) error message should be responsed.
8. If sending the INH-SWTOWKG command to an active working card when the protect card has failed or is missing, the SPFA (Status, Protection unit Failed) error message should be received.
9. If sending the INH-SWTOWKG command to an active working card when the protect card is already carrying traffic (this only occurs in a 1:N protection group with N greater than one), the SPAC (Status, Protection unit Active) error message should be received.
10. The following situation is allowed and will not generate any error response: Sending this command to missing cards as long as none of the previous error conditions apply.

Category Equipment

Security Maintenance

Related Commands

ALW-SWDX-EQPT	INH-SWDX-EQPT	RTRV-COND-EQPT
ALW-SWTOPROTN-EQPT	INH-SWTOPROTN-EQPT	RTRV-EQPT
ALW-SWTOWKG-EQPT	REPT ALM EQPT	SET-ALMTH-EQPT
DLT-EQPT	REPT EVT EQPT	SW-DX-EQPT
ED-EQPT	REPT SW	SW-TOPROTN-EQPT
ENT-EQPT	RTRV-ALM-EQPT	SW-TOWKG-EQPT
EX-SW-<OCN_BLSR>	RTRV-ALMTH-EQPT	

Input Format

INH-SWTOWKG-EQPT:[<TID>]:<AID>:<CTAG>[::<DIRN>];

Input Example

INH-SWTOWKG-EQPT:CISCO:SLOT-2:123::BTH;

Input Parameters

Table 3-107 INH-SWTOWKG-EQPT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "EQPT" section on page 4-43. This AID can either be the working unit for which switching to protection is inhibited (lock on) or the protection unit for which carrying traffic is to be inhibited (lockout)
DIRN	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 Parameter type is DIRECTION—transmit and receive directions
• BTH	Both transmit and receive directions

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.105 INH-USER-SECU

Inhibit User Security

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command disables (without deleting) a user account, so the user is denied access to the NE. The user is disabled until re-enabled via the ALW-USER-SECU command.

Note This command does not forcibly log a user off. If the user is logged in, changes do not apply until after the user has logged off.

Category Security

Security Superuser

Related Commands

ACT-USER	DLT-USER-SECU	REPT EVT SECU
ALW-MSG-SECU	ED-CMD-SECU	REPT EVT SESSION
ALW-USER-SECU	ED-PID	RTRV-CMD-SECU
CANC	ED-USER-SECU	RTRV-DFLT-SECU
CANC-USER	ENT-USER-SECU	RTRV-USER-SECU
CANC-USER-SECU	INH-MSG-SECU	SET-ATTR-SECUDFLT
CLR-COND-SECU	REPT ALM SECU	

Input Format INH-USER-SECU:[<TID>]::<CTAG>::<UID>;

Input Example INH-USER-SECU:PETALUMA::123::CISCO100;

Input Parameters

Table 3-108 INH-USER-SECU Input Parameters

Parameter and Values	Description
UID	User identifier. String

Errors Errors are listed in Table 6-1 on page 6-1

3.2.106 INIT-REG-<MOD2>

Initialize Register (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, D1VIDEO, DS1, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, VT2)

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

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command initializes the performance monitoring (PM) registers.

Notes:

1. The time period is always the current time period, and the previous time period counts are not cleared; therefore, both <MONDAT> and <MONTM> are not supported in this command.
2. Unless otherwise stated, DS1 cards are the only cards that support the RCV, and TRMT directions. All other cards support only the RCV direction. BTH is not supported for this command.
3. INIT-REG-<MOD2> can also be used to initialize the RMON managed raw data.

Category Performance

Security Maintenance

Related Commands

ALW-PMREPT-ALL
DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
DLT-RMONTH-<MOD2_RMON>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
ENT-RMONTH-<MOD2_RMON>
INH-PMREPT-ALL
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMMODE-<STS_PATH>
RTRV-PMSCHED-<MOD2>
RTRV-PMSCHED-ALL
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-RMONTH-<MOD2_RMON>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TH-ALL
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-PMMODE-<STS_PATH>
SET-TH-<MOD2>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1

Input Format

INIT-REG-<MOD2>:[<TID>]:<aid>:<CTAG>::<MONTYPE>,,[<LOCN>],[<DIRN>],[<TMPER>][,,];

Input Example

INIT-REG-OC3:CISCO:FAC-1-1:1234::CVL,,NEND,BTH,15-MIN;

Input Parameters

Table 3-109 INIT-REG-<MOD2> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17. All of the STS, VT1, Facility and DS1 AIDS are supported
MONTYPE	Monitored type
	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 1/10th of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as 1/10th of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• 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
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• 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
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as 1/10th of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as 1/10th of a percentage
• ESS	Errored Seconds—Section

Table 3-109 INIT-REG-<MOD2> Input Parameters (continued)

Parameter and Values	Description
• ESV	Errored Seconds—VT Path
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• FCP	Failure Count—Line
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in uA
• LBCL-MIN	Max Laser Bias current in uA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-MAX	Maximum value for LBCN
• LOSSL	Loss of Signal Seconds—Line
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OBED	FEC—One Bit Errors Detected
• OPR-AVG	Average Receive Power in 1/10 uW
• OPR-MAX	Maximum Receive Power in 1/10 uW
• OPR-MIN	Minimum Receive Power in 1/10 uW
• 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 1/10 uW
• OPT-MAX	Maximum Transmit Power in 1/10 uW
• OPT-MIN	Minimum Transmit Power in 1/10uW
• 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 1/10th of dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in 1/10th of dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in 1/10th of dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working

Table 3-109 INIT-REG-<MOD2> Input Parameters (continued)

Parameter and Values	Description
• 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
• SES-PM	OTN—Severely Errored Second—Path
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• 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
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as 1/10th of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as 1/10th of a percentage
• SESS	Severely Errored Second—Section
• SESV	Severely Errored Second—VT Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second - Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
LOCN	Location associated with a particular command in reference to the entity identified by the AID Parameter type is LOCATION—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. Defaults to ALL which means that the command initializes all of the registers irrespective of the PM direction

Table 3-109 INIT-REG-<MOD2> Input Parameters (continued)

Parameter and Values	Description
	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. A null value defaults to 15-MIN. Defaults to 15-MIN
	Parameter type is TMPER—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.

Errors Errors are listed in Table 6-1 on page 6-1

3.2.107 INIT-SYS

Initialize System

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command initializes the specified card and its associated subsystem(s).

Notes:

1. The SLOT-ALL AID and the list AID are not allowed in this command.
2. Only one level of restart is supported in this command for ONS 15454 and 15327.
3. It is important that the standby TCC2/TCC2P should be up and running fully standby before this command is sent on the active TCC2/TCC2P for a period of time. During this time, the system is vulnerable to traffic outages caused by timing disruptions or other causes.

4. The ONS 15310-CL supports the restart parameters for the 15310-CL-CTX card only.

Category System

Security Maintenance

Related Commands

ACT-USER	ED-TRAPTABLE	RTRV-NE-GEN
ALW-MSG-ALL	ENT-TRAPTABLE	RTRV-NE-IPMAP
ALW-MSG-DBCHG	INH-MSG-ALL	RTRV-NE-PATH
ALW-MSG-SECU	INH-MSG-DBCHG	RTRV-NE-SYNCN
COPY-RFILE	INH-MSG-SECU	RTRV-NE-WDMANS
DLT-TRAPTABLE	REPT EVT FXFR	RTRV-TOD
ED-DAT	RTRV-HDR	RTRV-TRAPTABLE
ED-NE-GEN	RTRV-INV	SET-TOD
ED-NE-PATH	RTRV-MAP-NETWORK	
ED-NE-SYNCN	RTRV-NE-APC	

Input Format INIT-SYS:[<TID>]:<AID>:<CTAG>::<PH>,[<CMDMODE>];

Input Example INIT-SYS:HOTWATER:SLOT-8:201::1,FRCD;

Input Parameters

Table 3-110 INIT-SYS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "EQPT" section on page 4-43
PH	The phase. 1=soft reset; 2=hard reset. PH is a required parameter for the ONS 15600 and 15310-CL. PH is not supported on the ONS 15327. PH is supported on the CE-100T-8 on the ONS 15454. Integer
CMDMDE	Command Mode. Allows the user to override safety checks. CMDMDE is optional for the ONS 15600 and defaults to NORM. CMDMDE is not supported on the ONS 15454/15454 SDH/15327/153310 Parameter type is CMDMDE—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 in which the command would normally be denied

Table 3-110 INIT-SYS Input Parameters (continued)

Parameter and Values	Description
• FRC D	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

Errors Errors are listed in Table 6-1 on page 6-1

3.2.108 OPR-ACO-ALL

Operate Alarm Cutoff All

Usage Guidelines Cisco ONS 15454, 15600

This command cuts off the office audible alarm indication without changing the local alarm indications.

This command does not have any effect on future alarms at the NE, it directs the NE to provide conditioning only on those alarms that are currently active.

The ACO retires the Central Office (CO) alarm audible indicators without clearing the indicators that show the trouble still exists. There is no need for a RLS-ACO command.

Category Environment

Security Maintenance

Related Commands

OPR-EXT-CONT	RTRV-ALM-ENV	RTRV-EXT-CONT
REPT ALM ENV	RTRV-ATTR-CONT	SET-ATTR-CONT
REPT EVT ENV	RTRV-ATTR-ENV	SET-ATTR-ENV
RLS-EXT-CONT	RTRV-COND-ENV	SET-ATTR-SECUDFLT

Input Format OPR-ACO-ALL:[<TID>]::<CTAG>;

Input Example OPR-ACO-ALL:CISCO::123;

Input Parameters

Table 3-111 OPR-ACO Input Parameters

Parameter and Values	Description
—	

Errors Errors are listed in Table 6-1 on page 6-1

3.2.109 OPR-ALS

Operate Automatic Laser Shutoff

Usage Guidelines Cisco ONS 15454, 15310-CL

This command is used to restart the laser of an OC-N facility and in general for all of the facilities that support the ALS feature.

Category Ports

Security Maintenance

Related Commands

ALW-PMREPT-ALL
DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
DLT-RMONTH-<MOD2_RMON>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
ENT-RMONTH-<MOD2_RMON>
INH-PMREPT-ALL
INIT-REG-<MOD2>
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMMODE-<STS_PATH>
RTRV-PMSCHED-<MOD2>
RTRV-PMSCHED-ALL
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-RMONTH-<MOD2_RMON>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TH-ALL
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-PMMODE-<STS_PATH>
SET-TH-<MOD2>

Input Format

OPR-ALS:[<TID>]:<AID>:<CTAG>[::::];

Input Example

OPR-ALS:CISCO:FAC-1-1:100;

Input Parameters

Table 3-112 OPR-ALS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "AidUnionId" section on page 4-25

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.110 OPR-APC

Operate Amplification Power Control

Usage Guidelines

Cisco ONS 15454

This command permits the APC application inside the NE to force regulation of the optical power to the entire DWDM ring.

Category

DWDM

Security

Maintenance

Related Commands

DLT-LNK-<MOD2O>
DLT-LNKTERM
DLT-OSC
DLT-WLEN
ED-APC
ED-DWDM
ED-FFP-OCH
ED-LNK-<MOD2O>
ED-LNKTERM
ED-OCH
ED-OMS
ED-OSC
ED-OTS
ED-SLV-WDMANS
ED-TRC-OCH
ED-WDMANS
ED-WLEN
ENT-LNK-<MOD2O>
ENT-LNKTERM
ENT-OSC
ENT-WLEN
OPR-LASER-OTS
OPR-PROTNSW-OCH
OPR-SLV-WDMANS
OPR-WDMANS
RLS-LASER-OTS
RLS-PROTNSW-OCH
RTRV-APC
RTRV-CLNT
RTRV-DWDM
RTRV-ESCON
RTRV-FFP-OCH
RTRV-LNK-<MOD2O>
RTRV-LNKTERM
RTRV-NE-APC
RTRV-NE-WDMANS
RTRV-OCH
RTRV-OMS
RTRV-OPM
RTRV-OSC
RTRV-OTS
RTRV-PROTNSW-OCH
RTRV-SLV-WDMANS
RTRV-TRC-OCH
RTRV-WDMANS
RTRV-WLEN

Input Format

OPR-APC:[<TID>]::<CTAG>[::::];

Input Example

OPR-APC:VA454-22::116;

Input Parameters

Table 3-113 OPR-APC Input Parameters

Parameter and Values	Description
—	

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.111 OPR-EXT-CONT

Operate External Control

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command operates an external control and closes the external control contact. The control can be operated momentarily or continuously.

Notes:

1. The duration has two values in this release:

   MNTRY: Momentary duration

   CONTS: Continuos duration
2. In an automatic state, the contact could be opened or closed depending on the provisioned trigger.
3. RLS-EXT-CONT changes the state to automatic. Therefore, issuing an OPR-EXT-CONT command when the control is manually open and then issuing a RLS-EXT-CONT will not revert the state back to Manual Open.
4. A NULL value for the duration parameter defaults to MNTRY in this release.
5. RLS-EXT-CONT is not allowed during the MNTRY duration, the command is allowed for the CONTS duration. The length of the MNTRY duration is set to be 2 seconds on Cisco ONS 15454.
6. RLS-EXT-CONT cannot change the state to automatic if the existing state is Manual Open.

Caution Do not turn on external controls that activate a potential danger; such as, sprinklers or other controls connected to possibly hazardous systems or equipment.

Category

Environment Alarms and Controls

Security

Maintenance

Related Commands

OPR-ACO-ALL	RTRV-ALM-ENV	RTRV-EXT-CONT
REPT ALM ENV	RTRV-ATTR-CONT	SET-ATTR-CONT
REPT EVT ENV	RTRV-ATTR-ENV	SET-ATTR-ENV
RLS-EXT-CONT	RTRV-COND-ENV	SET-ATTR-SECUDFLT

Input Format

OPR-EXT-CONT:[<TID>]:<AID>:<CTAG>::[<CONTTYPE>],[<DURATION>];

Input Example

OPR-EXT-CONT:CISCO:ENV-OUT-2:123::AIRCOND,CONTS;

Input Parameters

Table 3-114 OPR-EXTR-CONT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ENV" section on page 4-42. Must not be null
CONTTYPE	Environmental control type. A null value is equivalent to ALL
	Parameter type is CONTTYPE—Environmental control types
• AIRCOND	Air conditioning
• ENGINE	Engine
• FAN	Fan
• GEN	Generator
• HEAT	Heat
• LIGHT	Light
• MISC	Miscellaneous
• SPKLR	Sprinkler
DURATION	Duration. A null value is equivalent to ALL
	Parameter type is Duration—Duration
• CONTS	Continuous duration

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.112 OPR-LASER-OTS

Operate Laser Optical Transport Section

Usage Guidelines

Cisco ONS 15454

This command instructs a laser to switch on.

Category

DWDM

Security

Maintenance

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-FFP-OCH
DLT-LNKTERM	ED-WDMANS	RTRV-LNK-<MOD2O>
DLT-OSC	ED-WLEN	RTRV-LNKTERM
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-NE-WDMANS
ED-DWDM	ENT-LNKTERM	RTRV-OCH
ED-FFP-OCH	ENT-OSC	RTRV-OMS
ED-LNK-<MOD2O>	ENT-WLEN	RTRV-OSC
ED-LNKTERM	OPR-PROTNSW-OCH	RTRV-OTS
ED-OCH	OPR-SLV-WDMANS	RTRV-PROTNSW-OCH
ED-OMS	OPR-WDMANS	TRV-SLV-WDMANS
ED-OSC	RLS-LASER-OTS	RTRV-TRC-OCH
ED-OTS	RLS-PROTNSW-OCH	RTRV-WDMANS
ED-SLV-WDMANS	RTRV-DWDM	RTRV-WLEN

Input Format

OPR-LASER-OTS:[<TID>]:<AID>:<CTAG>;

Input Example

OPR-LASER-OTS::LINE-5-2-TX:3;

Input Parameters

Table 3-115 OPR-LASER-OTS Input Parameters

Parameter and Values	Description
AID	Access identifier of an optical facility supporting laser from the "LINE" section on page 4-47

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.113 OPR-LNK

Operate Link

Usage Guidelines

Cisco ONS 15454

This command operates the optical link (OLNK) application inside the NE to calculate all the automatic optical links between end points which can be univocally identified by the NE.

Category

DWDM

Security Maintenance

Related Commands

—

Input Format OPR-LNK:[<TID>]::<CTAG>;

Input Example OPR-LNK:PENNGROVE::114;

Input Parameters

Table 3-116 OPR-LNK Input Parameters

Parameter and Values	Description
—	

Errors Errors are listed in Table 6-1 on page 6-1

3.2.114 OPR-LPBK-<MOD2>

Operate Loopback (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, D1VIDEO, DS1, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, VT2)

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

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

This command operates a signal loopback on an I/O card or on a cross-connect.

The optional [<LPBKTYPE>] defaults to FACILITY in this command if it is given to a port entity. It defaults to CRS if given to an STS entity.

Notes:

1. The value CRS for the LPBKTYPE parameter is applicable only for the STS modifier. The FACILITY and TERMINAL values are applicable to the ports.
2. The TERMINAL loopback type is not supported for the DS1 line of a DS3XM card.
3. Loopbacks are only allowed to be setup if the port/interface/STS_PATH is in OOS-MT or in OOS-AINS state.
4. Cross-connect loopbacks cannot be applied to the destination end of any 1WAY cross-connect.:
5. A cross-connect loopback can be applied only on one STS path of a cross-connect.

6. FEAC loopbacks can be applied by using the LINE value for LPBKTYPE parameter and specifying the LOCN as FEND. The FEAC loopbacks are supported only on the DS3(T3) and DS1 interfaces on the DS3XM-12 and DS3XM-6 card.
7. FEAC loopbacks can be applied only if the DS3 is in C-bit framing format. FEAC loopbacks will override existing loopbacks at the near end on the entity and vice-versa. This means that if a facility loopback has been applied on a port and if the FEAC loopback is applied, then the facility loopback is first released and then the far end loopback is applied.
8. The LINE value is supported only with the FEND value of the LOCN parameter. FACILITY, TERMINAL, and CRS values are not compatible with the FEND value for the LOCN parameter.
9. A Lockout of the protection command is required before putting the span of either two-fiber or four-fiber BLSR line in loopback. (a) A span lockout of one side (e.g. East side) of the two-fiber BLSR is required before operating a Facility (or Terminal) line Loopback on the same side (e.g.. East side) of the ring. (b) A span lockout of one Protection side (e.g. East Protection side) of the four-fiber BLSR is required before operating a Facility (or Terminal) line Loopback on the same side Working line (e.g. East Working side) of the ring.
10. FEAC loopbacks on the DS1 interface of a DS3XM card can be applied only if a VT connection has been created on it. An attempt to operate/release FEAC loopbacks in the absence of a VT connection will lead to an error message response.
11. The FEAC line is supported only with the FEND value of the LOCN parameter on DS1, T3 of the DS3XM-12 card in R5.0.

Category Troubleshooting and Test Access

Security Maintenance

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

OPR-LPBK-<MOD2>:[<TID>]:<AID>:<CTAG>::[<LOCATION>],,,[<LPBKTYPE>];

Input Example

OPR-LPBK-DS1:PTREYES:DS1-4-1-2-13:203::NEND,,,FACILITY;

Input Parameters

Table 3-117 OPR-LPBK-<MOD2> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17. The valid values for AID are FACILITY, DS1, and STS
LOCATION	The location where the operation is to be carried out. LOCATION defaults to NEND.
	Parameter type is LOCATION—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
	Parameter type is LPBK_TYPE—indicates the type of loopback that is to be operated or released
• CRS	Path level loopback which is established at the cross-connect matrix level (the XCVT/XC10G card). An STS 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
• LINE	Line level loopback for a far end DS1 path loop back of the DS3XM. The DS3XM cards only support the DS1 path far end FEAC loopback in this release, R5.0
• 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

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.115 OPR-PROTNSW-<MOD2DWDMPAYLOAD>

Operate Protection Switch (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, HDTV, ISC1, ISC3, PASSTHRU)

Usage Guidelines

Cisco ONS 15454

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

This command initiates a Y cable protection switch request. User switch requests initiated with this command remain active until they are released via the RLS-PROTNSW-<MOD2DWDMPAYLOAD> command or are overridden by a higher priority protection switch request.

The switch commands; MAN (Manual Switch), FRCD (Forced Switch) and LOCKOUT (Lockout) are supported by the ONS 15454, however, you must have provisioning or higher privilege to execute FRCD and LOCKOUT operations.

Manual Switch of Protection Line (to Working Line). If the AID identifies the protection line, then (only in the 1+1 architecture) service will be transferred from the protection line to the working line, unless a request of equal or higher priority is in effect.

Manual Switch of Working Line (to Protection Line). If the AID identifies a working line, then service will be switched from the working line to the protection line unless a request of equal or higher priority is in effect.

Force Switch of Protection Line (to Working Line). If the AID identifies the protection line, then service will be transferred from the protection line to the working line unless a request of equal or higher priority is in effect.

Force Switch of Working Line (to Protection Line). If the AID identifies a working line, then service will be transferred from the working line to the protection line unless a request of equal or higher priority is in effect. A lockout of protection and a signal fail of protection line have higher priority than this switch command.

Lockout of Protection Line. If the AID identifies the protection line, this switch command will prevent the working line from switching to protection line. If the working line is already on protection, then the working line will be switched back to its original working line.

Lockout of Working Line. If the AID identifies the working line, this switch command will prevent the working line from switching to protection line. If the working line is already on protection, then the working line will be switched back from protection line to its original working line.

If the command is used against pre-provisioned cards, the SROF (Protection Switching Failed) error is returned.

Category DWDM

Security Maintenance

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

OPR-PROTNSW-<MOD2DWDMPAYLOAD>:[<TID>]:<SRC>:<CTAG>::<SC>[:];

Input Example

OPR-PROTNSW-HDTV:CISCO:FAC-1-1-1:100::FRCD;

Input Parameters

Table 3-118 OPR-PROTNSW-<MOD2DWDMPAYLOAD> Input Parameters

Parameter and Values	Description
SRC	Access identifier from the "FACILITY" section on page 4-45
SC	Switch command that is to be initiated on the paths
	Parameter type is SW—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

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.116 OPR-PROTNSW-<OCN_TYPE>

Operate Protection Switch (OC3, OC12, OC48, OC192)

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

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

This command initiates a SONET line protection switch request. User switch requests initiated with this command remain active until they are released via the RLS-PROTNSW-OCN command or are overridden by a higher priority protection switch request.

The switch commands; MAN (Manual Switch), FRCD (Forced Switch) and LOCKOUT (Lockout) are supported by the ONS 15454.

Manual Switch of Protection Line (to Working Line). If the AID identifies the protection line, then (only in the 1+1 architecture) service will be transferred from the protection line to the working line, unless a request of equal or higher priority is in effect.

Manual Switch of Working Line (to Protection Line). If the AID identifies a working line, then service will be switched from the working line to the protection line unless a request of equal or higher priority is in effect.

Force Switch of Protection Line (to Working Line). If the AID identifies the protection line, then (only in the 1+1 architecture) service will be transferred from the protection line to the working line unless a request of equal or higher priority is in effect.

Force Switch of Working Line (to Protection Line). If the AID identifies a working line, then service will be transferred from the working line to the protection line unless a request of equal or higher priority is in effect. A lockout of protection and a signal fail of protection line have higher priority than this switch command.

Lockout of Protection Line. If the AID identifies the protection line, this switch command will prevent the working line from switching to protection line. If the working line is already on protection, then the working line will be switched back to its original working line.

Lockout of Working Line. If the AID identifies the working line, this switch command will prevent the working line from switching to protection line. If the working line is already on protection, then the working line will be switched back from protection line to its original working line.

Notes:

1. This command is not used for the common control (TCC2/TCC2P or XCVT/XC10G) cards. A query on a common control card will generate an IIAC (Input, Invalid Access Identifier) error message. To use this command on the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
2. Sending this command on non-SONET (OCN) cards, an IIAC (Input, Invalid Access Identifier) error message should be received. To query on a non-SONET card switching command, use the ALW-SWTOPROTN/SWTOWKG-EQPT and INH-SWTOPROTN/SWTOWKG-EQPT commands.
3. When sending this command to query on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message will be returned.
4. When sending this command to a working card that is failed or missing, the SROF (Protection Switching Failed) error message will be returned.
5. When sending this command to a protect card that is failed or missing, the SROF (Protection Switching Failed) error message will be returned.
6. Protection for pre-provisioned cards will not succeed.
7. When sending this command to a card that is already in protection with a higher priority, the SSRD (Status, Switch Request Denied) error message will be returned.
8. Sending this command to an OCN line with a switching mode that is already in mode, will return a SAMS (Already in the Maintenance State) error message.
9. To get the protection switching state (manual, lockout, forced), use the RTRV-COND-ALL or RTRV-ALM-ALL commands.
10. If the far end of the same span has a higher protection switching state, for example, the near end is under Manual protection switching state, the far end is in the Forced protection switching state, the near end protection switching state will be preemptive and shown as APS_CLEAR switching state over the CTC/TL1 interface. The RTRV-PROTNSW-OCN command is used to retrieve the current switching state of a SONET line.
11. If sending this command with EXERCISE or APS_CLEAR switch operation, an error SROF (Invalid Protection Switch Operation) will be returned because these operations are not valid according to GR-833-CORE.

    The EX-SW-<OCN_BLSR> is the correct command to perform the EXERCISE switch over the BLSR line.
12. Protection switch will be denied if SD/SF is already present on the switching path. If SD/SF is generated on the switching path after the switch is performed, the switch will be overwritten by the APS_CLEAR state. This does not apply for lockout of protection and forced switch which have higher priority than SD/SF.

13. Sending the following Manual Ring switching requests on both east and west sides/spans of a two-fiber or four-fiber ring in less than 30-45 seconds, such as: (a) A single TL1 command with both side/span AIDs (in the list AID format) of the same two-fiber or four-fiber ring; (b) The separated (via TL1, or CTC, or TL1 and CTC user interfaces) queries on the both sides/spans of the same two-fiber or four-fiber ring. The system will only execute one (WEST) side MS-RING query, and preempt the other (EAST) side query. There will be no event messages coming out for the preempted side, which switching state will be in APS-CLEAR state.
14. DIRN is an optional parameter. A NULL value defaults to BTH for a BLSR protection, BTH for 1+1 BI directional protection group, and RCV for 1+1 UNI directional protection group.

    DIRN follows these rules: TRMT will always fail for any kind of protection groups. For two-fiber and four-fiber BLSR protection groups both the RCV and TRMT directions will fail.
15. 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;
16. A lockout of the protection command is required before putting the span of either two-fiber or four-fiber BLSR line in loopback. (a) A span lockout of one side (e.g. East side) of the two-fiber BLSR is required before operating a Facility (or Terminal) line Loopback on the same side (e.g. East side) of the ring. (b) A span lockout of one Protection side (e.g. East Protection side) of the four-fiber BLSR is required before operating a Facility (or Terminal) line Loopback on the same side Working line (e.g. East Working side) of the ring.
17. A span lockout on the working unit is not supported in ONS 15454/1532715600.

Category Protection

Security Maintenance

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

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

Table 3-119 OPR-PROTNSW-<OCN_TYPE> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. Identifies the facility in the NE to which the switch request is directed
SC	Switch command that is to be initiated on the paths
	Parameter type is SW—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	BLSR switch type
	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
	Parameter type is DIRECTION—transmit and receive directions
• BTH	Both transmit and receive directions
• RCV	Receive direction only
• TRMT	Transmit direction only

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.117 OPR-PROTNSW-<PATH>

Operate Protection Switch (STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VT1, VT2)

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

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

This command initiates a SONET path protection switch request. User switch requests initiated with this command (forced switch, lockout, and manual switch) remain active until they are released through the RLS-PROTNSW-<PATH> command or overridden by a higher priority protection switch request.

Notes:

1. This command applies to path protection configuration only.
2. The VTAID should be working or protect AID only.
3. If you send this command on the Drop AID, a DENY (Invalid AID, should use working/protect AID) message will be returned.
4. To get the protection switching state (manual, lockout, forced), use the RTRV-COND-ALL or RTRV-ALM-ALL commands.
5. The GR-1400 does not allow the LOCKOUT_OF_WORKING on the UPSR WORKING path/AID. Sending this command on the UPSR WORKING path, a SROF (Invalid Protection Switch Operation) is returned.
6. If sending this command with EXERCISE or APS_CLEAR switch operation, an error SROF (Invalid Protection Switch Operation) will be returned because these operations are not valid according to GR-833-CORE.
7. Protection switch will be denied if SD/SF is already present on the switching path. If SD/SF is generated on the switching path after the switch is performed, the switch will be overwritten by the APS_CLEAR state. This does not apply for lockout of protection and forced switch which have higher priority than SD/SF. This rule does not apply for Lockout of Protection and Forced Switch which have a higher priority than SD/SF.

Category

Protection

Security

Maintenance

Related Commands

DLT-CRS-<PATH>
DLT-ROLL-<MOD_PATH>
ED-<MOD_PATH>
ED-CRS-<PATH>
ED-NE-PATH
ENT-CRS-<PATH>
ENT-ROLL-<MOD_PATH>
RLS-PROTNSW-<PATH>
RTRV-<PATH>
RTRV-CRS-<PATH>
RTRV-NE-PATH
RTRV-PROTNSW-<PATH>
RTRV-PTHTRC-<PATH>
RTRV-ROLL-<MOD_PATH>

Input Format OPR-PROTNSW-<PATH>:[<TID>]:<SRC>:<CTAG>::<SC>[:];

Input Example OPR-PROTNSW-STS1:CISCO:STS-2-1-1:123::MAN;

Input Parameters

Table 3-120 OPR-PROTNSW-<PATH> Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "CrossConnectId" section on page 4-31
SC	The switch command that is to be initiated on the paths
	Parameter type is SW—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

Errors Errors are listed in Table 6-1 on page 6-1

3.2.118 OPR-PROTNSW-OCH

Operate Protection Switch Optical Channel

Usage Guidelines Cisco ONS 15454

This command performs a protection switch on the trunk port of a TXPP_MR_2.5G card.

Category DWDM

Security Maintenance

Related Commands

DLT-LNK-<MOD2O>
DLT-LNKTERM
DLT-OSC
DLT-WLEN
ED-DWDM
ED-FFP-OCH
ED-LNK-<MOD2O>
ED-LNKTERM
ED-OCH
ED-OMS
ED-OSC
ED-OTS
ED-SLV-WDMANS
ED-TRC-OCH
ED-WDMANS
ED-WLEN
ENT-LNK-<MOD2O>
ENT-LNKTERM
ENT-OSC
ENT-WLEN
OPR-LASER-OTS
OPR-SLV-WDMANS
OPR-WDMANS
RLS-LASER-OTS
RLS-PROTNSW-OCH
RTRV-DWDM
RTRV-FFP-OCH
RTRV-LNK-<MOD2O>
RTRV-LNKTERM
RTRV-NE-WDMANS
RTRV-OCH
RTRV-OMS
RTRV-OSC
RTRV-OTS
RTRV-PROTNSW-OCH
RTRV-SLV-WDMANS
RTRV-TRC-OCH
RTRV-WDMANS
RTRV-WLEN

Input Format

OPR-PROTNSW-OCH:[<TID>]:<AID>:<CTAG>::<SW>;

Input Example

OPR-PROTNSW-OCH:VA454-22:CHAN-2-2:100::FRCD;

Input Parameters

Table 3-121 OPR-PROTNSW-OCH Input Parameters

Parameter and Values	Description
AID	Access identifier from the "CHANNEL" section on page 4-30. Indicates the trunk port
SW	Switch operation
	Parameter type is SW—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

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.119 OPR-SLV-WDMANS

Operate Span Loss Verification Wavelength Division Multiplexing Automatic Node Setup

Usage Guidelines

Cisco ONS 15454

This command performs the calculation of the expected span loss verification.

Category

DWDM

Security

Maintenance

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-FFP-OCH
DLT-LNKTERM	ED-WDMANS	RTRV-LNK-<MOD2O>
DLT-OSC	ED-WLEN	RTRV-LNKTERM
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-NE-WDMANS
ED-DWDM	ENT-LNKTERM	RTRV-OCH
ED-FFP-OCH	ENT-OSC	RTRV-OMS
ED-LNK-<MOD2O>	ENT-WLEN	RTRV-OSC
ED-LNKTERM	OPR-LASER-OTS	RTRV-OTS
ED-OCH	OPR-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-OMS	OPR-WDMANS	RTRV-SLV-WDMANS
ED-OSC	RLS-LASER-OTS	RTRV-TRC-OCH
ED-OTS	RLS-PROTNSW-OCH	RTRV-WDMANS
ED-SLV-WDMANS	RTRV-DWDM	RTRV-WLEN

Input Format

OPR-SLV-WDMANS:[<TID>]:<AID>:<CTAG>;

Input Example

OPR-SLV-WDMANS:VA454-22:WDMANS-E:116;

Input Parameters

Table 3-122 OPR-SLV-WDMANS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "WDMANS" section on page 4-59

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.120 OPR-SYNCNSW

Operate Synchronization Switch

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command initiates a switch to the reference specified by the synchronization reference number if the reference supplied is valid and of the same quality.

For manual types of switches the reference to which you want to switch should be of the same quality as the active reference source, otherwise the command will fail.

If you want to switch to a reference of lower quality, use the forced switch option.

The Operate Synchronization Switches are released by the RLS-SYNCNSW command or are overridden by a synchronization reference failure.

Once the switch is effective, a minor alarm “MANSWTOPRI” (Manual Switch to Primary or Secondary Reference...) will be raised.

Category

Synchronization

Security

Maintenance

Related Commands

ED-BITS	REPT EVT BITS	RTRV-BITS
ED-NE-SYNCN	REPT EVT SYNCN	RTRV-COND-BITS
ED-SYNCN	RLS-SYNCNSW	RTRV-COND-SYNCN
REPT ALM BITS	RTRV-ALM-BITS	RTRV-NE-SYNCN
REPT ALM SYNCN	RTRV-ALM-SYNCN	RTRV-SYNCN

Input Format

OPR-SYNCNSW:[<TID>]:[<AID>]:<CTAG>::<SWITCHTO>,[<SC>];

Input Example

OPR-SYNCNSW:CISCO:SYNC-NE:3::PRI,MAN;

Input Parameters

Table 3-123 OPR-SYNCSW Input Parameters

Parameter and Values	Description
AID	Access identifier from the “SYNC_REF” section on page 4-56 Defaults to SYNC-NE
SWITCHTO	Access identifier from the “SYNCSW” section on page 4-56. Identifies the new synchronization reference that will be used

Table 3-123 OPR-SYNCSW Input Parameters (continued)

Parameter and Values	Description
SC	Switch command to be initiated on the paths. Only MAN and FRCD switches are allowed for this command
	Parameter type is SW—the type of switch to be initiated
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect
• MAN	Requests a manual switch of the facility

Errors Errors are listed in Table 6-1 on page 6-1

3.2.121 OPR-WDMANS

Operate Wavelength Division Multiplexing Automatic Node Setup

Usage Guidelines Cisco ONS 15454

This command initiates the Automatic Optical Node Setup (AONS) application inside the NE to force a recompute of the value to be assigned to all VOAs representing the Optical Path inside the node.

Category DWDM

Security Maintenance

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-FFP-OCH
DLT-LNKTERM	ED-WDMANS	RTRV-LNK-<MOD2O>
DLT-OSC	ED-WLEN	RTRV-LNKTERM
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-NE-WDMANS
ED-DWDM	ENT-LNKTERM	RTRV-OCH
ED-FFP-OCH	ENT-OSC	RTRV-OMS
ED-LNK-<MOD2O>	ENT-WLEN	RTRV-OSC
ED-LNKTERM	OPR-LASER-OTS	RTRV-OTS
ED-OCH	OPR-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-OMS	OPR-SLV-WDMANS	RTRV-SLV-WDMANS
ED-OSC	RLS-LASER-OTS	RTRV-TRC-OCH
ED-OTS	RLS-PROTNSW-OCH	RTRV-WDMANS
ED-SLV-WDMANS	RTRV-DWDM	RTRV-WLEN

Input Format

OPR-WDMANS:[<TID>]::<CTAG>;

Input Example

OPR-WDMANS:PENNGROVE::114;

Input Parameters

Table 3-124 OPR-WDMANS Input Parameters

Parameter and Values	Description
—	

Errors

Errors are listed in Table 6-1 on page 6-1

3.2.122 REPT ALM <MOD2ALM>

Report Alarm (1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, DS1, E100, E1000, E3, E4, EC1, FSTE, G1000, GFPOS, GIGE, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, UDCDCC, UDCF, VC12, VC3, VCG, VT1, VT2, WLEN)

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

Reports an alarm condition against a facility or a path.

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

Category

Fault

Security

Retrieve

Related Commands

CLR-COND-SECU	REPT EVT ENV	RTRV-ALM-ENV
REPT ALM BITS	REPT EVT EQPT	RTRV-ALM-EQPT
REPT ALM COM	REPT EVT FXFR	RTRV-ALM-SYNCN
REPT ALM ENV	REPT EVT IOSCFG	RTRV-COND-<MOD2ALM>
REPT ALM EQPT	REPT EVT SECU	RTRV-COND-ALL
REPT ALM SECU	REPT EVT SESSION	RTRV-COND-BITS
REPT ALM SYNCN	REPT EVT SYNCN	RTRV-COND-ENV
REPT EVT <MOD2ALM>	RTRV-ALM-<MOD2ALM>	RTRV-COND-EQPT
REPT EVT BITS	RTRV-ALM-ALL	RTRV-COND-SYNCN
REPT EVT COM	RTRV-ALM-BITS	

Output Format

SID DATE TIME
** ATAG REPT ALM <MOD2ALM>
"<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,:[<DESC>],[<AIDDET>]"
;

Output Example

TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM 1GFC
"FAC-2-1:MJ,LOS,SA,,,,:\"LOSS OF SIGNAL\",OC12"
;

Output Parameters

Table 3-125 REPT ALM <MOD2ALM> Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17
NTFCNCDE	Two-letter notification code
	Parameter type is NOTIF_CODE—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

Table 3-125 REPT ALM <MOD2ALM> Output Parameters (continued)

Parameter and Values	Description
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition
	Parameter type is SERV_EFF—the effect of the alarm on service
• NSA	The condition is non-service affecting
• SA	The condition is service affecting
DESC	Condition description. Optional
AIDDET	AIDDET uses the same addressing rules as the AID, but specifies AID type and additional details about the entity being managed. Optional
	Parameter type is EQPT_TYPE—the type of equipment being provisioned into a slot
• AD-1B	Optical Add/Drop Multiplexed (OADM) 1 Band Filter
• AD-1C	Optical Add/Drop Multiplexed (OADM) 1 Channel Filter
• AD-2C	Optical Add/Drop Multiplexed (OADM) 2 Channels Filter
• AD-4B	Optical Add/Drop Multiplexed (OADM) 4 Bands Filter
• AD-4C	Optical Add/Drop Multiplexed (OADM) 4 Channels Filter
• AIC	The Alarm Interface Controller Card is an optional card which expands system management capabilities for the customer defined alarm I/O and orderwire functionality
• AICI	The AICI card
• AIP	The Alarm Indicator Panel
• ALM-PWR	Alarm Power
• ASAP-4	ASAP Carrier card with four PIM slots
• BP	The Backplane of the NE
• CE-100T-8	8-Port 100T card on ONS 15454 and ONS 15310-CL
• CRFT-TMG	Craft Timing
• DCC	The Data Communications Channel
• DMX-32	Optical De/Multiplexed (DMX) 32 Channels
• DS1-14	A 14 port interface card supporting DS1 facilities
• DS1N-14	A 14 port interface card supporting DS1 facilities
• DS3-12	A 12 port interface card supporting DS3 facilities
• DS3-3	A 3 port interface card supporting DS3 facilities
• DS3-EC1-48	High Density DS3/EC1 card supporting 48 ports
• DS3ATM-12	A 12 port interface card supporting DS3 ATM facilities

Table 3-125 REPT ALM <MOD2ALM> Output Parameters (continued)

Parameter and Values	Description
• DS3CR-12	Cost reduced DS3
• DS3E-12	A 12 port DS3 enhancement interface card supporting DS3E facilities
• DS3N-12	A 12 port interface card supporting DS3 facilities
• DS3NE-12	A 12 port DS3 enhancement interface card supporting DS3E facilities
• DS3XM-6	An interface card that converts six framed DS-3 network connections to 28x6 or 168 VT1.5s
• E1000T-2	A 2 port interface card supporting 1000 Base T Ethernet facilities
• E100T-12	A 12 port interface card supporting 100 Base T Ethernet facilities
• E100T-4	A four port interface card supporting 100 Base T Ethernet facilities.
• EC1-12	A 12 port interface card supporting EC1 facilities
• EC1N-12	A 12 port interface card supporting EC1 facilities
• FILLER_CARD	Smart Filler card (ONS 15600)
• FTA	The Fan Tray of the NE
• FTA1	The Fan Tray 1 of the NE
• FTA2	The Fan Tray 2 of the NE
• G1000-4	A four port G1000 card
• MD-4	Optical Multiplexer/Demultiplexer with 4 Channels
• MIC-28-3-A	ONS 15327 MIC card A
• MIC-28-3-B	ONS 15327 MIC card B
• MIC-EXT	ONS 15327 MIC card
• MIC-GEN	ONS 15327 MIC card
• ML-100T-8	8 port 100T card on ONS 15310-CL
• MUX-32	Optical Multiplexed (MUX) 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder Card
• OC12	An interface card that supports one or more OC-12 (622Mbs) optical facilities
• OC12-327	ONS 15327 OC12 card
• OC12-4	A four port OC12 card
• OC12-IR-1	An interface card that supports one intermediate range OC-12 (622Mbs) optical facilities
• OC12-LR-1	An interface card that supports one long range OC-12 (622Mbs) optical facilities
• OC12-SR-1	An interface card that supports one short range OC-12 (622Mbs) optical facilities
• OC192_4	4 port OC192 card (ONS 15600)

Table 3-125 REPT ALM <MOD2ALM> Output Parameters (continued)

Parameter and Values	Description
• OC192-LR-1	An interface card that supports one or more OC-192 optical facilities
• OC3	An interface card that supports multiple OC-3 (155Mbs) optical facilities
• OC3-327	ONS 15327 OC3 card
• OC3-IR-4	An interface card that supports four intermediate range OC-3 (155Mbs) optical facilities
• OC3-SR-4	An interface card that supports four short range OC-3 (155Mbs) optical facilities
• OC3ATM-IR-6	An interface card that supports six intermediate range OC-3 (155Mbs) ATM optical fibers
• OC3IR-STM1SH-1310-8	An OC3 card which has 8 ports over the lower speed slot of the ONS 15454 with XC10G/192
• OC3POS-SR-4	An interface card that supports four short range OC-3 (155Mbs) POS optical facilities
• OC48	An interface card that supports one or more OC-48 (10Gbs) optical facilities
• OC48-327	ONS 15327 OC48 card
• OC48-AS-1	An interface card that supports one short range OC-48 (10Gbs) optical facilities that can be provisioned in any I/O slot
• OC48-ELR-1	An interface card that supports one short range OC-48 (2.5Gbs) optical facility
• OC48-IR-1	An interface card that supports one intermediate range OC-48 (10Gbs) optical facility
• OC48-LR-1	An interface card that supports one long range OC-48 (10Gbs) optical facility
• OC48-SR-1	An interface card that supports one short range OC-48 (10Gbs) optical facilities
• OC-48_16	16 port OC48 card (ONS 15600)
• OPT-BST	Optical Booster Amplifier
• OPT-PRE	Optical Pre-Amplifier
• OSC-CSM	Optical Service Channel (OSC) with Combiner/Separator Module (SCM)
• OSCM	Optical Service Channel (OSC) Module
• PIM-4	Pluggable interface module with 4 PPM slots
• PPM-1	Pluggable port module with 1 port SFP module
• SSXC	Cross connect card (ON 15600)
• TCC	The Timing Communication and Control card
• TSC	Timing and synchronization controller card (ONS 15600)

Table 3-125 REPT ALM <MOD2ALM> Output Parameters (continued)

Parameter and Values	Description
• TXP-MR-10G	10G Multirate Transponder Card
• TXP-MR-2.5G	Multi-Rate 2.5G Unprotected
• TXPP-MR-2.5G	Multi-Rate 2.5G Protected
• XCVT	A Cross-Connect card
• XC10G	A Cross-Connect card
• XTC	ONS 15327 XTC card
• XTC-DS1-14	ONS 15327 XTC DS1-14 card
• XTC-DS1-28	ONS 15327 XTC DS1-28 card
• XTC-DS1-56	ONS 15327 XTC DS1-56 card
• XTC-DS3-3	ONS 15327 XTC DS3-3 card

3.2.123 REPT ALM BITS

Report Alarm Building Integrated Timing Supply

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

Reports an alarm condition on a BITS facility.

Category

Synchronization

Security

Retrieve

Related Commands

CLR-COND-SECU	REPT EVT COM	RTRV-ALM-EQPT
ED-BITS	REPT EVT ENV	RTRV-ALM-SYNCN
ED-NE-SYNCN	REPT EVT EQPT	RTRV-BITS
ED-SYNCN	REPT EVT FXFR	RTRV-COND-<MOD2ALM>
OPR-SYNCNSW	REPT EVT IOSCFG	RTRV-COND-ALL
REPT ALM <MOD2ALM>	REPT EVT SECU	RTRV-COND-BITS
REPT ALM COM	REPT EVT SESSION	RTRV-COND-ENV
REPT ALM ENV	REPT EVT SYNCN	RTRV-COND-EQPT
REPT ALM EQPT	RLS-SYNCNSW	RTRV-COND-SYNCN
REPT ALM SECU	RTRV-ALM-<MOD2ALM>	RTRV-NE-SYNCN
REPT ALM SYNCN	RTRV-ALM-ALL	RTRV-SYNCN
REPT EVT <MOD2ALM>	RTRV-ALM-BITS	
REPT EVT BITS	RTRV-ALM-ENV	

Output Format

```
   SID DATE TIME
** ATAG REPT ALM BITS
   "<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,:[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM BITS
   "BITS-1:MJ,SYNC,SA,,,,:\"LOSS OF TIMING\""
;
```

Output Parameters

Table 3-126 REPT ALM BITS Output Parameters

Parameter and Values	Description
AID	Access identifier from the "BITS" section on page 4-29
NTFCNCDE	Two-letter notification code
	Parameter type is NOTIF_CODE—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

Table 3-126 REPT ALM BITS Output Parameters (continued)

Parameter and Values	Description
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition
	Parameter type is SERV_EFF—the effect of the alarm on service
• NSA	The condition is non-service affecting
• SA	The condition is service affecting
DESC	Condition description. Optional

3.2.124 REPT ALM COM

Report Alarm Common

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

Reports an alarm condition when an AID cannot be given, for example, a fan failure is reported using this message.

Category

Fault

Security

Retrieve

Related Commands

CLR-COND-SECU	REPT EVT ENV	RTRV-ALM-ENV
REPT ALM <MOD2ALM>	REPT EVT EQPT	RTRV-ALM-EQPT
REPT ALM BITS	REPT EVT FXFR	RTRV-ALM-SYNCN
REPT ALM ENV	REPT EVT IOSCFG	RTRV-COND-<MOD2ALM>
REPT ALM EQPT	REPT EVT SECU	RTRV-COND-ALL
REPT ALM SECU	REPT EVT SESSION	RTRV-COND-BITS
REPT ALM SYNCN	REPT EVT SYNCN	RTRV-COND-ENV
REPT EVT <MOD2ALM>	RTRV-ALM-<MOD2ALM>	RTRV-COND-EQPT
REPT EVT BITS	RTRV-ALM-ALL	RTRV-COND-SYNCN
REPT EVT COM	RTRV-ALM-BITS	

Output Format

```
   SID DATE TIME
** ATAG REPT ALM COM
   "[<AID>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,:[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM COM
   "COM:MJ,FAN,NSA,,,,:\"FAN FAILURE\""
;
```

Output Parameters

Table 3-127 REPT ALM COM Output Parameters

Parameter and Values	Description
AID	Access identifier. Identifies the entity to which the command pertains. Indicates an alarm without AID. String. Optional
NTFCNCDE	Two-letter notification code
	Parameter type is NOTIF_CODE—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
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition
	Parameter type is SERV_EFF—the effect of the alarm on service
• NSA	The condition is non-service affecting
• SA	The condition is service affecting
DESC	Condition description. Optional

3.2.125 REPT ALM ENV

Report Alarm Environment

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

Reports a customer-defined condition on an environmental alarm input.

Category

Environment Alarms and Controls

Security

Retrieve

Related Commands

CLR-COND-SECU	REPT EVT EQPT	RTRV-ATTR-CONT
OPR-ACO-ALL	REPT EVT FXFR	RTRV-ATTR-ENV
OPR-EXT-CONT	REPT EVT IOSCFG	RTRV-COND-<MOD2ALM>
REPT ALM <MOD2ALM>	REPT EVT SECU	RTRV-COND-ALL
REPT ALM BITS	REPT EVT SESSION	RTRV-COND-BITS
REPT ALM COM	REPT EVT SYNCN	RTRV-COND-ENV
REPT ALM EQPT	RLS-EXT-CONT	RTRV-COND-EQPT
REPT ALM SECU	RTRV-ALM-<MOD2ALM>	RTRV-COND-SYNCN
REPT ALM SYNCN	RTRV-ALM-ALL	RTRV-EXT-CONT
REPT EVT <MOD2ALM>	RTRV-ALM-BITS	SET-ATTR-CONT
REPT EVT BITS	RTRV-ALM-ENV	SET-ATTR-ENV
REPT EVT COM	RTRV-ALM-EQPT	SET-ATTR-SECUDFLT
REPT EVT ENV	RTRV-ALM-SYNCN	

Output Format

```
   SID DATE TIME
** ATAG REPT ALM ENV
   "<AID>:<NTFCNCDE>,<ALMTYPE>,,,[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM ENV
   "ENV-IN-1:MJ,OPENDR,,,\"OPEN DOOR\""
;
```

Output Parameters

Table 3-128 REPT ALM ENV Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ENV" section on page 4-42. Identifies an environmental input
NTFCNCDE	Two-letter notification code
	Parameter type is NOTIF_CODE—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
	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
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUSE	Fuse failure
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel

Table 3-128 REPT ALM ENV Output Parameters (continued)

Parameter and Values	Description
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 Volt power supply failure
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• SMOKE	Smoke
• TOXICGAS	Toxic gas
• VENTN	Ventilation system failure
DESC	Condition description. Optional

3.2.126 REPT ALM EQPT

Report Alarm Equipment

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

Reports an alarm condition against an equipment unit or slot.

Category

Equipment

Security

Retrieve

Related Commands

ALW-SWDX-EQPT	REPT EVT <MOD2ALM>	RTRV-ALM-EQPT
ALW-SWTOPROTN-EQPT	REPT EVT BITS	RTRV-ALM-SYNCN
ALW-SWTOWKG-EQPT	REPT EVT COM	RTRV-ALMTH-EQPT
CLR-COND-SECU	REPT EVT ENV	RTRV-COND-<MOD2ALM>
DLT-EQPT	REPT EVT EQPT	RTRV-COND-ALL
ED-EQPT	REPT EVT FXFR	RTRV-COND-BITS
ENT-EQPT	REPT EVT IOSCFG	RTRV-COND-ENV
INH-SWDX-EQPT	REPT EVT SECU	RTRV-COND-EQPT
INH-SWTOPROTN-EQPT	REPT EVT SESSION	RTRV-COND-SYNCN
INH-SWTOWKG-EQPT	REPT EVT SYNCN	RTRV-EQPT
REPT ALM <MOD2ALM>	REPT RMV EQPT	SET-ALMTH-EQPT
REPT ALM BITS	REPT RST EQPT	SW-DX-EQPT
REPT ALM COM	RTRV-ALM-<MOD2ALM>	SW-TOPROTN-EQPT
REPT ALM ENV	RTRV-ALM-ALL	SW-TOWKG-EQPT
REPT ALM SECU	RTRV-ALM-BITS	
REPT ALM SYNCN	RTRV-ALM-ENV	

Output Format

```
   SID DATE TIME
** ATAG REPT ALM EQPT
   “<AID>:<NTFCNCDE>,<CONDITION>,<SRVEFF>,,,,:[<DESC>],[<AIDDET>]”
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM EQPT
   “SLOT-7:MJ,CONTR,NSA,,,,:\“CONTROLLER FAILURE\”,TCC”
;
```

Output Parameters

Table 3-129 REPT ALM EQPT Output Parameters

Parameter and Values	Description
AID	Access identifier from the “EQPT” section on page 4-43. Equipment AID SLOT-{1-17}
NTFCNCDE	Two-letter notification code Parameter type is NOTIF_CODE—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

Table 3-129 REPT ALM EQPT Output Parameters (continued)

Parameter and Values	Description
• NR	The alarm is not reported
CONDITION	Condition type for an alarm or a reported event
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition
	Parameter type is SERV_EFF—the effect of the alarm on service
• NSA	The condition is non-service affecting
• SA	The condition is service affecting
DESC	Condition description. Optional
AIDDET	AIDDET uses the same addressing rules as the AID, but specifies AID type and additional details about the entity being managed. Optional
	Parameter type is EQPT_TYPE—the type of equipment being provisioned into a slot
• AD-1B	Optical Add/Drop Multiplexed (OADM) 1 Band Filter
• AD-1C	Optical Add/Drop Multiplexed (OADM) 1 Channel Filter
• AD-2C	Optical Add/Drop Multiplexed (OADM) 2 Channels Filter
• AD-4B	Optical Add/Drop Multiplexed (OADM) 4 Bands Filter
• AD-4C	Optical Add/Drop Multiplexed (OADM) 4 Channels Filter
• AIC	The Alarm Interface Controller Card is an optional card which expands system management capabilities for the customer defined alarm I/O and orderwire functionality
• AICI	The AICI card
• AIP	The Alarm Indicator Panel
• ALM-PWR	Alarm Power
• ASAP-4	ASAP Carrier card with four PIM slots
• BP	The Backplane of the NE
• CE-100T-8	8-Port 100T card on ONS 15454 and ONS 15310-CL
• CRFT-TMG	Craft Timing
• DCC	The Data Communications Channel
• DMX-32	Optical De/Multiplexed (DMX) 32 Channels
• DS1-14	A 14 port interface card supporting DS1 facilities
• DS1N-14	A 14 port interface card supporting DS1 facilities
• DS3-12	A 12 port interface card supporting DS3 facilities
• DS3-3	A 3 port interface card supporting DS3 facilities

Table 3-129 REPT ALM EQPT Output Parameters (continued)

Parameter and Values	Description
• DS3-EC1-48	High Density DS3/EC1 card supporting 48 ports
• DS3ATM-12	A 12 port interface card supporting DS3 ATM facilities
• DS3CR-12	Cost reduced DS3
• DS3E-12	A 12 port DS3 enhancement interface card supporting DS3E facilities
• DS3N-12	A 12 port interface card supporting DS3 facilities
• DS3NE-12	A 12 port DS3 enhancement interface card supporting DS3E facilities
• DS3XM-6	An interface card that converts six framed DS-3 network connections to 28x6 or 168 VT1.5s
• E1000T-2	A 2 port interface card supporting 1000 Base T Ethernet facilities
• E100T-12	A 12 port interface card supporting 100 Base T Ethernet facilities
• E100T-4	A four port interface card supporting 100 Base T Ethernet facilities.
• EC1-12	A 12 port interface card supporting EC1 facilities
• EC1N-12	A 12 port interface card supporting EC1 facilities
• FILLER_CARD	Smart Filler card (ONS 15600)
• FTA	The Fan Tray of the NE
• FTA1	The Fan Tray 1 of the NE
• FTA2	The Fan Tray 2 of the NE
• G1000-4	A four port G1000 card
• MD-4	Optical Multiplexer/Demultiplexer with 4 Channels
• MIC-28-3-A	ONS 15327 MIC card A
• MIC-28-3-B	ONS 15327 MIC card B
• MIC-EXT	ONS 15327 MIC card
• MIC-GEN	ONS 15327 MIC card
• ML-100T-8	8 port 100T card on ONS 15310-CL
• MUX-32	Optical Multiplexed (MUX) 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder Card
• OC12	An interface card that supports one or more OC-12 (622Mbs) optical facilities
• OC12-327	ONS 15327 OC12 card
• OC12-4	A four port OC12 card
• OC12-IR-1	An interface card that supports one intermediate range OC-12 (622Mbs) optical facilities
• OC12-LR-1	An interface card that supports one long range OC-12 (622Mbs) optical facilities
• OC12-SR-1	An interface card that supports one short range OC-12 (622Mbs) optical facilities

Table 3-129 REPT ALM EQPT Output Parameters (continued)

Parameter and Values	Description
• OC192_4	4 port OC192 card (ONS 15600)
• OC192-LR-1	An interface card that supports one or more OC-192 optical facilities
• OC3	An interface card that supports multiple OC-3 (155Mbs) optical facilities
• OC3-327	ONS 15327 OC3 card
• OC3-IR-4	An interface card that supports four intermediate range OC-3 (155Mbs) optical facilities
• OC3-SR-4	An interface card that supports four short range OC-3 (155Mbs) optical facilities
• OC3ATM-IR-6	An interface card that supports six intermediate range OC-3 (155Mbs) ATM optical fibers
• OC3IR-STM1SH-1310-8	An OC3 card which has 8 ports over the lower speed slot of the ONS 15454 with XC10G/192
• OC3POS-SR-4	An interface card that supports four short range OC-3 (155Mbs) POS optical facilities
• OC48	An interface card that supports one or more OC-48 (10Gbs) optical facilities
• OC48-327	ONS 15327 OC48 card
• OC48-AS-1	An interface card that supports one short range OC-48 (10Gbs) optical facilities that can be provisioned in any I/O slot
• OC48-ELR-1	An interface card that supports one short range OC-48 (2.5Gbs) optical facility
• OC48-IR-1	An interface card that supports one intermediate range OC-48 (10Gbs) optical facility
• OC48-LR-1	An interface card that supports one long range OC-48 (10Gbs) optical facility
• OC48-SR-1	An interface card that supports one short range OC-48 (10Gbs) optical facilities
• OC-48_16	16 port OC48 card (ONS 15600)
• OPT-BST	Optical Booster Amplifier
• OPT-PRE	Optical Pre-Amplifier
• OSC-CSM	Optical Service Channel (OSC) with Combiner/Separator Module (SCM)
• OSCM	Optical Service Channel (OSC) Module
• PIM-4	Pluggable interface module with 4 PPM slots
• PPM-1	Pluggable port module with 1 port SFP module
• SSXC	Cross connect card (ON 15600)
• TCC	The Timing Communication and Control card

Table 3-129 REPT ALM EQPT Output Parameters (continued)

Parameter and Values	Description
• TSC	Timing and synchronization controller card (ONS 15600)
• TXP-MR-10G	10G Multirate Transponder Card
• TXP-MR-2.5G	Multi-Rate 2.5G Unprotected
• TXPP-MR-2.5G	Multi-Rate 2.5G Protected
• XCVT	A Cross-Connect card
• XC10G	A Cross-Connect card
• XTC	ONS 15327 XTC card
• XTC-DS1-14	ONS 15327 XTC DS1-14 card
• XTC-DS1-28	ONS 15327 XTC DS1-28 card
• XTC-DS1-56	ONS 15327 XTC DS1-56 card
• XTC-DS3-3	ONS 15327 XTC DS3-3 card

3.2.127 REPT ALM SECU

Report Alarm Security

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

Reports the occurrence of an alarmed security event against the NE.

Based on TR-NWT-000835, the AID of the security alarm should be the Connection IDentifier (CID) which is not currently supported.

The COM or UID is an acceptable substitute for the AID.

Note The INTRUSION-PSWD condition is the only condition that is reported as a standing condition instead of a transient condition. It defaults to NA and is reported by the REPT EVT SECU message. However, it can be reprovisioned to be reported at a higher severity. If the severity of this alarm is higher than NA, it is reported by the REPT ALM SECU message.

Category

Security

Security

Superuser

Related Commands

ACT-USER	REPT ALM ENV	RTRV-ALM-BITS
ALW-MSG-SECU	REPT ALM EQPT	RTRV-ALM-ENV
ALW-USER-SECU	REPT ALM SYNCN	RTRV-ALM-EQPT
CANC	REPT EVT <MOD2ALM>	RTRV-ALM-SYNCN
CANC-USER	REPT EVT BITS	RTRV-CMD-SECU
CANC-USER-SECU	REPT EVT COM	RTRV-COND-<MOD2ALM>
CLR-COND-SECU	REPT EVT ENV	RTRV-COND-ALL
DLT-USER-SECU	REPT EVT EQPT	RTRV-COND-BITS
ED-CMD-SECU	REPT EVT FXFR	RTRV-COND-ENV
ED-PID	REPT EVT IOSCFG	RTRV-COND-EQPT
ED-USER-SECU	REPT EVT SECU	RTRV-COND-SYNCN
ENT-USER-SECU	REPT EVT SESSION	RTRV-DFLT-SECU
INH-MSG-SECU	REPT EVT SYNCN	RTRV-USER-SECU
INH-USER-SECU	RTRV-ALM-<MOD2ALM>	SET-ATTR-SECUDFLT
REPT ALM <MOD2ALM>	RTRV-ALM-ALL	
REPT ALM BITS		
REPT ALM COM		

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

Table 3-130 REPT ALM SECU Output Parameters

Parameter and Values	Description
AID	Access identifier. Identifies an entity with the condition. Defaults to COM. String
NOTIFCODE	Two-letter notification code
	Parameter type is NOTIF_CODE—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

Table 3-130 REPT ALM SECU Output Parameters (continued)

Parameter and Values	Description
• 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 (R5.0) the only allowable type is INTRUSION-PSWD 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

3.2.128 REPT ALM SYNCN

Report Alarm Synchronization

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

Reports an alarm condition against a synchronization reference.

Category

Synchronization

Security

Retrieve

Related Commands

CLR-COND-SECU
ED-BITS
ED-NE-SYNCN
ED-SYNCN
OPR-SYNCNSW
REPT ALM <MOD2ALM>
REPT ALM BITS
REPT ALM COM
REPT ALM ENV
REPT ALM EQPT
REPT ALM SECU
REPT EVT <MOD2ALM>
REPT EVT BITS
REPT EVT COM
REPT EVT ENV
REPT EVT EQPT
REPT EVT FXFR
REPT EVT IOSCFG
REPT EVT SECU
REPT EVT SESSION
REPT EVT SYNCN
RLS-SYNCNSW
RTRV-ALM-<MOD2ALM>
RTRV-ALM-ALL
RTRV-ALM-BITS
RTRV-ALM-ENV
RTRV-ALM-EQPT
RTRV-ALM-SYNCN
RTRV-BITS
RTRV-COND-<MOD2ALM>
RTRV-COND-ALL
RTRV-COND-BITS
RTRV-COND-ENV
RTRV-COND-EQPT
RTRV-COND-SYNCN
RTRV-NE-SYNCN
RTRV-SYNCN

Output Format

```
   SID DATE TIME
** ATAG REPT ALM SYNCN
   "<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,:[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM SYNCN
   "SYNC-NE:MJ,MAN,SA,,,,:\"MANUAL SWITCH\","
;
```

Output Parameters

Table 3-131 REPT ALM SYNCN Output Parameters

Parameter and Values	Description
AID	Access identifier from the "SYNC_REF" section on page 4-56. Identifies a synchronization reference with alarm condition
NTFCNCDE	Two-letter notification code
	Parameter type is NOTIF_CODE—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
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition
	Parameter type is SERV_EFF—the effect of the alarm on service
• NSA	The condition is non-service affecting
• SA	The condition is service affecting
DESC	Condition description. Optional

3.2.129 REPT DBCHG

Report Database Change Message

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

Reports any changes on the NE that result from:

1. TL1 provisioning commands or their GUI equivalents containing the verbs: ALW, DLT, ED, ENT, INH, INIT, OPR, RLS, SET, and SW (for example, DLT-EQPT, ENT-CRS-STS1)
2. External event such as a board insertion.
3. When secondary state is changed from AINS state to any other state, no REPT DBCHG messages are generated.

Note The REPT DBCHG is turned off by default. To turn REPT DBCHG on, you must issue the ALW-MSG-DBCHG command.

Category

Log

Security

Retrieve

Related Commands

ALW-MSG-DBCHG INH-MSG-DBCHG RTRV-LOG

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

Table 3-132 REPT DBCHG Output Parameters

Parameter and Values	Description
TIME	The time of the message triggered by the NE
DATE	The date of the message triggered by the NE
SOURCE	An input-command CTAG if present. String. Optional
USERID	The user name or user identifier. String. Optional
DBCHGSEQ	Identifier or range of identifiers to be retrieved. It is a sequential number of the DBCHGSEQ message. Integer
COMMAND	The input command or substitute. String
AID	Access identifier. String
PSTPSTQ	Admin state in the PST-PSTQ format
	Parameter type is PST_PSTQ—service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ)
• IS-NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SST	Secondary state
	Parameter type is SST—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

3.2.130 REPT EVT <MOD2ALM>

Report Event (1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, DS1, E100, E1000, E3, E4, EC1, FSTE, G1000, GFPOS, GIGE, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, UDCDCC, UDCF, VC12, VC3, VCG, VT1, VT2, WLEN)

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

Reports the occurrence of a non-alarmed event. Beginning with this release (R5.0), REPT EVT <MOD2ALM> can report the RMON-managed threshold crossing alarm.

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

Category

Fault

Security

Retrieve

Related Commands

CLR-COND-SECU	REPT EVT ENV	RTRV-ALM-ENV
REPT ALM <MOD2ALM>	REPT EVT EQPT	RTRV-ALM-EQPT
REPT ALM BITS	REPT EVT FXFR	RTRV-ALM-SYNCN
REPT ALM COM	REPT EVT IOSCFG	RTRV-COND-<MOD2ALM>
REPT ALM ENV	REPT EVT SECU	RTRV-COND-ALL
REPT ALM EQPT	REPT EVT SESSION	RTRV-COND-BITS
REPT ALM SECU	REPT EVT SYNCN	RTRV-COND-ENV
REPT ALM SYNCN	RTRV-ALM-<MOD2ALM>	RTRV-COND-EQPT
REPT EVT BITS	RTRV-ALM-ALL	RTRV-COND-SYNCN
REPT EVT COM	RTRV-ALM-BITS	

Output Format

```
   SID DATE TIME
A ATAG REPT EVT <MOD2ALM>
   "<AID>:<CONDTYPE>,[<CONDEFF>],,,[<LOCN>],,[<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 TOPROTECTION\",
   OC48"
;
```

Output Parameters

Table 3-133 REPT EVT <MOD2ALM> Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17
CONDTYPE	Condition type for an alarm or a reported event
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
CONDEFF	The effect of the event on the condition of the NE
	Parameter type is COND_EFF—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 in reference to the entity identified by the AID
	Parameter type is LOCATION—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
MONVAL	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. Float. Optional
THLEV	Threshold level. Float. Optional
TMPER	Accumulation time period for performance counters. Optional
	Parameter type is TMPER—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.

Table 3-133 REPT EVT <MOD2ALM> Output Parameters (continued)

Parameter and Values	Description
• 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	Condition description. Optional
AIDDET	AIDDET uses the same addressing rules as the AID, but specifies AID type and additional details about the entity being managed. Optional
	Parameter type is EQPT_TYPE—the type of equipment being provisioned into a slot
• AD-1B	Optical Add/Drop Multiplexed (OADM) 1 Band Filter
• AD-1C	Optical Add/Drop Multiplexed (OADM) 1 Channel Filter
• AD-2C	Optical Add/Drop Multiplexed (OADM) 2 Channels Filter
• AD-4B	Optical Add/Drop Multiplexed (OADM) 4 Bands Filter
• AD-4C	Optical Add/Drop Multiplexed (OADM) 4 Channels Filter
• AIC	The Alarm Interface Controller Card is an optional card which expands system management capabilities for the customer defined alarm I/O and orderwire functionality
• AICI	The AICI card
• AIP	The Alarm Indicator Panel
• ALM-PWR	Alarm Power
• ASAP-4	ASAP Carrier card with four PIM slots
• BP	The Backplane of the NE
• CE-100T-8	8-Port 100T card on ONS 15454 and ONS 15310-CL
• CRFT-TMG	Craft Timing
• DCC	The Data Communications Channel
• DMX-32	Optical De/Multiplexed (DMX) 32 Channels
• DS1-14	A 14 port interface card supporting DS1 facilities
• DS1N-14	A 14 port interface card supporting DS1 facilities
• DS3-12	A 12 port interface card supporting DS3 facilities
• DS3-3	A 3 port interface card supporting DS3 facilities
• DS3-EC1-48	High Density DS3/EC1 card supporting 48 ports
• DS3ATM-12	A 12 port interface card supporting DS3 ATM facilities
• DS3CR-12	Cost reduced DS3
• DS3E-12	A 12 port DS3 enhancement interface card supporting DS3E facilities
• DS3N-12	A 12 port interface card supporting DS3 facilities
• DS3NE-12	A 12 port DS3 enhancement interface card supporting DS3E facilities

Table 3-133 REPT EVT <MOD2ALM> Output Parameters (continued)

Parameter and Values	Description
• DS3XM-6	An interface card that converts six framed DS-3 network connections to 28x6 or 168 VT1.5s
• E1000T-2	A 2 port interface card supporting 1000 Base T Ethernet facilities
• E100T-12	A 12 port interface card supporting 100 Base T Ethernet facilities
• E100T-4	A four port interface card supporting 100 Base T Ethernet facilities.
• EC1-12	A 12 port interface card supporting EC1 facilities
• EC1N-12	A 12 port interface card supporting EC1 facilities
• FILLER_CARD	Smart Filler card (ONS 15600)
• FTA	The Fan Tray of the NE
• FTA1	The Fan Tray 1 of the NE
• FTA2	The Fan Tray 2 of the NE
• G1000-4	A four port G1000 card
• MD-4	Optical Multiplexer/Demultiplexer with 4 Channels
• MIC-28-3-A	ONS 15327 MIC card A
• MIC-28-3-B	ONS 15327 MIC card B
• MIC-EXT	ONS 15327 MIC card
• MIC-GEN	ONS 15327 MIC card
• ML-100T-8	8 port 100T card on ONS 15310-CL
• MUX-32	Optical Multiplexed (MUX) 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder Card
• OC12	An interface card that supports one or more OC-12 (622Mbs) optical facilities
• OC12-327	ONS 15327 OC12 card
• OC12-4	A four port OC12 card
• OC12-IR-1	An interface card that supports one intermediate range OC-12 (622Mbs) optical facilities
• OC12-LR-1	An interface card that supports one long range OC-12 (622Mbs) optical facilities
• OC12-SR-1	An interface card that supports one short range OC-12 (622Mbs) optical facilities
• OC192_4	4 port OC192 card (ONS 15600)
• OC192-LR-1	An interface card that supports one or more OC-192 optical facilities
• OC3	An interface card that supports multiple OC-3 (155Mbs) optical facilities
• OC3-327	ONS 15327 OC3 card
• OC3-IR-4	An interface card that supports four intermediate range OC-3 (155Mbs) optical facilities

Table 3-133 REPT EVT <MOD2ALM> Output Parameters (continued)

Parameter and Values	Description
• OC3-SR-4	An interface card that supports four short range OC-3 (155Mbs) optical facilities
• OC3ATM-IR-6	An interface card that supports six intermediate range OC-3 (155Mbs) ATM optical fibers
• OC3IR-STM1SH-1310-8	An OC3 card which has 8 ports over the lower speed slot of the ONS 15454 with XC10G/192
• OC3POS-SR-4	An interface card that supports four short range OC-3 (155Mbs) POS optical facilities
• OC48	An interface card that supports one or more OC-48 (10Gbs) optical facilities
• OC48-327	ONS 15327 OC48 card
• OC48-AS-1	An interface card that supports one short range OC-48 (10Gbs) optical facilities that can be provisioned in any I/O slot
• OC48-ELR-1	An interface card that supports one short range OC-48 (2.5Gbs) optical facility
• OC48-IR-1	An interface card that supports one intermediate range OC-48 (10Gbs) optical facility
• OC48-LR-1	An interface card that supports one long range OC-48 (10Gbs) optical facility
• OC48-SR-1	An interface card that supports one short range OC-48 (10Gbs) optical facilities
• OC-48_16	16 port OC48 card (ONS 15600)
• OPT-BST	Optical Booster Amplifier
• OPT-PRE	Optical Pre-Amplifier
• OSC-CSM	Optical Service Channel (OSC) with Combiner/Separator Module (SCM)
• OSCM	Optical Service Channel (OSC) Module
• PIM-4	Pluggable interface module with 4 PPM slots
• PPM-1	Pluggable port module with 1 port SFP module
• SSXC	Cross connect card (ON 15600)
• TCC	The Timing Communication and Control card
• TSC	Timing and synchronization controller card (ONS 15600)
• TXP-MR-10G	10G Multirate Transponder Card
• TXP-MR-2.5G	Multi-Rate 2.5G Unprotected
• TXPP-MR-2.5G	Multi-Rate 2.5G Protected
• XCVT	A Cross-Connect card
• XC10G	A Cross-Connect card
• XTC	ONS 15327 XTC card

Table 3-133 REPT EVT <MOD2ALM> Output Parameters (continued)

Parameter and Values	Description
• XTC-DS1-14	ONS 15327 XTC DS1-14 card
• XTC-DS1-28	ONS 15327 XTC DS1-28 card
• XTC-DS1-56	ONS 15327 XTC DS1-56 card
• XTC-DS3-3	ONS 15327 XTC DS3-3 card

3.2.131 REPT EVT BITS

Report Event Building Integrated Timing Supply

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

Reports a non-alarmed event against a BITS facility.

Category

Synchronization

Security

Retrieve

Related Commands

CLR-COND-SECU	REPT EVT COM	RTRV-ALM-EQPT
ED-BITS	REPT EVT ENV	RTRV-ALM-SYNCN
ED-NE-SYNCN	REPT EVT EQPT	RTRV-BITS
ED-SYNCN	REPT EVT FXFR	RTRV-COND-<MOD2ALM>
OPR-SYNCNSW	REPT EVT IOSCFG	RTRV-COND-ALL
REPT ALM <MOD2ALM>	REPT EVT SECU	RTRV-COND-BITS
REPT ALM BITS	REPT EVT SESSION	RTRV-COND-ENV
REPT ALM COM	REPT EVT SYNCN	RTRV-COND-EQPT
REPT ALM ENV	RLS-SYNCNSW	RTRV-COND-SYNCN
REPT ALM EQPT	RTRV-ALM-<MOD2ALM>	RTRV-NE-SYNCN
REPT ALM SECU	RTRV-ALM-ALL	RTRV-SYNCN
REPT ALM SYNCN	RTRV-ALM-BITS	
REPT EVT <MOD2ALM>	RTRV-ALM-ENV	

Output Format

```
   SID DATE TIME
** ATAG REPT EVT BITS
   "<AID>:<CONDTYPE>,[<CONDEFF>],,,,,,,:[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
A 100.100 REPT ALM BITS
   "BITS-1:SSM-STU,TC,,,,,,,:\"SYNCHRONIZED - TRACEABILITY UNKNOWN\""
;
```

Output Parameters

Table 3-134 REPT EVT BITS Output Parameters

Parameter and Values	Description
AID	Access identifier from the "BITS" section on page 4-29
CONDTYPE	Condition type for an alarm or a reported event
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
CONDEFF	The effect of the event on the condition of the NE
	Parameter type is COND_EFF—the state of the condition upon the affected unit
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
DESC	Condition description. Optional

3.2.132 REPT EVT COM

Report Event COM

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

Reports a non-alarmed event against an NE when there is no AID associated with it.

Category

Fault

Security

Retrieve

Related Commands

CLR-COND-SECU	REPT EVT ENV	RTRV-ALM-ENV
REPT ALM <MOD2ALM>	REPT EVT EQPT	RTRV-ALM-EQPT
REPT ALM BITS	REPT EVT FXFR	RTRV-ALM-SYNCN
REPT ALM COM	REPT EVT IOSCFG	RTRV-COND-<MOD2ALM>
REPT ALM ENV	REPT EVT SECU	RTRV-COND-ALL
REPT ALM EQPT	REPT EVT SESSION	RTRV-COND-BITS
REPT ALM SECU	REPT EVT SYNCN	RTRV-COND-ENV
REPT ALM SYNCN	RTRV-ALM-<MOD2ALM>	RTRV-COND-EQPT
REPT EVT <MOD2ALM>	RTRV-ALM-ALL	RTRV-COND-SYNCN
REPT EVT BITS	RTRV-ALM-BITS	

Output Format

```
   SID DATE TIME
A ATAG REPT EVT COM
   “[<AID>]:<CONDTYPE>,[<CONDEFF>],,,,,,,:[<DESC>]”
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
A 100.100 REPT EVT COM
   “COM:CLDRESTART,TC,,,,,,,:\“COLD RESTART\”,”
;
```

Output Parameters

Table 3-135 REPT EVT COM Output Parameters

Parameter and Values	Description
AID	Access identifier. Identifies the entity to which the command pertains. String. Optional
CONDTYPE	Condition type for an alarm or a reported event
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the “Conditions” section on page 4-9 for a list of conditions
CONDEFF	The effect of the event on the condition of the NE
	Parameter type is COND_EFF—the state of the condition upon the affected unit
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
DESC	Condition description. Optional

3.2.133 REPT EVT ENV

Report Event Environment

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

Reports the occurrence of a non-alarmed event against an environment alarm input.

Category

Environment Alarms and Controls

Security

Retrieve

Related Commands

CLR-COND-SECU	REPT EVT EQPT	RTRV-ATTR-CONT
OPR-ACO-ALL	REPT EVT FXFR	RTRV-ATTR-ENV
OPR-EXT-CONT	REPT EVT IOSCFG	RTRV-COND-<MOD2ALM>
REPT ALM <MOD2ALM>	REPT EVT SECU	RTRV-COND-ALL
REPT ALM BITS	REPT EVT SESSION	RTRV-COND-BITS
REPT ALM COM	REPT EVT SYNCN	RTRV-COND-ENV
REPT ALM ENV	RLS-EXT-CONT	RTRV-COND-EQPT
REPT ALM EQPT	RTRV-ALM-<MOD2ALM>	RTRV-COND-SYNCN
REPT ALM SECU	RTRV-ALM-ALL	RTRV-EXT-CONT
REPT ALM SYNCN	RTRV-ALM-BITS	SET-ATTR-CONT
REPT EVT <MOD2ALM>	RTRV-ALM-ENV	SET-ATTR-ENV
REPT EVT BITS	RTRV-ALM-EQPT	SET-ATTR-SECUDFLT
REPT EVT COM	RTRV-ALM-SYNCN	

Output Format

```
   SID DATE TIME
A ATAG REPT EVT ENV
   "<AID>:<ALMTYPE>,[<CONDEFF>],,,,,,,:[<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

Table 3-136 REPT EVT ENV Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ENV" section on page 4-42. Identifies an environmental input
ALMTYPE	Abbreviated code identifying the alarm
	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
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUSE	Fuse failure
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 Volt power supply failure

Table 3-136 REPT EVT ENV Output Parameters (continued)

Parameter and Values	Description
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• SMOKE	Smoke
• TOXICGAS	Toxic gas
• VENTN	Ventilation system failure
CONDEFF	The effect of the event on the condition of the NE Parameter type is COND_EFF—the state of the condition upon the affected unit
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
DESC	Condition description. Optional

3.2.134 REPT EVT EQPT

Report Event Equipment

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

Reports the occurrence of a non-alarmed event against an equipment unit or slot.

Category

Equipment

Security

Retrieve

Related Commands

ALW-SWDX-EQPT
ALW-SWTOPROTN-EQPT
ALW-SWTOWKG-EQPT
CLR-COND-SECU
DLT-EQPT
ED-EQPT
ENT-EQPT
INH-SWDX-EQPT
INH-SWTOPROTN-EQPT
INH-SWTOWKG-EQPT
REPT ALM <MOD2ALM>
REPT ALM BITS
REPT ALM COM
REPT ALM ENV
REPT ALM EQPT
REPT ALM SECU
REPT ALM SYNCN
REPT EVT <MOD2ALM>
REPT EVT BITS
REPT EVT COM
REPT EVT ENV
REPT EVT FXFR
REPT EVT IOSCFG
REPT EVT SECU
REPT EVT SESSION
REPT EVT SYNCN
REPT RMV EQPT
REPT RST EQPT
RTRV-ALM-<MOD2ALM>
RTRV-ALM-ALL
RTRV-ALM-BITS
RTRV-ALM-ENV
RTRV-ALM-EQPT
RTRV-ALM-SYNCN
RTRV-ALMTH-EQPT
RTRV-COND-<MOD2ALM>
RTRV-COND-ALL
RTRV-COND-BITS
RTRV-COND-ENV
RTRV-COND-EQPT
RTRV-COND-SYNCN
RTRV-EQPT
SET-ALMTH-EQPT
SW-DX-EQPT
SW-TOPROTN-EQPT
SW-TOWKG-EQPT

Output Format

```
   SID DATE TIME
A ATAG REPT EVT EQPT
   “<AID>:<CONDTYPE>,[<CONDEFF>],,,,,,,:[<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

Table 3-137 REPT EVT EQPT Output Parameters

Parameter and Values	Description
AID	Access identifier from the “EQPT” section on page 4-43. Equipment AID SLOT-{1-17}
CONDTYPE	Condition type for an alarm or a reported event Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the “Conditions” section on page 4-9 for a list of conditions
CONDEFF	The effect of the event on the condition of the NE

Table 3-137 REPT EVT EQPT Output Parameters (continued)

Parameter and Values	Description
	Parameter type is COND_EFF—the state of the condition upon the affected unit
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
DESC	Condition description. Optional
AIDDET	AIDDET uses the same addressing rules as the AID, but specifies AID type and additional details about the entity being managed. Optional
	Parameter type is EQPT_TYPE—the type of equipment being provisioned into a slot
• AD-1B	Optical Add/Drop Multiplexed (OADM) 1 Band Filter
• AD-1C	Optical Add/Drop Multiplexed (OADM) 1 Channel Filter
• AD-2C	Optical Add/Drop Multiplexed (OADM) 2 Channels Filter
• AD-4B	Optical Add/Drop Multiplexed (OADM) 4 Bands Filter
• AD-4C	Optical Add/Drop Multiplexed (OADM) 4 Channels Filter
• AIC	The Alarm Interface Controller Card is an optional card which expands system management capabilities for the customer defined alarm I/O and orderwire functionality
• AICI	The AICI card
• AIP	The Alarm Indicator Panel
• ALM-PWR	Alarm Power
• ASAP-4	ASAP Carrier card with four PIM slots
• BP	The Backplane of the NE
• CE-100T-8	8-Port 100T card on ONS 15454 and ONS 15310-CL
• CRFT-TMG	Craft Timing
• DCC	The Data Communications Channel
• DMX-32	Optical De/Multiplexed (DMX) 32 Channels
• DS1-14	A 14 port interface card supporting DS1 facilities
• DS1N-14	A 14 port interface card supporting DS1 facilities
• DS3-12	A 12 port interface card supporting DS3 facilities
• DS3-3	A 3 port interface card supporting DS3 facilities
• DS3-EC1-48	High Density DS3/EC1 card supporting 48 ports
• DS3ATM-12	A 12 port interface card supporting DS3 ATM facilities
• DS3CR-12	Cost reduced DS3
• DS3E-12	A 12 port DS3 enhancement interface card supporting DS3E facilities
• DS3N-12	A 12 port interface card supporting DS3 facilities

Table 3-137 REPT EVT EQPT Output Parameters (continued)

Parameter and Values	Description
• DS3NE-12	A 12 port DS3 enhancement interface card supporting DS3E facilities
• DS3XM-6	An interface card that converts six framed DS-3 network connections to 28x6 or 168 VT1.5s
• E1000T-2	A 2 port interface card supporting 1000 Base T Ethernet facilities
• E100T-12	A 12 port interface card supporting 100 Base T Ethernet facilities
• E100T-4	A four port interface card supporting 100 Base T Ethernet facilities.
• EC1-12	A 12 port interface card supporting EC1 facilities
• EC1N-12	A 12 port interface card supporting EC1 facilities
• FILLER_CARD	Smart Filler card (ONS 15600)
• FTA	The Fan Tray of the NE
• FTA1	The Fan Tray 1 of the NE
• FTA2	The Fan Tray 2 of the NE
• G1000-4	A four port G1000 card
• MD-4	Optical Multiplexer/Demultiplexer with 4 Channels
• MIC-28-3-A	ONS 15327 MIC card A
• MIC-28-3-B	ONS 15327 MIC card B
• MIC-EXT	ONS 15327 MIC card
• MIC-GEN	ONS 15327 MIC card
• ML-100T-8	8 port 100T card on ONS 15310-CL
• MUX-32	Optical Multiplexed (MUX) 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder Card
• OC12	An interface card that supports one or more OC-12 (622Mbs) optical facilities
• OC12-327	ONS 15327 OC12 card
• OC12-4	A four port OC12 card
• OC12-IR-1	An interface card that supports one intermediate range OC-12 (622Mbs) optical facilities
• OC12-LR-1	An interface card that supports one long range OC-12 (622Mbs) optical facilities
• OC12-SR-1	An interface card that supports one short range OC-12 (622Mbs) optical facilities
• OC192_4	4 port OC192 card (ONS 15600)
• OC192-LR-1	An interface card that supports one or more OC-192 optical facilities
• OC3	An interface card that supports multiple OC-3 (155Mbs) optical facilities
• OC3-327	ONS 15327 OC3 card

Table 3-137 REPT EVT EQPT Output Parameters (continued)

Parameter and Values	Description
• OC3-IR-4	An interface card that supports four intermediate range OC-3 (155Mbs) optical facilities
• OC3-SR-4	An interface card that supports four short range OC-3 (155Mbs) optical facilities
• OC3ATM-IR-6	An interface card that supports six intermediate range OC-3 (155Mbs) ATM optical fibers
• OC3IR-STM1SH-1310-8	An OC3 card which has 8 ports over the lower speed slot of the ONS 15454 with XC10G/192
• OC3POS-SR-4	An interface card that supports four short range OC-3 (155Mbs) POS optical facilities
• OC48	An interface card that supports one or more OC-48 (10Gbs) optical facilities
• OC48-327	ONS 15327 OC48 card
• OC48-AS-1	An interface card that supports one short range OC-48 (10Gbs) optical facilities that can be provisioned in any I/O slot
• OC48-ELR-1	An interface card that supports one short range OC-48 (2.5Gbs) optical facility
• OC48-IR-1	An interface card that supports one intermediate range OC-48 (10Gbs) optical facility
• OC48-LR-1	An interface card that supports one long range OC-48 (10Gbs) optical facility
• OC48-SR-1	An interface card that supports one short range OC-48 (10Gbs) optical facilities
• OC-48_16	16 port OC48 card (ONS 15600)
• OPT-BST	Optical Booster Amplifier
• OPT-PRE	Optical Pre-Amplifier
• OSC-CSM	Optical Service Channel (OSC) with Combiner/Separator Module (SCM)
• OSCM	Optical Service Channel (OSC) Module
• PIM-4	Pluggable interface module with 4 PPM slots
• PPM-1	Pluggable port module with 1 port SFP module
• SSXC	Cross connect card (ON 15600)
• TCC	The Timing Communication and Control card
• TSC	Timing and synchronization controller card (ONS 15600)
• TXP-MR-10G	10G Multirate Transponder Card
• TXP-MR-2.5G	Multi-Rate 2.5G Unprotected
• TXPP-MR-2.5G	Multi-Rate 2.5G Protected
• XCVT	A Cross-Connect card
• XC10G	A Cross-Connect card

Table 3-137 REPT EVT EQPT Output Parameters (continued)

Parameter and Values	Description
• XTC	ONS 15327 XTC card
• XTC-DS1-14	ONS 15327 XTC DS1-14 card
• XTC-DS1-28	ONS 15327 XTC DS1-28 card
• XTC-DS1-56	ONS 15327 XTC DS1-56 card
• XTC-DS3-3	ONS 15327 XTC DS3-3 card

3.2.135 REPT EVT FXFR

Report Event Software Download

Usage Guidelines

Cisco ONS 15454, 15327, 15310-CL

Reports the FTP software download status of the start, completion, and completed percentage.

Notes:

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

Category

System

Security

Retrieve

Related Commands

ACT-USER
ALW-MSG-ALL
ALW-MSG-DBCHG
ALW-MSG-SECU
CLR-COND-SECU
COPY-RFILE
DLT-TRAPTABLE
ED-DAT
ED-NE-GEN
ED-NE-PATH
ED-NE-SYNCN
ED-TRAPTABLE
ENT-TRAPTABLE
INH-MSG-ALL
INH-MSG-DBCHG
INH-MSG-SECU
INIT-SYS
REPT ALM <MOD2ALM>
REPT ALM BITS
REPT ALM COM
REPT ALM ENV
REPT ALM EQPT
REPT ALM SECU
REPT ALM SYNCN
REPT EVT <MOD2ALM>
REPT EVT BITS
REPT EVT COM
REPT EVT ENV
REPT EVT EQPT
REPT EVT IOSCFG
REPT EVT SECU
REPT EVT SESSION
REPT EVT SYNCN
RTRV-ALM-<MOD2ALM>
RTRV-ALM-ALL
RTRV-ALM-BITS
RTRV-ALM-ENV
RTRV-ALM-EQPT
RTRV-ALM-SYNCN
RTRV-COND-<MOD2ALM>
RTRV-COND-ALL
RTRV-COND-BITS
RTRV-COND-ENV
RTRV-COND-EQPT
RTRV-COND-SYNCN
RTRV-HDR
RTRV-INV
RTRV-MAP-NETWORK
RTRV-NE-APC
RTRV-NE-GEN
RTRV-NE-IPMAP
RTRV-NE-PATH
RTRV-NE-SYNCN
RTRV-NE-WDMANS
RTRV-TOD
RTRV-TRAPTABLE
SET-TOD

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

Table 3-138 REPT EVT FXFR Output Parameters

Parameter and Values	Description
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 controller 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. String
FXFR_STATUS	The status of the file transfer: Start, IP (in progress), or COMPLD
	Parameter type is TX_STATUS—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	The result of the file transfer: Success or Failure. Optional
	Parameter type is TX_RSLT—result of the file transfer
• FAILURE	A failed result
• SUCCESS	A successful result
BYTES_XFRD	The percentage of bytes transferred. String. Optional

3.2.136 REPT EVT IOSCFG

Report Event IOS Config File

Usage Guidelines

Cisco ONS 15454

Reports the status of copying the IOS configuration file when the COPY-IOSCFG command is issued.

Notes:

1. You can identify if this message is caused by an IOS config file downloading/uploading/merging by looking at the SRC and DEST field in the message. Refer to the COPY-IOSCFG command for more details.
2. There is no success/failure in the message to indicate the success or failure of the merge process when merging the startup IOS config file to the running config file.

Category

IOS

Security

Retrieve

Related Commands

CLR-COND-SECU	REPT EVT COM	RTRV-ALM-ENV
COPY-IOSCFG	REPT EVT ENV	RTRV-ALM-EQPT
REPT ALM <MOD2ALM>	REPT EVT EQPT	RTRV-ALM-SYNCN
REPT ALM BITS	REPT EVT FXFR	RTRV-COND-<MOD2ALM>
REPT ALM COM	REPT EVT SECU	RTRV-COND-ALL
REPT ALM ENV	REPT EVT SESSION	RTRV-COND-BITS
REPT ALM EQPT	REPT EVT SYNCN	RTRV-COND-ENV
REPT ALM SECU	RTRV-ALM-<MOD2ALM>	RTRV-COND-EQPT
REPT ALM SYNCN	RTRV-ALM-ALL	RTRV-COND-SYNCN
REPT EVT <MOD2ALM>	RTRV-ALM-BITS	
REPT EVT BITS		

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

Table 3-139 REPT EVT IOSCFG Output Parameters

Parameter and Values	Description
AID	Access identifier from the "EQPT" section on page 4-43. Slot AID for the equipment
SRC	Source access identifier. Specifies where the IOS config file is copied from. String
DEST	Destination. Specifies where the IOS config file is copied to. String
STATUS	The status of COPY-IOSCFG: Start, IP, or COMPLD
	Parameter type is TX_STATUS—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	The result of the file transfer: Success or Failure. Optional
	Parameter type is TX_RSLT—result of the file transfer
• FAILURE	A failed result
• SUCCESS	A successful result

3.2.137 REPT EVT SECU

Report Event Security

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

Reports the occurrence of a non-alarmed security event against the NE.

Based on TR-NWT-000835 in TR-NWT-000835 and the AID of the security alarm should be the Connection Identifier (CID) which is not supported in this release. The COM or UID is an acceptable substitute for the AID here. 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

Related Commands

ACT-USER
ALW-MSG-SECU
ALW-USER-SECU
CANC
CANC-USER
CANC-USER-SECU
CLR-COND-SECU
DLT-USER-SECU
ED-CMD-SECU
ED-PID
ED-USER-SECU
ENT-USER-SECU
INH-MSG-SECU
INH-USER-SECU
REPT ALM <MOD2ALM>
REPT ALM BITS
REPT ALM COM
REPT ALM ENV
REPT ALM EQPT
REPT ALM SECU
REPT ALM SYNCN
REPT EVT <MOD2ALM>
REPT EVT BITS
REPT EVT COM
REPT EVT ENV
REPT EVT EQPT
REPT EVT FXFR
REPT EVT IOSCFG
REPT EVT SESSION
REPT EVT SYNCN
RTRV-ALM-<MOD2ALM>
RTRV-ALM-ALL
RTRV-ALM-BITS
RTRV-ALM-ENV
RTRV-ALM-EQPT
RTRV-ALM-SYNCN
RTRV-CMD-SECU
RTRV-COND-<MOD2ALM>
RTRV-COND-ALL
RTRV-COND-BITS
RTRV-COND-ENV
RTRV-COND-EQPT
RTRV-COND-SYNCN
RTRV-DFLT-SECU
RTRV-USER-SECU
SET-ATTR-SECUDFLT

Output Format

```
   SID DATE TIME
A  ATAG REPT EVT SECU
   "<AID>:<DNFIELD>,[<CONDEFF>],,,,,,,:<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

Table 3-140 REPT EVT SECU Output Parameters

Parameter and Values	Description
AID	Access identifier. Identifies an entity with the condition. Defaults to COM. String
DNFIELD	String
CONDEFF	The effect of the event on the condition of the NE
	Parameter type is COND_EFF—the state of the condition upon the affected unit
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
SECURITY	String
DNFIELD1	String

3.2.138 REPT EVT SESSION

Report Event Session

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

Reports a non-alarmed event related to establishing a session with the NE.

Notes:

1. The WARN field may contain different information depending on the type of session-related event.
2. If the password aging feature has not been enabled (or the feature is enabled but the password is not close to expiring):

   /*USER <UID> LOGGED IN <IP/SERIAL PORT*/
3. If the forced password feature is enforced and the user is logging in for the first time (or the password has expired):

   /*PLEASE CHANGE PASSWORD BEFORE CONTINUING*/

4. If a session is terminated for any reason (except a user timeout), the reason for the session termination is indicated in the warning (<WARN>).

Category Security

Security Retrieve

Related Commands

ACT-USER	REPT ALM ENV	RTRV-ALM-BITS
ALW-MSG-SECU	REPT ALM EQPT	RTRV-ALM-ENV
ALW-USER-SECU	REPT ALM SECU	RTRV-ALM-EQPT
CANC	REPT ALM SYNCN	RTRV-ALM-SYNCN
CANC-USER	REPT EVT <MOD2ALM>	RTRV-CMD-SECU
CANC-USER-SECU	REPT EVT BITS	RTRV-COND-<MOD2ALM>
CLR-COND-SECU	REPT EVT COM	RTRV-COND-ALL
DLT-USER-SECU	REPT EVT ENV	RTRV-COND-BITS
ED-CMD-SECU	REPT EVT EQPT	RTRV-COND-ENV
ED-PID	REPT EVT FXFR	RTRV-COND-EQPT
ED-USER-SECU	REPT EVT IOSCFG	RTRV-COND-SYNCN
ENT-USER-SECU	REPT EVT SECU	RTRV-DFLT-SECU
INH-MSG-SECU	REPT EVT SYNCN	RTRV-USER-SECU
INH-USER-SECU	RTRV-ALM-<MOD2ALM>	SET-ATTR-SECUDFLT
REPT ALM <MOD2ALM>	RTRV-ALM-ALL	
REPT ALM BITS		
REPT ALM COM		

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 */"
;
```

Output Parameters

Table 3-141 REPT EVT SESSION Output Parameters

Parameter and Values	Description
AID	Access identifier. Identifies the NE with which a session is established. String
EXP	Indicates whether the password is alive (i.e., no password updating is required at the moment), expired, or is about to expire Parameter type is YES_NO—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 either 1.) the warning period has not been exhausted or 2.) the user is a new user establishing a session for the first time and the forced password change policy has been activated. String
WARN	Free format text containing additional information about the security event. String

3.2.139 REPT EVT SYNCN

Report Event Synchronization

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

Reports the occurrence of a non-alarmed event against a synchronization entity.

Category

Synchronization

Security

Retrieve

Related Commands

CLR-COND-SECU	REPT EVT BITS	RTRV-ALM-EQPT
ED-BITS	REPT EVT COM	RTRV-ALM-SYNCN
ED-NE-SYNCN	REPT EVT ENV	RTRV-BITS
ED-SYNCN	REPT EVT EQPT	RTRV-COND-<MOD2ALM>
OPR-SYNCNSW	REPT EVT FXFR	RTRV-COND-ALL
REPT ALM <MOD2ALM>	REPT EVT IOSCFG	RTRV-COND-BITS
REPT ALM BITS	REPT EVT SECU	RTRV-COND-ENV
REPT ALM COM	REPT EVT SESSION	RTRV-COND-EQPT
REPT ALM ENV	RLS-SYNCNSW	RTRV-COND-SYNCN
REPT ALM EQPT	RTRV-ALM-<MOD2ALM>	RTRV-NE-SYNCN
REPT ALM SECU	RTRV-ALM-ALL	RTRV-SYNCN
REPT ALM SYNCN	RTRV-ALM-BITS	
REPT EVT <MOD2ALM>	RTRV-ALM-ENV	

Output Format

```
   SID DATE TIME
A  ATAG REPT EVT SYNCN
   "<AID>:<CONDTYPE>,[<CONDEFF>],,,,,,,:[<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

Table 3-142 REPT EVT SYNCN Output Parameters

Parameter and Values	Description
AID	Access identifier from the "SYNC_REF" section on page 4-56. Identifies a synchronization reference with alarm condition
CONDTYPE	Condition type for an alarm or a reported event
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
CONDEFF	The effect of the event on the condition of the NE
	Parameter type is COND_EFF—the state of the condition upon the affected unit
• CL	Standing condition cleared
• SC	Standing condition raised

Table 3-142 REPT EVT SYNCN Output Parameters (continued)

Parameter and Values	Description
• TC	Transient condition
DESC	Condition description. Optional
AIDDET	AIDDET uses the same addressing rules as the AID, but specifies AID type and additional details about the entity being managed. Optional
	Parameter type is EQPT_TYPE—the type of equipment being provisioned into a slot
• AD-1B	Optical Add/Drop Multiplexed (OADM) 1 Band Filter
• AD-1C	Optical Add/Drop Multiplexed (OADM) 1 Channel Filter
• AD-2C	Optical Add/Drop Multiplexed (OADM) 2 Channels Filter
• AD-4B	Optical Add/Drop Multiplexed (OADM) 4 Bands Filter
• AD-4C	Optical Add/Drop Multiplexed (OADM) 4 Channels Filter
• AIC	The Alarm Interface Controller Card is an optional card which expands system management capabilities for the customer defined alarm I/O and orderwire functionality
• AICI	The AICI card
• AIP	The Alarm Indicator Panel
• ALM-PWR	Alarm Power
• ASAP-4	ASAP Carrier card with four PIM slots
• BP	The Backplane of the NE
• CE-100T-8	8-Port 100T card on ONS 15454 and ONS 15310-CL
• CRFT-TMG	Craft Timing
• DCC	The Data Communications Channel
• DMX-32	Optical De/Multiplexed (DMX) 32 Channels
• DS1-14	A 14 port interface card supporting DS1 facilities
• DS1N-14	A 14 port interface card supporting DS1 facilities
• DS3-12	A 12 port interface card supporting DS3 facilities
• DS3-3	A 3 port interface card supporting DS3 facilities
• DS3-EC1-48	High Density DS3/EC1 card supporting 48 ports
• DS3ATM-12	A 12 port interface card supporting DS3 ATM facilities
• DS3CR-12	Cost reduced DS3
• DS3E-12	A 12 port DS3 enhancement interface card supporting DS3E facilities
• DS3N-12	A 12 port interface card supporting DS3 facilities
• DS3NE-12	A 12 port DS3 enhancement interface card supporting DS3E facilities
• DS3XM-6	An interface card that converts six framed DS-3 network connections to 28x6 or 168 VT1.5s

Table 3-142 REPT EVT SYNCN Output Parameters (continued)

Parameter and Values	Description
• E1000T-2	A 2 port interface card supporting 1000 Base T Ethernet facilities
• E100T-12	A 12 port interface card supporting 100 Base T Ethernet facilities
• E100T-4	A four port interface card supporting 100 Base T Ethernet facilities.
• EC1-12	A 12 port interface card supporting EC1 facilities
• EC1N-12	A 12 port interface card supporting EC1 facilities
• FILLER_CARD	Smart Filler card (ONS 15600)
• FTA	The Fan Tray of the NE
• FTA1	The Fan Tray 1 of the NE
• FTA2	The Fan Tray 2 of the NE
• G1000-4	A four port G1000 card
• MD-4	Optical Multiplexer/Demultiplexer with 4 Channels
• MIC-28-3-A	ONS 15327 MIC card A
• MIC-28-3-B	ONS 15327 MIC card B
• MIC-EXT	ONS 15327 MIC card
• MIC-GEN	ONS 15327 MIC card
• ML-100T-8	8 port 100T card on ONS 15310-CL
• MUX-32	Optical Multiplexed (MUX) 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder Card
• OC12	An interface card that supports one or more OC-12 (622Mbs) optical facilities
• OC12-327	ONS 15327 OC12 card
• OC12-4	A four port OC12 card
• OC12-IR-1	An interface card that supports one intermediate range OC-12 (622Mbs) optical facilities
• OC12-LR-1	An interface card that supports one long range OC-12 (622Mbs) optical facilities
• OC12-SR-1	An interface card that supports one short range OC-12 (622Mbs) optical facilities
• OC192_4	4 port OC192 card (ONS 15600)
• OC192-LR-1	An interface card that supports one or more OC-192 optical facilities
• OC3	An interface card that supports multiple OC-3 (155Mbs) optical facilities
• OC3-327	ONS 15327 OC3 card
• OC3-IR-4	An interface card that supports four intermediate range OC-3 (155Mbs) optical facilities
• OC3-SR-4	An interface card that supports four short range OC-3 (155Mbs) optical facilities

Table 3-142 REPT EVT SYNCN Output Parameters (continued)

Parameter and Values	Description
• OC3ATM-IR-6	An interface card that supports six intermediate range OC-3 (155Mbs) ATM optical fibers
• OC3IR-STM1SH-1310-8	An OC3 card which has 8 ports over the lower speed slot of the ONS 15454 with XC10G/192
• OC3POS-SR-4	An interface card that supports four short range OC-3 (155Mbs) POS optical facilities
• OC48	An interface card that supports one or more OC-48 (10Gbs) optical facilities
• OC48-327	ONS 15327 OC48 card
• OC48-AS-1	An interface card that supports one short range OC-48 (10Gbs) optical facilities that can be provisioned in any I/O slot
• OC48-ELR-1	An interface card that supports one short range OC-48 (2.5Gbs) optical facility
• OC48-IR-1	An interface card that supports one intermediate range OC-48 (10Gbs) optical facility
• OC48-LR-1	An interface card that supports one long range OC-48 (10Gbs) optical facility
• OC48-SR-1	An interface card that supports one short range OC-48 (10Gbs) optical facilities
• OC-48_16	16 port OC48 card (ONS 15600)
• OPT-BST	Optical Booster Amplifier
• OPT-PRE	Optical Pre-Amplifier
• OSC-CSM	Optical Service Channel (OSC) with Combiner/Separator Module (SCM)
• OSCM	Optical Service Channel (OSC) Module
• PIM-4	Pluggable interface module with 4 PPM slots
• PPM-1	Pluggable port module with 1 port SFP module
• SSXC	Cross connect card (ON 15600)
• TCC	The Timing Communication and Control card
• TSC	Timing and synchronization controller card (ONS 15600)
• TXP-MR-10G	10G Multirate Transponder Card
• TXP-MR-2.5G	Multi-Rate 2.5G Unprotected
• TXPP-MR-2.5G	Multi-Rate 2.5G Protected
• XCVT	A Cross-Connect card
• XC10G	A Cross-Connect card
• XTC	ONS 15327 XTC card
• XTC-DS1-14	ONS 15327 XTC DS1-14 card
• XTC-DS1-28	ONS 15327 XTC DS1-28 card

Table 3-142 REPT EVT SYNCN Output Parameters (continued)

Parameter and Values	Description
• XTC-DS1-56	ONS 15327 XTC DS1-56 card
• XTC-DS3-3	ONS 15327 XTC DS3-3 card

3.2.140 REPT PM <MOD2>

Report Performance Monitoring (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, D1VIDEO, DS1, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, VT2)

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

Reports autonomous monitoring statistics as a result of the schedule created by SCHED-PMREPT.

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

Category

Performance

Security

Retrieve

Related Commands

ALW-PMREPT-ALL
DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
DLT-RMONTH-<MOD2_RMON>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
ENT-RMONTH-<MOD2_RMON>
INH-PMREPT-ALL
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMMODE-<STS_PATH>
RTRV-PMSCHED-<MOD2>
RTRV-PMSCHED-ALL
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-RMONTH-<MOD2_RMON>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TH-ALL
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-PMMODE-<STS_PATH>

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

Table 3-143 REPT PM <MOD2> Output Parameters

Parameter and Values	Description
AID	Access identifier from the “ALL” section on page 4-17
MONTYPE	Monitored type
	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 1/10th of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as 1/10th of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• 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

Table 3-143 REPT PM <MOD2> Output Parameters (continued)

Parameter and Values	Description
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as 1/10th of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as 1/10th of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• FCP	Failure Count—Line
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in uA
• LBCL-MAX	Max Laser Bias current in uA
• LBCL-MIN	Minimum Laser Bias current in uA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-MAX	Maximum value for LBCN
• LOSSL	Loss of Signal Seconds—Line
• 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 1/10 uW
• OPR-MAX	Maximum Receive Power in 1/10 uW
• OPR-MIN	Minimum Receive Power in 1/10 uW
• 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 1/10 uW
• OPT-MAX	Maximum Transmit Power in 1/10 uW
• OPT-MIN	Minimum Transmit Power in 1/10uW
• OPTN	Normalized value for Optical Power Transmitted for OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in 1/10th of dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in 1/10th of dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in 1/10th of dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification

Table 3-143 REPT PM <MOD2> Output Parameters (continued)

Parameter and Values	Description
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Frame Second - Path (DS3XM-12 DS1 PM count)
• SES-PM	OTN—Severely Errored Second—Path
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• 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
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as 1/10th of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as 1/10th of a percentage
• SESS	Severely Errored Second—Section
• SESV	Severely Errored Second—VT Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second - Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count

Table 3-143 REPT PM <MOD2> Output Parameters (continued)

Parameter and Values	Description
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. String
VLDTY	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
	Parameter type is VALIDITY—response validity
• COMPL	Complete response
• PRTL	Partial response
LOCN	Location associated with a particular command in reference to the entity identified by the AID
	Parameter type is LOCATION—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
	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
	Parameter type is TMPER—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.

Table 3-143 REPT PM <MOD2> Output Parameters (continued)

Parameter and Values	Description
MONDAT	The beginning date of the PM or storage register period specified in TMPER. The format is MM-DD. String
MONTM	The beginning time of day of the PM or storage register period specified in TMPER. The format is HH-MM. String

3.2.141 REPT SW

Report Switch

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

Reports the autonomous switching of a unit in a duplex equipment pair to the standby state and its mate unit to the active state. An automatic report for the occurrence or clearance of an alarm or event that triggers the switch may be associated with the message.

Category

Path protection Switching

Security

Retrieve

Related Commands

ALW-SWDX-EQPT	INH-SWDX-EQPT	SW-DX-EQPT
ALW-SWTOPROTN-EQPT	INH-SWTOPROTN-EQPT	SW-TOPROTN-EQPT
ALW-SWTOWKG-EQPT	INH-SWTOWKG-EQPT	SW-TOWKG-EQPT
EX-SW-<OCN_BLSR>		

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

Table 3-144 REPT SW Output Parameters

Parameter and Values	Description
ACTID	Identifies the equipment unit from the "EQPT" section on page 4-43 that was placed in the active state. Parameter grouping cannot be used with this parameter
STDBYID	Identifies the equipment unit from the "EQPT" section on page 4-43 that was placed in the standby state. Parameter grouping cannot be used with this parameter

3.2.142 RLS-EXT-CONT

Release External Control

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command releases a forced contact state and returns the control of the contact to an AUTOMATIC control state. In AUTOMATIC control state, the contact can be opened or closed depending on triggers that may or may 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.

Notes:

1. The duration is not supported, it defaults to CONTS.
2. In an automatic state, the contact could be opened or closed depending on the provisioned trigger. Therefore, issuing an OPR-EXT-CONT command followed by an RLS-EXT-CONT command might not produce any contact state change.
3. The RLS-EXT-CONT is not allowed during the MNTRY duration. The command is allowed for the CONTS duration. The length of MNTRY duration is set to be 2 seconds.
4. RLS-EXT-CONT cannot change the contact state to Automatic if the existing state is Manual Open.

Category

Environment Alarms and Controls

Security

Maintenance

Related Commands

OPR-ACO-ALL	RTRV-ALM-ENV	RTRV-EXT-CONT
OPR-EXT-CONT	RTRV-ATTR-CONT	SET-ATTR-CONT
REPT ALM ENV	RTRV-ATTR-ENV	SET-ATTR-ENV
REPT EVT ENV	RTRV-COND-ENV	SET-ATTR-SECUDFLT

Input Format RLS-EXT-CONT:[<TID>]:<AID>:<CTAG>[::,];

Input Example RLS-EXT-CONT:CISCO:ENV-OUT-2:123;

Input Parameters

Table 3-145 RLS-EXT-CONT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ENV" section on page 4-42. Identifies the external control being released

Errors Errors are listed in Table 4-11 on page 4-5.

3.2.143 RLS-LASER-OTS

Release Laser Optical Transport Section

Usage Guidelines Cisco ONS 15454

This command instructs a laser to be switched off.

Category DWDM

Security Maintenance

Related Commands

DLT-LNK-<MOD2O>	ED-WDMANS	RTRV-LNK-<MOD2O>
DLT-LNKTERM	ED-WLEN	RTRV-LNKTERM
DLT-OSC	ENT-LNK-<MOD2O>	RTRV-NE-WDMANS
DLT-WLEN	ENT-LNKTERM	RTRV-OCH
ED-DWDM	ENT-OSC	RTRV-OMS
ED-FFP-OCH	ENT-WLEN	RTRV-OSC
ED-LNK-<MOD2O>	OPR-LASER-OTS	RTRV-OTS
ED-LNKTERM ED-OCH	OPR-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-OMS	OPR-SLV-WDMANS	RTRV-SLV-WDMANS
ED-OSC	OPR-WDMANS	RTRV-TRC-OCH
ED-OTS	RLS-PROTNSW-OCH	RTRV-WDMANS
ED-SLV-WDMANS	RTRV-DWDM	RTRV-WLEN
ED-TRC-OCH	RTRV-FFP-OCH	

Input Format

RLS-LASER-OTS:[<TID>]:<AID>:<CTAG>;

Input Example

RLS-LASER-OTS::LINE-5-2-TX:3;

Input Parameters

Table 3-146 RLS-LASER-OTS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "LINE" section on page 4-47. Identifies the external control being released

Errors

Errors are listed in Table 4-11 on page 4-5.

3.2.144 RLS-LPBK-<MOD2>

Release Loopback (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, D1VIDEO, DS1, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, VT2)

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

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

This command releases a signal loopback on an I/O card or a cross-connect.

Notes:

1. The value CRS for the LPBKTYPE parameter is applicable only for the STS modifier. The FACILITY and TERMINAL values for LPBKTYPE parameter are applicable to the ports.
2. The optional [<LPBKTYPE>] field defaults to the current existing loopback type.
3. The TERMINAL loopback type is not supported for a DS3XM card.
4. FEAC loopbacks can be released by specifying LINE as the loopback type and FEND as the location.
5. FEAC loopbacks on the DS1 interface of a DS3XM card can be applied only if a VT connection has been created on it. An attempt to operate/release FEAC loopbacks in the absence of a VT connection will result in an error message.

Category Troubleshooting and Test Access

Security Maintenance

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RLS-LPBK-<MOD2>:[<TID>]:<SRC>:<CTAG>::[<LOCATION>],,,[<LPBKTYPE>];

Input Example

RLS-LPBK-DS1:PTREYES:DS1-4-1-2-13:203::NEND,,,FACILITY;

Input Parameters

Table 3-147 RLS-LPBK-<MOD2> Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "ALL" section on page 4-17. The valid values for AID are FACILITY, DS1, and STS
LOCATION	The location where the operation is to be carried out. LOCATION defaults to NEND.
	Parameter type is LOCATION—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
	Parameter type is LPBK_TYPE—indicates the type of loopback that is to be operated or released
• CRS	Path level loopback which is established at the cross-connect matrix level (the XCVT/XC10G card). An STS 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
• LINE	Line level loopback for a far end DS1 path loop back of the DS3XM. The DS3XM cards only support the DS1 path far end FEAC loopback in this release, R5.0
• 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

Errors

Errors are listed in Table 4-11 on page 4-5.

3.2.145 RLS-PROTNSW-<MOD2DWDMPAYLOAD>

Release Protection Switch (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, HDTV, ISC1, ISC3, PASSTHRU)

Usage Guidelines

Cisco ONS 15454

This command releases a Y cable protection switch on client facilities.

Category

DWDM

Security Maintenance

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-PROTNSW-<OCN_TPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format RLS-PROTNSW-<MOD2DWDMPAYLOAD>:[<TID>]:<SRC>:<CTAG>[::];

Input Example RLS-PROTNSW-HDTV:CISCO:FAC-1-1-1:100;

Input Parameters

Table 3-148 RLS-PROTNSW-<MOD2DWDMPAYLOAD> Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "FACILITY" section on page 4-45

Errors

Errors are listed in Table 4-11 on page 4-5.

3.2.146 RLS-PROTNSW-<OCN_TYPE>

Release Protection Switch (OC3, OC12, OC48, OC192)

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command releases a SONET line protection switch request.

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

The release of a protection switch request is applicable only to the OPR-PROTNSW protection switch commands, the user-initiated switch protection commands.

Notes:

1. This command is not used for the common control (TCC2/TCC2P or XCVT/XC10G) cards. Sending a command on a common control card will generate an IIAC (Input, Invalid Access Identifier) error message. To query the common control card switching commands, use SW-DX-EQPT, ALW-SWDX-EQPT commands.
2. When sending this command on non-SONET (OCN) cards, an IIAC (Input, Invalid Access Identifier) error message should be responsed. To use this command on a non-SONET card switching command, use ALW-SWTOPROTN/SWTOWKG-EQPT and INH-SWTOPROTN/SWTOWKG-EQPT commands.
3. When sending this command to query on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message should be responsed.
4. When sending this command to a working card that is failed or missing, the SWFA (Status, Working unit Failed) error message should be responsed.
5. When sending this command to a protect card that is failed or missing, the SPFA (Status, Protection unit Failed) error message should be responsed.
6. When sending this command to a card that is not in protection, the SNPR (Status, Not in Protection State) error message should be responsed.
7. Sending this command to an OCN line that is already in clear mode will return a SAMS (Already in Clear Maintenance State) error message.
8. To get the protection switching state (manual, lockout, forced), use the RTRV-COND-ALL or RTRV-ALM-ALL command.
9. DIRN is an optional parameter. A NULL value defaults to BTH for a BLSR protection, BTH for 1+1 BI directional protection group, and RCV for 1+1 UNI directional protection group.

   DIRN follows these rules: TRMT will always fail for any kind of protection groups. For two-fiber and four-fiber BLSR protection groups both the RCV and TRMT directions will fail.

10. DIRN is applicable for both 1+1 and BLSR protection groups. OPR-PROTNSW applies to a BLSR span/ring as shown by the following command:

    "RLS-PROTNSW-OC48::FAC-5-1:A::BTH;" instructs the NE to release a line protection switch request between a working line and a protection line.

Category Protection

Security Maintenance

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RLS-PROTNSW-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[::<DIRECTION>];

Input Example

RLS-PROTNSW-OC48:PETALUMA:FAC-6-1:209::BTH;

Input Parameters

Table 3-149 RLS-PROTNSW-<OCN_TYPE> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. Identifies the facility in the NE to which the switch request is directed
DIRECTION	Direction. Defaults to RCV
	Parameter type is DIRECTION—transmit and receive direction
• BTH	Both transmit and receive directions
• RCV	Receive direction only
• TRMT	Transmit direction only

Errors

Errors are listed in Table 4-11 on page 4-5.

3.2.147 RLS-PROTNSW-<PATH>

Release Protection Switch (STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VT1, VT2)

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command releases a SONET path protection switch request that was established with the OPR-PROTNSW-<PATH> command. This command assumes that only one user-initiated switch is active per AID.

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

Notes:

1. This command applies to path protection configuration only.
2. The VTAID should be working or protect AID only.
3. If sending this command on the Drop AID, a DENY (Invalid AID, should use working/protect AID) message will be returned.
4. To get the protection switching state (manual, lockout, forced), use the RTRV-COND-ALL or RTRV-ALM-ALL command.

Category

Protection

Security

Maintenance

Related Commands

DLT-CRS-<PATH>	ENT-CRS-<PATH>	RTRV-NE-PATH
DLT-ROLL-<MOD_PATH>	ENT-ROLL-<MOD_PATH>	RTRV-PROTNSW-<PATH>
ED-<MOD_PATH>	OPR-PROTNSW-<PATH>	RTRV-PTHTRC-<PATH>
ED-CRS-<PATH>	RTRV-<PATH>	RTRV-ROLL-<MOD_PATH>
ED-NE-PATH	RTRV-CRS-<PATH>	

Input Format

RLS-PROTNSW-<PATH>:[<TID>]:<SRC>:<CTAG>[::];

Input Example

RLS-PROTNSW-STS1:CISCO:STS-2-1-1:123;

Input Parameters

Table 3-150 RLS-PROTNSW-<PATH> Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "CrossConnectId" section on page 4-31

Errors

Errors are listed in Table 4-11 on page 4-5.

3.2.148 RLS-PROTNSW-OCH

Release Protection Switch Optical Channel

Usage Guidelines

Cisco ONS 15454

This command releases the protection switch on a TXPP_MR_2.5G card.

Category

DWDM

Security

Maintenance

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-FFP-OCH
DLT-LNKTERM	ED-WDMANS	RTRV-LNK-<MOD2O>
DLT-OSC	ED-WLEN	RTRV-LNKTERM
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-NE-WDMANS
ED-DWDM	ENT-LNKTERM	RTRV-OCH
ED-FFP-OCH	ENT-OSC	RTRV-OMS
ED-LNK-<MOD2O>	ENT-WLEN	RTRV-OSC
ED-LNKTERM	OPR-LASER-OTS	RTRV-OTS
ED-OCH	OPR-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-OMS	OPR-SLV-WDMANS	RTRV-SLV-WDMANS
ED-OSC	OPR-WDMANS	RTRV-TRC-OCH
ED-OTS	RLS-LASER-OTS	RTRV-WDMANS
ED-SLV-WDMANS	RTRV-DWDM	RTRV-WLEN

Input Format

RLS-PROTNSW-OCH:[<TID>]:<AID>:<CTAG>;

Input Example

RLS-PROTNSW-OCH:VA454-22:CHAN-2-2:1;

Input Parameters

Table 3-151 RLS-PROTNSW-OCH Input Parameters

Parameter and Values	Description
AID	Access identifier from the "CHANNEL" section on page 4-30

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.149 RLS-SYNCNSW

Release Synchronization Switch

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command releases the previous synchronization reference provided by the OPR-SYNCNSW command.

In a non-revertive system, the use of the RLS-SYNCNSW command may not be appropriate. All the switching between synchronization references should be initiated with the OPR-SYNCNSW command.

Once a switch is released, a minor alarm "MANSWTOPRI", (Manual Switch to Primary Reference or Secondary...) or "FRDCSWTOPRI" (Forced Switch to Primary Reference or Secondary...), will be cleared.

Category Synchronization

Security Maintenance

Related Commands

ED-BITS	REPT ALM SYNCN	RTRV-BITS
ED-NE-SYNCN	REPT EVT BITS	RTRV-COND-BITS
ED-SYNCN	REPT EVT SYNCN	RTRV-COND-SYNCN
OPR-SYNCNSW	RTRV-ALM-BITS	RTRV-NE-SYNCN
REPT ALM BITS	RTRV-ALM-SYNCN	RTRV-SYNCN

Input Format RLS-SYNCNSW:[<TID>]:[<AID>]:<CTAG>;

Input Example RLS-SYNCNSW:CISCO:SYNC-NE:3;

Input Parameters

Table 3-152 RLS-SYNCSW Input Parameters

Parameter and Values	Description
AID	Access identifier from the "SYNC_REF" section on page 4-56 Defaults to SYNC-NE

Errors Errors are listed in Table 4-11 on page 4-5

3.2.150 RMV-<MOD2>

Remove (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, D1VIDEO, DS1, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, VT2)

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command removes a facility from service.

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

Category Facility

Security Maintenance

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format RMV-<MOD2>:[<TID>]:<AID>:<CTAG>[::];

Input Example RMV-EC1:CISCO:FAC-1-1:1;

Input Parameters

Table 3-153 RMV-<MOD2> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17

Errors Errors are listed in Table 4-11 on page 4-5

3.2.151 RST-<MOD2>

Restore (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, D1VIDEO, DS1, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, VT2)

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command provisions a facility in service.

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

Category Facility

Security Maintenance

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RST-<MOD2>:[<TID>]:<AID>:<CTAG>::::[<PST>],[<SST>];

Input Example

RST-EC1:CISCO:FAC-1-1:1::::IS,AINS;

Input Parameters

Table 3-154 RST-<MOD2> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17
PST	Primary state
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service
SST	Secondary state
	Parameter type is SST—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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.152 RTRV-<MOD1FCPAYLOAD>

Retrieve (1GFC, 2GFC)

Usage Guidelines Cisco ONS 15454

This command retrieves the attributes related with the fiber channel port.

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

Category Ports

Security Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RTRV-<MOD1FCPAYLOAD>:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-1GFC:CISCO:FAC-6-1:888;

Input Parameters

Table 3-155 RTRV-<MOD1FCPAYLOAD> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>::LINKRATE=<LINKRATE>,LINKSTATE=<LINKSTATE>,
   [LINKRCVRY=<LINKRCVRY>,][DISTEXTN=<DISTEXTN>,]
   [LINKCREDITS=<LINKCREDITS>,][MFS=<MFS>,][ENCAP=<ENCAP>,]
   [NAME=<NAME>,][SOAK=<SOAK>,][SOAKLEFT=<SOAKLEFT>]:<PST_PSTQ>,[<SST>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-1-1::LINKRATE=1GFC,LINKSTATE=UP,LINKRCVRY=Y,DISTEXTN=NONE,
   LINKCREDITS=0,MFS=2148,ENCAP=GFP-T,
   NAME=\"FC PORT\",SOAK=32,SOAKLEFT=\"12-25\":OOS-MA,MT"
;
```

Output Parameters

Table 3-156 RTRV-<MOD1FCPAYLOAD> Output Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
LINKRATE	The actual rate running on the fiber channel port. It can differ from the payload type provisioned
	Parameter type is LINKRATE—the link rate on a fiber channel port
• 1GFC	The rate is 1 G fiber channel
• 1GFICON	The rate is 1 G FICON
• 2GFC	The rate is 2 G fiber channel
• 2GFICON	The rate is 2 G FICON
• UNKNOWN	The rate is unknown
• UNPLUGGED	The SFP is not plugged into the fiber channel port so the link rate cannot be detected
LINKSTATE	Link state
	Parameter type is DIRN—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

Table 3-156 RTRV-<MOD1FCPAYLOAD> Output Parameters (continued)

Parameter and Values	Description
• UP	Monitored parameter with values equal or less than the value of LEV will be reported
LINKRCVRY	Link recovery
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
DISTEXTN	Distance extension. Optional
	Parameter type is DISTANCE_EXTENSION—distance extension
• B2B	Buffer to buffer flow control
• NONE	No distance extension
LINKCREDITS	Number of link credits. Integer. Optional
MFS	Maximum frame size. Integer. Optional
ENCAP	Frame encapsulation type. Optional
	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	Identifies the port name. String. Optional
SOAK	OOS-AINS to IS transition soak time as measured in 15-minute intervals. Integer. Optional
SOAKLEFT	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. Optional Rules for <SOAKLEFT> are as follows: • When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed. • When the port is in OOS_AINS state, 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.
PST_PSTQ	Primary state of the entity
	Parameter type is PST_PSTQ—service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ)
• IS_NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management

Table 3-156 RTRV-<MOD1FCPAYLOAD> Output Parameters (continued)

Parameter and Values	Description
• OOS-MA	Out of service - management
SST	Secondary state of the entity. Optional Parameter type is SST—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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.153 RTRV-<MOD1FICONPAYLOAD>

Retrieve (1GFICON, 2GFICON)

Usage Guidelines Cisco ONS 15454

This command returns fiber channel-specific settings for ports which have been configured to carry FICON traffic using the ENT-FICON command. The MXP(P)-MR-2.5G card only supports the GFP-T frame type

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

Category Ports

Security Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RTRV-<MOD1FICONPAYLOAD>:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-1GFICON:CISCO:FAC-1-1:123;

Input Parameters

Table 3-157 RTRV-<MOD1FICONPAYLOAD> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>::[LINKRATE=<LINKRATE>,][LINKSTATE=<LINKSTATE>,]
   [LINKRCVRY=<LINKRCVRY>,][DISTEXTN=<DISTEXTN>,]
   [LINKCREDITS=<LINKCREDITS>,][MFS=<MFS>,][ENCAP=<ENCAP>,]
   [NAME=<NAME>,][SOAK=<SOAK>,][SOAKLEFT=<SOAKLEFT>]:<PST_PSTQ>,<SST>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-1-1::LINKRATE=1GFICON,LINKSTATE=UP,LINKRCVRY=Y,DISTEXTN=NONE,
   LINKCREDITS=0,MFS=2148,ENCAP=GFP-T,NAME=\"FC PORT\",SOAK=32,
   SOAKLEFT=\"12-25\":OOS-MA,MT"
;
```

Output Parameters

Table 3-158 RTRV-<MOD1FICONPAYLOAD> Output Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
LINKRATE	The actual rate running on the fiber channel port. It can differ from the payload type provisioned
	Parameter type is LINKRATE—the link rate on a fiber channel port
• 1GFC	The rate is 1 G fiber channel
• 1GFICON	The rate is 1 G FICON
• 2GFC	The rate is 2 G fiber channel
• 2GFICON	The rate is 2 G FICON
• UNKNOWN	The rate is unknown
• UNPLUGGED	The SFP is not plugged into the fiber channel port so the link rate cannot be detected
LINKSTATE	Link state
	Parameter type is DIRN—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

Table 3-158 RTRV-<MOD1FICONPAYLOAD> Output Parameters (continued)

Parameter and Values	Description
• UP	Monitored parameter with values equal or less than the value of LEV will be reported
LINKRCVRY	Link recovery
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
DISTEXTN	Distance extension. Optional
	Parameter type is DISTANCE_EXTENSION—distance extension
• B2B	Buffer to buffer flow control
• NONE	No distance extension
LINKCREDITS	Number of link credits. Integer. Optional
MFS	Maximum frame size. Integer. Optional
ENCAP	Frame encapsulation type. Optional
	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	Identifies the port name. String. Optional
SOAK	OOS-AINS to IS transition soak time as measured in 15-minute intervals. Integer. Optional
SOAKLEFT	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. Optional Rules for <SOAKLEFT> are as follows: • When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed. • When the port is in OOS_AINS state, 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.
PST_PSTQ	Primary state of the entity
	Parameter type is PST_PSTQ—service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ)
• IS_NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management

Table 3-158 RTRV-<MOD1FICONPAYLOAD> Output Parameters (continued)

Parameter and Values	Description
• OOS-MA	Out of service - management
SST	Secondary state of the entity. Optional
	Parameter type is SST—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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.154 RTRV-<MOD2DWDMPAYLOAD>

Retrieve (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, HDTV, ISC1, ISC3, PASSTHRU)

Usage Guidelines Cisco ONS 15454

This command retrieves the configuration parameter of a DWDM client.

Note To retrieve the ROLE of a Y-cable protection group for 1GFC, use the RTRV-FFP-1GFC command in the "ED-FFP-<MOD2DWDMPAYLOAD>" section on page 3-144.
To retrieve the STATUS of a Y-cable protection group for 1GFC, use the RTRV-COND-1GFC command in the "RTRV-COND-<MOD2ALM>" section on page 3-451. The output provides the protection switch condition on the switched facility.

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

Category DWDM

Security Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RTRV-<MOD2DWDMPAYLOAD>:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-HDTV:MILAN:FAC-1-1:100;

Input Parameters

Table 3-159 RTRV-<MOD2DWDMPAYLOAD> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AIDUNIONID>,<AIDTYPE>::[NAME=<NAME>,][LBCL=<LBCL>,][OPT=<OPT>,]
   [OPR=<OPR>]:<PST_PSTQ>,[<SST>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-1-1-1,HDTV::NAME=\"NY PORT\",LBCL=10.0,OPT=10.0,OPR=10.0:OOS-AU,AINS"
;
```

Output Parameters

Table 3-160 RTRV-<MOD2DWDMPAYLOAD> Output Parameters

Parameter and Values	Description
AIDUNIONID	Access identifier from the "AidUnionId" section on page 4-25
AIDTYPE	A type of access identifier
	Parameter type is MOD2DWDMPAYLOAD—payload types applicable to DWDM ports
• 10GFC	10 gigabit fiber channel payload
• 10GIGE	10 gigabit Ethernet
• 1GFC	1 gigabit fiber channel payload
• 1GFICON	1 gigabit FICON payload
• 2GFC	2 gigabit fiber channel payload
• 2GFICON	2 gigabit FICON payload
• D1VIDEO	D1Video payload
• DV6000	DV6000 payload
• ETRCLO	ETRCLO payload
• GIGE	Gigabit Ethernet payload
• HDTV	HDTV payload
• ISC1	ISC1 payload
• ISC3	ISC3 payload
• PASSTHRU	Any pass through (2R) payload
NAME	Identifies the port name. String. Optional

Table 3-160 RTRV-<MOD2DWDMPAYLOAD> Output Parameters (continued)

Parameter and Values	Description
LBCL	Displays the current value of the laser current. Float. Optional
OPT	Displays the current value of the transmitted optical power. Float. Optional
OPR	Displays the current value of the received optical power. Float. Optional
PST_PSTQ	Primary state of the entity
	Parameter type is PST_PSTQ—service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ)
• IS_NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SST	Secondary state of the entity. Optional
	Parameter type is SST—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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.155 RTRV-<MOD_RING>

Retrieve Bidirectional Line Switched Ring

Usage Guidelines Cisco ONS 15454, 15327, 15600

This command retrieves the BLSR information of the NE. A two-fiber or four-fiber BLSR can be retrieved.

Note Cisco ONS 15600 and 15327 do not support four-fiber BLSR.

Output examples:

4F BLSR

"BLSR-N43AB::RINGID=N43AB,NODEID=3,MODE=4F,RVRTV=Y,RVTM=5.0,SRVRTV=Y,
SRVTM=5.0,EASTWORK=FAC-5-1,WESTWORK=FAC-6-1,EASTPROT=FAC-12-1,
WESTPROT=FAC-13-1"

2F BLSR

"BLSR-N12EF::RINGID=N12EF,NODEID=2,MODE=2F,RVRTV=Y,RVTM=5.0,
EASTWORK=FAC-5-1,WESTWORK=FAC-6-1"

Error conditions:

1. Only ALL, NULL, BLSR-ALL, or BLSR-RINGID is allowed for this command.
2. A NULL AID defaults to the AID ALL.
3. The list AID format is supported.
4. If the system fails on getting IOR, a SROF (Get IOR Failed) error message is returned.
5. If the AID is invalid, an IIAC (Invalid AID) error message is returned.
6. If the BLSR does not exist, a SRQN (BLSR Does Not Exist) error message is returned.

Category

BLSR

Security

Retrieve

Related Commands

DLT-<MOD_RING>	ENT-<MOD_RING>	RTRV-TRC-<OCN_BLSR>
ED-<MOD_RING>	EX-SW-<OCN_BLSR>	

Input Format

RTRV-<MOD_RING>:[<TID>]:[<AID>]:<CTAG>[::::];

Input Example

RTRV-BLSR:PETALUMA:ALL:123;

Input Parameters

Table 3-161 RTRV-<MOD_RING> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "AidUnionId1" section on page 4-29. Identifies the BLSR of the NE. Only ALL, null or a list of BLSR-# in AID are allowed. A null value is equivalent to ALL

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "[<AID>]::[RINGID=<RINGID>,][NODEID=<NODEID>,][MODE=<MODE>,]
   [RVRTV=<RVRTV>,][RVTM=<RVTM>,][SRVRTV=<SRVRTV>,][SRVTM=<SRVTM>,]
   [EASTWORK=<EASTWORK>,][WESTWORK=<WESTWORK>,][EASTPROT=<EASTPROT>,]
   [WESTPROT=<WESTPROT>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "BLSR-43::RINGID=43,NODEID=3,MODE=4F,RVRTV=Y,RVTM=5.0,SRVRTV=Y,SRVTM=5.0,
   EASTWORK=FAC-5-1,WESTWORK=FAC-6-1,EASTPROT=FAC-12-1,WESTPROT=FAC-13-1"
;
```

Output Parameters

Table 3-162 RTRV-<MOD_RING> Output Parameters

Parameter and Values	Description
AID	Access identifier from the "AidUnionId1" section on page 4-29. Identifies the BLSR of the NE. Optional
RINGID	The BLSR ID of the NE up to six characters. Valid characters are A-Z and 0-9. String. Optional
NODEID	The BLSR node ID of the NE. NODEID ranges from 0 to 31. String. Optional
MODE	Mode with which the command is to be implemented. Identifies the BLSR mode; either two-fiber or four-fiber. Optional
	Parameter type is BLSR_MODE—BLSR mode
• 2F	Two-fiber BLSR
• 4F	Four-fiber BLSR
RVRTV	Revertive mode. The value Y indicates that the protection switching system reverts service to the original line after restoration. The value N indicates that the 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
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time. RVTM is not allowed to be set while "RVRTV" is N
	Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
SRVRTV	The span revertive mode for four-fiber BLSR only

Table 3-162 RTRV-<MOD_RING> Output Parameters (continued)

Parameter and Values	Description
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
SRVTM	The span revertive time for four-fiber BLSR only. SRVTM is not allowed to be set while SRVRTV is N
	Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
EASTWORK	East working facility. AID from the "FACILITY" section on page 4-45
WESTWORK	West working facility. AID from the "FACILITY" section on page 4-45
EASTPROT	East protecting facility. AID from the "FACILITY" section on page 4-45
WESTPROT	West protecting facility. AID from the "FACILITY" section on page 4-45

Errors Errors are listed in Table 4-11 on page 4-5

3.2.156 RTRV-<OCN_TYPE>

Retrieve (OC3, OC12, OC48, OC192)

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the attributes (i.e., service parameters) and the state of an OC-N facility.

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

Both RINGID and BLSRTYPE identify the OCN port connected with a BLSR. These attributes are only presented for the OC12, OC48, OC192 ports within a BLSR connection. The RTRV-<MOD_RING> command with the AID BLSR-RINGID, can provide more information on this BLSR.

Note This command does not show the WVLEN attribute if the OCN port has zero value on WVLEN.

UNI-C DCC provisioning notes:

1. The attributes DCC(Y/N) and mode (SONET/SDH) remain the same in the ED/RTRV-OCN commands when the DCC is used for UNI-C, in which case the port attribute UNIC is enabled (UNIC=Y).
2. UNI-C DCC termination ca not be deleted by the regular DCC de-provisioning command.
3. If the DCC is created under regular SONET provisioning, and this port is used by UNI-C, the port is converted as an UNI-C DCC automatically.

4. De-provisioning UNI-C IF/IB IPCC will free up DCC termination automatically.
5. The parameters ALSMODE, ALSRCINT, and ALSRCPW are only applicable for OC3-8, OC192 and OC48ELR cards.
6. SSMRCV will display the quality of the individual port.
7. SSM selectable (ADMSSM) and synchronization messaging for output (SYNCMSGOUT) are not applicable to the ONS 15600.

Category BLSR

Security Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-PROTNSW-<OCN_TYPE>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RTRV-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-OC48:PENNGROVE:FAC-6-1:236;

Input Parameters

Table 3-163 RTRV-<OCN_TYPE> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. Must not be null

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>,]
   [CCID=<CCID>,][NBRIX=<NBRIX>,][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>]:<PST_PSTQ>,[<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=SONET,WVLEN=1310.00,RINGID=43,
   BLSRTYPE=WESTWORK,MUX=E2,UNIC=Y,CCID=8,NBRIX=2,SOAK=52,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:OOS-AU,AINS"
;
```

Output Parameters

Table 3-164 RTRV-<OCN_TYPE> Output Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
ROLE	An OCn port role. Optional
	Parameter type is SIDE—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	An OCn port status. Optional
	Parameter type is STATUS—the status of the unit in the protection pair
• ACT	The entity is the active unit in the shelf
• NA	Status is unavailable

Table 3-164 RTRV-<OCN_TYPE> Output Parameters (continued)

Parameter and Values	Description
• STBY	The entity is the standby unit in the shelf
DCC	Indicates whether or not the section DCC is to be used. Optional
	Parameter type is EXT_RING—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
AREA	Area ID. Shows up only if the DCC is enabled. String. Optional
TMGREF	The termination to be used, whether primary or secondary. Identifies if an OCn port has a timing reference. Defaults to N. Optional
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
SYNCMSG	Synchronization status message
	Parameter type is EXT_RING—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	The facility will send the DUS (Don't use for Synchronization) value in 0x0f bits pattern as the sync status message for that facility. Defaults to N. Optional
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
PJMON	Identifies an OCn port PJMON. Defaults to 0 (zero). Integer. Optional
SFBER	An OCn port signal failure threshold. Defaults to 1E-4. Optional
	Parameter type is SF_BER—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	An OCn port signal degrade threshold. Defaults 1E-7. Optional
	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

Table 3-164 RTRV-<OCN_TYPE> Output Parameters (continued)

Parameter and Values	Description
• 1E-9	SDBER is 1E-9
MODE	OCn port mode. Defaults to SONET. Optional
	Parameter type is OPTICAL_MODE—the facility's optical mode
• SDH	SDH/ETSI optical mode using European/International format
• SONET	SONET/ANSI optical mode using the American format
WVLEN	An OCn port wavelength in nanometer. For example, WVLEN=1310.00 means it operates at 1310 nm in the DWDM application. Float. Optional
RINGID	The BLSR RINGID with which the port is connected. RINGID ranges from 0 to 9999. Integer. Optional
BLSRTYPE	The BLSR type with which the port is connected. Optional
	Parameter type is BLSR_TYPE—BLSR type of an OCn port
• EASTPROT	The OCn port is an east protecting port
• EASTWORK	The OCn port is an east working port
• WESTPROT	The OCn port is an west protecting port
• WESTWORK	The OCn port is an west working port
MUX	BLSR extension byte. Optional
	Parameter type is MUX_TYPE—BLSR extension byte
• 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. Integer. Optional
SOAKLEFT	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. Optional Rules for <SOAKLEFT> are as follows: • When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed. • 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.
SSMRCV	Displays the quality of the individual port. Optional
	Parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL—clock source quality level for SONET
• DUS	Do Not Use For Synchronization

Table 3-164 RTRV-<OCN_TYPE> Output Parameters (continued)

Parameter and Values	Description
• 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)
OSFP	The open shortest path first discovery. Optional
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
LDCC	The line DCC connection on the port. Optional
	Parameter type is EXT_RING—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. String. Optional
LBCL	Displays the current value of the laser current. Float. Optional
OPT	Displays the current value of the transmitted optical power. OPT is only displayed for DWDM cards. Float. Optional
OPR	Received optical power. Float
EXPTRC	Expected path trace content. String. Optional
TRC	Path trace message to be transmitted. String. Optional
TRCMODE	Path trace mode. Applicable only to STS-level Paths in SONET (STSn). Defaults to the OFF mode. Optional
	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	Trace message size. Optional
	Parameter type is TRCFORMAT—trace format

Table 3-164 RTRV-<OCN_TYPE> Output Parameters (continued)

Parameter and Values	Description
• 1-BYTE	1 byte trace message
• 16-BYTE	16 byte trace message
• 64-BYTE	64 byte trace message
• Y	Enable an attribute
ADMSSM	SSM selectable value. Only displayed when SSM is disabled. Optional
	Parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL—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	Indicates that the facility will send the DUS (Don't use for synchronization) value in 0xff bits pattern as the sync status message for that facility. Defaults to N. Optional
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
PST_PSTQ	Admin state in the PST_PSTQ format
	Parameter type is PST_PSTQ—service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ)
• IS-NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SSTQ	Secondary state of the entity. Optional
	Parameter type is SST—provides additional information pertaining to PST and PSTQ
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback

Table 3-164 RTRV-<OCN_TYPE> Output Parameters (continued)

Parameter and Values	Description
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

Errors Errors are listed in Table 4-11 on page 4-5

3.2.157 RTRV-<PATH>

Retrieve (STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VT1, VT2)

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the attributes associated with an STS path.

See Table 4-11 on page 4-5 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 UPSR.

The path trace message is a 64 character string including the terminating CR (carriage return) and LF (line feed) that is transported in the J1 byte of the SONET STS Path overhead.

The EXPTRC indicates the contents of the expected incoming path trace are provisioned by the user in the ED-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 and OC192.

TRC and INCTRC are supported on DS1(N), DS3(N)E, DS3-EC1-48 and DS3XM cards.

Notes:

1. An optional parameter BLSRPTHTYPE is introduced into this command to provide more options to retrieve J1/C2 of a particular BLSR path. This field is valid only if the queried AID port has BLSR. The BLSRPTHTYPE defaults to “non-pca” path type if the BLSR is switched, or defaults to all BLSR path types if there is no BLSR switching.
2. Sending this command while BLSRPTHTYPE=PCA, whether there is BLSR switch or not, the PCA path J1/C2 data will be returned (if there is PCA circuit on the AID). Sending this command with an STS AID without circuits and no BLSR switched on the STS, an error message will be returned.
3. An optional output parameter BLSRPTHSTATE is introduced into this command output. Each J1/C2 output data of this command will include the BLSR path state information.
4. After the BLSR switching, the J1/IPPM/C2 data can be retrieved over the protection path, to provision J1 trace string, trace mode, or threshold is not allowed on the protection path.
5. HOLDOFFTIMER is not specific to a path. Instead, it is applicable to the path protection selector.
6. The VT1.5 J2 path trace provisioning is supported on the DS3XM-12 card and the 15454 CE-100T-8 card VT1.5 path via ED-VT1, RTRV-VT1 and RTRV-PTHTRC-VT1 commands. The 15310-CL CE-100T-8 card supports J2 path trace.
7. Test access is not supported on the ONS 15310-CL. J2 is not supported on the 15310-CL-CTX card of the ONS 15310-CL, however the CE-100T-8 card supports J2 in the ONS 15310-CL.

Category Paths

Security Retrieve

Related Commands

DLT-CRS-<PATH>	ENT-CRS-<PATH>	RTRV-NE-PATH
DLT-ROLL-<MOD_PATH>	ENT-ROLL-<MOD_PATH>	RTRV-PROTNSW-<PATH>
ED-<MOD_PATH>	OPR-PROTNSW-<PATH>	RTRV-PTHTRC-<PATH>
ED-CRS-<PATH>	RLS-PROTNSW-<PATH>	RTRV-ROLL-<MOD_PATH>
ED-NE-PATH	RTRV-CRS-<PATH>	

Input Format RTRV-<PATH>:[<TID>]:<AID>:<CTAG>:::[BLSRPTHTYPE=<BLSRPTHTYPE>][:];

Input Example RTRV-STS3C:FERNDALE:STS-2-1-4:238:::BLSRPTHTYPE=NON-PCA;

Input Parameters

Table 3-165 RTRV-<PATH> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "CrossConnectId1" section on page 4-36. Must not be null
BLSRPTHTYPE	The BLSR path type only if the port is on the BLSR. Defaults to NON-PCA. Applicable only to STS-level paths in SONET. A null value defaults to NON-PCA
	Parameter type is BLSR_PTH_TYPE—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>,]
   [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,TACC=8,TAPTYPE=DUAL,
   UPSRPTHSTATE=ACT,C2=0X04,BLSRPTHSTATE=PROTPTHACT:OOS-AU,AINS"
;
```

Output Parameters

Table 3-166 RTRV-<PATH> Output Parameters

Parameter and Values	Description
AID	Access identifier from the "CrossConnectId1" section on page 4-36
LEVEL	The rate of the cross-connect. Indicates the rate of the cross connected channel. Applicable only to STS path in SONET. Optional
	Parameter type is PATH—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)

Table 3-166 RTRV-<PATH> Output Parameters (continued)

Parameter and Values	Description
• 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	An STS path signal failure threshold which only applies to path protection. Applicable only to STS-level paths in SONET. Defaults to 1E-4. Optional Parameter type is SF_BER—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	An STS path signal degrade threshold which only applies to path protection. Applicable only to STS-level paths in SONET. Defaults 1E-6. Optional 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

Table 3-166 RTRV-<PATH> Output Parameters (continued)

Parameter and Values	Description
RVRTV	Revertive mode. Only applies to path protection. The value Y indicates that the protection switching system reverts service to the original line after restoration. The value N indicates that the 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
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time. Only applies to path protection
	Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
SWPDIP	Switch on PDI-P. Applicable only to STS-level paths in SONET (STSn). Optional
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
HOLDOFFTIMER	Hold off timer. Integer. Optional
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). Defaults to NULL when path protection path is created. Supported on the CE-100T-8 card (ONS 15310-CL) provisioned in mapper mode. String. Optional
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 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). Applicable to VT-level paths for the DS3XM-12 card on the ONS 15454. Supported on the CE-100T-8 card (ONS 15310-CL) provisioned in mapper mode. String. Optional
INCTRC	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. Supported on the CE-100T-8 card (ONS 15310-CL) provisioned in mapper mode. String. Optional
TRCMODE	Path trace mode. Applicable only to STS-level paths in SONET (STSn). Defaults to OFF when a path protection path is created. Supported on the CE-100T-8 card (ONS 15310-CL) provisioned in mapper mode. Optional
	Parameter type is TRCMODE—trace mode

Table 3-166 RTRV-<PATH> Output Parameters (continued)

Parameter and Values	Description
• 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 TIMP detected
• MAN	Use the provisioned expected string as the expected string
• MAN-NO-AIS	Use the provisioned expected string as the expected string and do not turn on AIS and RDI if TIMP detected
• OFF	Turn off path trace capability. Nothing will be reported
TACC	Test access. Indicates whether the digroup being provisioned is to be used as a test access digroup. Defaults to N. Not applicable to the ONS 15310-CL. Optional
TAPTYPE	TAP type. Not applicable to the ONS 15310-CL. Optional
	Parameter type is TAPTYPE—test access point type
• DUAL	Dual FAD
• SINGLE	Single FAD
UPSRPTHSTATE	Indicates whether a given AID is the working or standby path of a path protection cross-connect. Optional
	Parameter type is STATUS—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	The c2 byte hex code. Applicable only to STS-level paths in SONET (STSn). Optional
	Parameter type is C2_BYTE—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

Table 3-166 RTRV-<PATH> Output Parameters (continued)

Parameter and Values	Description
• 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	The BLSR path state only if the port is on the BLSR. Applicable only to STS-level paths in SONET (STSn). Optional Parameter type is BLSR_PTH_STATE—the BLSR path state only if the port is on the BLSR
• PCAPTHACT	Indicates the BLSR ring un-switched and its PCA path is in the active state
• PCAPTHSTB	Indicates the BLSR ring switched and its PCA path is in the standby state
• PROTPTHACT	Indicates the BLSR ring switched and its protection path is in the active state

Table 3-166 RTRV-<PATH> Output Parameters (continued)

Parameter and Values	Description
• WKGPTHACT	Indicates the BLSR ring un-switched and its working path is in the active state
• WKGPTHSTB	Indicates the BLSR ring switched and its working path is in the standby state
PST_PSTQ	Admin state in the PST_PSTQ format
	Parameter type is PST_PSTQ—service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ)
• IS-NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SSTQ	Secondary state of the entity. Optional
	Parameter type is SST—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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.158 RTRV-10GIGE

Retrieve 10GIGE

Usage Guidelines Cisco ONS 15454

This command retrieves the 10 Gbps-specific parameters for a port that has been configured to support the gigabyte Ethernet payload with the ENT-10GIGE command.

Category Ports

Security Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-PROTNSW-<OCN_TYPE>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<MOD_RING>
RTRV-<OCN_TYPE>
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format RTRV-10GIGE:[<TID>]:<AID>:<CTAG>[::::];

Input Example RTRV-10GIGE:TID:FAC-1-1:100;

Input Parameters

Table 3-167 RTRV-10GIGE Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>::[NAME=<NAME>,][MACADDR=<MACADDR>,][LBCL=<LBCL>,][OPT=<OPT>,]
   [OPR=<OPR>]:<PST_PSTQ>,[<SST>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-6-1::NAME=\"NY PORT\",MACADDR=00-0E-AA-BB-CC-FF,LBCL=10.0,OPT=10.0,
   OPR=10.0:OOS-AU,AINS"
;
```

Output Parameters

Table 3-168 RTRV-10GIGE Output Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
NAME	Port name. String. Optional
MACADDR	The MAC address for the 10 gigabyte Ethernet payload. String. Optional
LBCL	Displays the current value of the laser current. Float. Optional
OPT	Displays the current value of the transmitted optical power. Float. Optional
OPR	Displays the current value of the received optical power. Float. Optional
PST_PSTQ	Admin state in the PST_PSTQ format
	Parameter type is PST_PSTQ—service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ)
• IS-NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SSTQ	Secondary state of the entity. Optional
	Parameter type is SST—provides additional information pertaining to PST and PSTQ
• AINS	Automatic in service

Table 3-168 RTRV-10GIGE Output Parameters (continued)

Parameter and Values	Description
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

Errors Errors are listed in Table 4-11 on page 4-5

3.2.159 RTRV-ALM-<MOD2ALM>

Retrieve Alarm (1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, DS1, E100, E1000, E3, E4, EC1, FSTE, G1000, GFPOS, GIGE, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, UDCDCC, UDCF, VC12, VC3, VCG, VT1, VT2, WLEN)

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves and sends the current status of alarm conditions. The alarm condition or severity to be retrieved can be specified by using the input parameters as a filter.

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

Notes:

1. VT1-n-n-n replaces PS_VT1-n-n-n for the VT1 alarm AID.
2. The [<AIDTYPE>] shows STS1 for STS alarms.

Category Fault

Security Retrieve

Related Commands

CLR-COND-SECU	REPT EVT COM	RTRV-ALM-ENV
REPT ALM <MOD2ALM>	REPT EVT ENV	RTRV-ALM-EQPT
REPT ALM BITS	REPT EVT EQPT	RTRV-ALM-SYNCN
REPT ALM COM	REPT EVT FXFR	RTRV-COND-<MOD2ALM>
REPT ALM ENV	REPT EVT IOSCFG	RTRV-COND-ALL
REPT ALM EQPT	REPT EVT SECU	RTRV-COND-BITS
REPT ALM SECU	REPT EVT SESSION	RTRV-COND-ENV
REPT ALM SYNCN	REPT EVT SYNCN	RTRV-COND-EQPT
REPT EVT <MOD2ALM>	RTRV-ALM-ALL	RTRV-COND-SYNCN
REPT EVT BITS	RTRV-ALM-BITS	

Input Format

RTRV-ALM-<MOD2ALM>:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>][,,,];

Input Example

RTRV-ALM-OC12:ELDRIDGE:FAC-5-1:225::MN,SD,SA;

Input Parameters

Table 3-169 RTRV-ALM-<MOD2ALM> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "AidUnionId" section on page 4-25. Must not be null
NTFCNCDE	Two-letter notification code. A null value is equivalent to ALL Parameter type is NOTIF_CODE—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. A null value is equivalent to ALL Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition

Table 3-169 RTRV-ALM-<MOD2ALM> Input Parameters (continued)

Parameter and Values	Description
	Parameter type is SERV_EFF—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

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],
   [<OCRTM>],,:[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-5-1,OC12:MJ,SD,SA,09-05,12-30-20,,:\"BER AT SIGNAL DEGRADE LEVEL\","
;
```

Output Parameters

Table 3-170 RTRV-ALM-<MOD2ALM> Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17
AIDTYPE	Type of access identifier. Optional
	Parameter type is MOD2ALM—alarm type
• 1GFC	1 Gigabit Fiber Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fiber Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• CLNT	Client facility for MXP/TXP cards
• DS1	DS1 alarm
• 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	GIG Ethernet port alarm
• OC3	OC3 alarm

Table 3-170 RTRV-ALM-<MOD2ALM> Output Parameters (continued)

Parameter and Values	Description
• 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
• T1	T1 alarm
• T3	T3 alarm
• UDCDCC	UDCDCC alarm
• UDCF	UCDF alarm
• VCG	Virtual Concatenation Group alarm
• VT1	VT1 alarm
• VT2	VT2 alarm
• WLEN	Wavelength Path Provisioning
NTFCNCDE	Two-letter notification code
	Parameter type is NOTIF_CODE—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

Table 3-170 RTRV-ALM-<MOD2ALM> Output Parameters (continued)

Parameter and Values	Description
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition
	Parameter type is SERV_EFF—the effect of the alarm on service
• NSA	The condition is non-service affecting
• SA	The condition is service affecting
OCRDAT	Date when the specific event or violation occurred. Optional
OCRTM	Time when the specific event or violation occurred. Optional

Errors Errors are listed in Table 4-11 on page 4-5

3.2.160 RTRV-ALM-ALL

Retrieve Alarm All

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves and sends the current status of all active alarm conditions. The alarm condition or severity to be retrieved is specified using the input parameters as a filter.

According to GR-833, the RTRV-ALM-ALL command only reports EQPT, COM, and rr (T1, T3, OCN, EC1, STSN, VT1, DS1, 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

Related Commands

CLR-COND-SECU	REPT EVT COM	RTRV-ALM-ENV
REPT ALM <MOD2ALM>	REPT EVT ENV	RTRV-ALM-EQPT
REPT ALM BITS	REPT EVT EQPT	RTRV-ALM-SYNCN
REPT ALM COM	REPT EVT FXFR	RTRV-COND-<MOD2ALM>
REPT ALM ENV	REPT EVT IOSCFG	RTRV-COND-ALL
REPT ALM EQPT	REPT EVT SECU	RTRV-COND-BITS
REPT ALM SECU	REPT EVT SESSION	RTRV-COND-ENV
REPT ALM SYNCN	REPT EVT SYNCN	RTRV-COND-EQPT
REPT EVT <MOD2ALM>	RTRV-ALM-<MOD2ALM>	RTRV-COND-SYNCN
REPT EVT BITS	RTRV-ALM-BITS	

Input Format

RTRV-ALM-ALL:[<TID>]:[<AID>]:<CTAG>::[<NTFCNCDE>],[<CONDITION>],[<SRVEFF>][,,,];

Input Example

RTRV-ALM-ALL:COTATI:ALL:229::MN,PWRRESTART,NSA;

Input Parameters

Table 3-171 RTRV-ALM-ALL Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17. A null value is equivalent to ALL. String
NTFCNCDE	Two-letter notification code. A null value is equivalent to ALL Parameter type is NOTIF_CODE—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	The type of alarm condition. A null value is equivalent to ALL Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition Parameter type is SERV_EFF—the effect of the alarm on service. A null value is equivalent to ALL

Table 3-171 RTRV-ALM-ALL Input Parameters (continued)

Parameter and Values	Description
• NSA	The condition is non-service affecting
• SA	The condition is service affecting

Output Format

SID DATE TIME
M CTAG COMPLD
"[<AID>],[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,:[<DESC>],[<AIDDET>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"SLOT-2,EQPT:MN,PWRRESTART,NSA,,,,:\"POWER FAIL RESTART\",DS1-14"
;

Output Parameters

Table 3-172 RTRV-ALM-ALL Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17. Optional
AIDTYPE	Type of facility, link or other addressable entity targeted by the message. Optional
	Parameter type is MOD2B—alarm type
• 1GFC	1 Gigabit Fiber Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fiber Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 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	GIG Ethernet port alarm
• MIC	MIC alarm (ONS 15327)

Table 3-172 RTRV-ALM-ALL Output Parameters (continued)

Parameter and Values	Description
• MIC-EXT	MIC-EXT (ONS 15327)
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS 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
• XTC	XTC alarm (ONS 15327)
NTFCNCDE	Two-letter notification code
	Parameter type is NOTIF_CODE—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

Table 3-172 RTRV-ALM-ALL Output Parameters (continued)

Parameter and Values	Description
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition
	Parameter type is SERV_EFF—the effect of the alarm on service
• NSA	The condition is non-service affecting
• SA	The condition is service affecting
DESC	A condition description. String. Optional
AIDDET	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. Optional

Errors Errors are listed in Table 4-11 on page 4-5

3.2.161 RTRV-ALM-BITS

Retrieve Alarm Building Integrated Timing Supply

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves and sends the current status of alarm conditions associated with the BITS facility. The alarm condition or severity retrieved is specified using the input parameters as a filter.

Category Synchronization

Security Retrieve

Related Commands

CLR-COND-SECU	REPT EVT BITS	RTRV-ALM-EQPT
ED-BITS	REPT EVT COM	RTRV-ALM-SYNCN
ED-NE-SYNCN	REPT EVT ENV	RTRV-BITS
ED-SYNCN	REPT EVT EQPT	RTRV-COND-<MOD2ALM>
OPR-SYNCNSW	REPT EVT FXFR	RTRV-COND-ALL
REPT ALM <MOD2ALM>	REPT EVT IOSCFG	RTRV-COND-BITS
REPT ALM BITS	REPT EVT SECU	RTRV-COND-ENV
REPT ALM COM	REPT EVT SESSION	RTRV-COND-EQPT
REPT ALM ENV	REPT EVT SYNCN	RTRV-COND-SYNCN
REPT ALM EQPT	RLS-SYNCNSW	RTRV-NE-SYNCN
REPT ALM SECU	RTRV-ALM-<MOD2ALM>	RTRV-SYNCN
REPT ALM SYNCN	RTRV-ALM-ALL	
REPT EVT <MOD2ALM>	RTRV-ALM-ENV	

Input Format

RTRV-ALM-BITS:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>][,,,];

Input Example

RTRV-ALM-BITS:ELVERANO:BITS-1:228::CR,LOS,SA;

Input Parameters

Table 3-173 RTRV-ALM-BITS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "BITS" section on page 4-29. Must not be null
NTFCNCDE	Two-letter notification code. A null value is equivalent to ALL Parameter type is NOTIF_CODE—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

Table 3-173 RTRV-ALM-BITS Input Parameters (continued)

Parameter and Values	Description
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition
	Parameter type is SERV_EFF—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

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>,[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,:[<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

Table 3-174 RTRV-ALM-BITS Output Parameters

Parameter and Values	Description
AID	Access identifier from the "BITS" section on page 4-29. Optional
AIDTYPE	Type of facility, link or other addressable entity targeted by the message. Optional
	Parameter type is MOD2B—alarm type
• 1GFC	1 Gigabit Fiber Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fiber Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• E100	E100 alarm

Table 3-174 RTRV-ALM-BITS Output Parameters (continued)

Parameter and Values	Description
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	GIG Ethernet port alarm
• MIC	MIC alarm (ONS 15327)
• MIC-EXT	MIC-EXT (ONS 15327)
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS 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
• XTC	XTC alarm (ONS 15327)
NTFCNCDE	Two-letter notification code

Table 3-174 RTRV-ALM-BITS Output Parameters (continued)

Parameter and Values	Description
	Parameter type is NOTIF_CODE—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
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition
	Parameter type is SERV_EFF—the effect of the alarm on service
• NSA	The condition is non-service affecting
• SA	The condition is service affecting
DESC	A condition description. String. Optional

Errors Errors are listed in Table 4-11 on page 4-5

3.2.162 RTRV-ALM-ENV

Retrieve Alarm Environment

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the environmental alarms.

Category Environment Alarms and Controls

Security Retrieve

Related Commands

CLR-COND-SECU	REPT EVT COM	RTRV-ALM-BITS
REPT ALM <MOD2ALM>	REPT EVT ENV	RTRV-ALM-EQPT
REPT ALM BITS	REPT EVT EQPT	RTRV-ALM-SYNCN
REPT ALM COM	REPT EVT FXFR	RTRV-COND-<MOD2ALM>
REPT ALM ENV	REPT EVT IOSCFG	RTRV-COND-ALL
REPT ALM EQPT	REPT EVT SECU	RTRV-COND-BITS
REPT ALM SECU	REPT EVT SESSION	RTRV-COND-ENV
REPT ALM SYNCN	REPT EVT SYNCN	RTRV-COND-EQPT
REPT EVT <MOD2ALM>	RTRV-ALM-<MOD2ALM>	RTRV-COND-SYNCN
REPT EVT BITS	RTRV-ALM-ALL	

Input Format

RTRV-ALM-ENV:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<ALMTYPE>];

Input Example

RTRV-ALM-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR;

Input Parameters

Table 3-175 RTRV-ALM-ENV Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ENV" section on page 4-42. Must not be null **Note** For RTRV-ALM-ENV, only ENV-IN-{1-4} is a valid AID for ONS 15454 and only ENV-IN-{1-6} is a valid AID for ONS 15327. ENV-OUT-{1,6} is not a valid AID for RTRV-ALM-ENV.
NTFCNCDE	Two-letter notification code. A null value is equivalent to ALL Parameter type is NOTIF_CODE—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 Parameter type is ENV_ALM—environmental alarm types
• AIRCOMPR	Air compressor failure
• AIRCOND	Air conditioning failure

Table 3-175 RTRV-ALM-ENV Input Parameters (continued)

Parameter and Values	Description
• 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
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUSE	Fuse failure
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 Volt power supply failure
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• SMOKE	Smoke
• TOXICGAS	Toxic gas
• VENTN	Ventilation system failure

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

Table 3-176 RTRV-ALM-ENV Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ENV" section on page 4-42
NTFCNCDE	Two-letter notification code
	Parameter type is NOTIF_CODE—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
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
ALMTYPE	The alarm type for the environmental alarm. A null value is equivalent to ALL
	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

Table 3-176 RTRV-ALM-ENV Output Parameters (continued)

Parameter and Values	Description
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUSE	Fuse failure
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 Volt power supply failure
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• SMOKE	Smoke
• TOXICGAS	Toxic gas
• VENTN	Ventilation system failure
DESC	A condition description. String. Optional

Errors Errors are listed in Table 4-11 on page 4-5

3.2.163 RTRV-ALM-EQPT

Retrieve Alarm Equipment

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves and sends the current status of alarm conditions associated with the equipment units. The alarm condition or severity to be retrieved is specified using the input parameters as a filter.

Category

Equipment

Security

Retrieve

Related Commands

ALW-SWDX-EQPT	REPT ALM SYNCN	RTRV-ALM-ENV
ALW-SWTOPROTN-EQPT	REPT EVT <MOD2ALM>	RTRV-ALM-SYNCN
ALW-SWTOWKG-EQPT	REPT EVT BITS	RTRV-ALMTH-EQPT
CLR-COND-SECU	REPT EVT COM	RTRV-COND-<MOD2ALM>
DLT-EQPT	REPT EVT ENV	RTRV-COND-ALL
ED-EQPT	REPT EVT EQPT	RTRV-COND-BITS
ENT-EQPT	REPT EVT FXFR	RTRV-COND-ENV
INH-SWDX-EQPT	REPT EVT IOSCFG	RTRV-COND-EQPT
INH-SWTOPROTN-EQPT	REPT EVT SECU	RTRV-COND-SYNCN
INH-SWTOWKG-EQPT	REPT EVT SESSION	RTRV-EQPT
REPT ALM <MOD2ALM>	REPT EVT SYNCN	SET-ALMTH-EQPT
REPT ALM BITS	RTRV-ALM-<MOD2ALM>	SW-DX-EQPT
REPT ALM COM	RTRV-ALM-ALL	SW-TOPROTN-EQPT
REPT ALM ENV	RTRV-ALM-BITS	SW-TOWKG-EQPT
REPT ALM EQPT		
REPT ALM SECU		

Input Format

RTRV-ALM-EQPT:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>][,,,];

Input Example

RTRV-ALM-EQPT:TWOROCK:SLOT-7:227::MJ,HITEMP,NSA;

Input Parameters

Table 3-177 RTRV-ALM-EQPT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "EQPT" section on page 4-43. Must not be null
NTFCNCDE	Two-letter notification code. A null value is equivalent to ALL
	Parameter type is NOTIF_CODE—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
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition
	Parameter type is SERV_EFF—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

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "[<AID>],[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,:[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "SLOT-7,EQPT:MJ,HITEMP,NSA,,,,:\"HI TEMPERATURE\","
;
```

Output Parameters

Table 3-178 RTRV-ALM-EQPT Output Parameters

Parameter and Values	Description
AID	Access identifier from the "EQPT" section on page 4-43. Optional
AIDTYPE	Type of facility, link or other addressable entity targeted by the message. Optional
	Parameter type is MOD2B—alarm type
• 1GFC	1 Gigabit Fiber Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fiber Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 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	GIG Ethernet port alarm
• MIC	MIC alarm (ONS 15327)
• MIC-EXT	MIC-EXT (ONS 15327)
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS port alarm
• STS1	STS1 alarm
• STS3C	STS3C alarm
• STS6C	STS6C alarm
• STS9C	STS9C alarm
• STS18C	STS18C alarm
• STS12C	STS12C alarm

Table 3-178 RTRV-ALM-EQPT Output Parameters (continued)

Parameter and Values	Description
• 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
• XTC	XTC alarm (ONS 15327)
NTFCNCDE	Two-letter notification code
	Parameter type is NOTIF_CODE—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
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition
	Parameter type is SERV_EFF—the effect of the alarm on service
• NSA	The condition is non-service affecting
• SA	The condition is service affecting
DESC	A condition description. String. Optional

Errors Errors are listed in Table 4-11 on page 4-5

3.2.164 RTRV-ALM-SYNCN

Retrieve Alarm Synchronization

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves and sends the current status of alarm conditions associated with a synchronization facility. The alarm condition or severity to be retrieved can be specified by using the input parameters as a filter.

Category

Synchronization

Security

Retrieve

Related Commands

CLR-COND-SECU	REPT EVT BITS	RTRV-ALM-ENV
ED-BITS	REPT EVT COM	RTRV-ALM-EQPT
ED-NE-SYNCN	REPT EVT ENV	RTRV-BITS
ED-SYNCN	REPT EVT EQPT	RTRV-COND-<MOD2ALM>
OPR-SYNCNSW	REPT EVT FXFR	RTRV-COND-ALL
REPT ALM <MOD2ALM>	REPT EVT IOSCFG	RTRV-COND-BITS
REPT ALM BITS	REPT EVT SECU	RTRV-COND-ENV
REPT ALM COM	REPT EVT SESSION	RTRV-COND-EQPT
REPT ALM ENV	REPT EVT SYNCN	RTRV-COND-SYNCN
REPT ALM EQPT	RLS-SYNCNSW	RTRV-NE-SYNCN
REPT ALM SECU	RTRV-ALM-<MOD2ALM>	RTRV-SYNCN
REPT ALM SYNCN	RTRV-ALM-ALL	
REPT EVT <MOD2ALM>	RTRV-ALM-BITS	

Input Format

RTRV-ALM-SYNCN:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<CONDTYPE>], [<SRVEFF>][,,,];

Input Example

RTRV-ALM-SYNCN:FULTON:SYNC-NE:226::CR,FAILTOSW,SA;

Input Parameters

Table 3-179 RTRV-ALM-SYNCN Input Parameters

Parameter and Values	Description
AID	Access identifier from the "SYNC_REF" section on page 4-56. Must not be null
NTFCNCDE	Two-letter notification code. A null value is equivalent to ALL
	Parameter type is NOTIF_CODE—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
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition
	Parameter type is SERV_EFF—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

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,:[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "SYNC-NE,SYNCN:CR,FAILTOSW,SA,,,,:\"FAILURE TO SWITCH TO PROTECTION\","
;
```

Output Parameters

Table 3-180 RTRV-ALM-SYNCN Output Parameters

Parameter and Values	Description
AID	Access identifier from the "SYN" section on page 4-55
AIDTYPE	Type of facility, link or other addressable entity targeted by the message. Optional
	Parameter type is MOD2B—alarm type
• 1GFC	1 Gigabit Fiber Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fiber Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 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	GIG Ethernet port alarm
• MIC	MIC alarm (ONS 15327)
• MIC-EXT	MIC-EXT (ONS 15327)
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS port alarm
• STS1	STS1 alarm
• STS3C	STS3C alarm
• STS6C	STS6C alarm
• STS9C	STS9C alarm
• STS18C	STS18C alarm
• STS12C	STS12C alarm

Table 3-180 RTRV-ALM-SYNCN Output Parameters (continued)

Parameter and Values	Description
• 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
• XTC	XTC alarm (ONS 15327)
NTFCNCDE	Two-letter notification code
	Parameter type is NOTIF_CODE—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
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition
	Parameter type is SERV_EFF—the effect of the alarm on service
• NSA	The condition is non-service affecting
• SA	The condition is service affecting
DESC	A condition description. String. Optional

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.165 RTRV-ALMTH-<MOD2>

Retrieve Alarm Threshold (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, D1VIDEO, DS1, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, VT2)

Usage Guidelines

Cisco ONS 15454, 15327, 15310-CL

This command retrieves the alarm threshold values. The only applicable MOD2 values are OC3, OC12, OC48, OC192, OCH, OMS, and OTS.

Category

DWDM

Security

Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RTRV-ALMTH-<MOD2>:[<TID>]:<AID>:<CTAG>::[<CONDTYPE>][,,::];

Input Example

RTRV-ALMTH-{MOD2}::CHAN-2-2:1::OPT-HIGH;

Input Parameters

Table 3-181 RTRV-ALMTH-<MOD2> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17. Must not be null
CONDTYPE	Alarm threshold. A null value is equivalent to ALL.
	Parameter type is ALM_THR—alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B cards
• BATV-EHIGH	Battery Voltage - Extremely High
• BATV-ELOW	Battery Voltage - Extremely Low
• BATV-HIGH	Battery Voltage - High
• BATV-LOW	Battery Voltage - Low
• GAIN-HDEG	Gain not reached—High Degrade Threshold
• GAIN-HFAIL	Gain not reached—High Failure Threshold
• GAIN-LDEG	Gain not reached—Low Degrade Threshold
• GAIN-LFAIL	Gain not reached—Low Failure Threshold
• LBCL-HIGH	Laser Bias current in uA as 1/10% High Warning Threshold, Low Warning Threshold Measured value [0.0%, 100.0%]
• OPR-HIGH	Receive power in 1/10 uW Measured value [-40.0 dBm,+30.0 dBm]
• OPR-LOW	Receive power in 1/10 uW Measured value [-40.0 dBm,+30.0 dBm
• OPT-HIGH	Transmit power in 1/10 uW. Measured value [-40.0 dBm,+30.0 dBm]
• OPT-LOW	Transmit power in 1/10 uW. Measured value [-40.0 dBm,+30.0 dBm]
• OPWR-HDEG	Optical Power—High Degrade Threshold
• OPWR-HFAIL	Optical Power—High Failure Threshold
• OPWR-LDEG	Optical Power—Low Degrade Threshold
• OPWR-LFAIL	Optical Power—Low Failure Threshold
• 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

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "CHAN-2-2,OCH:OPT-HIGH,,,20"
;
```

Output Parameters

Table 3-182 RTRV-ALMTH-<MOD2> Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17
MOD	AID type
	Parameter type is MOD2—line/path modifier
• 10GFC	10 Gigabit Fiber Channel
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit Fiber Channel
• 1GFICON	1 Gigabit FICON
• 2GFC	2 Gigabit Fiber Channel
• 2GFICON	2 Gigabit FICON
• D1VIDEO	D1 Video
• DS1	DS1 line of a DS3XM card
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETRCLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	Generic Framing Protocol over Packet Over SONET. Virtual Ports partitioned using GFP's Multiplexing Capability
• GIGE	GIG Ethernet
• HDTV	HDTV
• ISC1	ISC1
• OC3	OC3 facility
• OC12	OC12 facility
• OC48	OC48 facility
• OC192	OC192 facility
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS port
• STS1	STS1 path

Table 3-182 RTRV-ALMTH-<MOD2> Output Parameters (continued)

Parameter and Values	Description
• 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
• SYNCN	SYNCN alarm
• 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
	Parameter type is ALM_THR—alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B cards
• BATV-EHIGH	Battery Voltage - Extremely High
• BATV-ELOW	Battery Voltage - Extremely Low
• BATV-HIGH	Battery Voltage - High
• BATV-LOW	Battery Voltage - Low
• GAIN-HDEG	Gain not reached—High Degrade Threshold
• GAIN-HFAIL	Gain not reached—High Failure Threshold
• GAIN-LDEG	Gain not reached—Low Degrade Threshold
• GAIN-LFAIL	Gain not reached—Low Failure Threshold
• LBCL-HIGH	Laser Bias current in uA as 1/10% High Warning Threshold, Low Warning Threshold Measured value [0.0%, 100.0%]
• OPR-HIGH	Receive power in 1/10 uW Measured value [-40.0 dBm,+30.0 dBm]
• OPR-LOW	Receive power in 1/10 uW Measured value [-40.0 dBm,+30.0 dBm
• OPT-HIGH	Transmit power in 1/10 uW. Measured value [-40.0 dBm,+30.0 dBm]
• OPT-LOW	Transmit power in 1/10 uW. Measured value [-40.0 dBm,+30.0 dBm]
• OPWR-HDEG	Optical Power—High Degrade Threshold
• OPWR-HFAIL	Optical Power—High Failure Threshold
• OPWR-LDEG	Optical Power—Low Degrade Threshold

Table 3-182 RTRV-ALMTH-<MOD2> Output Parameters (continued)

Parameter and Values	Description
• OPWR-LFAIL	Optical Power—Low Failure Threshold
• 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. Float

Errors Errors are listed in Table 4-11 on page 4-5

3.2.166 RTRV-ALMTH-EQPT

Retrieve Alarm Threshold Equipment

Usage Guidelines Cisco ONS 15454

This command retrieves the alarm thresholds for the power level monitoring on an NE.

Category Equipment

Security Retrieve

Related Commands

ALW-SWDX-EQPT	INH-SWDX-EQPT	RTRV-COND-EQPT
ALW-SWTOPROTN-EQPT	INH-SWTOPROTN-EQPT	RTRV-EQPT
ALW-SWTOWKG-EQPT	INH-SWTOWKG-EQPT	SET-ALMTH-EQPT
DLT-EQPT	REPT ALM EQPT	SW-DX-EQPT
ED-EQPT	REPT EVT EQPT	SW-TOPROTN-EQPT
ENT-EQPT	RTRV-ALM-EQPT	SW-TOWKG-EQPT

Input Format RTRV-ALMTH-EQPT:[<TID>]::<CTAG>::<ALMTHR>[,,::];

Input Example RTRV-ALMTH-EQPT:::1::BATV-HIGH;

Input Parameters

Table 3-183 RTRV-ALMTH-EQPT Input Parameters

Parameter and Values	Description
ALMTHR	Alarm threshold. Must not be null Parameter type is ALM_THR—alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B cards
• BATV-EHIGH	Battery Voltage - Extremely High
• BATV-ELOW	Battery Voltage - Extremely Low
• BATV-HIGH	Battery Voltage - High
• BATV-LOW	Battery Voltage - Low
• GAIN-HDEG	Gain not reached—High Degrade Threshold
• GAIN-HFAIL	Gain not reached—High Failure Threshold
• GAIN-LDEG	Gain not reached—Low Degrade Threshold
• GAIN-LFAIL	Gain not reached—Low Failure Threshold
• LBCL-HIGH	Laser Bias current in uA as 1/10% High Warning Threshold, Low Warning Threshold Measured value [0.0%, 100.0%]
• OPR-HIGH	Receive power in 1/10 uW Measured value [-40.0 dBm,+30.0 dBm]
• OPR-LOW	Receive power in 1/10 uW Measured value [-40.0 dBm,+30.0 dBm
• OPT-HIGH	Transmit power in 1/10 uW. Measured value [-40.0 dBm,+30.0 dBm]
• OPT-LOW	Transmit power in 1/10 uW. Measured value [-40.0 dBm,+30.0 dBm]
• OPWR-HDEG	Optical Power—High Degrade Threshold
• OPWR-HFAIL	Optical Power—High Failure Threshold
• OPWR-LDEG	Optical Power—Low Degrade Threshold
• OPWR-LFAIL	Optical Power—Low Failure Threshold
• 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
“,<MOD2B>:<ALMTHR>,,,<DNFIELD>”
;

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   ",EQPT:BATV-HIGH,,,-52.0,"
;
```

Output Parameters

Table 3-184 RTRV-ALMTH-EQPT Output Parameters

Parameter and Values	Description
MOD2B	Alarm type
	Parameter type is MOD2B—alarm type
• 1GFC	1 Gigabit Fiber Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fiber Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 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	GIG Ethernet port alarm
• MIC	MIC alarm (ONS 15327)
• MIC-EXT	MIC-EXT (ONS 15327)
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS port alarm
• STS1	STS1 alarm
• STS3C	STS3C alarm
• STS6C	STS6C alarm

Table 3-184 RTRV-ALMTH-EQPT Output Parameters (continued)

Parameter and Values	Description
• 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
• XTC	XTC alarm (ONS 15327)
ALMTHR	Alarm threshold
	Parameter type is ALM_THR—alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B cards
• BATV-EHIGH	Battery Voltage - Extremely High
• BATV-ELOW	Battery Voltage - Extremely Low
• BATV-HIGH	Battery Voltage - High
• BATV-LOW	Battery Voltage - Low
• GAIN-HDEG	Gain not reached—High Degrade Threshold
• GAIN-HFAIL	Gain not reached—High Failure Threshold
• GAIN-LDEG	Gain not reached—Low Degrade Threshold
• GAIN-LFAIL	Gain not reached—Low Failure Threshold
• LBCL-HIGH	Laser Bias current in uA as 1/10% High Warning Threshold, Low Warning Threshold Measured value [0.0%, 100.0%]
• OPR-HIGH	Receive power in 1/10 uW Measured value [-40.0 dBm,+30.0 dBm]
• OPR-LOW	Receive power in 1/10 uW Measured value [-40.0 dBm,+30.0 dBm
• OPT-HIGH	Transmit power in 1/10 uW. Measured value [-40.0 dBm,+30.0 dBm]
• OPT-LOW	Transmit power in 1/10 uW. Measured value [-40.0 dBm,+30.0 dBm]
• OPWR-HDEG	Optical Power—High Degrade Threshold
• OPWR-HFAIL	Optical Power—High Failure Threshold
• OPWR-LDEG	Optical Power—Low Degrade Threshold

Table 3-184 RTRV-ALMTH-EQPT Output Parameters (continued)

Parameter and Values	Description
• OPWR-LFAIL	Optical Power—Low Failure Threshold
• 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	Float

Errors Errors are listed in Table 4-11 on page 4-5

3.2.167 RTRV-ALS

Retrieve Automatic Laser Shutoff

Usage Guidelines Cisco ONS 15454, 15310-CL

This 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

Category Ports

Security Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMMODE-<STS_PATH>
RTRV-PMSCHED-<MOD2>
RTRV-PMSCHED-ALL
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RTRV-ALS:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-ALS:PENNGROVE:FAC-1-1:1;

Input Parameters

Table 3-185 RTRV-ALS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "AidUnionId" section on page 4-25. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,<AIDTYPE>::[ALSMODE=<ALSMODE>,][ALSRCINT=<ALSRCINT>,]
   [ALSRCPW=<ALSRCPW>,][LSRSTAT=<LSRSTAT>]"
;
```

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=ON:"
;
```

Output Parameters

Table 3-186 RTRV-ALS Output Parameters

Parameter and Values	Description
AID	Access identifier from the "AidUnionId" section on page 4-25
AIDTYPE	Type of access identifier
	Parameter type is MOD2—line/path modifier
• 10GFC	10 Gigabit Fiber Channel
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit Fiber Channel
• 1GFICON	1 Gigabit FICON
• 2GFC	2 Gigabit Fiber Channel
• 2GFICON	2 Gigabit FICON
• D1VIDEO	D1 Video
• DS1	DS1 line of a DS3XM card
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETRCLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	Generic Framing Protocol over Packet Over SONET. Virtual Ports partitioned using GFP's Multiplexing Capability

Table 3-186 RTRV-ALS Output Parameters (continued)

Parameter and Values	Description
• GIGE	GIG Ethernet
• HDTV	HDTV
• ISC1	ISC1
• OC3	OC3 facility
• OC12	OC12 facility
• OC48	OC48 facility
• OC192	OC192 facility
• OCH	Optical channel
• 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
• SYNCN	SYNCN alarm
• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 Path
• VT2	VT2 Path
ALSMODE	ALS is enabled or disabled Parameter type is ALS_MODE—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. Integer. Optional
ALSRCPW	ALS recovery pulse width. The range is 2.0 to 100.00 seconds, in increments of 100 ms. Float. Optional

Table 3-186 RTRV-ALS Output Parameters (continued)

Parameter and Values	Description
LSRSTAT	Status of the laser. Optional
	Parameter type is LASER_STATUS—
• APR	Laser is switched on but is working automatic power reduction
• OFF	Laser is switched off
• ON	Laser is switched on

Errors Errors are listed in Table 4-11 on page 4-5

3.2.168 RTRV-APC

Operate Amplification Power Control

Usage Guidelines Cisco ONS 15454

This command retrieves the APC application attributes.

Category DWDM

Security Maintenance

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-FFP-OCH
DLT-LNKTERM	ED-WDMANS	RTRV-LNK-<MOD2O>
DLT-OSC	ED-WLEN	RTRV-LNKTERM
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-NE-WDMANS
ED-DWDM	ENT-LNKTERM	RTRV-OCH
ED-FFP-OCH	ENT-OSC	RTRV-OMS
ED-LNK-<MOD2O>	ENT-WLEN	RTRV-OSC
ED-LNKTERM	OPR-LASER-OTS	RTRV-OTS
ED-OCH	OPR-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-OMS	OPR-WDMANS	RTRV-TRC-OCH
ED-OSC	RLS-LASER-OTS	RTRV-WDMANS
ED-OTS	RLS-PROTNSW-OCH	RTRV-WLEN

Input Format RTRV-APC:[<TID>]::<CTAG>;

Input Example

RTRV-APC:PENNGROVE::114;

Input Parameters

Table 3-187 RTRV-APC Input Parameters

Parameter and Values	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

Table 3-188 RTRV-APC Output Parameters

Parameter and Values	Description
APCENABLE	The enable/disable of the APC application. Optional
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
APCSTATE	Indicates the status of the APC application. Optional
	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

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.169 RTRV-ATTR-CONT

Retrieve Attribute Control

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves and sends the attributes associated with an external control. These attributes are used when an external control is operated or released. To set these attributes, use the SET-ATTR-CONT command.

Category

Environment

Security

Retrieve

Related Commands

OPR-ACO-ALL	RLS-EXT-CONT	RTRV-EXT-CONT
OPR-EXT-CONT	RTRV-ALM-ENV	SET-ATTR-CONT
REPT ALM ENV	RTRV-ATTR-ENV	SET-ATTR-ENV
REPT EVT ENV	RTRV-COND-ENV	SET-ATTR-SECUDFLT

Input Format

RTRV-ATTR-CONT:[<TID>]:<AID>:<CTAG>[::<CONTTYPE>];

Input Example

RTRV-ATTR-CONT:CISCO:ENV-OUT-2:123::AIRCOND;

Input Parameters

Table 3-189 RTRV-ATTR-CONT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ENV" section on page 4-42. Identifies the external control for which attributes are being set. Must not be null
CONTTYPE	Environmental control type. A null value is equivalent to ALL
	Parameter type is CONTTYPE—Environmental control types
• AIRCOND	Air conditioning
• ENGINE	Engine
• FAN	Fan
• GEN	Generator
• HEAT	Heat

Table 3-189 RTRV-ATTR-CONT Input Parameters (continued)

Parameter and Values	Description
• 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

Table 3-190 RTRV-ATTR-CONT Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ENV" section on page 4-42. Identifies the external control for which attributes are being set. Must not be null
CONTTYPE	Environmental control type. A null value is equivalent to ALL
	Parameter type is CONTTYPE—Environmental control types
• AIRCOND	Air conditioning
• ENGINE	Engine
• FAN	Fan
• GEN	Generator
• HEAT	Heat
• LIGHT	Light
• MISC	Miscellaneous
• SPKLR	Sprinkler

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.170 RTRV-ATTR-ENV

Retrieve Attribute Environment

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the attributes associated with an environmental alarm.

Category

Environment

Security

Retrieve

Related Commands

OPR-ACO-ALL	RLS-EXT-CONT	RTRV-EXT-CONT
OPR-EXT-CONT	RTRV-ALM-ENV	SET-ATTR-CONT
REPT ALM ENV	RTRV-ATTR-CONT	SET-ATTR-ENV
REPT EVT ENV	RTRV-COND-ENV	SET-ATTR-SECUDFLT

Input Format

RTRV-ATTR-ENV:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<ALMTYPE>];

Input Example

RTRV-ATTR-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR;

Input Parameters

Table 3-191 RTRV-ATTR-ENV Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ENV" section on page 4-42. Must not be null
NTFCNCDE	Two-letter notification code
	Parameter type is NOTIF_CODE—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

Table 3-191 RTRV-ATTR-ENV Input Parameters (continued)

Parameter and Values	Description
ALMTYPE	The alarm type for the environmental alarm. A null value is equivalent to ALL
	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
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUSE	Fuse failure
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 Volt power supply failure
• RECT	Rectifier failure

Table 3-191 RTRV-ATTR-ENV Input Parameters (continued)

Parameter and Values	Description
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• SMOKE	Smoke
• TOXICGAS	Toxic gas
• 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

Table 3-192 RTRV-ATTR-ENV Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ENV" section on page 4-42. Must not be null
NTFCNCDE	Two-letter notification code. Optional
	Parameter type is NOTIF_CODE—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. Optional
	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

Table 3-192 RTRV-ATTR-ENV Output Parameters (continued)

Parameter and Values	Description
• CLFAN	Cooling fan failure
• CPMAJOR	Centralized power major failure
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUSE	Fuse failure
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 Volt power supply failure
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• SMOKE	Smoke
• TOXICGAS	Toxic gas
• VENTN	Ventilation system failure
DESC	Alarm description. String. Optional

Errors Errors are listed in Table 4-11 on page 4-5

3.2.171 RTRV-BITS

Retrieve Building Integrated Timing Supply

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the BITS configuration command. For BITS facility, 64 k and 6 MHz are only applicable to the ONS 15454. SSM selectable (ADMSSM) is not applicable to the ONS 15600.

Category

Synchronization

Security

Retrieve

Related Commands

ED-BITS	REPT ALM SYNCN	RTRV-ALM-SYNCN
ED-NE-SYNCN	REPT EVT BITS	RTRV-COND-BITS
ED-SYNCN	REPT EVT SYNCN	RTRV-COND-SYNCN
OPR-SYNCNSW	RLS-SYNCNSW	RTRV-NE-SYNCN
REPT ALM BITS	RTRV-ALM-BITS	RTRV-SYNCN

Input Format

RTRV-BITS:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-BITS:SONOMA:BITS-1:782;

Input Parameters

Table 3-193 RTRV-BITS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "BITS" section on page 4-29. Must not be null

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

Table 3-194 RTRV-BITS Output Parameters

Parameter and Values	Description
AID	Access identifier from the "BITS" section on page 4-29
LINECDE	Line code. Optional
	Parameter type is LINE_CODE—line code
• AMI	Line code value is AMI
• B8ZS	Line code value is B8ZS (bipolar with three-zero substitution)
FMT	Digital signal frame format. Optional
	Parameter type is FRAME_FORMAT—frame format for a T1 port
• D4	Frame format is D4
• ESF	Frame format is ESF
• UNFRAMED	Frame format is unframed
LBO	Line build out settings. BITS line build out. Default value is 0 to 133. Integer. Optional
	Parameter type is BITS_LineBuildOut—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 on (Y)
	Parameter type is EXT_RING—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	Alarm indication signal threshold. Optional
	Parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL—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

Table 3-194 RTRV-BITS Output Parameters (continued)

Parameter and Values	Description
• 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. Optional 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. Optional Parameter type is IMPEDANCE—the terminal impedance of the BITS-IN port
• 120-OHM	Impedance of 120 ohm
• 75-OHM	Impedance of 75 ohm
BITSFAC	BITS facility settings. Optional Parameter type is BITS_FAC—BITS facility rate. 64 k and 6 MHz are only applicable to the ONS 15454
• 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. Optional **Note** Not applicable for ONS 15600 Parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL—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

Table 3-194 RTRV-BITS Output Parameters (continued)

Parameter and Values	Description
• 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	Primary state. Optional
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service

Errors Errors are listed in Table 4-11 on page 4-5

3.2.172 RTRV-CMD-SECU

Retrieve Command Security

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the current command security level of the command specified in the AID field.

Category Security

Security Superuser

Related Commands

ACT-USER	DLT-USER-SECU	REPT ALM SECU
ALW-MSG-SECU	ED-CMD-SECU	REPT EVT SECU
ALW-USER-SECU	ED-PID	REPT EVT SESSION
CANC	ED-USER-SECU	RTRV-DFLT-SECU
CANC-USER	ENT-USER-SECU	RTRV-USER-SECU
CANC-USER-SECU	INH-MSG-SECU	SET-ATTR-SECUDFLT
CLR-COND-SECU	INH-USER-SECU	

Input Format

RTRV-CMD-SECU:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-CMD-SECU::INIT-REG:1;

Input Parameters

Table 3-195 RTRV-CMD-SECU Input Parameters

Parameter and Values	Description
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 may include all commands. Only INIT-REG will be supported. String. Must not be null

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:MAINT"
;

Output Parameters

Table 3-196 RTRV-CMD-SECU Output Parameters

Parameter and Values	Description
AID	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. String. Optional
CAP	Command access privilege
	Parameter type is PRIVILEGE—security level
• MAINT	Maintenance security Level
• PROV	Provision security level
• RTRV	Retrieve security level
• SUPER	Superuser security level

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.173 RTRV-COND-<MOD2ALM>

Retrieve Condition (1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, DS1, E100, E1000, E3, E4, EC1, FSTE, G1000, GFPOS, GIGE, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, UDCDCC, UDCF, VC12, VC3, VCG, VT1, VT2, WLEN)

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the current standing condition and state associated with an entity.

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

Category

Fault

Security

Retrieve

Related Commands

CLR-COND-SECU	REPT EVT COM	RTRV-ALM-BITS
REPT ALM <MOD2ALM>	REPT EVT ENV	RTRV-ALM-ENV
REPT ALM BITS	REPT EVT EQPT	RTRV-ALM-EQPT
REPT ALM COM	REPT EVT FXFR	RTRV-ALM-SYNCN
REPT ALM ENV	REPT EVT IOSCFG	RTRV-COND-ALL
REPT ALM EQPT	REPT EVT SECU	RTRV-COND-BITS
REPT ALM SECU	REPT EVT SESSION	RTRV-COND-ENV
REPT ALM SYNCN	REPT EVT SYNCN	RTRV-COND-EQPT
REPT EVT <MOD2ALM>	RTRV-ALM-<MOD2ALM>	RTRV-COND-SYNCN
REPT EVT BITS	RTRV-ALM-ALL	

Input Format

RTRV-COND-<MOD2ALM>:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>][,,,];

Input Example

RTRV-COND-T3:TID:FAC-2-1:229::LOS;

Input Parameters

Table 3-197 RTRV-COND-<MOD2ALM> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17. Must not be null
TYPEREQ	The type of condition to be retrieved. A null value is equivalent to ALL Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,[<AIDTYPE>]:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>],[<OCRDAT>],
   [<OCRTM>],,,[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-2-1,T3:CR,LOS,SA,01-01,16-00-20,,,\"LOS OF SIGNAL\""
;
```

Output Parameters

Table 3-198 RTRV-COND-<MOD2ALM> Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17
AIDTYPE	Type of access identifier. Specifies the type of facility, link or other addressable entity targeted by the message. Optional Parameter type is MOD2ALM—alarm type
• 1GFC	1 Gigabit Fiber Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fiber Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• CLNT	Client facility for MXP/TXP cards
• DS1	DS1 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• FSTE	Fast Ethernet Port alarm

Table 3-198 RTRV-COND-<MOD2ALM> Output Parameters (continued)

Parameter and Values	Description
• G1000	G1000 alarm
• GFPOS	Generic framing protocol over packet over SONET virtual port alarm
• GIGE	GIG Ethernet port alarm
• 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
• T1	T1 alarm
• T3	T3 alarm
• UDCDCC	UDCDCC alarm
• UDCF	UCDF alarm
• VCG	Virtual Concatenation Group alarm
• VT1	VT1 alarm
• VT2	VT2 alarm
• WLEN	Wavelength Path Provisioning
NTFCNCDE	Two-letter notification code. Optional
	Parameter type is NOTIF_CODE—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

Table 3-198 RTRV-COND-<MOD2ALM> Output Parameters (continued)

Parameter and Values	Description
• NA	The condition is not alarmed
• NR	The alarm is not reported
TYPEREP	The condition itself
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition, Optional
	Parameter type is SERV_EFF—the effect of the alarm on service
• NSA	The condition is non-service affecting
• SA	The condition is service affecting
OCRDAT	Date when the specific event or violation occurred. Optional
OCRTM	Time when the specific event or violation occurred. Optional
DESC	Condition description. String. Optional

Errors Errors are listed in Table 4-11 on page 4-5

3.2.174 RTRV-COND-ALL

Retrieve Condition All

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the current standing condition for all entities.

According to GR-833, the RTRV-COND-ALL command only reports EQPT, COM, and rr (T1, T3, OCn, EC1, STSn, VT1, DS1, 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. 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

Related Commands

CLR-COND-SECU	REPT EVT COM	RTRV-ALM-BITS
REPT ALM <MOD2ALM>	REPT EVT ENV	RTRV-ALM-ENV
REPT ALM BITS	REPT EVT EQPT	RTRV-ALM-EQPT
REPT ALM COM	REPT EVT FXFR	RTRV-ALM-SYNCN
REPT ALM ENV	REPT EVT IOSCFG	RTRV-COND-<MOD2ALM>
REPT ALM EQPT	REPT EVT SECU	RTRV-COND-BITS
REPT ALM SECU	REPT EVT SESSION	RTRV-COND-ENV
REPT ALM SYNCN	REPT EVT SYNCN	RTRV-COND-EQPT
REPT EVT <MOD2ALM>	RTRV-ALM-<MOD2ALM>	RTRV-COND-SYNCN
REPT EVT BITS	RTRV-ALM-ALL	

Input Format RTRV-COND-ALL:[<TID>]:[<AID>]:<CTAG>::[<TYPEREQ>][,,,];

Input Example RTRV-COND-ALL:TID:ALL:229::LOS;

Input Parameters

Table 3-199 RTRV-COND-ALL Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17. String. A null value is equivalent to ALL
TYPEREQ	The type of condition to be retrieved. A null value is equivalent to ALL Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,[<AIDTYPE>]:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>],[<OCRDAT>],
   [<OCRTM>],,,[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-2-1,OC3:CR,LOS,SA,01-01,16-02-15,,,\"LOS OF SIGNAL\""
;
```

Output Parameters

Table 3-200 RTRV-COND-ALL Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17 that has an alarm condition
AIDTYPE	Type of access identifier. Specifies the type of facility, link or other addressable entity targeted by the message. Optional
	Parameter type is MOD2B—alarm type
• 1GFC	1 Gigabit Fiber Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fiber Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 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	GIG Ethernet port alarm
• MIC	MIC alarm (ONS 15327)
• MIC-EXT	MIC-EXT (ONS 15327)
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm

Table 3-200 RTRV-COND-ALL Output Parameters (continued)

Parameter and Values	Description
• 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
• XTC	XTC alarm (ONS 15327)
NTFCNCDE	Two-letter notification code. Optional
	Parameter type is NOTIF_CODE—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

Table 3-200 RTRV-COND-ALL Output Parameters (continued)

Parameter and Values	Description
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition, Optional
	Parameter type is SERV_EFF—the effect of the alarm on service
• NSA	The condition is non-service affecting
• SA	The condition is service affecting
OCRDAT	Date when the specific event or violation occurred. Optional
OCRTM	Time when the specific event or violation occurred. Optional
DESC	Condition description. String. Optional

Errors Errors are listed in Table 4-11 on page 4-5

3.2.175 RTRV-COND-BITS

Retrieve Condition Building Integrated Timing Supply

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the standing conditions on BITS.

Category Synchronization

Security Retrieve

Related Commands

CLR-COND-SECU	REPT EVT COM	RTRV-ALM-BITS
REPT ALM <MOD2ALM>	REPT EVT ENV	RTRV-ALM-ENV
REPT ALM BITS	REPT EVT EQPT	RTRV-ALM-EQPT
REPT ALM COM	REPT EVT FXFR	RTRV-ALM-SYNCN
REPT ALM ENV	REPT EVT IOSCFG	RTRV-COND-<MOD2ALM>
REPT ALM EQPT	REPT EVT SECU	RTRV-COND-ALL
REPT ALM SECU	REPT EVT SESSION	RTRV-COND-ENV
REPT ALM SYNCN	REPT EVT SYNCN	RTRV-COND-EQPT
REPT EVT <MOD2ALM>	RTRV-ALM-<MOD2ALM>	RTRV-COND-SYNCN
REPT EVT BITS	RTRV-ALM-ALL	

Input Format

RTRV-COND-BITS:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>][,,,];

Input Example

RTRV-COND-BITS:TID:BITS-1:229::LOS;

Input Parameters

Table 3-201 RTRV-COND-BITS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "BITS" section on page 4-29. Must not be null
TYPEREQ	The type of condition to be retrieved. A null value is equivalent to ALL Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,[<AIDTYPE>]:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>],[<OCRDAT>],
   [<OCRTM>],,,[<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

Table 3-202 RTRV-COND-BITS Output Parameters

Parameter and Values	Description
AID	Access identifier from the "BITS" section on page 4-29 that has an alarm condition
AIDTYPE	Type of access identifier. Specifies the type of facility, link or other addressable entity targeted by the message. Optional
	Parameter type is MOD2B—alarm type
• 1GFC	1 Gigabit Fiber Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fiber Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 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	GIG Ethernet port alarm
• MIC	MIC alarm (ONS 15327)
• MIC-EXT	MIC-EXT (ONS 15327)
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS port alarm
• STS1	STS1 alarm
• STS3C	STS3C alarm
• STS6C	STS6C alarm
• STS9C	STS9C alarm
• STS18C	STS18C alarm

Table 3-202 RTRV-COND-BITS Output Parameters (continued)

Parameter and Values	Description
• 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
• XTC	XTC alarm (ONS 15327)
NTFCNCDE	Two-letter notification code. Optional
	Parameter type is NOTIF_CODE—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
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition, Optional
	Parameter type is SERV_EFF—the effect of the alarm on service
• NSA	The condition is non-service affecting
• SA	The condition is service affecting
OCRDAT	Date when the specific event or violation occurred. Optional
OCRTM	Time when the specific event or violation occurred. Optional
DESC	Condition description. String. Optional

Errors Errors are listed in Table 4-11 on page 4-5

3.2.176 RTRV-COND-ENV

Retrieve Environmental Condition

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the environmental conditions.

Category Environment Alarms and Controls

Security Retrieve

Related Commands

CLR-COND-SECU	REPT EVT COM	RTRV-ALM-BITS
REPT ALM <MOD2ALM>	REPT EVT ENV	RTRV-ALM-ENV
REPT ALM BITS	REPT EVT EQPT	RTRV-ALM-EQPT
REPT ALM COM	REPT EVT FXFR	RTRV-ALM-SYNCN
REPT ALM ENV	REPT EVT IOSCFG	RTRV-COND-<MOD2ALM>
REPT ALM EQPT	REPT EVT SECU	RTRV-COND-ALL
REPT ALM SECU	REPT EVT SESSION	RTRV-COND-BITS
REPT ALM SYNCN	REPT EVT SYNCN	RTRV-COND-EQPT
REPT EVT <MOD2ALM>	RTRV-ALM-<MOD2ALM>	RTRV-COND-SYNCN
REPT EVT BITS	RTRV-ALM-ALL	

Input Format RTRV-COND-ENV:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<ALMTYPE>][,,,];

Input Example RTRV-COND-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR;

Input Parameters

Table 3-203 RTRV-COND-ENV Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ENV" section on page 4-42. Must not be null **Note** For RTRV-ALM-ENV, only ENV-IN-{1-4} is a valid AID for ONS 15454 and only ENV-IN-{1-6} is a valid AID for ONS 15327. ENV-OUT-{1,6} is not a valid AID for RTRV-ALM-ENV.
NTFCNCDE	Two-letter notification code. A null value is equivalent to ALL Parameter type is NOTIF_CODE—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 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
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUSE	Fuse failure
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature

Table 3-203 RTRV-COND-ENV Input Parameters (continued)

Parameter and Values	Description
• HIWTR	High water
• INTRUDER	Intrusion
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 Volt power supply failure
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• SMOKE	Smoke
• TOXICGAS	Toxic gas
• VENTN	Ventilation system failure

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,01-01,16-02-15,,,,\"OPEN DOOR\""
;
```

Output Parameters

Table 3-204 RTRV-COND-ENV Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ENV" section on page 4-42
NTFCNCDE	Two-letter notification code. Optional

Table 3-204 RTRV-COND-ENV Output Parameters (continued)

Parameter and Values	Description
	Parameter type is NOTIF_CODE—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
	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
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUSE	Fuse failure
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature

Table 3-204 RTRV-COND-ENV Output Parameters (continued)

Parameter and Values	Description
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 Volt power supply failure
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• SMOKE	Smoke
• TOXICGAS	Toxic gas
• VENTN	Ventilation system failure
OCRDAT	Date when the specific event or violation occurred. Optional
OCRTM	Time when the specific event or violation occurred. Optional
DESC	Condition description. String. Optional

Errors Errors are listed in Table 4-11 on page 4-5

3.2.177 RTRV-COND-EQPT

Retrieve Condition Equipment

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the equipment conditions.

Category Equipment

Security Retrieve

Related Commands

ALW-SWDX-EQPT	REPT ALM SECU	RTRV-ALM-ENV
ALW-SWTOPROTN-EQPT	REPT ALM SYNCN	RTRV-ALM-EQPT
ALW-SWTOWKG-EQPT	REPT EVT <MOD2ALM>	RTRV-ALM-SYNCN
CLR-COND-SECU	REPT EVT BITS	RTRV-ALMTH-EQPT
DLT-EQPT	REPT EVT COM	RTRV-COND-<MOD2ALM>
ED-EQPT	REPT EVT ENV	RTRV-COND-ALL
ENT-EQPT	REPT EVT EQPT	RTRV-COND-BITS
INH-SWDX-EQPT	REPT EVT FXFR	RTRV-COND-ENV
INH-SWTOPROTN-EQPT	REPT EVT IOSCFG	RTRV-COND-SYNCN
INH-SWTOWKG-EQPT	REPT EVT SECU	RTRV-EQPT
REPT ALM <MOD2ALM>	REPT EVT SESSION	SET-ALMTH-EQPT
REPT ALM BITS	REPT EVT SYNCN	SW-DX-EQPT
REPT ALM COM	RTRV-ALM-<MOD2ALM>	SW-TOPROTN-EQPT
REPT ALM ENV	RTRV-ALM-ALL	SW-TOWKG-EQPT
REPT ALM EQPT	RTRV-ALM-BITS	

Input Format

RTRV-COND-EQPT:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>][,,,];

Input Example

RTRV-COND-EQPT:TID:SLOT-1:229::LOS;

Input Parameters

Table 3-205 RTRV-COND-EQPT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "EQPT" section on page 4-43 that has an alarm condition. Must not be null
TYPEREQ	The type of condition to be retrieved. A null value is equivalent to ALL Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,[<AIDTYPE>]:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>],[<OCRDAT>],
   [<OCRTM>],,,[<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,,,\"LOS OF SIGNAL\""
;
```

Output Parameters

Table 3-206 RTRV-COND-EQPT Output Parameters

Parameter and Values	Description
AID	Access identifier from the "EQPT" section on page 4-43 that has an alarm condition
AIDTYPE	Type of facility, link or other addressable entity targeted by the message. Optional
	Parameter type is MOD2B—alarm type
• 1GFC	1 Gigabit Fiber Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fiber Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 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	GIG Ethernet port alarm
• MIC	MIC alarm (ONS 15327)
• MIC-EXT	MIC-EXT (ONS 15327)
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS port alarm

Table 3-206 RTRV-COND-EQPT Output Parameters (continued)

Parameter and Values	Description
• 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
• XTC	XTC alarm (ONS 15327)
NTFCNCDE	Two-letter notification code. Optional
	Parameter type is NOTIF_CODE—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
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition, Optional
	Parameter type is SERV_EFF—the effect of the alarm on service
• NSA	The condition is non-service affecting
• SA	The condition is service affecting

Table 3-206 RTRV-COND-EQPT Output Parameters (continued)

Parameter and Values	Description
OCRDAT	Date when the specific event or violation occurred. Optional
OCRTM	Time when the specific event or violation occurred. Optional
DESC	Condition description. String. Optional

Errors Errors are listed in Table 4-11 on page 4-5

3.2.178 RTRV-COND-SYNCN

Retrieve Condition Synchronization

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the synchronization condition.

Category Synchronization

Security Retrieve

Related Commands

CLR-COND-SECU	REPT EVT BITS	RTRV-ALM-BITS
ED-BITS	REPT EVT COM	RTRV-ALM-ENV
ED-NE-SYNCN	REPT EVT ENV	RTRV-ALM-EQPT
ED-SYNCN	REPT EVT EQPT	RTRV-ALM-SYNCN
OPR-SYNCNSW	REPT EVT FXFR	RTRV-BITS
REPT ALM <MOD2ALM>	REPT EVT IOSCFG	RTRV-COND-<MOD2ALM>
REPT ALM BITS	REPT EVT SECU	RTRV-COND-ALL
REPT ALM COM	REPT EVT SESSION	RTRV-COND-BITS
REPT ALM ENV	REPT EVT SYNCN	RTRV-COND-ENV
REPT ALM EQPT	RLS-SYNCNSW	RTRV-COND-EQPT
REPT ALM SECU	RTRV-ALM-<MOD2ALM>	RTRV-NE-SYNCN
REPT ALM SYNCN	RTRV-ALM-ALL	RTRV-SYNCN
REPT EVT <MOD2ALM>		

Input Format RTRV-COND-SYNCN:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>][,,,];

Input Example

RTRV-COND-SYNCN:TID:SYNC-NE:229::LOS;

Input Parameters

Table 3-207 RTRV-COND-SYNCN Input Parameters

Parameter and Values	Description
AID	Access identifier from the "SYNC_REF" section on page 4-56 that has an alarm condition. Must not be null
TYPEREQ	The type of condition to be retrieved. A null value is equivalent to ALL Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,[<AIDTYPE>]:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>],[<OCRDAT>],
   [<OCRTM>],,,[<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

Table 3-208 RTRV-COND-SYNCN Output Parameters

Parameter and Values	Description
AID	Access identifier from the "SYN" section on page 4-55 that has an alarm condition
AIDTYPE	Type of facility, link or other addressable entity targeted by the message. The value is always SYNCN. Optional Parameter type is MOD2B—alarm type
• 1GFC	1 Gigabit Fiber Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fiber Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• BITS	BITS alarm

Table 3-208 RTRV-COND-SYNCN Output Parameters (continued)

Parameter and Values	Description
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 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	GIG Ethernet port alarm
• MIC	MIC alarm (ONS 15327)
• MIC-EXT	MIC-EXT (ONS 15327)
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS 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

Table 3-208 RTRV-COND-SYNCN Output Parameters (continued)

Parameter and Values	Description
• VT2	VT2 alarm
• XTC	XTC alarm (ONS 15327)
NTFCNCDE	Two-letter notification code. Optional
	Parameter type is NOTIF_CODE—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
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
SRVEFF	The effect on service caused by the standing alarm or condition, Optional
	Parameter type is SERV_EFF—the effect of the alarm on service
• NSA	The condition is non-service affecting
• SA	The condition is service affecting
OCRDAT	Date when the specific event or violation occurred. Optional
OCRTM	Time when the specific event or violation occurred. Optional
DESC	Condition description. String. Optional

Errors Errors are listed in Table 4-11 on page 4-5

3.2.179 RTRV-CRS

Retrieve Cross Connect

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves all the cross-connections based on the required PATH types.

Notes:

1. A NULL AID defaults to ALL (NE).

2. A NULL PATH defaults to all the existing cross-connections.
3. The LEVEL in the output field is an optional field, and is used to indicate the bandwidth of the PATH cross-connection.
4. 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.
5. The DS3XM-12 card allows portless STS1/VT1.5 cross-connection provisioning on the portless ports (port number >= 12).
6. CKTID is a string of ASCII characters. The maximum length of CKTID is 48. If the CKTID is EMPTY or NULL it will not be displayed.

Category

Cross Connections

Security

Retrieve

Related Commands

DLT-CRS-<PATH> ENT-CRS-<PATH> RTRV-CRS-<PATH>
ED-CRS-<PATH>

Input Format

RTRV-CRS:[<TID>]:[<AID>]:<CTAG>:::[CRSTYPE=<CRSTYPE>][:];

Input Example

RTRV-CRS:CISCO:ALL:123:::CRSTYPE=STS;

Input Parameters

Table 3-209 RTRV-CRS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "CrossConnectId1" section on page 4-36 that can be 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
	Parameter type is PATH—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)

Table 3-209 RTRV-CRS Input Parameters (continued)

Parameter and Values	Description
• 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 (SONET). Virtual Channel 11 (SDH)
• VT2	Virtual Tributary 2 (SONET). Virtual Channel 12 (SDH)

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

Table 3-210 RTRV-CRS Output Parameters

Parameter and Values	Description
SRC	Source access identifier from the "CrossConnectId" section on page 4-31. Indicates the source AID(s) of the cross-connection. Listable
DST	Destination AID of the cross-connection from the "CrossConnectId" section on page 4-31. Listable
CCT	Type of connection. Used for specifying one or two-way connections Parameter type is CCT—type of cross-connect to be created

Table 3-210 RTRV-CRS Output Parameters (continued)

Parameter and Values	Description
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	Path protection mcast drop with (1-way) continue
• 1WAYEN	Path protection mcast end node (1-way continue)
• 1WAYMON	A bidirectional connection between the two tributaries **Note** Starting with ONS 15454 R3.0 and ONS 15327 R3.3, 1WAYMON is not supported with TL1. However, it is still supported from CTC. Using CTC you can create 1WAYMON cross-connects and can be retrieved via TL1.
• 1WAYPCA	A unidirectional connection from a source tributary to a destination tributary on the protection path/fiber
• 2WAY	A bidirectional connection between the two tributaries
• 2WAYDC	A Bidirectional Drop and Continue connection applicable only to path protection Traditional and Integrated Dual Ring InterConnections
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber
• DIAG	Diagnostics cross-connect. Supports BERT (BLSR PCA diagnostics cross-connect)
CRSTYPE	The cross-connection type Parameter type is CRS_TYPE—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
DRITYPE	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. Optional Parameter type is DRITYPE—DRI type

Table 3-210 RTRV-CRS Output Parameters (continued)

Parameter and Values	Description
• BLRS	BLSR DRI type
• UPSR	Path protection DRI type
• UPSR-BLSR	Path protection-BLSR hand off DRI type
SYNCSW	Synchronization switch AID from the "SYNCSW" section on page 4-56. Optional
CKTID	Circuit identification parameter that contains the a common language ID or other alias of the circuit being provisioned. It cannot contain blank spaces. String. Optional
PST_PSTQ	Primary state and primary state qualifier separated by a colon Parameter type is PST_PSTQ—service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ)
• IS-NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SSTQ	One or more secondary states separated by &, in alphabetical order. Optional Parameter type is SST—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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.180 RTRV-CRS-<PATH>

Retrieve Cross Connect (STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VT1, VT2)

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves any connections associated with the entered AID(s) or AID range. The information on both ends is returned along with the type of connection.

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

Notes:

1. The path protection STS cross-connection can be retrieved by using "&" in the AID fields of this command.
   a. To retrieve a 1-way selector or 2-way selector and bridge cross-connection with:

      from points: F1, F2

      to points: T1

      the output will be:

      1-way

      "F1&F2,T1:CCT,STS3C"

      2-way

      If retrieved on point F1 or F2, the output format is the same as the 1-way output.

      If retrieved on point T1, the output will be:

      "T1,F1&F2:CCT,STS3C"

   b. To retrieve a 1-way bridge or 2-way selector and bridge cross-connection with:

      from point: F1

      to points: T1, T2

      the output will be:

      1-way

      "F1,T1&T2:CCT,STS3C"

      2-way

      "T1&T2,F1:CCT,STS3C"

   c. To retrieve a 1-way subtending path protection connection or 2-way subtending path protection cross-connection with:

      from point: F1, F2

      to points: T1, T2

      the output will be:

      1-way:

      "F1&F2,T1&T2:CCT,STS3C"

      2-way:

      If retrieved on point F1 or F2, the output format is the same as the 1-way output.

If retrieved on point T1 or T2, the output will be:

"T1&T2,F1&F2:CCT,STS3C"

d. To retrieve a 2-way selector and bridge cross-connection with:

ENT-CRS-<PATH>::F1&F2,S1&S2:<CTAG>::2WAY;

from points: F1, F2 (F1 is the working side, F2 is the protect side)

selector: S1, S2 (s1 is the working side, S2 is the protect side)

the output will be:

If retrieved on point F1 or F2, the output will be:

"F1&F2,S1&S2:CCT,STS3C"

If retrieved on selector S1 or S2, the output will be:

"S1&S2,F1&F2:CCT,STS3C"

e. To retrieve a path protection IDRI cross-connect with:

from points: F1, F2

to points: T1, T2

the output will be:

"F1&F2,T1&T2:CCT,STS3C"

f. To retrieve a path protection DRI cross-connect with:

from points: F1, F2

to points: T1

the output will be:

"F1&F2,T1:CCT,STS3C"

2. All A&B AIDs in the TL1 cross-connection command are in the format of WorkingAID&ProtectAID.
3. <STS_PATH> does not include STS for the RTRV-CRS command because STS is not a standard designator as defined by GR-833 A-2.
4. Both the 1WAYPCA and 2WAYPCA is used to specify a PCA cross-connection.
5. The facility AID is only valid on slots with a G1000-4 card.
6. The virtual facility AID (VFAC) is only valid on slots holding the ML-Series card.
7. 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.
8. The DS3XM-12 card allows portless STS1/VT1.5 cross-connection provisioning on the PORTLESS ports (port number >= 12).

Category Cross Connections

Security Retrieve

Related Commands

DLT-CRS-<PATH>	ENT-CRS-<PATH>	RTRV-CRS
DLT-ROLL-<MOD_PATH>	ENT-ROLL-<MOD_PATH>	RTRV-NE-PATH
ED-<MOD_PATH>	OPR-PROTNSW-<PATH>	RTRV-PROTNSW-<PATH>
ED-CRS-<PATH>	RLS-PROTNSW-<PATH>	RTRV-PTHTRC-<PATH>
ED-NE-PATH	RTRV-<PATH>	RTRV-ROLL-<MOD_PATH>

Input Format

RTRV-CRS-<PATH>:[<TID>]:<SRC>:<CTAG>[::::];

Input Example

RTRV-CRS-STS3C:KENWOOD:STS-6-1-1:223;

Input Parameters

Table 3-211 RTRV-CRS-<PATH> Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "CrossConnectId1" section on page 4-36. Must not be null

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

Table 3-212 RTRV-CRS-<PATH> Output Parameters

Parameter and Values	Description
SRC	Source access identifier from the "CrossConnectId" section on page 4-31. Indicates the source AID(s) of the cross-connection. Listable
DST	Destination AID of the cross-connection from the "CrossConnectId" section on page 4-31. Listable
CCT	Type of connection. Used for specifying one or two-way connections

Table 3-212 RTRV-CRS-<PATH> Output Parameters (continued)

Parameter and Values	Description
	Parameter type is CCT—type of cross-connect to be created
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	Path protection mcast drop with (1-way) continue
• 1WAYEN	Path protection mcast end node (1-way continue)
• 1WAYMON	A bidirectional connection between the two tributaries **Note** Starting with ONS 15454 R3.0 and ONS 15327 R3.3, 1WAYMON is not supported with TL1. However, it is still supported from CTC. Using CTC you can create 1WAYMON cross-connects and can be retrieved via TL1.
• 1WAYPCA	A unidirectional connection from a source tributary to a destination tributary on the protection path/fiber
• 2WAY	A bidirectional connection between the two tributaries
• 2WAYDC	A Bidirectional Drop and Continue connection applicable only to path protection Traditional and Integrated Dual Ring InterConnections
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber
• DIAG	Diagnostics cross-connect. Supports BERT (BLSR PCA diagnostics cross-connect)
MOD	The connection path bandwidth
	Parameter type is MOD2—line/path modifier
• 10GFC	10 Gigabit Fiber Channel
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit Fiber Channel
• 1GFICON	1 Gigabit FICON
• 2GFC	2 Gigabit Fiber Channel
• 2GFICON	2 Gigabit FICON
• D1VIDEO	D1 Video
• DS1	DS1 line of a DS3XM card
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETRCLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	Generic Framing Protocol over Packet Over SONET. Virtual Ports partitioned using GFP's Multiplexing Capability
• GIGE	GIG Ethernet

Table 3-212 RTRV-CRS-<PATH> Output Parameters (continued)

Parameter and Values	Description
• HDTV	HDTV
• ISC1	ISC1
• OC3	OC3 facility
• OC12	OC12 facility
• OC48	OC48 facility
• OC192	OC192 facility
• OCH	Optical channel
• 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
• SYNCN	SYNCN alarm
• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 Path
• VT2	VT2 Path
DRITYPE	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. Optional Parameter type is DRITYPE—DRI type
• BLRS	BLSR DRI type
• UPSR	Path protection DRI type
• UPSR-BLSR	Path protection-BLSR hand off DRI type
SYNCSW	Synchronization switch AID from the "SYNCSW" section on page 4-56. Optional
CKTID	A string of ASCII characters. Maximum length is 48. String. Optional
PST_PSTQ	Primary state and primary state qualifier separated by a colon

Table 3-212 RTRV-CRS-<PATH> Output Parameters (continued)

Parameter and Values	Description
	Parameter type is PST_PSTQ—service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ)
• IS-NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SSTQ	One or more secondary states separated by &, in alphabetical order. Optional
	Parameter type is SST—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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.181 RTRV-DFLT-SECU

Retrieve Default Security

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the system-wide default values associated with several security parameters.

Category Security

Security Superuser

Related Commands

ACT-USER	DLT-USER-SECU	REPT ALM SECU
ALW-MSG-SECU	ED-CMD-SECU	REPT EVT SECU
ALW-USER-SECU	ED-PID	REPT EVT SESSION
CANC	ED-USER-SECU	RTRV-CMD-SECU
CANC-USER	ENT-USER-SECU	RTRV-USER-SECU
CANC-USER-SECU	INH-MSG-SECU	SET-ATTR-SECUDFLT
CLR-COND-SECU	INH-USER-SECU	

Input Format

RTRV-DFLT-SECU:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-DFLT-SECU:CISCO:ALL:123;

Input Parameters

Table 3-213 RTRV-DFLT-SECU Input Parameters

Parameter and Values	Description
AID	Access identifier. ALL is the only acceptable value. String. Must not be null

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=<UAP>"
;
```

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"
;
```

Output Parameters

Table 3-214 RTRV-DFLT-SECU Output Parameters

Parameter and Values	Description
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/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. Integer
PCND	Number of days a password can be used before a new one is mandatory (i.e., the warning period). Default is 5 days. PCND ranges from 2 to 20 days. Integer
MXINV	Maximum number of consecutive and invalid session setup attempts allowed to occur before an intrusion attempt is suspected (i.e., "Failed Logins Before Lockout" from CTC). 0 indicates the policy is turned off. Default is 5. MXINV ranges from 0 to 10. Integer
DURAL	Time interval (in seconds) during which a userid is locked out when an intrusion attempt is suspected (i.e., 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. 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. DURAL is 0 for RTRV users, 60 minutes for MAINT users, 30 minutes for PROV users, and 15 minutes for SUPER users. 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 45 to 90 days. Integer
PFRCD	Indicates a password change is required when a new user establishes a session to the NE for the first time (i.e., "Require password change on 1st login"). Default is NO Parameter type is YES_NO—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 (i.e.,"Prevent reusing last X passwords"). Default is 1. POLD ranges from 0 to 10. 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. Integer

Table 3-214 RTRV-DFLT-SECU Output Parameters (continued)

Parameter and Values	Description
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 (i.e., CTC, TL1, etc.). Default is MUL TIPLE Parameter type is USER_LOGINS—the number of times a user can log into the same NE with the same userid
• 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)
UAP	User's access privilege Parameter type is PRIVILEGE—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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.182 RTRV-DS1

Retrieve DS1

Usage Guidelines Cisco ONS 15454

This command retrieves the test access attributes on a DS1 layer of a DS3XM card.

Notes:

1. Both MODE and FMT fields of this command are applied for the DS3XM-12 card only.
2. If the DS1 mode of the DS3XM-12 is in ATT mode, 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 in FDL mode, the DS1 path can retrieve FDL/T1-403 FEND PM counts up to 32 15-minute intervals in RTRV-PM-DS1.
3. 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 the detected frame. If the frame format is not determined, it will be in the "UNFRAMED" format.
4. For the pre-provisioning DS3XM-12 card, its DS1 frame format defaults to "UNFRAMED" format.
5. For the DS3XM-12 card, the DS1-configurable attributes; PM, TH, alarm etc. only apply to the ported ports (1-12) 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.

Category Ports

Security Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1 RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format RTRV-DS1:[<TID>]:<DS1AID>:<CTAG>[::::];

Input Example

RTRV-DS1:PETALUMA:DS1-2-1-6-12:123;

Input Parameters

Table 3-215 RTRV-DS1 Input Parameters

Parameter and Values	Description
DS1AID	The DS1 path access identifier of the DS3XM card from the "DS1" section on page 4-42. Must not be null

Output Format

SID DATE TIME
M CTAG COMPLD
"<DS1AID>::[TACC=<TACC>,][TAPTYPE=<TAPTYPE>,][MODE=<MODE>,][FMT=<FMT>]"
;

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"
;

Output Parameters

Table 3-216 RTRV-DS1 Output Parameters

Parameter and Values	Description
DS1AID	The DS1 path access identifier of the DS3XM card from the "DS1" section on page 4-42
TACC	Indicates whether the digroup being provisioned is to be used as a test access digroup. Default is N. Integer. Optional
TAPTYPE	TAP type. Optional
	Parameter type is TAPTYPE—test access point type
• DUAL	Dual FAD
• SINGLE	Single FAD
MODE	Mode with which the command is to be implemented. DS1 path mode of the DS3XM-12 card. Optional
	Parameter type is DS1MODE—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. Optional
	Parameter type is FRAME_FORMAT—frame format for a T1 port
• D4	Frame format is D4

Table 3-216 RTRV-DS1 Output Parameters (continued)

Parameter and Values	Description
• ESF	Frame format is ESF
• UNFRAMED	Frame format is unframed

Errors Errors are listed in Table 4-11 on page 4-5

3.2.183 RTRV-DWDM

Retrieve Dense Wavelength Division Multiplexing

Usage Guidelines Cisco ONS 15454

This command retrieves DWDM card-level attributes.

Category DWDM

Security Retrieve

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-FFP-OCH
DLT-LNKTERM	ED-WDMANS	RTRV-LNK-<MOD2O>
DLT-OSC	ED-WLEN	RTRV-LNKTERM
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-NE-WDMANS
ED-DWDM	ENT-LNKTERM	RTRV-OCH
ED-FFP-OCH	ENT-OSC	RTRV-OMS
ED-LNK-<MOD2O>	ENT-WLEN	RTRV-OSC
ED-LNKTERM	OPR-LASER-OTS	RTRV-OTS
ED-OCH	OPR-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-OMS	OPR-WDMANS	RTRV-TRC-OCH
ED-OSC	RLS-LASER-OTS	RTRV-WDMANS
ED-OTS	RLS-PROTNSW-OCH	RTRV-WLEN

Input Format RTRV-DWDM:[<TID>]:<AID>:<CTAG>;

Input Example RTRV-DWDM:VA454-22:SLOT-1:100;

Input Parameters

Table 3-217 RTRV-WDMANS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "EQPT" section on page 4-43
EQPT_TYPE	Equipment type
	Parameter type is EQPT_TYPE—the type of equipment being provisioned into a slot
• AD-1B	Optical Add/Drop Multiplexed (OADM) 1 Band Filter
• AD-1C	Optical Add/Drop Multiplexed (OADM) 1 Channel Filter
• AD-2C	Optical Add/Drop Multiplexed (OADM) 2 Channels Filter
• AD-4B	Optical Add/Drop Multiplexed (OADM) 4 Bands Filter
• AD-4C	Optical Add/Drop Multiplexed (OADM) 4 Channels Filter
• AIC	The Alarm Interface Controller Card is an optional card which expands system management capabilities for the customer defined alarm I/O and orderwire functionality
• AICI	The AICI card
• AIP	The Alarm Indicator Panel
• ALM-PWR	Alarm Power
• ASAP-4	ASAP Carrier card with four PIM slots
• BP	The Backplane of the NE
• CE-100T-8	8-Port 100T card on ONS 15454 and ONS 15310-CL
• CRFT-TMG	Craft Timing
• DCC	The Data Communications Channel
• DMX-32	Optical De/Multiplexed (DMX) 32 Channels
• DS1-14	A 14 port interface card supporting DS1 facilities
• DS1N-14	A 14 port interface card supporting DS1 facilities
• DS3-12	A 12 port interface card supporting DS3 facilities
• DS3-3	A 3 port interface card supporting DS3 facilities
• DS3-EC1-48	High Density DS3/EC1 card supporting 48 ports
• DS3ATM-12	A 12 port interface card supporting DS3 ATM facilities
• DS3CR-12	Cost reduced DS3
• DS3E-12	A 12 port DS3 enhancement interface card supporting DS3E facilities
• DS3N-12	A 12 port interface card supporting DS3 facilities
• DS3NE-12	A 12 port DS3 enhancement interface card supporting DS3E facilities
• DS3XM-6	An interface card that converts six framed DS-3 network connections to 28x6 or 168 VT1.5s
• E1000T-2	A 2 port interface card supporting 1000 Base T Ethernet facilities
• E100T-12	A 12 port interface card supporting 100 Base T Ethernet facilities

Table 3-217 RTRV-WDMANS Input Parameters (continued)

Parameter and Values	Description
• E100T-4	A four port interface card supporting 100 Base T Ethernet facilities.
• EC1-12	A 12 port interface card supporting EC1 facilities
• EC1N-12	A 12 port interface card supporting EC1 facilities
• FILLER_CARD	Smart Filler card (ONS 15600)
• FTA	The Fan Tray of the NE
• FTA1	The Fan Tray 1 of the NE
• FTA2	The Fan Tray 2 of the NE
• G1000-4	A four port G1000 card
• MD-4	Optical Multiplexer/Demultiplexer with 4 Channels
• MIC-28-3-A	ONS 15327 MIC card A
• MIC-28-3-B	ONS 15327 MIC card B
• MIC-EXT	ONS 15327 MIC card
• MIC-GEN	ONS 15327 MIC card
• ML-100T-8	8 port 100T card on ONS 15310-CL
• MUX-32	Optical Multiplexed (MUX) 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder Card
• OC12	An interface card that supports one or more OC-12 (622Mbs) optical facilities
• OC12-327	ONS 15327 OC12 card
• OC12-4	A four port OC12 card
• OC12-IR-1	An interface card that supports one intermediate range OC-12 (622Mbs) optical facilities
• OC12-LR-1	An interface card that supports one long range OC-12 (622Mbs) optical facilities
• OC12-SR-1	An interface card that supports one short range OC-12 (622Mbs) optical facilities
• OC192_4	4 port OC192 card (ONS 15600)
• OC192-LR-1	An interface card that supports one or more OC-192 optical facilities
• OC3	An interface card that supports multiple OC-3 (155Mbs) optical facilities
• OC3-327	ONS 15327 OC3 card
• OC3-IR-4	An interface card that supports four intermediate range OC-3 (155Mbs) optical facilities
• OC3-SR-4	An interface card that supports four short range OC-3 (155Mbs) optical facilities
• OC3ATM-IR-6	An interface card that supports six intermediate range OC-3 (155Mbs) ATM optical fibers

Table 3-217 RTRV-WDMANS Input Parameters (continued)

Parameter and Values	Description
• OC3IR-STM1SH-1310-8	An OC3 card which has 8 ports over the lower speed slot of the ONS 15454 with XC10G/192
• OC3POS-SR-4	An interface card that supports four short range OC-3 (155Mbs) POS optical facilities
• OC48	An interface card that supports one or more OC-48 (10Gbs) optical facilities
• OC48-327	ONS 15327 OC48 card
• OC48-AS-1	An interface card that supports one short range OC-48 (10Gbs) optical facilities that can be provisioned in any I/O slot
• OC48-ELR-1	An interface card that supports one short range OC-48 (2.5Gbs) optical facility
• OC48-IR-1	An interface card that supports one intermediate range OC-48 (10Gbs) optical facility
• OC48-LR-1	An interface card that supports one long range OC-48 (10Gbs) optical facility
• OC48-SR-1	An interface card that supports one short range OC-48 (10Gbs) optical facilities
• OC-48_16	16 port OC48 card (ONS 15600)
• OPT-BST	Optical Booster Amplifier
• OPT-PRE	Optical Pre-Amplifier
• OSC-CSM	Optical Service Channel (OSC) with Combiner/Separator Module (SCM)
• OSCM	Optical Service Channel (OSC) Module
• PIM-4	Pluggable interface module with 4 PPM slots
• PPM-1	Pluggable port module with 1 port SFP module
• SSXC	Cross connect card (ON 15600)
• TCC	The Timing Communication and Control card
• TSC	Timing and synchronization controller card (ONS 15600)
• TXP-MR-10G	10G Multirate Transponder Card
• TXP-MR-2.5G	Multi-Rate 2.5G Unprotected
• TXPP-MR-2.5G	Multi-Rate 2.5G Protected
• XCVT	A Cross-Connect card
• XC10G	A Cross-Connect card
• XTC	ONS 15327 XTC card
• XTC-DS1-14	ONS 15327 XTC DS1-14 card
• XTC-DS1-28	ONS 15327 XTC DS1-28 card
• XTC-DS1-56	ONS 15327 XTC DS1-56 card
• XTC-DS3-3	ONS 15327 XTC DS3-3 card

Table 3-217 RTRV-WDMANS Input Parameters (continued)

Parameter and Values	Description
EQUIP	Indicates if the equipment is physically present
	Parameter type is EQUIP—the presence of a plug-in unit
• EQUIP	The unit is equipped - present
• UNEQUIP	The unit is unequipped - absent
STATUS	Indicates a status. SONET card status is shown on its card level. Optional
	Parameter type is STATUS—
• ACT	The entity is the active unit in the shelf
• NA	Status is unavailable
• STBY	The entity is the standby unit on the shelf
PEERID	The regeneration group peer card slot AID from the "EQPT" section on page 4-43. Optional
NAME	A free form text string description which is the name given to a regeneration group. String. Optional
TERMMODE	Termination mode of the card. Optional
	Parameter type is TERM_MODE—terminating mode of the card
• LINE	Line terminating mode
• SEC	Section terminating mode
• TRANS	Transparent mode
PWL	Provisioned wavelength. Optional. (See parameter below)
TWL	Tunable wavelength 1. Optional. (See parameter below)
TWL1	Tunable wavelength 2. Optional. (See parameter below)
TWL2	Tunable wavelength 3. Optional. (See parameter below)
TWL3	Tunable wavelength 4. Optional. (See parameter below)
	Parameter type for PWL, TWL, TWL1, TWL2, and TWL3 is OPTICAL_WLEN—optical wavelength
• 1530.33	Wavelength 1
• 1531.12	Wavelength 2
• 1531.90	Wavelength 3
• 1532.68	Wavelength 4
• 1534.25	Wavelength 5
• 1535.04	Wavelength 6
• 1535.82	Wavelength 7
• 1536.61	Wavelength 8
• 1538.19	Wavelength 9
• 1538.98	Wavelength 10
• 1539.77	Wavelength 11

Table 3-217 RTRV-WDMANS Input Parameters (continued)

Parameter and Values	Description
• 1540.56	Wavelength 12
• 1542.14	Wavelength 13
• 1542.94	Wavelength 14
• 1543.73	Wavelength 15
• 1544.53	Wavelength 16
• 1546.12	Wavelength 17
• 1546.92	Wavelength 18
• 1547.72	Wavelength 19
• 1548.51	Wavelength 20
• 1550.12	Wavelength 21
• 1550.92	Wavelength 22
• 1551.72	Wavelength 23
• 1552.52	Wavelength 24
• 1554.13	Wavelength 25
• 1554.94	Wavelength 26
• 1555.75	Wavelength 27
• 1556.55	Wavelength 28
• 1558.17	Wavelength 29
• 1558.98	Wavelength 30
• 1559.79	Wavelength 31
• 1560.61	Wavelength 32
• USE-TWL1	Use Tunable Wavelength 1
PST_PSTQ	Admin state in the PST-PSTQ format
	Parameter type is PST_PSTQ—service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ)
• IS-NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SSTQ	Secondary state of the entity. Optional
	Parameter type is SST—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

Table 3-217 RTRV-WDMANS Input Parameters (continued)

Parameter and Values	Description
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
  "<AID>:<EQPTTYPE>,<EQUIP>,,[<STATUS>]:[PEERID=<PEERID>,][NAME=<NAME>,]
  [TERMMODE=<TERMMODE>,][PAYLOAD=<PAYLOAD>,][CARDNAME=<CARDNAME>,]
  [PWL=<PWL>,][TWL1=<TWL>,][TWL2=<TWL1>,][TWL3=<TWL2>,]
  [TWL4=<TWL3>]:<PST_PSTQ>,[<SSTQ>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
  "SLOT-1:TXP-MR-2.5G,EQUIP,,ACT:PEERID=SLOT-2,NAME=\"NY GROUP\",
  TERMMODE=TRANS,PAYLOAD=OC48,CARDNAME=\"TRUNK-1\",
  PWL=1530.33, TWL1=1530.33,TWL2=1531.12,TWL3=1532.68,TWL4=1533.47:OOS-AU,AINS"
;
```

Output Parameters

Table 3-218 RTRV-DWDM Output Parameters

Parameter and Values	Description
AID	Access identifier from the "EQPT" section on page 4-43. The entity in the NE to which the command pertains
EQPT_TYPE	Equipment type
	Parameter type is EQPT_TYPE—the type of equipment being provisioned into a slot
• AD-1B	Optical Add/Drop Multiplexed (OADM) 1 Band Filter
• AD-1C	Optical Add/Drop Multiplexed (OADM) 1 Channel Filter
• AD-2C	Optical Add/Drop Multiplexed (OADM) 2 Channels Filter
• AD-4B	Optical Add/Drop Multiplexed (OADM) 4 Bands Filter
• AD-4C	Optical Add/Drop Multiplexed (OADM) 4 Channels Filter
• AIC	The Alarm Interface Controller Card is an optional card which expands system management capabilities for the customer defined alarm I/O and orderwire functionality
• AICI	The AICI card
• AIP	The Alarm Indicator Panel
• ALM-PWR	Alarm Power

Table 3-218 RTRV-DWDM Output Parameters (continued)

Parameter and Values	Description
• ASAP-4	ASAP Carrier card with four PIM slots
• BP	The Backplane of the NE
• CE-100T-8	8-Port 100T card on ONS 15454 and ONS 15310-CL
• CRFT-TMG	Craft Timing
• DCC	The Data Communications Channel
• DMX-32	Optical De/Multiplexed (DMX) 32 Channels
• DS1-14	A 14 port interface card supporting DS1 facilities
• DS1N-14	A 14 port interface card supporting DS1 facilities
• DS3-12	A 12 port interface card supporting DS3 facilities
• DS3-3	A 3 port interface card supporting DS3 facilities
• DS3-EC1-48	High Density DS3/EC1 card supporting 48 ports
• DS3ATM-12	A 12 port interface card supporting DS3 ATM facilities
• DS3CR-12	Cost reduced DS3
• DS3E-12	A 12 port DS3 enhancement interface card supporting DS3E facilities
• DS3N-12	A 12 port interface card supporting DS3 facilities
• DS3NE-12	A 12 port DS3 enhancement interface card supporting DS3E facilities
• DS3XM-6	An interface card that converts six framed DS-3 network connections to 28x6 or 168 VT1.5s
• E1000T-2	A 2 port interface card supporting 1000 Base T Ethernet facilities
• E100T-12	A 12 port interface card supporting 100 Base T Ethernet facilities
• E100T-4	A four port interface card supporting 100 Base T Ethernet facilities.
• EC1-12	A 12 port interface card supporting EC1 facilities
• EC1N-12	A 12 port interface card supporting EC1 facilities
• FILLER_CARD	Smart Filler card (ONS 15600)
• FTA	The Fan Tray of the NE
• FTA1	The Fan Tray 1 of the NE
• FTA2	The Fan Tray 2 of the NE
• G1000-4	A four port G1000 card
• MD-4	Optical Multiplexer/Demultiplexer with 4 Channels
• MIC-28-3-A	ONS 15327 MIC card A
• MIC-28-3-B	ONS 15327 MIC card B
• MIC-EXT	ONS 15327 MIC card
• MIC-GEN	ONS 15327 MIC card
• ML-100T-8	8 port 100T card on ONS 15310-CL
• MUX-32	Optical Multiplexed (MUX) 32 Channels

Table 3-218 RTRV-DWDM Output Parameters (continued)

Parameter and Values	Description
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder Card
• OC12	An interface card that supports one or more OC-12 (622Mbs) optical facilities
• OC12-327	ONS 15327 OC12 card
• OC12-4	A four port OC12 card
• OC12-IR-1	An interface card that supports one intermediate range OC-12 (622Mbs) optical facilities
• OC12-LR-1	An interface card that supports one long range OC-12 (622Mbs) optical facilities
• OC12-SR-1	An interface card that supports one short range OC-12 (622Mbs) optical facilities
• OC192_4	4 port OC192 card (ONS 15600)
• OC192-LR-1	An interface card that supports one or more OC-192 optical facilities
• OC3	An interface card that supports multiple OC-3 (155Mbs) optical facilities
• OC3-327	ONS 15327 OC3 card
• OC3-IR-4	An interface card that supports four intermediate range OC-3 (155Mbs) optical facilities
• OC3-SR-4	An interface card that supports four short range OC-3 (155Mbs) optical facilities
• OC3ATM-IR-6	An interface card that supports six intermediate range OC-3 (155Mbs) ATM optical fibers
• OC3IR-STM1SH-1310-8	An OC3 card which has 8 ports over the lower speed slot of the ONS 15454 with XC10G/192
• OC3POS-SR-4	An interface card that supports four short range OC-3 (155Mbs) POS optical facilities
• OC48	An interface card that supports one or more OC-48 (10Gbs) optical facilities
• OC48-327	ONS 15327 OC48 card
• OC48-AS-1	An interface card that supports one short range OC-48 (10Gbs) optical facilities that can be provisioned in any I/O slot
• OC48-ELR-1	An interface card that supports one short range OC-48 (2.5Gbs) optical facility
• OC48-IR-1	An interface card that supports one intermediate range OC-48 (10Gbs) optical facility
• OC48-LR-1	An interface card that supports one long range OC-48 (10Gbs) optical facility
• OC48-SR-1	An interface card that supports one short range OC-48 (10Gbs) optical facilities

Table 3-218 RTRV-DWDM Output Parameters (continued)

Parameter and Values	Description
• OC-48_16	16 port OC48 card (ONS 15600)
• OPT-BST	Optical Booster Amplifier
• OPT-PRE	Optical Pre-Amplifier
• OSC-CSM	Optical Service Channel (OSC) with Combiner/Separator Module (SCM)
• OSCM	Optical Service Channel (OSC) Module
• PIM-4	Pluggable interface module with 4 PPM slots
• PPM-1	Pluggable port module with 1 port SFP module
• SSXC	Cross connect card (ON 15600)
• TCC	The Timing Communication and Control card
• TSC	Timing and synchronization controller card (ONS 15600)
• TXP-MR-10G	10G Multirate Transponder Card
• TXP-MR-2.5G	Multi-Rate 2.5G Unprotected
• TXPP-MR-2.5G	Multi-Rate 2.5G Protected
• XCVT	A Cross-Connect card
• XC10G	A Cross-Connect card
• XTC	ONS 15327 XTC card
• XTC-DS1-14	ONS 15327 XTC DS1-14 card
• XTC-DS1-28	ONS 15327 XTC DS1-28 card
• XTC-DS1-56	ONS 15327 XTC DS1-56 card
• XTC-DS3-3	ONS 15327 XTC DS3-3 card
EQUIP	Indicates if the equipment is physically present Parameter type is EQUIP—the presence of a plug-in unit
• EQUIP	The unit is equipped - present
• UNEQUIP	The unit is unequipped - absent
STATUS	Indicates a status. SONET card status is shown on its card level. Optional Parameter type is STATUS—
• ACT	The entity is the active unit in the shelf
• NA	Status is unavailable
• STBY	The entity is the standby unit on the shelf
PEERID	The regeneration group peer card slot AID from the "EQPT" section on page 4-43. Optional
NAME	A free form text string description which is the name given to a regeneration group. String. Optional
TERMMODE	Termination mode of the card. Optional Parameter type is TERM_MODE—terminating mode of the card

Table 3-218 RTRV-DWDM Output Parameters (continued)

Parameter and Values	Description
• LINE	Line terminating mode
• SEC	Section terminating mode
• TRANS	Transparent mode
PAYLOAD	The payload for the card. Optional
	Parameter type is PAYLOAD—identifies payload type
• 10GFC	10 Gigabit Ethernet Fiber Channel mode
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit Fiber Channel mode
• 1GFICON	1 Gigabit FICON mode
• 2GFC	2 Gigabit Fiber Channel mode
• 2GFICON	2 Gigabit FICON mode
• DS3	DS3 mode
• DV6000	Video mode
• EC1	EC1 mode
• ESCON	ESCON mode
• ETRCLO	ETR/CLO payload mode
• GIGE	Gigabit Ethernet Payload
• HDTV	HDTV mode
• ISC1	ISC1 Mode
• ISC3	ISC3 Mode
• OC12	SONET OC12 mode
• OC3	SONET OC3 mode
• OC48	SONET OC48 mode
• PASS-THROUGH	Pass through mode
• SDI-D1-VIDEO	SDI-D1-Video mode
• SONET	SONET Payload Mode
CARDNAME	Card name. String. Optional
PWL	Provisioned wavelength. Optional. (See parameter below)
TWL	Tunable wavelength 1. Optional. (See parameter below)
TWL1	Tunable wavelength 2. Optional. (See parameter below)
TWL2	Tunable wavelength 3. Optional. (See parameter below)
TWL3	Tunable wavelength 4. Optional. (See parameter below)
	Parameter type for PWL, TWL, TWL1, TWL2, and TWL3 is OPTICAL_WLEN—optical wavelength
• 1530.33	Wavelength 1
• 1531.12	Wavelength 2

Table 3-218 RTRV-DWDM Output Parameters (continued)

Parameter and Values	Description
• 1531.90	Wavelength 3
• 1532.68	Wavelength 4
• 1534.25	Wavelength 5
• 1535.04	Wavelength 6
• 1535.82	Wavelength 7
• 1536.61	Wavelength 8
• 1538.19	Wavelength 9
• 1538.98	Wavelength 10
• 1539.77	Wavelength 11
• 1540.56	Wavelength 12
• 1542.14	Wavelength 13
• 1542.94	Wavelength 14
• 1543.73	Wavelength 15
• 1544.53	Wavelength 16
• 1546.12	Wavelength 17
• 1546.92	Wavelength 18
• 1547.72	Wavelength 19
• 1548.51	Wavelength 20
• 1550.12	Wavelength 21
• 1550.92	Wavelength 22
• 1551.72	Wavelength 23
• 1552.52	Wavelength 24
• 1554.13	Wavelength 25
• 1554.94	Wavelength 26
• 1555.75	Wavelength 27
• 1556.55	Wavelength 28
• 1558.17	Wavelength 29
• 1558.98	Wavelength 30
• 1559.79	Wavelength 31
• 1560.61	Wavelength 32
• USE-TWL1	Use Tunable Wavelength 1
PST_PSTQ	Admin state in the PST-PSTQ format Parameter type is PST_PSTQ—service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ)
• IS-NR	In service - normal
• OOS-AU	Out of service - autonomous

Table 3-218 RTRV-DWDM Output Parameters (continued)

Parameter and Values	Description
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SSTQ	Secondary state of the entity. Optional
	Parameter type is SST—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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.184 RTRV-EC1

Retrieve Electrical Carrier

Usage Guidelines Cisco ONS 15454

This command retrieves the facility status of an EC1 card.

Category Ports

Security Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RTRV-EC1:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-EC1:CISCO:FAC-1-1:1234;

Input Parameters

Table 3-219 RTRV-EC1 Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>::[PJMON=<PJMON>,][LBO=<LBO>,][RXEQUAL=<RXEQUAL>,][SOAK=<SOAK>,]
   [SOAKLEFT=<SOAKLEFT>,][SFBER=<SFBER>,][SDBER=<SDBER>,]
   [NAME=<NAME>]:<PST_PSTQ>,[<SSTQ>]"
;
```

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\":OOS-AU,AINS"
;
```

Output Parameters

Table 3-220 RTRV-EC1 Output Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
PJMON	A SONET pointer monitor attribute of an EC1 port. Integer. Optional
LBO	Line build out settings. Integer. Optional
	Parameter type is E_LBO—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—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	OOS-AINS to IS transition soak time as measured in 15-minute intervals. Integer. Optional

Table 3-220 RTRV-EC1 Output Parameters (continued)

Parameter and Values	Description
SOAKLEFT	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. Optional Rules for <SOAKLEFT> are as follows: • When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed. • 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	Signal failure threshold. The default value is 1E-4. Optional Parameter type is SF_BER—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. Optional 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
NAME	String. Optional
PST_PSTQ	Admin state in the PST_PSTQ format Parameter type is PST_PSTQ—service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ)
• IS-NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SSTQ	Secondary state of the entity. Optional Parameter type is SST—provides additional information pertaining to PST and PSTQ
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback

Table 3-220 RTRV-EC1 Output Parameters (continued)

Parameter and Values	Description
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

Errors Errors are listed in Table 4-11 on page 4-5

3.2.185 RTRV-EQPT

Retrieve Equipment

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the data parameters and state parameters associated to an equipment unit.

This command returns the PRTYPE, PROTID, RVTM, and RVRTV parameters for a card inside of a protection group by the following scenario:

1. A working AID/card within a 1:1 protection group will return PRTYPE, PROTID, RVTM and RVRTV.
2. A protection/AID card within a 1:1 protection group will return PRTYPE, RVTM and RVRTV.
3. A working AID/card within a 1:N protection group will return PRTYPE, PROTID, RVTM and RVRTV=Y.
4. A protection AID/card of a 1:1 protection group will return PRTYPE, RVTM and RVRTV=Y.
5. An unprotected AID/card will return the AID type, equip (equip/unequip), status (act/standby) and state (IS/OOS) values.
6. Pre-provisioned cards (without being plugged in) will display OOS,AINS for PST and SST. Once the card is plugged in and has gone through it's initialization sequence the card automatically goes to IS (PST).
7. CARDMODE parameter is displayed for ML-Series and FCMR-4 cards.

Error conditions:

1. The equipment is not provisioned.

Category Equipment

Security Retrieve

Related Commands

ALW-SWDX-EQPT	INH-SWDX-EQPT	RTRV-ALMTH-EQPT
ALW-SWTOPROTN-EQPT	INH-SWTOPROTN-EQPT	RTRV-COND-EQPT
ALW-SWTOWKG-EQPT	INH-SWTOWKG-EQPT	SET-ALMTH-EQPT
DLT-EQPT	REPT ALM EQPT	SW-DX-EQPT
ED-EQPT	REPT EVT EQPT	SW-TOPROTN-EQPT
ENT-EQPT	RTRV-ALM-EQPT	SW-TOWKG-EQPT

Input Format

RTRV-EQPT:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-EQPT:MIRABEL:SLOT-12:230;

Input Parameters

Table 3-221 RTRV-EQPT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "EQPT" section on page 4-43. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:<AIDTYPE>,<EQUIP>,[<ROLE>],[<STATUS>]:[PROTID=<PROTID>,]
   [PRTYPE=<PRTYPE>,][RVRTV=<RVRTV>,][RVTM=<RVTM>,]
   [CARDNAME=<CARDNAME>,][IOSCFG=<IOSCFG>,][CARDMODE=<CARDMODE>,]
   [PEERID=<PEERID>,][REGENNAME=<REGENNAME>,]
   [PWL=<PWL>]:<PST_PSTQ>,<SSTQ>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "SLOT-12:DS1,EQUIP,,ACT:PROTID=SLOT-13,PRTYPE=1-1,RVRTV=Y,RVTM=8.5,
   CARDNAME=DESCRIPTION,IOSCFG="IOS CONFIG INFO FOR ML SERIES CARD",
   CARDMODE=DS3XM12-STS48,PEERID=SLOT-1,REGENNAME="THIS GROUP",
    PWL=1530.33:OOS-AU,AINS&UEQ"
;
```

Output Parameters

Table 3-222 RTRV-EQPT Output Parameters

Parameter and Values	Description
AID	Access identifier from the "EQPT" section on page 4-43
AIDTYPE	The type of facility, link or other addressable entity targeted by the message
	Parameter type is EQUIPMENT_TYPE—equipment type
• AD-1B	Optical Add/Drop Multiplexed (OADM) 1 Band Filter
• AD-1C	Optical Add/Drop Multiplexed (OADM) 1 Channel Filter
• AD-2C	Optical Add/Drop Multiplexed (OADM) 2 Channels Filter
• AD-4B	Optical Add/Drop Multiplexed (OADM) 4 Bands Filter
• AD-4C	Optical Add/Drop Multiplexed (OADM) 4 Channels Filter
• AIC	AIC card
• AICI	AICI card
• ASAP-4	Any Service Any Port (ASAP) Carrier card with 4 PIM slots
• CE-100T-8	8-Port 100T card on ONS 15454 and ONS 15310-CL
• DMX-32	Optical De/Multiplexed (DMX) 32 channels
• DS1	DS1 card
• DS1N	DS1N card
• DS3	DS3 card
• DS3E	DS3E card
• DS3-EC1-48	DS3-EC1-48 card
• DS3N	DS3N card
• DS3NE	DS3NE card
• DS3XM	DS3XM card
• DS3XM-12	DS3XM-12 card
• E1000T	E1000T card
• E100T	E100T card
• EC1	EC1 card
• FC_MR-4	FC_MR-4 card
• FILLER-CARD	Blank Filler card (ONS 15600)
• G1000-2	2-port G1000 card (ONS 15327)
• G1000-4	4-port G1000 card (ONS 15454)
• MD-4	Optical Multiplexer/Demultiplexer with 4 Channels
• MIC	ONS 15327 MIC card
• MIC-EXT	ONS 15327 MIC-EXT card
• ML100T-8	15454-LI+ Mapper card
• ML1000-1	ML-Series 1-Port GigE card
• ML1000-2	ML-Series 2-Port GigE card

Table 3-222 RTRV-EQPT Output Parameters (continued)

Parameter and Values	Description
• ML100T-12	ML-Series 12-Port FSTE card
• MUX-32	Optical Multiplexed (MUX) 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder Card
• OC3	OC3 card
• OC3-8	8-Port OC3 card
• OC12	OC12 card
• OC12-4	4-port OC12 card
• OC48	OC48 card
• OC48_16	16-port OC48 card
• OC192	OC192 card
• OC192-4	4-port OC192 card
• OPT-BST	Optical Booster Amplifier
• OPT-PRE	Optical Pre-Amplifier
• OSC-CSM	Optical Service Channel (OSC) with Combiner/Separator Module (SCM)
• OSCM	Optical Service Channel (OSC) Module
• PIM-4	4-port Pluggable Interface Module (ONS 15600)
• PPM-1	Pluggable Port Module with 1 SFP port (ONS 15600 ASAP, ONS 15454 MXP/MXPP and TXP/TXPP)
• SSXC	Cross Connect card (ONS 15600)
• TCC	TCC card
• TXP-MR-10G	10G Multirate Transponder Card
• TXP-MR-2.5G	Multi-Rate 2.5G Unprotected
• TXPP-MR-2.5G	Multi-Rate 2.5G Protected
• XC10G	XC10G card
• XCVT	XCVT card
• XTC	ONS 15327 XTC card
EQUIP	Indicates if the equipment is physically present Parameter type is EQUIP—the presence of a plug-in unit
• EQUIP	The unit is equipped - present
• UNEQUIP	The unit is unequipped - absent
ROLE	Indicates if the card is a working unit or the protecting unit. Optional Parameter type is SIDE—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

Table 3-222 RTRV-EQPT Output Parameters (continued)

Parameter and Values	Description
STATUS	Indicates a status. SONET card status is shown on its card level. Optional
	Parameter type is STATUS—
• 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	Protecting identifier AID from the "PRSLOT" section on page 4-49. Optional
PRTYPE	Protection type. Optional
	Parameter type is PROTECTION_GROUP—protection group type
• 1-1	1 to 1 protection
• 1-N	1 to N protection
RVRTV	Revertive mode. The value Y indicates that the protection switching system reverts service to the original line after restoration. The value N indicates that the 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. Optional
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time. Optional
	Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
IOSCFG	Displays the information about the startup IOS config file for the ML-Series cards. An example of this field is "TL1,11.22.33.44//DIR/IOS.CONF,2002/1/1 9:1:1 EST". The following information is included in this field: 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 cards. String. Optional.
CARDMODE	Card mode. Optional
	Parameter type is CARDMODE—card mode. Card mode is applicable to cards that have multiple capabilities, for example, the ML card can operate in two distinct modes: Linear Mapper Mode and L2/L3 Mode
• DS3XM12-STS12	The DS3XM-12 card in the STS12 back plane rate mode
• DS3XM12-STS48	The DS3XM-12 card in the STS48 back plane rate mode

Table 3-222 RTRV-EQPT Output Parameters (continued)

Parameter and Values	Description
• DWDM-LINE	Line terminating mode
• DWDM-SEC	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
• MXPMR25G-FCGE	Fibre channel or GIGE mode for the MXP-MR-2.5G card
PEERID	The regeneration group peer slot identifier from the "EQPT" section on page 4-43. Optional
REGENNAME	Name of a regeneration group. String. Optional
PWL	Provisioned wavelength. Optional
	Parameter type is OPTICAL_WLEN—optical wavelength
• 1530.33	Wavelength 1
• 1531.12	Wavelength 2
• 1531.90	Wavelength 3
• 1532.68	Wavelength 4
• 1534.25	Wavelength 5
• 1535.04	Wavelength 6
• 1535.82	Wavelength 7
• 1536.61	Wavelength 8
• 1538.19	Wavelength 9
• 1538.98	Wavelength 10
• 1539.77	Wavelength 11
• 1540.56	Wavelength 12
• 1542.14	Wavelength 13
• 1542.94	Wavelength 14
• 1543.73	Wavelength 15
• 1544.53	Wavelength 16
• 1546.12	Wavelength 17
• 1546.92	Wavelength 18
• 1547.72	Wavelength 19
• 1548.51	Wavelength 20
• 1550.12	Wavelength 21
• 1550.92	Wavelength 22

Table 3-222 RTRV-EQPT Output Parameters (continued)

Parameter and Values	Description
• 1551.72	Wavelength 23
• 1552.52	Wavelength 24
• 1554.13	Wavelength 25
• 1554.94	Wavelength 26
• 1555.75	Wavelength 27
• 1556.55	Wavelength 28
• 1558.17	Wavelength 29
• 1558.98	Wavelength 30
• 1559.79	Wavelength 31
• 1560.61	Wavelength 32
• USE-TWL1	Use Tunable Wavelength 1
PST_PSTQ	Admin state in the PST_PSTQ format
	Parameter type is PST_PSTQ—service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ)
• IS-NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SSTQ	Secondary state of the entity. Listable
	Parameter type is SST—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

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.186 RTRV-ESCON

Retrieve Enterprise System Connection

Usage Guidelines

Cisco ONS 15454

This command retrieves the fiber channel-specific settings for ports that have been configured to carry ESCON traffic using the ENT-ESCON command.

Category

DWDM

Security

Retrieve

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-FFP-OCH
DLT-LNKTERM	ED-WDMANS	RTRV-LNK-<MOD2O>
DLT-OSC	ED-WLEN	RTRV-LNKTERM
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-NE-WDMANS
ED-DWDM	ENT-LNKTERM	RTRV-OCH
ED-FFP-OCH	ENT-OSC	RTRV-OMS
ED-LNK-<MOD2O>	ENT-WLEN	RTRV-OSC
ED-LNKTERM	OPR-LASER-OTS	RTRV-OTS
ED-OCH	OPR-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-OMS	OPR-WDMANS	RTRV-TRC-OCH
ED-OSC	RLS-LASER-OTS	RTRV-WDMANS
ED-OTS	RLS-PROTNSW-OCH	RTRV-WLEN

Input Format

RTRV-ESCON:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-ESCON::CISCO:FAC-1-1:123;

Input Parameters

Table 3-223 RTRV-ESCON Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>::[ENCAP=<ENCAP>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-1-1::ENCAP=GFP-T"
;
```

Output Parameters

Table 3-224 RTRV-ESCON Output Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
ENCAP	Encapsulation frame type. Optional
	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

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.187 RTRV-EXT-CONT

Retrieve External Control

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the control state of an external control. The command can be used to audit the result of an OPR-EXT-CONT or a RLS-EXT-CONT command.

Notes:

1. If the CONTTYPE is null, the existing conttype on this AID will be returned.
2. The duration is not supported, it defaults to CONTS.

Category

Environment Alarms and Controls

Security

Retrieve

Related Commands

OPR-ACO-ALL	RLS-EXT-CONT	RTRV-COND-ENV
OPR-EXT-CONT	RTRV-ALM-ENV	SET-ATTR-CONT
REPT ALM ENV	RTRV-ATTR-CONT	SET-ATTR-ENV
REPT EVT ENV	RTRV-ATTR-ENV	SET-ATTR-SECUDFLT

Input Format

RTRV-EXT-CONT:[<TID>]:<AID>:<CTAG>[::<CONTTYPE>];

Input Example

RTRV-EXT-CONT:CISCO:ENV-OUT-2:123::AIRCOND;

Input Parameters

Table 3-225 RTRV-EXT-CONT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ENV" section on page 4-42. The only valid AID for RTRV-EXT-CONT is ENV-OUT-{1-2}. Must not be null
CONTTYPE	Environmental control type. A null value is equivalent to ALL Parameter type is CONTTYPE—Environmental control types
• 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

Table 3-226 RTRV-EXT-CONT Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ENV" section on page 4-42. Identifies the external control for which the control state is being retrieved
CONTTYPE	Environmental control type. Optional
	Parameter type is CONTTYPE—Environmental control types
• 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
	Parameter type is Duration—Duration
• CONTS	Continuous duration
CONTSTATE	Control state of the external control. Optional
	Parameter type is CONT_MODE—current state of the environmental control
• NA	Not applicable (i.e., duration is MNTRY)
• OPER	The environmental control state is CLOSE
• RLS	The environmental control state is OPEN

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.188 RTRV-FAC

Retrieve Facility

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This 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.

Category

Ports

Security Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EQPT
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format RTRV-FAC:[<TID>]:<SRC>:<CTAG>[::::];

Input Example RTRV-FAC:CISCO:FAC-2-9:2223;

Input Parameters

Table 3-227 RTRV-FAC Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "FACILITY" section on page 4-45. Must not be null

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

Table 3-228 RTRV-FAC Output Parameters

Parameter and Values	Description
SRC	Source access identifier from the "FACILITY" section on page 4-45
PAYLOAD	Payload type of the facility. Optional
	Parameter type is PAYLOAD—identifies payload type
• 10GFC	10 Gigabit Ethernet Fiber Channel mode
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit Fiber Channel mode
• 1GFICON	1 Gigabit FICON mode
• 2GFC	2 Gigabit Fiber Channel mode
• 2GFICON	2 Gigabit FICON mode
• DS3	DS3 mode
• DV6000	Video mode
• EC1	EC1 mode
• ESCON	ESCON mode
• ETRCLO	ETR/CLO payload mode
• GIGE	Gigabit Ethernet Payload
• HDTV	HDTV mode
• ISC1	ISC1 Mode
• ISC3	ISC3 Mode
• OC12	SONET OC12 mode
• OC3	SONET OC3 mode

Table 3-228 RTRV-FAC Output Parameters (continued)

Parameter and Values	Description
• OC48	SONET OC48 mode
• PASS-THROUGH	Pass through mode
• SDI-D1-VIDEO	SDI-D1-Video mode
• SONET	SONET Payload Mode
PST_PSTQ	Admin state in the PST-PSTQ format Parameter type is PST_PSTQ—service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ)
• IS-NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SSTQ	Secondary state. String. Optional

Errors Errors are listed in Table 4-11 on page 4-5

3.2.189 RTRV-FFP-<MOD2DWDMPAYLOAD>

Retrieve Facility Protection Group (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, HDTV, ISC1, ISC3, PASSTHRU)

Usage Guidelines Cisco ONS 15454

This command retrieves Y cable protection on client facilities.

Category DWDM

Security Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EQPT
RTRV-FAC
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RTRV-FFP-<MOD2DWDMPAYLOAD>:[<TID>]:<SRC>:<CTAG>[::::];

Input Example

RTRV-FFP-HDTV:CISCO:FAC-1-1-1:100;

Input Parameters

Table 3-229 RTRV-FFP-<MOD2DWDMPAYLOAD> Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "FACILITY" section on page 4-45. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AIDUNIONID>,<AIDUNIONID1>::[PROTTYPE=<PROTTYPE>,][PROTID=<PROTID>,]
   [RVRTV=<RVRTV>,][RVTM=<RVTM>,][PSDIRN=<PSDIRN>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-1-1-1,FAC-2-1-1::PROTTYPE=Y-CABLE,PROTID=\"DC-METRO\",
   RVRTV=N,RVTM=1.0,PSDIRN=BI"
;
```

Output Parameters

Table 3-230 RTRV-FFP-<MOD2DWDMPAYLOAD> Output Parameters

Parameter and Values	Description
AIDUNIONID	Access identifier from the "FACILITY" section on page 4-45
AIDUNIONID1	Access identifier from the "FACILITY" section on page 4-45
PROTTYPE	The type of facility protection. Optional
	Parameter type is PROTTYPE—protection type for DWDM client facilities
• Y-CABLE	Y cable protection for the client ports on TXP_MR_10G,/MXP_2.5G_10G and TXP_MR_2.5G/TXPP_MR_2.5G cards
PROTID	Y cable protection group identifier. String. Optional
RVRTV	Revertive mode. The value Y indicates that the protection switching system reverts service to the original line after restoration. The value N indicates that the 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. Optional
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time. Defaults to 5.0 minutes. Optional
	Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes

Table 3-230 RTRV-FFP-<MOD2DWDMPAYLOAD> Output Parameters (continued)

Parameter and Values	Description
PSDIRN	Protection switch operation. Identifies the switching mode. Defaults to UNI. Optional Parameter type is UNI_BI—unidirectional and bidirectional switch operations
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching

Errors Errors are listed in Table 4-11 on page 4-5

3.2.190 RTRV-FFP-<OCN_TYPE>

Retrieve Facility Protection Group (OC3, OC12, OC48, OC192)

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the optical facility protection information.

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

Note Optimized 1+1 and related attributes only apply to the ONS 15454.

Category Protection

Security Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EQPT
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RTRV-FFP-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-FFP-OC3:PETALUMA:FAC-1-1:1;

Input Parameters

Table 3-231 RTRV-FFP-<OCN_TYPE> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<WORK>,<PROTECT>::[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::PROTID="PROT_NAME",RVRTV=Y,RVTM=1.0,PSDIRN=BI,
   VRGRDTM=0.5,DTGRDTM=1.0,RCGRDTM=1.0,OPOTYPE=OPTIMIZED"
;
```

Output Parameters

Table 3-232 RTRV-FFP-<OCN_TYPE> Output Parameters

Parameter and Values	Description
WORK	Access identifier from the "FACILITY" section on page 4-45. Identifies the working port
PROTECT	Access identifier from the "FACILITY" section on page 4-45. Identifies the protection port
PROTID	Free form text string name given to the 1+1 protection group. String. Optional
RVRTV	Revertive mode. The value Y indicates that the protection switching system reverts service to the original line after restoration. The value N indicates that the 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. Optional
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time. Defaults to 5.0 minutes. Optional
	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. Optional

Table 3-232 RTRV-FFP-<OCN_TYPE> Output Parameters (continued)

Parameter and Values	Description
	Parameter type is TRANS_MODE—G1000 transponder mode
• BI	Bidirectional
• NONE	Not in transponder mode
• UNI	Unidirectional
VRGRDTM	Verification guard timer. Only applies to optimized 1+1. Optional
	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 applies to optimized 1+1. Optional
	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 seconds
• 3.0	3 seconds
• 4.0	4 seconds
• 5.0	5 seconds
RCGRDTM	Recovery guard timer. Only applies to optimized 1+1. Optional
	Parameter type is RECOVERY_GUARD_TIMER—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

Table 3-232 RTRV-FFP-<OCN_TYPE> Output Parameters (continued)

Parameter and Values	Description
• 10.0	10 seconds
OPOTYPE	1+1 protection type. Optional Parameter type is ONE_PLUS_ONE— one plus one protection type
• OPTIMIZED	Optimized 1+1
• STANDARD	Standard 1+1

Errors Errors are listed in Table 4-11 on page 4-5

3.2.191 RTRV-FFP-OCH

Retrieve Facility Protection Group Optical Channel

Usage Guidelines Cisco ONS 15454

This command retrieves the protection group information for the TXP-MR-2.5G and the TXPP-MR-2.5G card trunk port.

Category DWDM

Security Retrieve

Related Commands

DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
DLT-LNK-<MOD2O>
DLT-LNKTERM
DLT-OSC
DLT-WLEN
ED-DWDM
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FFP-OCH
ED-LNK-<MOD2O>
ED-LNKTERM
ED-OCH
ED-OMS
ED-OSC
ED-OTS
ED-SLV-WDMANS
ED-TRC-OCH
ED-WDMANS
ED-WLEN
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
ENT-LNK-<MOD2O>
ENT-LNKTERM
ENT-OSC
ENT-WLEN
EX-SW-<OCN_BLSR>
OPR-LASER-OTS
OPR-PROTNSW-<OCN_TYPE>
OPR-PROTNSW-OCH
OPR-SLV-WDMANS
OPR-WDMANS
RLS-LASER-OTS
RLS-PROTNSW-<OCN_TYPE>
RLS-PROTNSW-OCH
RTRV-DWDM
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-LNK-<MOD2O>
RTRV-LNKTERM
RTRV-NE-WDMANS
RTRV-OCH
RTRV-OMS
RTRV-OSC
RTRV-OTS
RTRV-PROTNSW-<OCN_TYPE>
RTRV-PROTNSW-OCH
RTRV-SLV-WDMANS
RTRV-TRC-OCH
RTRV-WDMANS
RTRV-WLEN

Input Format

RTRV-FFP-OCH:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-FFP-OCH:VA454-22:CHAN-2-2:100;

Input Parameters

Table 3-233 RTRV-FFP-OCH Input Parameters

Parameter and Values	Description
AID	Access identifier from the "CHANNEL" section on page 4-30. Must not be null

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

Table 3-234 RTRV-FFP-OCH Output Parameters

Parameter and Values	Description
WORK	The working port access identifier from the "CHANNEL" section on page 4-30
PROTECT	The protected port access identifier from the "CHANNEL" section on page 4-30
PROTTYPE	Protection group type. String. Optional
PROTID	Protection group name. String. Optional
RVRTV	Revertive mode. The value Y indicates that the protection switching system reverts service to the original line after restoration. The value N indicates that the 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. Optional
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time. Optional
	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. Direction of reversion. Optional
	Parameter type is UNI_BI—unidirectional and bidirectional switch operations
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.192 RTRV-FSTE

Retrieve Fast Ethernet

Usage Guidelines

Cisco ONS 15454, 15310-CL

This command retrieves the front end port information of fast (10/100 Mbps) ethernet card. MTU is not displayed for the ML-100T-8 and CE-100T-8 cards. RTRV-POS will display the MTU which is common for both front and backend ports.

Category

Ports

Security

Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RTRV-FSTE:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-FSTE:TID:FAC-1-1:CTAG;

Input Parameters

Table 3-235 RTRV-FSTE Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>::[ADMINSTATE=<ADMINSTATE>,][LINKSTATE=<LINKSTATE>,][MTU=<MTU>,]
   [FLOWCTRL=<FLOWCTRL>,][DUPLEX=<DUPLEX>,][SPEED=<SPEED>,][FLOW=<FLOW>,]
   [EXPDUPLEX=<EXPDUPLEX>,][EXPSPEED=<EXPSPEED>,][VLANCOS=<VLANCOS>,]
   [IPTOS=<IPTOS>,][NAME=<NAME>,][SOAK=<SOAK>,]
   [SOAKLEFT=<SOAKLEFT>]:<PST_PSTQ>,[<SSTQ>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-1-1::ADMINSTATE=DOWN,LINKSTATE=DOWN,MTU=1500,
   FLOWCTRL=SYMMETRIC,DUPLEX=AUTO,SPEED=AUTO,FLOW=FLOW,
   EXPDUPLEX=EXPDUPLEX,EXPSPEED=EXPSPEED,VLANCOS=VLANCOS,
   IPTOS=IPTOS,NAME=\"FSTE PORT\",SOAK=32,SOAKLEFT=\"12-25\":OOS-AU,AINS"
;
```

Output Parameters

Table 3-236 RTRV-FSTE Output Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
ADMINSTATE	Administration type. Optional
	Parameter type is UP_DOWN—Up or down
• DOWN	Down
• UP	Up
LINKSTATE	Link protocol. Optional
	Parameter type is UP_DOWN—Up or down
• DOWN	Down
• UP	Up
MTU	Maximum transmission unit. Integer. Optional
FLOWCTRL	Flow control. Optional
	Parameter type is FLOW—the type of flow control that has been negotiated for an Ethernet port
• ASYMMETRIC	Asymmetric flow control
• ASYMMETRIC_LOCAL	Asymmetric local flow control

Table 3-236 RTRV-FSTE Output Parameters (continued)

Parameter and Values	Description
• NONE	No flow control
• SYMMETRIC	Symmetric flow control
DUPLEX	Duplex mode. Optional
	Parameter type is ETHER_DUPLEX—duplex mode
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode
SPEED	Speed. Optional
	Parameter type is ETHER_SPEED—Ethernet speed
• 100_MBPS	100 Mbps
• 10_GBPS	10 Gbps
• 10_MBPS	10 Mbps
• 1_GBPS	1 Gbps
• AUTO	Auto
FLOW	Flow. Optional
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
EXPDUPLEX	Ethernet duplex mode. Optional
	Parameter type is ETHER_DUPLEX—duplex mode
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode
EXPSPEED	Ethernet speed. Optional
	Parameter type is ETHER_SPEED—Ethernet speed
• 100_MBPS	100 Mbps
• 10_GBPS	10 Gbps
• 10_MBPS	10 Mbps
• 1_GBPS	1 Gbps
• AUTO	Auto
VLANCOS	Priority queing threshold based on VLAN class of service of incoming Ethernet packets. Integer. Optional
IPTOS	Priority queing threshold based on IP type of service of incoming Ethernet packets. Integer. Optional
NAME	Name. String. Optional
SOAK	OOS-AINS to IS transition soak time as measured in 15-minute intervals. Integer. Optional

Table 3-236 RTRV-FSTE Output Parameters (continued)

Parameter and Values	Description
SOAKLEFT	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. Optional Rules for <SOAKLEFT> are as follows: • When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed. • When the port is in OOS_AINS state, 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.
PST_PSTQ	Admin state in the PST-PSTQ format Parameter type is PST_PSTQ—service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ)
• IS-NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SSTQ	Secondary state. Optional Parameter type is SST—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

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.193 RTRV-G1000

Retrieve G1000 Facility

Usage Guidelines

Cisco ONS 15454

This command retrieves the G1000 facilities configuration.

Category

Ports

Security

Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RTRV-G1000:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-G1000:TID:FAC-1-1:CTAG;

Input Parameters

Table 3-237 RTRV-G1000 Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>::[MFS=<MFS>,][FLOW=<FLOW>,][LAN=<LAN>,][OPTICS=<OPTICS>,]
   [TRANS=<TRANS>,][TPORT=<TPORT>,][LOWMRK=<LOWMRK>,]
   [HIWMRK=<HIWMRK>,][AUTONEG=<AUTONEG>,][ENCAP=<ENCAP>,]
   [NAME=<NAME>,][SOAK=<SOAK>,][SOAKLEFT=<SOAKLEFT>]:<PST_PSTQ>,[<SSTQ>]"
;
```

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\":OOS-AU,AINS"
;
```

Output Parameters

Table 3-238 RTRV-G1000 Output Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
MFS	Maximum frame size
	Parameter type is MFS_TYPE—maximum frame size used by an Ethernet card
• 1548	Normal frame size
• JUMBO	Jumbo frame size
FLOW	Flow control
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
LAN	Local-area network. Optional
	Parameter type is FLOW—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
• SYMMETRIC	Symmetric flow control

Table 3-238 RTRV-G1000 Output Parameters (continued)

Parameter and Values	Description
OPTICS	GBIC type. Optional
	Parameter type is OPTICS—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

Table 3-238 RTRV-G1000 Output Parameters (continued)

Parameter and Values	Description
• 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	Transponder mode. Optional
	Parameter type is TRANS_MODE—G1000 transponder mode
• BI	Bidirectional
• NONE	Not in transponder mode
• UNI	Unidirectional
TPORT	Transponding port access identifier from the "FACILITY" section on page 4-45. Optional
LOWMRK	Low watermark value. Integer. Optional
HIWMRK	High watermark value. Integer. Optional
AUTONEG	Automatic negotiation. Optional
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
ENCAP	Frame encapsulation type. Optional
	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	Name. String. Optional
SOAK	OOS-AINS to IS transition soak time as measured in 15-minute intervals. Integer. Optional

Table 3-238 RTRV-G1000 Output Parameters (continued)

Parameter and Values	Description
SOAKLEFT	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. Optional Rules for <SOAKLEFT> are as follows: • When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed. • When the port is in OOS_AINS state, 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.
PSTPSTQ	Admin state in the PST-PSTQ format Parameter type is PST_PSTQ—service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ)
• IS-NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SSTQ	Secondary state Parameter type is SST—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

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.194 RTRV-GFP

Retrieve Generic Framing Protocol

Usage Guidelines

Cisco ONS 15454, 15310-CL, 15600

This command applies to the ONS 15454 CE-100T-8 card, the ONS 15454 FC_MR-4 card, and the 15310-CL CE-100T-8 card.

Category

Ports

Security

Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RTRV-GFP:[<TID>]:<SRC>:<CTAG>;

Input Example

RTRV-GFP:CISCO:FAC-1-1:123;

Input Parameters

Table 3-239 RTRV-GFP Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "FACILITY" section on page 4-45. Must not be null **Note** VFAC AID is used for the CE-100T-8 cards on 15310-CL and 15454. ML-100T-8 GFP management is done via the IOS CLI and not via the TL1 interface. FAC AID is used for 15454 FC_MR-4
FCS	Payload frame check sequence 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
SUPERBLKS	Number of superblocks in a GFP frame. Integer

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>::[FCS=<FCS>,][SUPERBLKS=<SUPERBLKS>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-1-1::FCS=FCS-32,SUPERBLKS=10"
;
```

Output Parameters

Table 3-240 RTRV-GFP Output Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
FCS	Payload frame check sequence. Optional 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
SUPERBLKS	Number of superblocks in a GFP frame. Integer. Optional

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.195 RTRV-GIGE

Retrieve Gigabit Ethernet

Usage Guidelines

Cisco ONS 15454, 15600

This command retrieves the front end port information for a 1 GIG Ethernet card.

Category

Ports

Security

Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RTRV-GIGE:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-GIGE:TID:FAC-1-1:CTAG;

Input Parameters

Table 3-241 RTRV-GIGE Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>::[ADMINSTATE=<ADMINSTATE>,][LINKSTATE=<LINKSTATE>,][MTU=<MTU>,]
   [ENCAP=<ENCAP>,][FLOWCTRL=<FLOWCTRL>,][OPTICS=<OPTICS>,]
   [DUPLEX=<DUPLEX>,][SPEED=<SPEED>,][NAME=<NAME>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-1-1::ADMINSTATE=DOWN,LINKSTATE=DOWN,MTU=1500,ENCAP=GFP-F,
   FLOWCTRL=SYMMETRIC,OPTICS=1000_BASE_SX,DUPLEX=AUTO,SPEED=AUTO,
   NAME=`"GIGE PORT\""
;
```

Output Parameters

Table 3-242 RTRV-GIGE Output Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
ADMINSTATE	Administration type. Optional
	Parameter type is UP_DOWN—Up or down
• DOWN	Down
• UP	Up
LINKSTATE	Link protocol. Optional
	Parameter type is UP_DOWN—Up or down
• DOWN	Down
• UP	Up
MTU	Maximum transmission unit. Integer. Optional
ENCAP	Encapsulation frame type. Optional
	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

Table 3-242 RTRV-GIGE Output Parameters (continued)

Parameter and Values	Description
FLOWCTRL	Flow control. Optional
	Parameter type is FLOW—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
• SYMMETRIC	Symmetric flow control
OPTICS	Optics type. Optional
	Parameter type is OPTICS—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

Table 3-242 RTRV-GIGE Output Parameters (continued)

Parameter and Values	Description
• 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	Duplex mode. Optional
	Parameter type is ETHER_DUPLEX—duplex mode
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode
SPEED	Speed. Optional
	Parameter type is ALS_MODE—automatic laser shutdown
• AUTO	Automatic
• DISABLED	Disabled
• MAN	Manual
• MAN-RESTART	Manual restart for test
NAME	Name. String. Optional

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.196 RTRV-HDLC

Retrieve High-Level Data Link Control

Usage Guidelines

Cisco ONS 15600

This command retrieves HDLC-related attributes.

Category

Ports

Security

Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RTRV-HDLC:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-HDLC:TID:VFAC-SLOT-PORT:CTAG;

Input Parameters

Table 3-243 RTRV-HDLC Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. The ONS 15600 ASAP card uses the VFAC AID

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>::[FCS=<FCS>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "VFAC-SLOT-PORT::FCS=FCS-16"
;
```

Output Parameters

Table 3-244 RTRV-HDLC Output Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. The ONS 15600 ASAP card uses the VFAC AID
FCS	Payload frame check sequence. Optional
	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

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.197 RTRV-HDR

Retrieve Header

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the header of a TL1 response message. Used by TL1 clients to determine if the link to the NE is still active and if the NE is responding to commands.

Category

System

Security Retrieve

Related Commands

ACT-USER	ED-TRAPTABLE	RTRV-NE-APC
ALW-MSG-ALL	ENT-TRAPTABLE	RTRV-NE-GEN
ALW-MSG-DBCHG	INH-MSG-ALL	RTRV-NE-IPMAP
ALW-MSG-SECU	INH-MSG-DBCHG	RTRV-NE-PATH
COPY-RFILE	INH-MSG-SECU	RTRV-NE-SYNCN
DLT-TRAPTABLE	INIT-SYS	RTRV-NE-WDMANS
ED-DAT	REPT EVT FXFR	RTRV-TOD
ED-NE-GEN	RTRV-INV	RTRV-TRAPTABLE
ED-NE-PATH	RTRV-MAP-NETWORK	SET-TOD
ED-NE-SYNCN		

Input Format RTRV-HDR:[<TID>]::<CTAG>;

Input Example RTRV-HDR:SONOMA::232;

Input Parameters

Table 3-245 RTRV-HDR Input Parameters

Parameter and Values	Description
—	

Errors Errors are listed in Table 4-11 on page 4-5

3.2.198 RTRV-INV

Retrieve Inventory

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves a listing of the equipment inventory. For each unit in the system, it identifies the unit's firmware numbers and CLEI codes, and the system's product ID, and version ID.

Category System

Security

Retrieve

Related Commands

ACT-USER	ED-TRAPTABLE	RTRV-NE-APC
ALW-MSG-ALL	ENT-TRAPTABLE	RTRV-NE-GEN
ALW-MSG-DBCHG	INH-MSG-ALL	RTRV-NE-IPMAP
ALW-MSG-SECU	INH-MSG-DBCHG	RTRV-NE-PATH
COPY-RFILE	INH-MSG-SECU	RTRV-NE-SYNCN
DLT-TRAPTABLE	INIT-SYS	RTRV-NE-WDMANS
ED-DAT	REPT EVT FXFR	RTRV-TOD
ED-NE-GEN	RTRV-HDR	RTRV-TRAPTABLE
ED-NE-PATH	RTRV-MAP-NETWORK	SET-TOD
ED-NE-SYNCN		

Input Format

RTRV-INV:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-INV:OCCIDENTAL:SLOT-15:301;

Input Parameters

Table 3-246 RTRV-INV Input Parameters

Parameter and Values	Description
AID	Access identifier from the "EQPT" section on page 4-43 or the "ALL" section on page 4-17. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,<AIDTYPE>::[PLUGTYPE=<PLUGTYPE>,][PN=<PN>,][HWREV=<HWREV>,]
   [FWREV=<FWREV>,][SN=<SN>,][CLEI=<CLEI>,][TWL1=<TWL>,][TWL2=<TWL1>,]
   [TWL3=<TWL2>,][TWL4=<TWL3>,][PLUGINVENDORID=<PLUGINVENDORID>,]
   [PLUGINPN=<PLUGINPN>,][PLUGINHWREV=<PLUGINHWREV>,]
   [PLUGINFWREV=<PLUGINFWREV>,][PLUGINSN=<PLUGINSN>,]
   [ILOSSREF=<ILOSSREF>,][PID=<PID>,][VID=<VID>,][FPGA=<FPGA>]"
;
```

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”
;

Output Parameters

Table 3-247 RTRV-INV Output Parameters

Parameter and Values	Description
AID	Access identifier from the “EQPT” section on page 4-43
AIDTYPE	Specifies the type of (AID) facility, link or other addressable entity targeted by the message. String
PLUGTYPE	The type of plug-in. String. Optional
PN	Hardware part number. String. Optional
HWREV	Hardware revision. String. Optional
FWREV	Firmware revision. String. Optional
SN	Serial number. String. Optional
CLEI	Common language equipment identifier code for the equipment. String. Optional
TWL	Tunable wavelength 1. Optional. (See OPTICAL_WLEN parameter below)
TWL1	Tunable wavelength 2. Optional. (See OPTICAL_WLEN parameter below)
TWL2	Tunable wavelength 3. Optional. (See OPTICAL_WLEN parameter below)
TWL3	Tunable wavelength 4. Optional. (See OPTICAL_WLEN parameter below)
	Parameter type for PWL, TWL, TWL1, TWL2, and TWL3 is OPTICAL_WLEN—optical wavelength
• 1530.33	Wavelength 1
• 1531.12	Wavelength 2
• 1531.90	Wavelength 3
• 1532.68	Wavelength 4
• 1534.25	Wavelength 5
• 1535.04	Wavelength 6
• 1535.82	Wavelength 7
• 1536.61	Wavelength 8
• 1538.19	Wavelength 9
• 1538.98	Wavelength 10
• 1539.77	Wavelength 11
• 1540.56	Wavelength 12
• 1542.14	Wavelength 13

Table 3-247 RTRV-INV Output Parameters (continued)

Parameter and Values	Description
• 1542.94	Wavelength 14
• 1543.73	Wavelength 15
• 1544.53	Wavelength 16
• 1546.12	Wavelength 17
• 1546.92	Wavelength 18
• 1547.72	Wavelength 19
• 1548.51	Wavelength 20
• 1550.12	Wavelength 21
• 1550.92	Wavelength 22
• 1551.72	Wavelength 23
• 1552.52	Wavelength 24
• 1554.13	Wavelength 25
• 1554.94	Wavelength 26
• 1555.75	Wavelength 27
• 1556.55	Wavelength 28
• 1558.17	Wavelength 29
• 1558.98	Wavelength 30
• 1559.79	Wavelength 31
• 1560.61	Wavelength 32
• USE-TWL1	Use Tunable Wavelength 1
PLUGINVENDORID	Plugin vendor ID. Integer. Optional
PLUGINPN	Third-party plug-in module HW part number. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. String. Optional
PLUGINHWREV	Third-party plug-in module hardware revision. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. String. Optional
PLUGINFWREV	Third-party plug-in module firmware. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. String. Optional
PLUGINSN	Third-party plug-in module serial number. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. String. Optional
ILOSSREF	The insertion loss reference calculated by the unit as worst insertion loss of all the unit. Optional Parameter type is REVERTIVE_TIME—revertive time

Table 3-247 RTRV-INV Output Parameters (continued)

Parameter and Values	Description
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
PID	Product ID of the module. String. Optional
VID	Vendor ID. String. Optional
FPGA	FPGA version. String. Optional

Errors Errors are listed in Table 4-11 on page 4-5

3.2.199 RTRV-LNK

Retrieve Link

Usage Guidelines Cisco ONS 15454

This command retrieves all the (optical) links created in the NE. The ends information is returned along with the type of (optical) link.

Category DWDM

Security Retrieve

Related Commands

DLT-LNK-<MOD2O> ENT-LNK-<MOD2O> OPR-LNK
ED-LNK-<MOD2O>

Input Format RTRV-LNK:[<TID>]::<CTAG>;

Input Example RTRV-LNK:PENNGROVE::114;

Input Parameters

Table 3-248 RTRV-LNK Input Parameters

Parameter and Values	Description
—	

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<FROM>,<TO>::[OLNKT=<OLNKT>,][CTYPE=<CTYPE>,][RDIRN=<RDIRN>,]
   [BAND=<BAND>,][WLEN=<WLEN>]:<PST_PSTQ>,[<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

Table 3-249 RTRV-LNK Output Parameters

Parameter and Values	Description
FROM	Access identifier from the "ALL" section on page 4-17. Identifies an entity at one end of the optical link
TO	Access identifier from the "ALL" section on page 4-17. Identifies an entity at the other end of the optical link
OLNKT	Optical link type. Optional
	Parameter type is OPTICAL_LINK_TYPE—type of optical link between two optical facilities
• ADD-DROP	Link between two points that result in an add/drop connection from a drop point to an add point
• HITLESS	Link between two OMS points that result in a hitless connection from a drop point to an add point of a consecutive band/channel filter
• OTS	Link between two OTS points
CTYPE	The type of cross-connection. Indicates if the optical link is provisioned by the user or automatically created by the NE. Optional
	Parameter type is CREATION_TYPE—optical link creation type
• AUTO	Automatically created by the NE
• PROV	Provisioned by the user
RDIRN	Ring directionality of the optical line. Optional
	Parameter type is RDIRN_MODE—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	The optical band (group of four contiguous wavelengths) for this optical link. BAND is optional and present only when there is a link between two OMS entities
	Parameter type is OPTICAL_BAND—optical band

Table 3-249 RTRV-LNK Output Parameters (continued)

Parameter and Values	Description
• 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
WLEN	Optical wavelength for this optical link. WLEN is present only when there is a link between two OCH entities. Option Parameter type is OPTICAL_WLEN—optical wavelength
• 1530.33	Wavelength 1
• 1531.12	Wavelength 2
• 1531.90	Wavelength 3
• 1532.68	Wavelength 4
• 1534.25	Wavelength 5
• 1535.04	Wavelength 6
• 1535.82	Wavelength 7
• 1536.61	Wavelength 8
• 1538.19	Wavelength 9
• 1538.98	Wavelength 10
• 1539.77	Wavelength 11
• 1540.56	Wavelength 12
• 1542.14	Wavelength 13
• 1542.94	Wavelength 14
• 1543.73	Wavelength 15
• 1544.53	Wavelength 16
• 1546.12	Wavelength 17
• 1546.92	Wavelength 18
• 1547.72	Wavelength 19
• 1548.51	Wavelength 20
• 1550.12	Wavelength 21
• 1550.92	Wavelength 22
• 1551.72	Wavelength 23
• 1552.52	Wavelength 24

Table 3-249 RTRV-LNK Output Parameters (continued)

Parameter and Values	Description
• 1554.13	Wavelength 25
• 1554.94	Wavelength 26
• 1555.75	Wavelength 27
• 1556.55	Wavelength 28
• 1558.17	Wavelength 29
• 1558.98	Wavelength 30
• 1559.79	Wavelength 31
• 1560.61	Wavelength 32
• USE-TWL1	Use Tunable Wavelength 1
PST_PSTQ	Primary state of the entity Parameter type is PST_PSTQ—service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ)
• IS_NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SST	Secondary state of the entity. Optional Parameter type is SST—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

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.200 RTRV-LNK-<MOD2O>

Retrieve Optical Link (OCH, OMS, OTS)

Usage Guidelines

Cisco ONS 15454

This command retrieves any optical link associated with the entered AIDs or AID range. The ends information is returned along with the type of optical link.

Category

DWDM

Security

Retrieve

Related Commands

DLT-LNK-<MOD2O>	ED-SLV-WDMANS	RLS-PROTNSW-OCH
ED-LNK-<MOD2O>	ENT-LNK-<MOD2O>	RTRV-DWDM
DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-FFP-OCH
DLT-LNKTERM	ED-WDMANS	RTRV-LNKTERM
DLT-OSC	ED-WLEN	RTRV-NE-WDMANS
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-OCH
ED-DWDM	ENT-LNKTERM	RTRV-OMS
ED-FFP-OCH	ENT-OSC	RTRV-OSC
ED-LNK-<MOD2O>	ENT-WLEN	RTRV-OTS
ED-LNKTERM	OPR-LASER-OTS	RTRV-PROTNSW-OCH
ED-OCH	OPR-PROTNSW-OCH	RTRV-SLV-WDMANS
ED-OMS	OPR-SLV-WDMANS	RTRV-TRC-OCH
ED-OSC	OPR-WDMANS	RTRV-WDMANS
ED-OTS	RLS-LASER-OTS	RTRV-WLEN

Input Format

RTRV-LNK-<MOD2O>:[<TID>]:<AID>:<CTAG>:::[OLNKT=<OLNKT>,][CTYPE=<CTYPE>,][RDIRN=<RDIRN>];

Input Example

RTRV-LNK-OMS:PENNGROVE:ALL:114:::OLNKT=HITLESS,CTYPE=AUTO,RDIRN=W-E;

Input Parameters

Table 3-250 RTRV-LNK-<MOD2O> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "BAND" section on page 4-29. Identifies facilities to check for optical link membership. It can be an OPTICAL_AID AID or an ALL AID. The ALL AID defaults to NE, which reports all the existing optical links of the NE. Must not be null
OLNKT	Optical link type. A null value is equivalent to ALL
	Parameter type is OPTICAL_LINK_TYPE—type of optical link between two optical facilities
• ADD-DROP	Link between two points that result in an add/drop connection from a drop point to an add point
• HITLESS	Link between two OMS points that result in a hitless connection from a drop point to an add point of a consecutive band/channel filter
• OTS	Link between two OTS points
CTYPE	The type of cross-connection. Indicates if the optical link is provisioned by the user or automatically created by the NE. A null value is equivalent to ALL
	Parameter type is CREATION_TYPE—optical link creation type
• AUTO	Automatically created by the NE
• PROV	Provisioned by the user
RDIRN	Ring directionality of the optical line. A null value is equivalent to ALL
	Parameter type is RDIRN_MODE—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)

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<FROM>,<TO>::[OLNKT=<OPTICALLINKTYPE>,][CTYPE=<CREATIONTYPE>,]
   [RDIRN=<RDIRN>,][BAND=<BAND>,][WLEN=<WLEN>]:<PST_PSTQ>,[<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

Table 3-251 RTRV-LNK-<MOD2O> Output Parameters

Parameter and Values	Description
FROM	Access identifier from the "BAND" section on page 4-29. Identifies an entity at one end of the optical link
TO	Access identifier from the "BAND" section on page 4-29. Identifies an entity at the other end of the optical link
OPTICALLINKTYPE	Optical link type. Optional
	Parameter type is OPTICAL_LINK_TYPE—type of optical link between two optical facilities
• ADD-DROP	Link between two points that result in an add/drop connection from a drop point to an add point
• HITLESS	Link between two OMS points that result in a hitless connection from a drop point to an add point of a consecutive band/channel filter
• OTS	Link between two OTS points
CREATIONTYPE	Indicates if the optical link is provisioned by the user or automatically created by the NE. Optional
	Parameter type is CREATION_TYPE—optical link creation type
• AUTO	Automatically created by the NE
• PROV	Provisioned by the user
RDIRN	Ring directionality of the optical line. Optional
	Parameter type is RDIRN_MODE—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	The optical band (group of four contiguous wavelengths) for this optical link. BAND is optional and present only when there is a link between two OMS entities
	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
WLEN	Optical wavelength for this optical link. WLEN is present only when there is a link between two OCH entities. Optional
	Parameter type is OPTICAL_WLEN—optical wavelength

Table 3-251 RTRV-LNK-<MOD2O> Output Parameters (continued)

Parameter and Values	Description
• 1530.33	Wavelength 1
• 1531.12	Wavelength 2
• 1531.90	Wavelength 3
• 1532.68	Wavelength 4
• 1534.25	Wavelength 5
• 1535.04	Wavelength 6
• 1535.82	Wavelength 7
• 1536.61	Wavelength 8
• 1538.19	Wavelength 9
• 1538.98	Wavelength 10
• 1539.77	Wavelength 11
• 1540.56	Wavelength 12
• 1542.14	Wavelength 13
• 1542.94	Wavelength 14
• 1543.73	Wavelength 15
• 1544.53	Wavelength 16
• 1546.12	Wavelength 17
• 1546.92	Wavelength 18
• 1547.72	Wavelength 19
• 1548.51	Wavelength 20
• 1550.12	Wavelength 21
• 1550.92	Wavelength 22
• 1551.72	Wavelength 23
• 1552.52	Wavelength 24
• 1554.13	Wavelength 25
• 1554.94	Wavelength 26
• 1555.75	Wavelength 27
• 1556.55	Wavelength 28
• 1558.17	Wavelength 29
• 1558.98	Wavelength 30
• 1559.79	Wavelength 31
• 1560.61	Wavelength 32
• USE-TWL1	Use Tunable Wavelength 1
PST_PSTQ	Primary state of the entity Parameter type is PST_PSTQ—service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ)

Table 3-251 RTRV-LNK-<MOD2O> Output Parameters (continued)

Parameter and Values	Description
• IS_NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SST	Secondary state of the entity. Optional
	Parameter type is SST—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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.201 RTRV-LNKTERM

Retrieve Provisionable Patchcord Termination

Usage Guidelines Cisco ONS 15454, 15327, 15310-CL

This command retrieves information about one or more provisionable patchcord (PP) terminations.

Notes:

1. All the terminations can be retrieved using ALL or LNKTERM-ALL as the AID.
2. If the PP termination does not exist, an error message will be returned.

Category Provisionable Patchcords

Security Retrieve

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-DWDM
DLT-LNKTERM	ED-WDMANS	RTRV-FFP-OCH
DLT-OSC	ED-WLEN	RTRV-LNK-<MOD2O>
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-NE-WDMANS
ED-DWDM	ENT-LNKTERM	RTRV-OCH
ED-FFP-OCH	ENT-OSC	RTRV-OMS
ED-LNK-<MOD2O>	ENT-WLEN	RTRV-OSC
ED-LNKTERM	OPR-LASER-OTS	RTRV-OTS
ED-OCH	OPR-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-OMS	OPR-SLV-WDMANS	RTRV-SLV-WDMANS
ED-OSC	OPR-WDMANS	RTRV-TRC-OCH
ED-OTS	RLS-LASER-OTS	RTRV-WDMANS
ED-SLV-WDMANS	RLS-PROTNSW-OCH	RTRV-WLEN

Input Format

RTRV-LNKTERM:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-LNKTERM::LNKTERM-2:CTAG;

Input Parameters

Table 3-252 RTRV-LNKTERM Input Parameters

Parameter and Values	Description
AID	Access identifier from the "LNKTERM" section on page 4-48. Must not be null

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

Table 3-253 RTRV-LNKTERM Output Parameters

Parameter and Values	Description
AID	Access identifier from the "LNKTERM" section on page 4-48. Must not be null
PORT	Access identifier from the "AidUnionId" section on page 4-25
REMOTENODE	Remote node. String. Optional
REMOTELNKTERMID	Remote link term ID. Integer. Optional

Errors Errors are listed in Table 4-11 on page 4-5

3.2.202 RTRV-LOG

Retrieve Log

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the alarm log of the NE.

Note The only option reported for LOGNM is ALARM.

Category Log

Security Retrieve

Related Commands

ALW-MSG-DBCHG INH-MSG-DBCHG REPT DBCHG

Input Format RTRV-LOG:[<TID>]::<CTAG>::<LOGNM>;

Input Example RTRV-LOG:CERENT::123::ALARM;

Input Parameters

Table 3-254 RTRV-LOG Input Parameters

Parameter and Values	Description
LOGNM	Log to be retrieved. Log name - ALARM. String. Must not be null

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

Table 3-255 RTRV-LOG Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17
ALMNUMBER	Alarm number of the log. Integer
CURRENT	Current severity
	Parameter type is NOTIF_CODE—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	Previous severity. Optional
	Parameter type is COND_EFF—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

Table 3-255 RTRV-LOG Output Parameters (continued)

Parameter and Values	Description
	Parameter type is CONDITION—any problem detected on an ONS 15454,15327, 15310-CL, or 15600 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. See the "Conditions" section on page 4-9 for a list of conditions
OCRTIME	Time when alarm was triggered. Optional
OCRDATE	Date when the specific event or violation occurred. Date when alarm was triggered. Optional
ALMDESCR	Alarm description. String

Errors Errors are listed in Table 4-11 on page 4-5

3.2.203 RTRV-MAP-NETWORK

Retrieve Map Network

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This 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).

Note The product type field in the response will be displayed as "unknown" for nodes that are not running the same version of software.

Category System

Security Retrieve

Related Commands

ACT-USER	ED-TRAPTABLE	RTRV-NE-APC
ALW-MSG-ALL	ENT-TRAPTABLE	RTRV-NE-GEN
ALW-MSG-DBCHG	INH-MSG-ALL	RTRV-NE-IPMAP
ALW-MSG-SECU	INH-MSG-DBCHG	RTRV-NE-PATH
COPY-RFILE	INH-MSG-SECU	RTRV-NE-SYNCN
DLT-TRAPTABLE	INIT-SYS	RTRV-NE-WDMANS
ED-DAT	REPT EVT FXFR	RTRV-TOD
ED-NE-GEN	RTRV-HDR	RTRV-TRAPTABLE
ED-NE-PATH	RTRV-INV	SET-TOD
ED-NE-SYNCN		

Input Format

RTRV-MAP-NETWORK:[<TID>]::<CTAG>;

Input Example

RTRV-MAP-NETWORK:CISCO::123;

Input Parameters

Table 3-256 RTRV-MAP-NETWORK Input Parameters

Parameter and Values	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"
;
```

Output Parameters

Table 3-257 RTRV-MAP-NETWORK Output Parameters

Parameter and Values	Description
IPADDR	Node IP address. String
NODENAME	Node name (TID). String
PRODUCT	Product type of the NE Parameter type is PRODUCT_TYPE—product (NE) type

Table 3-257 RTRV-MAP-NETWORK Output Parameters (continued)

Parameter and Values	Description
• ONS15310-CL	15310-CL
• ONS15327	15327
• ONS15454	15454
• ONS15455	15454 SDH
• ONS15600	15600
• UNKNOWN	Unknown product type

Errors Errors are listed in Table 4-11 on page 4-5

3.2.204 RTRV-NE-APC

Retrieve Network Amplification Power Control

Usage Guidelines Cisco ONS 15454

This command retrieves the APC application ports involved in node setup regulation.

Category System

Security Maintenance

Related Commands

ACT-USER	ED-TRAPTABLE	RTRV-MAP-NETWORK
ALW-MSG-ALL	ENT-TRAPTABLE	RTRV-NE-GEN
ALW-MSG-DBCHG	INH-MSG-ALL	RTRV-NE-IPMAP
ALW-MSG-SECU	INH-MSG-DBCHG	RTRV-NE-PATH
COPY-RFILE	INH-MSG-SECU	RTRV-NE-SYNCN
DLT-TRAPTABLE	INIT-SYS	RTRV-NE-WDMANS
ED-DAT	REPT EVT FXFR	RTRV-TOD
ED-NE-GEN	RTRV-HDR	RTRV-TRAPTABLE
ED-NE-PATH	RTRV-INV	SET-TOD
ED-NE-SYNCN		

Input Format RTRV-NE-APC:[<TID>]:[<AID>]:<CTAG>;

Input Example

RTRV-NE-APC:PENNGROVE:CHAN-16-1-RX:114;

Input Parameters

Table 3-258 RTRV-NE-APC Input Parameters

Parameter and Values	Description
AID	Access identifier from the "CHANNEL" section on page 4-30. 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

Table 3-259 RTRV-NE-APC Output Parameters

Parameter and Values	Description
AID	Access identifier from the "CHANNEL" section on page 4-30
MOD	AID type
	Parameter type is MOD2O—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
• OCH	Optical channel
• OMS	Optical multiplexer section
• OTS	Optical trace section
MODIFDAT	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. MODIFDAT is a Date. Optional
MODIFTM	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. MODIFTM is a time. Optional

Table 3-259 RTRV-NE-APC Output Parameters (continued)

Parameter and Values	Description
CHECKDAT	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. CHECKDAT is a date. Optional
CHECKTM	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. CHECKTM is a time. Optional

Errors Errors are listed in Table 4-11 on page 4-5

3.2.205 RTRV-NE-GEN

Retrieve Network Element General

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the general NE attributes.

Note 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 System

Security Retrieve

Related Commands

ACT-USER	INH-MSG-ALL	RTRV-NE-IPMAP
ALW-MSG-ALL	INH-MSG-DBCHG	RTRV-NE-PATH
ALW-MSG-DBCHG	INH-MSG-SECU	RTRV-NE-SYNCN
ALW-MSG-SECU	INIT-SYS	RTRV-NE-WDMANS
ED-DAT	RTRV-HDR	RTRV-TOD
ED-NE-PATH	RTRV-INV	RTRV-TRAPTABLE
ED-NE-SYNCN	RTRV-NE-APC	SET-TOD

Input Format RTRV-NE-GEN:[<TID>]::<CTAG>;

Input Example

RTRV-NE-GEN:CISCO::123;

Input Parameters

Table 3-260 RTRV-NE-GEN Input Parameters

Parameter and Values	Description
—	

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "[IPADDR=<IPADDR>,][IPMASK=<IPMASK>,][DEFRTR=<DEFRTR>,]
   [IIOPPORT=<IIOPPORT>,][NTP=<NTP>,][ETHIPADDR=<ETHIPADDR>,]
   [ETHIPMASK=<ETHIPMASK>,][NAME=<NAME>,][SWVER=<SWVER>,]
   [LOAD=<LOAD>,][PROTSWVER=<PROTSWVER>,][PROTLOAD=<PROTLOAD>,]
   [DEFDESC=<DEFDESC>,][PLATFORM=<PLATFORM>,][SECUMODE=<SECUMODE>]"
;
```

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,
   IIOPPORT=57970,NTP=192.168.100.52,ETHIPADDR=172.20.208.225,
   ETHIPMASK=255.255.255.0,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=REPEATER"
;
```

Output Parameters

Table 3-261 RTRV-NE-GEN Output Parameters

Parameter and Values	Description
IPADDR	Node IP address. String. Optional
IPMASK	Node IP mask. String. Optional
DEFRTR	Node default router. String. Optional
IIOPPORT	Node IIOP port. Integer. Optional
NTP	Node NTP timing source address. String. Optional
ETHIPADDR	Node Ethernet IP address. String. Optional. Disabled
ETHIPMASK	Node Ethernet IP mask. String. Optional. Disabled
NAME	Name. String. Optional
SWVER	Software version. String. Optional
LOAD	Load. String. Optional
PROTSWVER	Protect software version. String. Optional
PROTLOAD	Protect load. String. Optional

Table 3-261 RTRV-NE-GEN Output Parameters (continued)

Parameter and Values	Description
DEFDESC	Provides a default description for the NE String. Optional
PLATFORM	Platform. String. Optional
SECUMODE	Security mode of the NE. Optional
	Parameter type is NE_SECURE_MODE—security mode of the NE
• REPEATER	The front port and backplane are sharing the same IP network
• SECURE	The front port and backplane are independent and in different IP sub-networks

Errors Errors are listed in Table 4-11 on page 4-5

3.2.206 RTRV-NE-IPMAP

Retrieve Network Element IPMAP

This command retrieves the IP address and node name of the NEs that have the DCC connection with this NE.

Note This command only reports the 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

Related Commands

ACT-USER	INH-MSG-ALL	RTRV-NE-GEN
ALW-MSG-ALL	INH-MSG-DBCHG	RTRV-NE-PATH
ALW-MSG-DBCHG	INH-MSG-SECU	RTRV-NE-SYNCN
ALW-MSG-SECU	INIT-SYS	RTRV-NE-WDMANS
ED-DAT	RTRV-HDR	RTRV-TOD
ED-NE-PATH	RTRV-INV	RTRV-TRAPTABLE
ED-NE-SYNCN	RTRV-NE-APC	SET-TOD

Input Format RTRV-NE-IPMAP:[<TID>]:[<AID>]:<CTAG>;

Input Example

RTRV-NE-IPMAP:CISCO:FAC-12-1:123;

Input Parameters

Table 3-262 RTRV-NE-IPMAP Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. 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

Table 3-263 RTRV-NE-IPMAP Output Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. Port of an NE carrying the DCC connection
IPADDR	Node IP address. String
NODENAME	Network element name. String

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.207 RTRV-NE-PATH

Retrieve Network Element Path

Usage Guidelines

Cisco ONS 15454, 15327, 15310-CL

This command retrieves the path-level attributes on an NE.

Category

System

Security Retrieve

Related Commands

ACT-USER	ED-TRAPTABLE	RTRV-INV
ALW-MSG-ALL	ENT-CRS-<PATH>	RTRV-MAP-NETWORK
ALW-MSG-DBCHG	ENT-ROLL-<MOD_PATH>	RTRV-NE-APC
ALW-MSG-SECU	ENT-TRAPTABLE	RTRV-NE-GEN
COPY-RFILE	INH-MSG-ALL	RTRV-NE-IPMAP
DLT-CRS-<PATH>	INH-MSG-DBCHG	RTRV-NE-SYNCN
DLT-ROLL-<MOD_PATH>	INH-MSG-SECU	RTRV-NE-WDMANS
DLT-TRAPTABLE	INIT-SYS	RTRV-PROTNSW-<PATH>
ED-<MOD_PATH>	OPR-PROTNSW-<PATH>	RTRV-PTHTRC-<PATH>
ED-CRS-<PATH>	REPT EVT FXFR	RTRV-ROLL-<MOD_PATH>
ED-DAT	RLS-PROTNSW-<PATH>	RTRV-TOD
ED-NE-GEN	RTRV-<PATH>	RTRV-TRAPTABLE
ED-NE-PATH	RTRV-CRS-<PATH>	SET-TOD
ED-NE-SYNCN	RTRV-HDR	

Input Format RTRV-NE-PATH:[<TID>]::<CTAG>[::::];

Input Example RTRV-NE-PATH:::CTAG;

Input Parameters

Table 3-264 RTRV-NE-PATH Input Parameters

Parameter and Values	Description
—	

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "[PDIP=<PDIP>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "PDIP=Y"
;
```

Output Parameters

Table 3-265 RTRV-NE-PATH Output Parameters

Parameter and Values	Description
PDIP	Flag used to indicate whether PDI-P should be generated on the outgoing VT-structured STSs
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute

Errors Errors are listed in Table 4-11 on page 4-5

3.2.208 RTRV-NE-SYNCN

Retrieve Network Element Synchronization

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the synchronization attributes of the NE.

Notes:

1. Although mixed mode timing is supported in this release, it is not recommended. See the "Mixed Mode Timing Support" section on page 1-21 for more information.
2. 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

Related Commands

ACT-USER	INH-MSG-ALL	RTRV-COND-BITS
ALW-MSG-ALL	INH-MSG-DBCHG	RTRV-COND-SYNCN
ALW-MSG-DBCHG	INH-MSG-SECU	RTRV-HDR
ALW-MSG-SECU	INIT-SYS	RTRV-INV
COPY-RFILE	OPR-SYNCNSW	RTRV-MAP-NETWORK
DLT-TRAPTABLE	REPT ALM BITS	RTRV-NE-APC
ED-BITS	REPT ALM SYNCN	RTRV-NE-GEN
ED-DAT	REPT EVT BITS	RTRV-NE-IPMAP
ED-NE-GEN	REPT EVT FXFR	RTRV-NE-PATH
ED-NE-PATH	REPT EVT SYNCN	RTRV-NE-WDMANS
ED-NE-SYNCN	RLS-SYNCNSW	RTRV-SYNCN
ED-SYNCN	RTRV-ALM-BITS	RTRV-TOD
ED-TRAPTABLE	RTRV-ALM-SYNCN	RTRV-TRAPTABLE
ENT-TRAPTABLE	RTRV-BITS	SET-TOD

Input Format

RTRV-NE-SYNCN:[<TID>]::<CTAG>[::::];

Input Example

RTRV-NE-SYNCN:CISCO::123;

Input Parameters

Table 3-266 RTRV-NE-SYNCN Input Parameters

Parameter and Values	Description
—	

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "::[TMMD=<TMMD>,][SSMGEN=<SSMGEN>,][QRES=<QRES>,][RVRTV=<RVRTV>,]
   [RVTM=<RVTM>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "::TMMD=LINE,SSMGEN=GEN1,QRES=ABOVE-PRS,RVRTV=Y,RVTM=8.0"
;
```

Output Parameters

Table 3-267 RTRV-NE-SYNCN Output Parameters

Parameter and Values	Description
TMMD	Timing mode. Optional
	Parameter type is TIMING_MODE—timing mode for the current node
• EXTERNAL	The node derives it's clock from the BITS input
• LINE	The node derives it's clock from the SONET lines
• MIXED	The node derives it's clock from the mixed timing mode
SSMGEN	Synchronization status message generator. Optional
	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. Optional
	Parameter type is SYNC_QUALITY_LEVEL—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

Table 3-267 RTRV-NE-SYNCN Output Parameters (continued)

Parameter and Values	Description
RVRTV	Revertive mode. The value Y indicates that the protection switching system reverts service to the original line after restoration. The value N indicates that the 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. Optional
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time. Optional
	Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes

Errors Errors are listed in Table 4-11 on page 4-5

3.2.209 RTRV-NE-WDMANS

Retrieve NE Wavelength Division Multiplexing Automatic Node Setup

Usage Guidelines Cisco ONS 15454

This command retrieves the optical node setup (WDMANS) application ports involved in node setup regulation.

Category DWDM

Security Retrieve

Related Commands

ACT-USER	ENT-OSC	RTRV-HDR
ALW-MSG-ALL	ENT-TRAPTABLE	RTRV-INV
ALW-MSG-DBCHG	ENT-WLEN	RTRV-LNK-<MOD2O>
ALW-MSG-SECU	INH-MSG-ALL	RTRV-LNKTERM
COPY-RFILE	INH-MSG-DBCHG	RTRV-MAP-NETWORK
DLT-LNK-<MOD2O>	INH-MSG-SECU	RTRV-NE-APC
DLT-LNKTERMDLT-OSC	ED-TRAPTABLE	RTRV-NE-GEN
DLT-TRAPTABLE	ED-TRC-OCH	RTRV-NE-IPMAP
DLT-WLEN	ED-WDMANS	RTRV-NE-PATH
ED-DAT	ED-WLEN	RTRV-NE-SYNCN
ED-DWDM	ENT-LNK-<MOD2O>	RTRV-OCH
ED-FFP-OCH	ENT-LNKTERM	RTRV-OMS
ED-LNK-<MOD2O>	INIT-SYS	RTRV-OSC
ED-LNKTERM	OPR-LASER-OTS	RTRV-OTS
ED-NE-GEN	OPR-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-NE-PATH	OPR-SLV-WDMANS	RTRV-SLV-WDMANS
ED-NE-SYNCN	OPR-WDMANS	RTRV-TOD
ED-OCH	REPT EVT FXFR	RTRV-TRAPTABLE
ED-OMS	RLS-LASER-OTS	RTRV-TRC-OCH
ED-OSC	RLS-PROTNSW-OCH	RTRV-WDMANS
ED-OTS	RTRV-DWDM	RTRV-WLEN
ED-SLV-WDMANS	RTRV-FFP-OCH	SET-TOD

Input Format

RTRV-NE-WDMANS:[<TID>]::<CTAG>;

Input Example

RTRV-NE-WDMANS:PENNGROVE::114;

Input Parameters

Table 3-268 RTRV-NE-WDMANS Input Parameters

Parameter and Values	Description
—	

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,<AIDTYPE>::[REGULATED=<REGULATED>,][PARAM=<PARAM>]"
;
```

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

Table 3-269 RTRV-NE-WDMANS Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17. AID is port regulated
AIDTYPE	Specifies the type of facility, link, or other addressable entity targeted by the message. A type of access identifier Parameter type is MOD2—line/path modifier
• 10GFC	10 Gigabit Fiber Channel
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit Fiber Channel
• 1GFICON	1 Gigabit FICON
• 2GFC	2 Gigabit Fiber Channel
• 2GFICON	2 Gigabit FICON
• D1VIDEO	D1 Video
• DS1	DS1 line of a DS3XM card
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETRCLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	Generic Framing Protocol over Packet Over SONET. Virtual Ports partitioned using GFP's Multiplexing Capability
• GIGE	GIG Ethernet
• HDTV	HDTV
• ISC1	ISC1
• OC3	OC3 facility
• OC12	OC12 facility
• OC48	OC48 facility
• OC192	OC192 facility
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section

Table 3-269 RTRV-NE-WDMANS Output Parameters (continued)

Parameter and Values	Description
• 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
• SYNCN	SYNCN alarm
• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 Path
• VT2	VT2 Path
REGULATED	The status of the port after a node setup regulation. Optional
	Parameter type is REGULATED_PORT_TYPE—optical configuration types for NEs
• FAILED	WDM-ANS encountered a failure while regulating this port
• 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
• UNCHANGED	WDM-ANS has not changed this port
PARAM	The regulated parameter inside of the specified port. Optional
	Parameter type is REGULATED_PARAM_NAME—
• 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

Table 3-269 RTRV-NE-WDMANS Output Parameters (continued)

Parameter and Values	Description
• VOAREFATTN	WDM-ANS has regulated the VOA attenuation reference parameter
• VOAREFPWR	WDM-ANS has regulated the VOA power reference parameter

Errors Errors are listed in Table 4-11 on page 4-5

3.2.210 RTRV-NETYPE

Retrieve Network Element Type

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the NE's equipment-related information.

Category System

Security Retrieve

Related Commands

ACT-USER	ED-TRAPTABLE	RTRV-NE-GEN
ALW-MSG-ALL	ENT-TRAPTABLE	RTRV-NE-IPMAP
ALW-MSG-DBCHG	INH-MSG-ALL	RTRV-NE-PATH
ALW-MSG-SECU	INH-MSG-DBCHG	RTRV-NE-SYNCN
DLT-TRAPTABLE	INH-MSG-SECU	RTRV-NE-WDMANS
ED-DAT	INIT-SYS	RTRV-TOD
ED-NE-GEN	RTRV-HDR	RTRV-TRAPTABLE
ED-NE-PATH	RTRV-INV	SET-TOD
ED-NE-SYNCN	RTRV-NE-APC	

Input Format RTRV-NETYPE:[<TID>]::<CTAG>;

Input Example RTRV-NETYPE:GAUR1::1;

Input Parameters

Table 3-270 RTRV-NETYPE Input Parameters

Parameter and Values	Description
—	

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<CISCO>,<PRODUCTTYPE>,<ADMMSPPMSTP>,<X>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "CISCO,ONS15454,ADM&MSPP&MSTP,5.00.00"
;
```

Output Parameters

Table 3-271 RTRV-NETYPE Output Parameters

Parameter and Values	Description
CISCO	String
PRODUCTTYPE	Product type
	Parameter type is PRODUCT_TYPE—product (NE) type
• ONS15310	15310
• ONS15327	15327
• ONS15454	15454
• ONS15455	15454 SDH
• ONS15600	15600
• UNKNOWN	Unknown product type
ADMMSPPMSTP	String. Listable
X	String

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.211 RTRV-OCH

Retrieve Optical Channel

Usage Guidelines

Cisco ONS 15454

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

See the "Provisioning Rules for Transponder and Muxponder Cards" section on page 1-10 for specific card provisioning rules.

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

Category

DWDM

Security

Retrieve

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-DWDM
DLT-LNKTERM	ED-WDMANS	RTRV-FFP-OCH
DLT-OSC	ED-WLEN	RTRV-LNK-<MOD2O>
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-LNKTERM
ED-DWDM	ENT-LNKTERM	RTRV-NE-WDMANS
ED-FFP-OCH	ENT-OSC	RTRV-OMS
ED-LNK-<MOD2O>	ENT-WLEN	RTRV-OSC
ED-LNKTERM	OPR-LASER-OTS	RTRV-OTS
ED-OCH	OPR-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-OMS	OPR-SLV-WDMANS	RTRV-SLV-WDMANS
ED-OSC	OPR-WDMANS	RTRV-TRC-OCH
ED-OTS	RLS-LASER-OTS	RTRV-WDMANS
ED-SLV-WDMANS	RLS-PROTNSW-OCH	RTRV-WLEN

Input Format

RTRV-OCH:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-OCH:PENNGROVE:CHAN-6-2:236;

Input Parameters

Table 3-272 RTRV-OCH Input Parameters

Parameter and Values	Description
AID	Access identifier from the "CHANNEL" section on page 4-30. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:,,[<ROLE>],[<STATUS>]:[RDIRN=<RDIRN>,][OPTYPE=<OPTICALPORTTYPE>,]
   [OPWR=<POWER>,][EXPWLEN=<EXPWLEN>,][ACTWLEN=<ACTWLEN>,]
   [ILOSS=<ILOSS>,][VOAMODE=<VOAMODE>,][VOAATTN=<VOAATTN>,]
   [VOAPWR=<VOAPWR>,][VOAREFATTN=<VOAREFATTN>,]
   [VOAREFPWR=<VOAREFPWR>,][REFOPWR=<REFOPWR>,][CALOPWR=<CALOPWR>,]
   [CHPOWER=<CHPOWER>,][NAME=<PORTNAME>,][SFBER=<SFBER>,]
   [SDBER=<SDBER>,][COMM=<COMM>,][GCCRATE=<GCCRATE>,][DWRAP=<DWRAP>,]
   [FEC=<FEC>,][PAYLOADMAP=<PAYLOADMAP>,][OSFBER=<OSFBER>,]
   [OSDBER=<OSDBER>,][MACADDR=<MACADDR>,][SYNCMSG=<SYNCMSG>,]
   [SENDDUS=<SENDDUS>,][SOAK=<SOAK>,][SOAKLEFT=<SOAKLEFT>,][OSPF=<OSPF>,]
   [LBCL=<LBCL>,][OPT=<OPT>,][OPR=<OPR>]:<PST_PSTQ>,[<SSTQ>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "CHAN-6-1:,,WORK,ACT:RDIRN=W-E,OPTYPE=DROP,OPWR=10.0,EXPWLEN=1530.33,
   ACTWLEN=1530.33,ILOSS=1.0,VOAMODE=ATTN,VOAATTN=0.5,VOAPWR=0.0,
   VOAREFATTN=3.5,VOAREFPWR=5.0,REFOPWR=10.5,CALOPWR=0,CHPOWER=2.0,
   NAME="NY PORT",SFBER=1E-4,SDBER=1E-5,COMM=GCC,GCCRATE=192K,DWRAP=Y,
   FEC=STD,PAYLOADMAP=ASYNCH,OSFBER=1E-4,OSDBER=1E-5,
   MACADDR=00-0E-AA-BB-CC-FF,SYNCMSG=Y,SENDDUS=Y,SOAK=52,SOAKLEFT=12-25,
   OSPF=Y,LBCL=10.0,OPT=10.0,OPR=10.0:OOS-AU,AINS"
;
```

Output Parameters

Table 3-273 RTRV-OCH Output Parameters

Parameter and Values	Description
AID	Access identifier from the "CHANNEL" section on page 4-30
ROLE	Identifies an OCH port role. Optional
	Parameter type is SIDE—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	The port status. Optional
	Parameter type is STATUS—the status of the unit in the protection pair

Table 3-273 RTRV-OCH Output Parameters (continued)

Parameter and Values	Description
• ACT	The entity is the active unit in the shelf
• NA	Status is unavailable
• STBY	The entity is the standby unit in the shelf
RDIRN	Ring directionality of the optical channel. Optional
	Parameter type is RDIRN_MODE—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. Only applicable to the following cards: OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B. Optional
	Parameter type is OPTICAL_PORT_TYPE—qualifies the optical port of a card
• ADD	The signal is added to the port
• DROP	The signal is dropped from the port
• IN-COM	COM channels (without OSC) that continue the signal from the previous card
• IN-DC	Input DCU port
• 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
• OUT-COM	COM channels (without OSC) that continue the signal to the next card
• OUT-DC	Output DCU port
• OUT-EXP	Express channel that continues the signal to the next card
• OUT-LINE	All the channels that continue the signal to the next card
• OUT-OSC	OSC channel that continue the signal to the next card
POWER	The optical power measured at this port. It can be the input or output power according to port type. Only applicable to the following cards: OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B. String. Optional
EXPWLEN	Optical wavelength for this port. Applicable only to the following cards: OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B. String. Optional
	Parameter type is OPTICAL_WLEN—optical wavelength. See values below

Table 3-273 RTRV-OCH Output Parameters (continued)

Parameter and Values	Description
ACTWLEN	The manufacturing optical wavelength for this port. Applicable only to the following cards: OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B. Optional Parameter type is OPTICAL_WLEN—optical wavelength
• 1530.33	Wavelength 1
• 1531.12	Wavelength 2
• 1531.90	Wavelength 3
• 1532.68	Wavelength 4
• 1534.25	Wavelength 5
• 1535.04	Wavelength 6
• 1535.82	Wavelength 7
• 1536.61	Wavelength 8
• 1538.19	Wavelength 9
• 1538.98	Wavelength 10
• 1539.77	Wavelength 11
• 1540.56	Wavelength 12
• 1542.14	Wavelength 13
• 1542.94	Wavelength 14
• 1543.73	Wavelength 15
• 1544.53	Wavelength 16
• 1546.12	Wavelength 17
• 1546.92	Wavelength 18
• 1547.72	Wavelength 19
• 1548.51	Wavelength 20
• 1550.12	Wavelength 21
• 1550.92	Wavelength 22
• 1551.72	Wavelength 23
• 1552.52	Wavelength 24
• 1554.13	Wavelength 25
• 1554.94	Wavelength 26
• 1555.75	Wavelength 27
• 1556.55	Wavelength 28
• 1558.17	Wavelength 29
• 1558.98	Wavelength 30
• 1559.79	Wavelength 31
• 1560.61	Wavelength 32

Table 3-273 RTRV-OCH Output Parameters (continued)

Parameter and Values	Description
• USE-TWL1	Use Tunable Wavelength 1
ILOSS	Insertion loss expressed in dBm. ILOSS applies to output ports only on the following cards: OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B. String. Optional
VOAMODE	The working control mode of the VOA. Applies only to the following cards: OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B. Optional Parameter type is VOA_CNTR_MODE—defines the VOA control mode
• ATTN	VOA has a fixed attenuation
• POWER	VOA controls the attenuation to obtain a fixed output power
VOAATTN	The transit power attenuation for the variable optical attenuator (VOA) expressed in dBm. The range is -24.0 to +2.0 dBm for the MXP_2.5G_10G and TXP_MR_10G cards. String. Optional
VOAPWR	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, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B. Float. String. Optional
VOAREFATTN	The value of reference attenuation for the VOA. Applicable only to the following cards: OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B. Float. String. Optional
VOAREFPWR	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, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B. Float. String. Optional
REFOPWR	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, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B. Float. String. Optional
CALOPWR	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. Applicable only to the following cards: OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B. Float. String. Optional.
CHPOWER	The value of per channel optical power expected to the OCH drop port of an AD-4C unit. CHPOWER is a float expressed in dBm Parameter type is REVERTIVE_TIME—revertive time

Table 3-273 RTRV-OCH Output Parameters (continued)

Parameter and Values	Description
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
PORTNAME	Port name. String. Optional
SFBER	Signal failure threshold for the SONET payload. Can only be provisioned on the working port. Optional
	Parameter type is SF_BER—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 for the SONET payload. Optional
	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
COMM	The GCC or DCC is enabled or disabled. The GCC can be enabled only if the digital wrapper has been enabled for the card. The default is NONE. Rules for an MXP_2.5G_10G/TXP_MR_10G client port are; only the DCC can be provisioned, if the termination mode is not transparent and the payload is SONET. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the DCC can be enabled only if the G.709 is not enabled and if the payload is SONET and the termination mode is not transparent. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the GCC can be enabled if there is no DCC and the G.709 flag is enabled. Optional
	Parameter type is COMM_TYPE—out of band communications channel termination type
• DCC	Section DCC type
• GCC	Generic communication channel (OTN) type
• NONE	Disable DCC or GCC if enabled
GCCRATE	The data rate of the GCC traffic. The default is 192Kbps. For MXP_2.5G_10G/TXP_MR_10G cards this applies only to the DWDM port. The 576K option is not supported for this release (R5.0). Optional
	Parameter type is GCCRATE—the data rate of the GCC traffic
• 192K	192 kbps
• 576K	576 kbps

Table 3-273 RTRV-OCH Output Parameters (continued)

Parameter and Values	Description
DWRAP	The G.709 digital wrapper. It is either on or off. The system default is ON. For MXP_2.5G_10G/TXP_MR_10G cards, this applies only to the DWDM port. Optional To enable G.709: • there should be no GCC on the DWDM port • the payload (in which the card is configured) should not be UNFRAMED To disable G.709: • 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 • none of the client ports on the card should be part of a Y cable protection group (muxponder only) Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
FEC	Forward error correction. It can be enabled only if the G.709 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. Optional Parameter type is FEC_MODE—specifies the type of forward error correction
• ENH	Enhanced FEC is enabled
• OFF	FEC is disabled
• STD	Standard FEC is enabled
PAYLOADMAP	The type of payload mapping. It can be enabled only if the G.709 is turned ON and FEC is enabled. Optional Parameter type is PAYLOAD_MAPPING—payload mapping mode
• ASYNCH	Asynchronous mapping mode
• ODU	ODU multiplex structure mode
• SYNCH	Synchronous mapping mode
OSFBER	The signal failure threshold at the OTN level. Optional Parameter type is SF_BER—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
OSDBER	The signal degrade threshold at the OTN level. Optional

Table 3-273 RTRV-OCH Output Parameters (continued)

Parameter and Values	Description
	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
MACADDR	MAC address for the 10GigE payload. String. Optional
SYNCMSG	The facility be enabled to provide the synchronization clock. This does not apply to the TXPD-10G card. This applies to an MXPD-10G card, only if the payload is SONET/SDH and the card termination mode is as follows: TRANSPARENT - All Client ports are available for all timing selections. All Trunk ports are not available. LINE - All ports are available for all-timing selections. Optional
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
SENDDUS	The facility sends out a Do not Use for Sync message. This does not apply to the TXPD-10G card. This applies to an MXPD-10G card, only if the payload is SONET/SDH and the card termination mode is as follows: TRANSPARENT- All Client ports are available for all timing selections. All Trunk ports are not available. LINE - All ports are available for all-timing selections
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
SOAK	OOS-AINS to IS transition soak time as measured in 15-minute intervals. Integer. Optional
SOAKLEFT	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, 48 hours maximum. Optional
OSPF	Open shortest path first. Optional
	Parameter type is EXT_RING—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
LBCL	Displays the current value of the laser current. Optional
	Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes

Table 3-273 RTRV-OCH Output Parameters (continued)

Parameter and Values	Description
OPT	Displays the current value of the transmitted optical power. Optional
	Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
OPR	Displays the current value of the received optical power. Optional
	Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
PST_PSTQ	Primary state of the entity
	Parameter type is PST_PSTQ—service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ)
• IS_NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SSTQ	Secondary state of the entity. Optional
	Parameter type is SST—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

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.212 RTRV-OMS

Retrieve Optical Multiplex Section

Usage Guidelines

Cisco ONS 15454

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

Category

DWDM

Security

Retrieve

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-DWDM
DLT-LNKTERM	ED-WDMANS	RTRV-FFP-OCH
DLT-OSC	ED-WLEN	RTRV-LNK-<MOD2O>
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-LNKTERM
ED-DWDM	ENT-LNKTERM	RTRV-NE-WDMANS
ED-FFP-OCH	ENT-OSC	RTRV-OCH
ED-LNK-<MOD2O>	ENT-WLEN	RTRV-OSC
ED-LNKTERM	OPR-LASER-OTS	RTRV-OTS
ED-OCH	OPR-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-OMS	OPR-SLV-WDMANS	RTRV-SLV-WDMANS
ED-OSC	OPR-WDMANS	RTRV-TRC-OCH
ED-OTS	RLS-LASER-OTS	RTRV-WDMANS
ED-SLV-WDMANS	RLS-PROTNSW-OCH	RTRV-WLEN

Input Format

RTRV-OMS:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-OMS:PENNGROVE:BAND-6-1-RX:236;

Input Parameters

Table 3-274 RTRV-OMS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "BAND" section on page 4-29. Must not be null

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

Table 3-275 RTRV-OMS Output Parameters

Parameter and Values	Description
AID	Access identifier from the "CHANNEL" section on page 4-30
RDIRN	Ring directionality of the optical line
	Parameter type is RDIRN_MODE—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
	Parameter type is OPTICAL_PORT_TYPE—qualifies the optical port of a card
• ADD	The signal is added to the port
• DROP	The signal is dropped from the port
• IN-COM	COM channels (without OSC) that continue the signal from the previous card
• IN-DC	Input DCU port
• 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
• OUT-COM	COM channels (without OSC) that continue the signal to the next card
• OUT-DC	Output DCU port
• OUT-EXP	Express channel that continues the signal to the next card
• OUT-LINE	All the channels that continue the signal to the next card

Table 3-275 RTRV-OMS Output Parameters (continued)

Parameter and Values	Description
• OUT-OSC	OSC channel that continue the signal to the next card
POWER	The optical power measured at this port. It can be the input or output power according to port type. String. Optional
EXPBAND	The expected value of band for this port
	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	Identifies the manufacturing optical band (group of four contiguous wavelengths) for this port. Optional
	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	Insertion loss expressed in dBm. ILOSS applies to output ports only. Optional
VOAMODE	The working control mode of the VOA. Optional
	Parameter type is VOA_CNTR_MODE—defines the VOA control mode
• ATTN	VOA has a fixed attenuation
• POWER	VOA controls the attenuation to obtain a fixed output power
VOAATTN	The value of calibrated attenuation for the VOA. Float. String. Optional
VOAPWR	The value of calibrated output power that the VOA is going to set as a result of its attenuation. Float. String. Optional

Table 3-275 RTRV-OMS Output Parameters (continued)

Parameter and Values	Description
VOAREFATTN	The value of reference attenuation for the VOA. Float. String. Optional
VOAREFPWR	The value of reference output power that the VOA is going to set as a result of its attenuation. Float. String. Optional
REFOPWR	The value of the calculated optical power expected for the output line added to the calibration value which equals the total expected output power. Float. String. Optional
CALOPWR	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. Float. String. Optional.
CHPOWER	The per channel optical power. Optional
	Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
NAME	Name. String. Optional
PST_PSTQ	Primary state of the entity
	Parameter type is PST_PSTQ—service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ)
• IS_NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SSTQ	Secondary state of the entity. Optional
	Parameter type is SST—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

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.213 RTRV-OPM

Retrieve Optical Monitoring Parameter

Usage Guidelines

Cisco ONS 15454

This command retrieves the optical power monitoring parameters present at the OCH layer in a R-OADM node.

Category

DWDM

Security

Retrieve

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-FFP-OCH
DLT-LNKTERM	ED-WDMANS	RTRV-LNK-<MOD2O>
DLT-OSC	ED-WLEN	RTRV-LNKTERM
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-NE-WDMANS
ED-DWDM	ENT-LNKTERM	RTRV-OCH
ED-FFP-OCH	ENT-OSC	RTRV-OMS
ED-LNK-<MOD2O>	ENT-WLEN	RTRV-OSC
ED-LNKTERM	OPR-LASER-OTS	RTRV-OTS
ED-OCH	OPR-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-OMS	OPR-WDMANS	RTRV-TRC-OCH
ED-OSC	RLS-LASER-OTS	RTRV-WDMANS
ED-OTS	RLS-PROTNSW-OCH	RTRV-WLEN

Input Format

RTRV-OPM:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-OPM:VA454-22:OPM-5-1530.33:116;

Input Parameters

Table 3-276 RTRV-OPM Input Parameters

Parameter and Values	Description
AID	Access identifier from the "OPM" section on page 4-49. Must not be null

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

Table 3-277 RTRV-OMS Output Parameters

Parameter and Values	Description
AID	Access identifier from the "OPM" section on page 4-49
POWEROUT	The value of the output power associated to the add or pass-through channel port of 32-WSS. Float. Optional
POWERADD	The value of the input power associated to the add channel port of 32-WSS. POWERADD is mutually exclusive with the POWERPT parameter. Float. Optional
POWERRPT	The value of the input power associated to the pass-through channel port of 32-WSS. POWERPT is mutually exclusive with the POWERADD parameter. Float. Optional

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.214 RTRV-OSC

Retrieve Optical Service Channel

Usage Guidelines

Cisco ONS 15454

This command retrieves all the OSC (optical service channel) information of the NE.

Category

DWDM

Security

Retrieve

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-DWDM
DLT-LNKTERM	ED-WDMANS	RTRV-FFP-OCH
DLT-OSC	ED-WLEN	RTRV-LNK-<MOD2O>
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-LNKTERM
ED-DWDM	ENT-LNKTERM	RTRV-NE-WDMANS
ED-FFP-OCH	ENT-OSC	RTRV-OCH
ED-LNK-<MOD2O>	ENT-WLEN	RTRV-OMS
ED-LNKTERM	OPR-LASER-OTS	RTRV-OTS
ED-OCH	OPR-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-OMS	OPR-SLV-WDMANS	RTRV-SLV-WDMANS
ED-OSC	OPR-WDMANS	RTRV-TRC-OCH
ED-OTS	RLS-LASER-OTS	RTRV-WDMANS
ED-SLV-WDMANS	RLS-PROTNSW-OCH	RTRV-WLEN

Input Format

RTRV-OSC:[<TID>]:<AID>:<CTAG

Input Example

RTRV-OSC:PENNGROVE:OSC-1:114;

Input Parameters

Table 3-278 RTRV-OSC Input Parameters

Parameter and Values	Description
AID	Access identifier from the "OSC" section on page 4-49. Identifies the OSC group of the NE. Only ALL, null, or OSC-# in AID is allowed. A null value is equivalent to ALL. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>::[RINGID=<RINGID>,][NODEID=<NODEID>,][EAST=<EAST>,][WEST=<WEST>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "OSC-1::RINGID=10,NODEID=1,EAST=FAC-8-1,WEST=FAC-10-1"
;
```

Output Parameters

Table 3-279 RTRV-OSC Output Parameters

Parameter and Values	Description
AID	Access identifier from the "OSC" section on page 4-49. Identifies the OSC group of the NE
RINGID	OSC ring ID of the NE. It is a string of up to six characters, valid characters are [A to Z, 0 to 0]. Default value is # of AID OSC-#. Integer. Optional
NODEID	OSC node ID of the NE. It ranges from 0 to 31. Integer. Optional
EAST	The east OC3 facility from the "FACILITY" section on page 4-45. EAST_OC3 is the AID facility. Only one OC3 for the east direction is supported in this release (R5.0). Optional
WEST	The west OC3 facility from the "FACILITY" section on page 4-45. EAST_OC3 is the AID facility. Only one OC3 for the west direction is supported in this release (R5.0). Optional

Errors Errors are listed in Table 4-11 on page 4-5

3.2.215 RTRV-OTS

Retrieve Optical Transport System

Usage Guidelines Cisco ONS 15454

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

Category DWDM

Security Retrieve

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-DWDM
DLT-LNKTERM	ED-WDMANS	RTRV-FFP-OCH
DLT-OSC	ED-WLEN	RTRV-LNK-<MOD2O>
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-LNKTERM
ED-DWDM	ENT-LNKTERM	RTRV-NE-WDMANS
ED-FFP-OCH	ENT-OSC	RTRV-OCH
ED-LNK-<MOD2O>	ENT-WLEN	RTRV-OMS
ED-LNKTERM	OPR-LASER-OTS	RTRV-OSC
ED-OCH	OPR-PROTNSW-OCH	RTRV-PROTNSW-OCH
ED-OMS	OPR-SLV-WDMANS	RTRV-SLV-WDMANS
ED-OSC	OPR-WDMANS	RTRV-TRC-OCH
ED-OTS	RLS-LASER-OTS	RTRV-WDMANS
ED-SLV-WDMANS	RLS-PROTNSW-OCH	RTRV-WLEN

Input Format

RTRV-OTS:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-OTS:PENNGROVE:LINE-6-1-RX:236;

Input Parameters

Table 3-280 RTRV-OTS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "LINE" section on page 4-47. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:RDIRN=<RDIRN>,OPTYPE=<OPTICALPORTTYPE>,[OPWR=<POWER>,]
   [ILOSS=<ILOSS>,][VOAMODE=<VOAMODE>,][VOAATTN=<VOAATTN>,]
   [VOAPWR=<VOAPWR>,][VOAREFATTN=<VOAREFATTN>,]
   [VOAREFPWR=<VOAREFPWR>,][OSRI=<OSRI>,][AMPLMODE=<AMPLMODE>,]
   [CHPOWER=<CHPOWER>,][GAIN=<GAIN>,][EXPGAIN=<EXPGAIN>,]
   [REFOPWR=<REFOPWR>,][OFFSET=<OFFSET>,][REFTILT=<REFTILT>,]
   [CALTILT=<CALTILT>,][ASEOPWR=<ASEOPWR>,][DCULOSS=<DCULOSS>,]
   [AWGST=<AWGST>,][HEATST=<HEATST>,][NAME=<NAME>]:<PST_PSTQ>,[<SSTQ>]"
;
```

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

Table 3-281 RTRV-OTS Output Parameters

Parameter and Values	Description
AID	Access identifier from the "LINE" section on page 4-47
RDIRN	Ring directionality of the optical line
	Parameter type is RDIRN_MODE—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
	Parameter type is OPTICAL_PORT_TYPE—qualifies the optical port of a card
• ADD	The signal is added to the port
• DROP	The signal is dropped from the port
• IN-COM	COM channels (without OSC) that continue the signal from the previous card
• IN-DC	Input DCU port
• 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
• OUT-COM	COM channels (without OSC) that continue the signal to the next card
• OUT-DC	Output DCU port
• OUT-EXP	Express channel that continues the signal to the next card
• OUT-LINE	All the channels that continue the signal to the next card
• OUT-OSC	OSC channel that continue the signal to the next card
POWER	The optical power measured at this port. It can be the input or output power according to port type. Float. Optional
ILOSS	Insertion loss. Optional
VOAMODE	The working control mode of the VOA. Optional
	Parameter type is VOA_CNTR_MODE—defines the VOA control mode
• ATTN	VOA has a fixed attenuation
• POWER	VOA controls the attenuation to obtain a fixed output power
VOAATTN	The value of calibrated attenuation for the VOA. Float. Optional

Table 3-281 RTRV-OTS Output Parameters (continued)

Parameter and Values	Description
VOAPWR	The value of calibrated output power that the VOA is going to set as a result of its attenuation. Float. Optional
VOAREFATTN	The value of reference attenuation for the VOA. Float. Optional
VOAREFPWR	The value of reference output power that the VOA is going to set as a result of its attenuation. Float. Optional
OSRI	OSRI enabled or disabled. Present only on a port where the safety is supported. Defaults to off. Optional
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
AMPLMODE	The optical amplification control mode. Optional
	Parameter type is AMPL_MODE—defines amplifier control mode
• GAIN	The amplifier always maintains a fixed gain
• POWER	The amplifier maintains the output power to a fixed value
CHPOWER	The per channel optical power. Applicable only to amplified OTS ports. Optional
GAIN	The value of the gain of the amplifier. Defaults to 21 dB for pre-amplifier and 20 dB for booster amplifier. Optional
EXPGAIN	The expected gain value to be reached from an amplifier when the node is in a DWDM access network. Float. Optional
REFOPWR	The value of the calculated optical power expected for the output line added to the calibration value which equals the total expected output power. Float. Optional
OFFSET	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. Float. Optional
REFTILT	The calculated tilt value to be added to the user provided calibration value. Float. Optional
CALTILT	The amplifier calibration tilt offset to be added to the calculated reference value. Float. Optional
ASEOPWR	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. Float. Optional
DCULOSS	The value of insertion loss associated to DCU in between the two stages of a pre-amplifier unit. Float. Optional
AWGST	The status assumed by AWG. Optional
	Parameter value is AWG_STATUS—AWG status list
• ON	The AWG is on
• WARM-UP	The AWG is warming up
HEATST	The status assumed by the heater. Optional

Table 3-281 RTRV-OTS Output Parameters (continued)

Parameter and Values	Description
	Parameter type is HEATER_STATUS—heater status list
• OFF	The heater is off
• ON	The heater is on
NAME	Name of the port. String. Optional
PST_PSTQ	Primary state of the entity
	Parameter type is PST_PSTQ—service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ)
• IS_NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SSTQ	Secondary state of the entity. Optional
	Parameter type is SST—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

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.216 RTRV-PM-<MOD2>

Retrieve Performance (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, D1VIDEO, DS1, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, VT2)

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the values of PM parameters for a specified card type.

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

<MONTYPE>, <MONLEV>, <MONDAT> and <MONTM> are supported in this release.

<MONLEV> is in the format of LEV-DIRN.

The format of <MONDAT> is MM-DD, where MM (month of the year) ranges from 1–12 and DD (day of the month) ranges from 1–31.

The format for <MONTM> is HH-MM, where HH (hour of the day) ranges from 0–23 and MM (minute of the hour) ranges from 0–59.

Notes:

1. If there are no errors to report, the response will be COMPLD (completed).
2. If the <TMPER> is 1-DAY, <MONTM> is not applicable (null), and is treated as null if <MONTM> is not null.
3. A null value for <MONLEV> defaults to 1-UP.
4. A null value for <MONDAT> defaults to the current date (MM-DD).
5. A null value for <MONTM> defaults to the current time (HH-MM).
6. Unless otherwise stated, DS1 cards are the only cards that support the RCV, and TRMT directions. All other cards only support the RCV direction.
7. After the BLSR switching, the working path is switched out, the traffic goes through the protection path, and the IPPM can be retrieved from the protection STS path.
8. If there is a STS PCA on the protection path, during the BLSR switching, the PCA path is pre-emptive; sending this command on the protection path after BLSR switch, the command returns the PMs off the protection path, not from the PCA path.
9. Some MOD2 entities; for example, OCH, CLNT, and Optical (OCn), support negative MONTYPE values. By default, this command defaults to 0–UP (return MONTYPEs where the MONVAL is 0 or higher). To retrieve the negative values, you must issue 0–DN in the MONLEV field.

   The rules are as follows: Client port only–Laser and SONET PM's are applicable and will be displayed. If the card payload is in SONET mode, then SONET PM's will be displayed, provided the MONLEV criteria is met.

   Trunk port Laser PM's are always available. Laser PM's are only for Near End. If G.709 is enabled, then the OTN PM's will be displayed. If G.709 is enabled and FEC is enabled, then the FEC PM's will be displayed. If the card payload is in SONET mode, then SONET PM's will be displayed. All PM MONVALUES should pass the MONLEV filter criteria.
10. For DWDM cards, the MONLEV filter criteria will not support a floating point. It will be returned and interpreted as an integer.
11. If the DS1 mode of the DS3XM-12 card is FDL, the DS1 path can retrieve FDL/T.403 FEND PM counts up to 32 15-minute intervals in the RTRV-PM-DS1 command.
12. RTRV-PM-<MOD2> can also be used to retrieve the RMON-managed PM data.

Category Performance

Security Retrieve

Related Commands

ALW-PMREPT-ALL
DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
DLT-RMONTH-<MOD2_RMON>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
ENT-RMONTH-<MOD2_RMON>
INH-PMREPT-ALL
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PMMODE-<STS_PATH>
RTRV-PMSCHED-<MOD2>
RTRV-PMSCHED-ALL
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-RMONTH-<MOD2_RMON>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TH-ALL
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-PMMODE-<STS_PATH>

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

Table 3-282 RTRV-PM-<MOD2> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17. All of the STS, VT1, Facility, and DS1 AIDs are supported. Must not be null
MONTYPE	Monitored type. A null value defaults to "all montypes applicable to the modifier"
	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 1/10th of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as 1/10th of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• 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
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as 1/10th of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as 1/10th of a percentage
• ESS	Errored Seconds—Section

Table 3-282 RTRV-PM-<MOD2> Input Parameters (continued)

Parameter and Values	Description
• ESV	Errored Seconds—VT Path
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• FCP	Failure Count—Line
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in uA
• LBCL-MAX	Max Laser Bias current in uA
• LBCL-MIN	Minimum Laser Bias current in uA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-MAX	Maximum value for LBCN
• LOSSL	Loss of Signal Seconds—Line
• 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 1/10 uW
• OPR-MAX	Maximum Receive Power in 1/10 uW
• OPR-MIN	Minimum Receive Power in 1/10 uW
• 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 1/10 uW
• OPT-MAX	Maximum Transmit Power in 1/10 uW
• OPT-MIN	Minimum Transmit Power in 1/10uW
• OPTN	Normalized value for Optical Power Transmitted for OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in 1/10th of dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in 1/10th of dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in 1/10th of dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working

Table 3-282 RTRV-PM-<MOD2> Input Parameters (continued)

Parameter and Values	Description
• 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 Frame Second - Path (DS3XM-12 DS1 PM count)
• SES-PM	OTN—Severely Errored Second—Path
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• 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
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as 1/10th of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as 1/10th of a percentage
• SESS	Severely Errored Second—Section
• SESV	Severely Errored Second—VT Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second - Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
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. String

Table 3-282 RTRV-PM-<MOD2> Input Parameters (continued)

Parameter and Values	Description
LOCN	Location associated with a particular command in reference to the entity identified by the AID. A null value defaults to NEND
	Parameter type is LOCATION—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
	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 MONTM is not null. A null value defaults to 15-MIN
	Parameter type is TMPER—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"
;
```

Output Parameters

Table 3-283 RTRV-PM-<MOD2> Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17
AIDTYPE	Type of facility, link or other addressable entity targeted by the message. Optional
	Parameter type is MOD2B—alarm type
• 1GFC	1 Gigabit Fiber Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fiber Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 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	GIG Ethernet port alarm
• MIC	MIC alarm (ONS 15327)
• MIC-EXT	MIC-EXT (ONS 15327)
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm

Table 3-283 RTRV-PM-<MOD2> Output Parameters (continued)

Parameter and Values	Description
• 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
• XTC	XTC alarm (ONS 15327)
MONTYPE	Monitored type
	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 1/10th of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as 1/10th of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section

Table 3-283 RTRV-PM-<MOD2> Output Parameters (continued)

Parameter and Values	Description
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• 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
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as 1/10th of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as 1/10th of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• FCP	Failure Count—Line
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in uA
• LBCL-MAX	Max Laser Bias current in uA
• LBCL-MIN	Minimum Laser Bias current in uA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-MAX	Maximum value for LBCN
• LOSSL	Loss of Signal Seconds—Line
• 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 1/10 uW
• OPR-MAX	Maximum Receive Power in 1/10 uW
• OPR-MIN	Minimum Receive Power in 1/10 uW
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN

Table 3-283 RTRV-PM-<MOD2> Output Parameters (continued)

Parameter and Values	Description
• OPT-AVG	Average Transmit Power in 1/10 uW
• OPT-MAX	Maximum Transmit Power in 1/10 uW
• OPT-MIN	Minimum Transmit Power in 1/10uW
• OPTN	Normalized value for Optical Power Transmitted for OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in 1/10th of dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in 1/10th of dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in 1/10th of dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Frame Second - Path (DS3XM-12 DS1 PM count)
• SES-PM	OTN—Severely Errored Second—Path
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• 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
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as 1/10th of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as 1/10th of a percentage
• SESS	Severely Errored Second—Section
• SESV	Severely Errored Second—VT Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point

Table 3-283 RTRV-PM-<MOD2> Output Parameters (continued)

Parameter and Values	Description
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second - Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UASV	Unavailable Second—VT Path
• UNC-WORDS	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. String
VLDTY	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. Optional
	Parameter type is VALIDITY—response validity
• COMPL	Complete response
• PRTL	Partial response
LOCN	Location associated with a particular command. Optional
	Parameter type is LOCATION—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
	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, Optional
	Parameter type is TMPER—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.

Table 3-283 RTRV-PM-<MOD2> Output Parameters (continued)

Parameter and Values	Description
• 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 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. String. Optional
MONTM	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. String. Optional

Errors Errors are listed in Table 4-11 on page 4-5.

3.2.217 RTRV-PMMODE-<STS_PATH>

Retrieve Performance Mode of PM Data Collection (STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C)

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the type of PM mode that has been previously set in the NE. This command can be used to identify whether the PM parameters are Section, Line or Path type, and to identify whether or not the PM are being collected by the NE.

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

The PM mode and state of an entity is set by using the SET-PMMODE command.

Notes:

1. This near end monitoring of the intermediate-path PM (IPPM) only supports OC-3, OC-12, OC-48, OC-48AS, OC-192, and EC-1 on STS Path.
2. The far end PM data collection is not supported in this release (R5.0).
3. This release of software will support only the Path (P) mode type PM parameters with this command, that is, this command will not be applicable for Line (L) and Section (S) mode types. It should be noted that the PM monitoring for Line (L) and Section (S) are supported by the ONS 15454, and the storing PM data is always performed.
4. This command only returns the categories that are enabled (pmstate is ON), and does not return the categories that are disabled (pmstate is OFF).

Category Performance

Security Retrieve

Related Commands

ALW-PMREPT-ALL	REPT PM <MOD2>	RTRV-TH-<MOD2>
DLT-RMONTH-<MOD2_RMON>	RTRV-PM-<MOD2>	RTRV-TH-ALL
ENT-RMONTH-<MOD2_RMON>	RTRV-PMSCHED-<MOD2>	SCHED-PMREPT-<MOD2>
INH-PMREPT-ALL	RTRV-PMSCHED-ALL	SET-PMMODE-<STS_PATH>
INIT-REG-<MOD2>	RTRV-RMONTH-<MOD2_RMON>	SET-TH-<MOD2>

Input Format RTRV-PMMODE-<STS_PATH>:[<TID>]:<SRC>:<CTAG>::<LOCN>;

Input Example RTRV-PMMODE-STS1:CISCO:STS-4-1-2:123::NEND;

Input Parameters

Table 3-284 RTRV-PMMODE-<STS_PATH> Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "CrossConnectId" section on page 4-31. Must not be null
LOCN	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. Must not be null
	Parameter type is LOCATION—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

Table 3-285 RTRV-PMMODE-<STS_PATH> Output Parameters

Parameter and Values	Description
CROSSCONNECTID	Access identifier from the "CrossConnectId" section on page 4-31
LOCN	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. Optional
	Parameter type is LOCATION—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 sub entity is to store as a result of an attribute change
	Parameter type is PM_MODE—the type of PM parameters
• P	Transport Path PM parameters

Errors

Errors are listed in Table 4-11 on page 4-5.

3.2.218 RTRV-PMSCHED-<MOD2>

Retrieve Performance Monitoring Schedule (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, D1VIDEO, DS1, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, VT2)

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the PM reporting schedule that was set for the NE by the SCHED-PMREPT command.

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

Category

Performance

Security

Retrieve

Related Commands

ALW-PMREPT-ALL
DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
DLT-RMONTH-<MOD2_RMON>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
ENT-RMONTH-<MOD2_RMON>
INH-PMREPT-ALL
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMMODE-<STS_PATH>
RTRV-PMSCHED-ALL
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-RMONTH-<MOD2_RMON>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TH-ALL
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-PMMODE-<STS_PATH>

Input Format

RTRV-PMSCHED-<MOD2>:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-PMSCHED-OC3:CISCO-NODE:FAC-3-1:123;

Input Parameters

Table 3-286 RTRV-PMSCHED-<MOD2> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17. Must not be null

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

Table 3-287 RTRV-PMSCHED-<MOD2> Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17
AIDTYPE	Type of facility, link or other addressable entity targeted by the message. Optional
	Parameter type is MOD2—line/path modifier
• 10GFC	10 Gigabit Fiber Channel
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit Fiber Channel
• 1GFICON	1 Gigabit FICON
• 2GFC	2 Gigabit Fiber Channel
• 2GFICON	2 Gigabit FICON
• D1VIDEO	D1 Video
• DS1	DS1 line of a DS3XM card
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETRCLO
• FSTE	FSTE facility

Table 3-287 RTRV-PMSCHED-<MOD2> Output Parameters (continued)

Parameter and Values	Description
• G1000	G1000 facility
• GFPOS	Generic Framing Protocol over Packet Over SONET. Virtual Ports partitioned using GFP's Multiplexing Capability
• GIGE	GIG Ethernet
• HDTV	HDTV
• ISC1	ISC1
• OC3	OC3 facility
• OC12	OC12 facility
• OC48	OC48 facility
• OC192	OC192 facility
• OCH	Optical channel
• 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
• SYNCN	SYNCN alarm
• 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. String
REPTDAT	Report date. Date for the next report. String
REPTTM	Report time. The time of day for the next PM report. String
NUMINVL	The remaining number of intervals over which PM is to be reported. Integer. Optional

Table 3-287 RTRV-PMSCHED-<MOD2> Output Parameters (continued)

Parameter and Values	Description
LOCN	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved Parameter type is LOCATION—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. Optional Parameter type is TMPER—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	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. String. Optional
INHMODE	Indicates whether a function is inhibited via an INH command. Indicates whether the reporting of PM data is inhibited (via the INH-PMREPT-ALL command) or is allowed (via the ALW-PMREPT-ALL command). Optional Parameter type is INH_MODE—indicates whether the function is inhibited
• ALW	Function is allowed
• INH	Function is inhibited

Errors

Errors are listed in Table 4-11 on page 4-5.

3.2.219 RTRV-PMSCHED-ALL

Retrieve Performance Schedule All

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves all the PM reporting schedules that were set for the NE by the SCHED-PMREPT command.

Category

Performance

Security

Retrieve

Related Commands

ALW-PMREPT-ALL	REPT PM <MOD2>	RTRV-TH-<MOD2>
DLT-RMONTH-<MOD2_RMON>	RTRV-PM-<MOD2>	RTRV-TH-ALL
ENT-RMONTH-<MOD2_RMON>	RTRV-PMMODE-<STS_PATH>	SCHED-PMREPT-<MOD2>
INH-PMREPT-ALL	RTRV-PMSCHED-<MOD2>	SET-PMMODE-<STS_PATH>
INIT-REG-<MOD2>	RTRV-RMONTH-<MOD2_RMON>	SET-TH-<MOD2>

Input Format

RTRV-PMSCHED-ALL:[<TID>]::<CTAG>;

Input Example

RTRV-PMSCHED-ALL:CISCO-NODE::123;

Input Parameters

Table 3-288 RTRV-PMSCHED-ALL Input Parameters

Parameter and Values	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

Table 3-289 RTRV-PMSCHED-ALL Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17
AIDTYPE	Type of facility, link or other addressable entity targeted by the message. Optional
	Parameter type is MOD2—line/path modifier
• 10GFC	10 Gigabit Fiber Channel
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit Fiber Channel
• 1GFICON	1 Gigabit FICON
• 2GFC	2 Gigabit Fiber Channel
• 2GFICON	2 Gigabit FICON
• D1VIDEO	D1 Video
• DS1	DS1 line of a DS3XM card
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETRCLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	Generic Framing Protocol over Packet Over SONET. Virtual Ports partitioned using GFP's Multiplexing Capability
• GIGE	GIG Ethernet
• HDTV	HDTV
• ISC1	ISC1
• OC3	OC3 facility
• OC12	OC12 facility
• OC48	OC48 facility
• OC192	OC192 facility
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS port

Table 3-289 RTRV-PMSCHED-ALL Output Parameters (continued)

Parameter and Values	Description
• 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
• SYNCN	SYNCN alarm
• 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. String
REPTDAT	Report date. Date for the next report. String
REPTTM	Report time. The time of day for the next PM report. String
NUMINVL	The remaining number of intervals over which PM is to be reported. Integer. Optional
LOCN	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved
	Parameter type is LOCATION—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. Optional
	Parameter type is TMPER—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.

Table 3-289 RTRV-PMSCHED-ALL Output Parameters (continued)

Parameter and Values	Description
• 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	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. String. Optional
INHMODE	Indicates whether a function is inhibited via an INH command. Indicates whether the reporting of PM data is inhibited (via the INH-PMREPT-ALL command) or is allowed (via the ALW-PMREPT-ALL command). Optional Parameter type is INH_MODE—indicates whether the function is inhibited
• ALW	Function is allowed
• INH	Function is inhibited

Errors Errors are listed in Table 4-11 on page 4-5.

3.2.220 RTRV-POS

Retrieve Packet Over SONET

Usage Guidelines Cisco ONS 15454, 15310-CL, 15600

Note This command is supported for the ONS 15454 CE-100T-8 card, the ONS 15310-CL CE-100T-8 card and the ONS 15310-CL ML-100T-8 card.

This command retrieves the back end port information for the Ethernet card when the back end port is working in POS mode.

Note Because the back end port is virtual, the Virtual Facility (VFAC) AID should be used when issuing the command.

Category Ports

Security Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format RTRV-POS:[<TID>]:<AID>:<CTAG>;

Input Example RTRV-POS:TID:VFAC-1-1:CTAG;

Input Parameters

Table 3-290 RTRV-POS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>::[ADMINSTATE=<ADMINSTATE>,][LINKSTATE=<LINKSTATE>,]
   [MTU=<MTU>,][ENCAP=<ENCAP>,][NAME=<NAME>,][SOAK=<SOAK>,]
   [SOAKLEFT=<SOAKLEFT>]:<PST_PSTQ>,[<SST>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "VFAC-1-1::ADMINSTATE=DOWN,LINKSTATE=DOWN,MTU=1500,ENCAP=HDLC,
   NAME=\"POSPORT\",SOAK=32,SOAKLEFT=\12-25\":OOS-AU,AINS"
;
```

Output Parameters

Table 3-291 RTRV-POS Output Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
ADMINSTATE	Administration type. Optional
	Parameter type is UP_DOWN—Up or down
• DOWN	Down
• UP	Up
LINKSTATE	Link protocol. Optional
	Parameter type is UP_DOWN—Up or down
• DOWN	Down
• UP	Up
MTU	Maximum transmission unit. Integer. Optional
ENCAP	Encapsulation
	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	Name. String. Optional

Table 3-291 RTRV-POS Output Parameters (continued)

Parameter and Values	Description
SOAK	OOS-AINS to IS transition soak time as measured in 15-minute intervals. Integer. Optional
SOAKLEFT	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. Optional Rules for <SOAKLEFT> are as follows: • When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed. • When the port is in OOS_AINS state, 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.
PST_PSTQ	Primary state of the entity Parameter type is PST_PSTQ—service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ)
• IS_NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SST	Secondary state of the entity. Optional Parameter type is SST—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

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.221 RTRV-PROTNSW-<MOD2DWDMPAYLOAD>

Retrieve Protection Switch (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, HDTV, ISC1, ISC3, PASSTHRU)

Usage Guidelines

Cisco ONS 15454

This command retrieves the protection switch status of client facilities.

Category

DWDM

Security

Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RTRV-PROTNSW-<MOD2DWDMPAYLOAD>:[<TID>]:<SRC>:<CTAG>[::::];

Input Example

RTRV-PROTNSW-HDTV:CISCO:FAC-1-1-1:100;

Input Parameters

Table 3-292 RTRV-PROTNSW-<MOD2DWDMPAYLOAD> Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "FACILITY" section on page 4-45. Must not be null

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

Table 3-293 RTRV-PROTNSW-<MOD2DWDMPAYLOAD> Output Parameters

Parameter and Values	Description
AIDUNIONID	Access identifier from the "FACILITY" section on page 4-45
SC	Switch command to be initiated on the paths
	Parameter type is SW—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	Switch type. Optional
	Parameter type is SWITCH_TYPE—BLSR switch type. MANWKSWBK, MANWKSWPR, FRCDWKSWBK, FRCDWKSWPR, LOCKOUTOFPR, and LOCKOUTOFWK are retrieve-only values for RTRV-PROTNSW-OCn commands. They are not applicable for the OPR-PROTNSW-OCn commands. 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

Table 3-293 RTRV-PROTNSW-<MOD2DWDMPAYLOAD> Output Parameters (continued)

Parameter and Values	Description
• 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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.222 RTRV-PROTNSW-<OCN_TYPE>

Retrieve Protection Switch (OC3, OC12, OC48, OC192)

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the switching state of a SONET line specified in the AID.

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

Category Protection

Security Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RTRV-PROTNSW-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-PROTNSW-OC48:CISCO:FAC-5-1:123;

Input Parameters

Table 3-294 RTRV-PROTNSW-<OCN_TYPE> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. Must not be null

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

Table 3-295 RTRV-PROTNSW-<OCN_TYPE> Output Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
SC	Switch command to be initiated on the paths
	Parameter type is SW—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	Switch type. Optional
	Parameter type is SWITCH_TYPE—BLSR switch type. MANWKSWBK, MANWKSWPR, FRCDWKSWBK, FRCDWKSWPR, LOCKOUTOFPR, and LOCKOUTOFWK are retrieve-only values for RTRV-PROTNSW-OCn commands. They are not applicable for the OPR-PROTNSW-OCn commands. 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

Table 3-295 RTRV-PROTNSW-<OCN_TYPE> Output Parameters (continued)

Parameter and Values	Description
• 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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.223 RTRV-PROTNSW-<PATH>

Retrieve Protection Switch (STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VT1, VT2)

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the switching state of a SONET path protection STS path specified in the AID. Because the GR-1400 does not allow the LOCKOUT_OF_WORKING on the UPSR WORKING path/AID, the “AID:LOCKOUT,LOCKOUTOFWK” is not presented in this protection switch retrieval result.

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

Category Protection

Security Retrieve

Related Commands

DLT-CRS-<PATH>	ENT-CRS-<PATH>	RTRV-CRS-<PATH>
DLT-ROLL-<MOD_PATH>	ENT-ROLL-<MOD_PATH>	RTRV-NE-PATH
ED-<MOD_PATH>	OPR-PROTNSW-<PATH>	RTRV-PTHTRC-<PATH>
ED-CRS-<PATH>	RLS-PROTNSW-<PATH>	RTRV-ROLL-<MOD_PATH>
ED-NE-PATH	RTRV-<PATH>	

Input Format RTRV-PROTNSW-<PATH>:[<TID>]:<SRC>:<CTAG>[::::];

Input Example

RTRV-PROTNSW-STS1:CISCO:STS-5-1-1:123;

Input Parameters

Table 3-296 RTRV-PROTNSW-<PATH> Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "CrossConnectId" section on page 4-31. Must not be null

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

Table 3-297 RTRV-PROTNSW-<PATH> Output Parameters

Parameter and Values	Description
CROSSCONNECTID	Access identifier from the "CrossConnectId" section on page 4-31
SC	Switch command that is to be initiated on the paths
	Parameter type is SW—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	Switch type. Optional
	Parameter type is SWITCH_TYPE—BLSR switch type. MANWKSWBK, MANWKSWPR, FRCDWKSWBK, FRCDWKSWPR, LOCKOUTOFPR, and LOCKOUTOFWK are retrieve-only values for RTRV-PROTNSW-OCn commands. They are not applicable for the OPR-PROTNSW-OCn commands. RING and SPAN are the only allowed values for BLSR protection

Table 3-297 RTRV-PROTNSW-<PATH> Output Parameters (continued)

Parameter and Values	Description
• 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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.224 RTRV-PROTNSW-OCH

Retrieve Protection Switch Optical Channel

Usage Guidelines Cisco ONS 15454

This command retrieves the protection switch status of a TXPP_MR_2.5G card.

Category DWDM

Security Retrieve

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-DWDM
DLT-LNKTERM	ED-WDMANS	RTRV-FFP-OCH
DLT-OSC	ED-WLEN	RTRV-LNK-<MOD2O>
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-LNKTERM
ED-DWDM	ENT-LNKTERM	RTRV-NE-WDMANS
ED-FFP-OCH	ENT-OSC	RTRV-OCH
ED-LNK-<MOD2O>	ENT-WLEN	RTRV-OMS
ED-LNKTERM	OPR-LASER-OTS	RTRV-OSC
ED-OCH	OPR-PROTNSW-OCH	RTRV-OTS
ED-OMS	OPR-SLV-WDMANS	RTRV-SLV-WDMANS
ED-OSC	OPR-WDMANS	RTRV-TRC-OCH
ED-OTS	RLS-LASER-OTS	RTRV-WDMANS
ED-SLV-WDMANS	RLS-PROTNSW-OCH	RTRV-WLEN

Input Format

RTRV-PROTNSW-OCH:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-PROTNSW-OCH:VA454-22:CHAN-2-2:100;

Input Parameters

Table 3-298 RTRV-PROTNSW-OCH Input Parameters

Parameter and Values	Description
AID	Access identifier from the "CHANNEL" section on page 4-30. Must not be null

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

Table 3-299 RTRV-PROTNSW-OCH Output Parameters

Parameter and Values	Description
AID	Access identifier from the "CHANNEL" section on page 4-30
SW	Indicates the switch operation
	Parameter type is SW—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
	Parameter type is SWITCH_TYPE—BLSR switch type. MANWKSWBK, MANWKSWPR, FRCDWKSWBK, FRCDWKSWPR, LOCKOUTOFPR, and LOCKOUTOFWK are retrieve-only values for RTRV-PROTNSW-OCn commands. They are not applicable for the OPR-PROTNSW-OCn commands. 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

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.225 RTRV-PTHTRC-<PATH>

Retrieve Path Trace (STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VT1, VT2)

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the contents of the SONET path trace message.

See Table 4-11 on page 4-5 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.

Notes:

1. A null value for the <MSGTYPE> defaults to INCTRC.
2. Only the NEND of the <LOCN> value is supported. A null value of the <LOCN> defaults to NEND.
3. Sending a FEND of the <LOCN> with this command, an “unsupported locn value” error message will display.
4. J1 (EXPTRC/INCTRC) is implemented on the DS1/DS1N, DS3E/DS3NE, DS3XM, EC1, OC3, OC48AS and OC192 cards.
5. TRC is supported only on DS1(N), DS3(N)E, and DS3XM cards.
6. The virtual facility AID (VFAC) is only valid on slots holding ML-Series cards.
7. After the BLSR switch, the working path is switched out and the traffic goes through the protection path. The J1 trace message can be retrieved from the protection STS path.
8. If there is an STS PCA on the protection path during the BLSR switch, the PCA path is pre-emptive. If this command is sent on the protection path after a BLSR switch, the command will return the trace message off of the protection path and not from the PCA path.
9. Starting with this release (R5.0), the J2 path trace on the VT1.5 is supported on the VT1.5 cross-connection of the DS3XM-12 card.
10. The VT2 modifier is not supported in this release (R5.0).

Category Troubleshooting and Test Access

Security Retrieve

Related Commands

DLT-CRS-<PATH>	ENT-CRS-<PATH>	RTRV-CRS-<PATH>
DLT-ROLL-<MOD_PATH>	ENT-ROLL-<MOD_PATH>	RTRV-NE-PATH
ED-<MOD_PATH>	OPR-PROTNSW-<PATH>	RTRV-PROTNSW-<PATH>
ED-CRS-<PATH>	RLS-PROTNSW-<PATH>	RTRV-ROLL-<MOD_PATH>
ED-NE-PATH	RTRV-<PATH>	

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

Table 3-300 RTRV-PTHTRC-<PATH> Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "CrossConnectId" section on page 4-31. Must not be null
MSGTYPE	Type of autonomous message to be retrieved. A null value defaults to INCTRC
	Parameter type is MSGTYPE—type of trace message
• EXPTRC	Expected incoming path trace message
• INCTRC	Incoming path trace message
• TRC	Outgoing path trace message
LOCN	Location associated with a particular command in reference to the entity identified by the AID
	Parameter type is LOCATION—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

Table 3-301 RTRV-PTHTRC-<PATH> Output Parameters

Parameter and Values	Description
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). String

Errors Errors are listed in Table 4-11 on page 4-5

3.2.226 RTRV-RMONTH-<MOD2_RMON>

Retrieve Remote Monitoring Threshold (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, FSTE, G1000, GFPOS, GIGE, OCH, POS)

Usage Guidelines Cisco ONS 15454, 15327, 15310-CL

This command retrieves the thresholds defined in the RMON alarm table.

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

Category Performance

Security Retrieve

Related Commands

ALW-PMREPT-ALL	REPT PM <MOD2>	RTRV-TH-<MOD2>
DLT-RMONTH-<MOD2_RMON>	RTRV-PM-<MOD2>	RTRV-TH-ALL
ENT-RMONTH-<MOD2_RMON>	RTRV-PMMODE-<STS_PATH>	SCHED-PMREPT-<MOD2>
INH-PMREPT-ALL	RTRV-PMSCHED-<MOD2>	SET-PMMODE-<STS_PATH>
INIT-REG-<MOD2>	RTRV-PMSCHED-ALL	SET-TH-<MOD2>

Input Format

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

Input Example

RTRV-RMONTH-GIGE:CISCO:FAC-2-1:1234::ETHERSTATSOCTETS,,,,100:RISE=1000,
FALL=100,SAMPLE=DELTA,STARTUP=RISING;

Input Parameters

Table 3-302 RTRV-RMONTH-<MOD2_RMON> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. AID for the facility that the data statistic is managed by. Must not be null
MONTYPE	Monitored type. Type of RMON monitored data statistic. A null value is equivalent to ALL
	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 1/10th of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as 1/10th of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• 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
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• 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
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as 1/10th of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as 1/10th of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• FC-PM	OTN—Failure Count—Path Monitor Point

Table 3-302 RTRV-RMONTH-<MOD2_RMON> Input Parameters (continued)

Parameter and Values	Description
• FC-SM	OTN—Failure Count—Section Monitor Point
• FCP	Failure Count—Line
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in uA
• LBCL-MIN	Max Laser Bias current in uA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-MAX	Maximum value for LBCN
• LOSSL	Loss of Signal Seconds—Line
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OBED	FEC—One Bit Errors Detected
• OPR-AVG	Average Receive Power in 1/10 uW
• OPR-MAX	Maximum Receive Power in 1/10 uW
• OPR-MIN	Minimum Receive Power in 1/10 uW
• 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 1/10 uW
• OPT-MAX	Maximum Transmit Power in 1/10 uW
• OPT-MIN	Minimum Transmit Power in 1/10uW
• 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 1/10th of dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in 1/10th of dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in 1/10th of dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring

Table 3-302 RTRV-RMONTH-<MOD2_RMON> Input Parameters (continued)

Parameter and Values	Description
• 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
• SES-PM	OTN—Severely Errored Second—Path
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• 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
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as 1/10th of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as 1/10th of a percentage
• SESS	Severely Errored Second—Section
• SESV	Severely Errored Second—VT Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second - Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• 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). 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 Parameter type is SAMPLE_TYPE—describes how the data will be calculated during the sampling period

Table 3-302 RTRV-RMONTH-<MOD2_RMON> Input Parameters (continued)

Parameter and Values	Description
• 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 Parameter type is STARTUP_TYPE—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

```
   SID DATE TIME
M  CTAG COMPLD
   "<AIDUNIONID>,<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"
;
```

Output Parameters

Table 3-303 RTRV-RMONTH-<MOD2_RMON> Output Parameters

Parameter and Values	Description
AIDUNIONID	Access identifier from the "FACILITY" section on page 4-45
AIDTYPE	The type of facility, link or other addressable entity targeted by the message Parameter type is MOD2_RMON—line modifiers
• 10GFC	10 Gigabit fiber channel
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit fiber channel
• 1GFICON	1 Gigabit FICON
• 2GFC	2 Gigabit fiber channel

Table 3-303 RTRV-RMONTH-<MOD2_RMON> Output Parameters (continued)

Parameter and Values	Description
• 2GFICON	2 Gigabit FICON
• 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
• POS	Packet over SONET
MONTYPE	Monitored type. Type of RMON monitored data statistic
	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 1/10th of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as 1/10th of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• 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
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• 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
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as 1/10th of a percentage

Table 3-303 RTRV-RMONTH-<MOD2_RMON> Output Parameters (continued)

Parameter and Values	Description
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as 1/10th of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• FCP	Failure Count—Line
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in uA
• LBCL-MIN	Max Laser Bias current in uA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-MAX	Maximum value for LBCN
• LOSSL	Loss of Signal Seconds—Line
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OBED	FEC—One Bit Errors Detected
• OPR-AVG	Average Receive Power in 1/10 uW
• OPR-MAX	Maximum Receive Power in 1/10 uW
• OPR-MIN	Minimum Receive Power in 1/10 uW
• 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 1/10 uW
• OPT-MAX	Maximum Transmit Power in 1/10 uW
• OPT-MIN	Minimum Transmit Power in 1/10uW
• 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 1/10th of dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in 1/10th of dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in 1/10th of dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count

Table 3-303 RTRV-RMONTH-<MOD2_RMON> Output Parameters (continued)

Parameter and Values	Description
• 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
• SES-PM	OTN—Severely Errored Second—Path
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• 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
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as 1/10th of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as 1/10th of a percentage
• SESS	Severely Errored Second—Section
• SESV	Severely Errored Second—VT Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second - Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• 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. Integer

Table 3-303 RTRV-RMONTH-<MOD2_RMON> Output Parameters (continued)

Parameter and Values	Description
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. Integer
SAMPLE	The method of calculating the value to be compared to the thresholds
	Parameter type is SAMPLE_TYPE—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
	Parameter type is STARTUP_TYPE—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

Errors

Errors are listed in Table 4-11 on page 4-5.

3.2.227 RTRV-ROLL-<MOD_PATH>

Retrieve Roll (STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VC12, VC3, VT1, VT2)

Usage Guidelines

Cisco ONS 15600

This command retrieves roll data parameters.

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

Category

STS Paths

Security

Retrieve

Related Commands

DLT-CRS-<PATH>	ENT-CRS-<PATH>	RTRV-CRS-<PATH>
DLT-ROLL-<MOD_PATH>	ENT-ROLL-<MOD_PATH>	RTRV-NE-PATH
ED-<MOD_PATH>	OPR-PROTNSW-<PATH>	RTRV-PROTNSW-<PATH>
ED-CRS-<PATH>	RLS-PROTNSW-<PATH>	RTRV-PTHTRC-<PATH>
ED-NE-PATH	RTRV-<PATH>	

Input Format

RTRV-ROLL-<MOD_PATH>:[<TID>]:<SRC>:<CTAG>;

Input Example

RTRV-ROLL-STS1:CISCO:STS-1-1-1:6;

Input Parameters

Table 3-304 RTRV-ROLL-<MOD_PATH> Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "STS" section on page 4-50. Roll path (STS or VT). Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<FROM>,<TO>:RFROM=<RFROM>,RTO=<RTO>,RMODE=<RMODE>"
;
```

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"
;
```

Output Parameters

Table 3-305 RTRV-ROLL-<MOD_PATH> Output Parameters

Parameter and Values	Description
FROM	One of the termination points (legs) of the existing cross-connection. Access identifier from the "STS" section on page 4-50
TO	One of the termination points (legs) of the existing cross-connection. Access identifier from the "STS" section on page 4-50
RFROM	The termination point of the existing cross-connect that is to be rolled. AID from the "STS" section on page 4-50

Table 3-305 RTRV-ROLL-<MOD_PATH> Output Parameters (continued)

Parameter and Values	Description
RTO	The termination point that will become a leg of the new cross-connection. AID from the "STS" section on page 4-50
RMODE	The mode of the rolling operation
	Parameter type is RMODE—roll mode
• AUTO	Automatic
• MAN	Manual

Errors Errors are listed in Table 4-11 on page 4-5

3.2.228 RTRV-ROUTE

Retrieve Route

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves static routes.

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

Related Commands

DLT-ROUTE ENT-ROUTE

Input Format RTRV-ROUTE:[<TID>]::<CTAG>::[<DESTIP>],[<IPMASK>],[<NXTHOP>],[<COST>];

Input Example RTRV-ROUTE:CISCO::123::10.64.72.57,255.255.255.0,10.64.10.1,2;

Input Parameters

Table 3-306 RTRV-ROUTE Input Parameters

Parameter and Values	Description
DESTIP	Destination tip. String. A null value is equivalent to ALL
IPMASK	IP mask. String. A null value is equivalent to ALL
NXTHOP	Next hop. String. A null value is equivalent to ALL
COST	Cost. Integer. 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\”,2”
;

Output Parameters

Table 3-307 RTRV-ROUTE Output Parameters

Parameter and Values	Description
DESTIP	Destination tip. String
IPMASK	IP mask. String
NXTHOP	Next hop. String
COST	Cost. Integer

Errors

Errors are listed in Table 4-11 on page 4-5.

3.2.229 RTRV-SLV-WDMANS

Retrieve Span Loss Verification Wavelength Division Multiplexing Automatic Node Setup

Usage Guidelines

Cisco ONS 15454

This command retrieves the expected span loss verification provisioned by the ED-SLV-WDMANS command.

Category

DWDM

Security

Retrieve

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-DWDM
DLT-LNKTERM	ED-WDMANS	RTRV-FFP-OCH
DLT-OSC	ED-WLEN	RTRV-LNK-<MOD2O>
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-LNKTERM
ED-DWDM	ENT-LNKTERM	RTRV-NE-WDMANS
ED-FFP-OCH	ENT-OSC	RTRV-OCH
ED-LNK-<MOD2O>	ENT-WLEN	RTRV-OMS
ED-LNKTERM	OPR-LASER-OTS	RTRV-OSC
ED-OCH	OPR-PROTNSW-OCH	RTRV-OTS
ED-OMS	OPR-SLV-WDMANS	RTRV-PROTNSW-OCH
ED-OSC	OPR-WDMANS	RTRV-TRC-OCH
ED-OTS	RLS-LASER-OTS	RTRV-WDMANS
ED-SLV-WDMANS	RLS-PROTNSW-OCH	RTRV-WLEN

Input Format

RTRV-SLV-WDMANS:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-SLV-WDMANS:VA454-22:WDMANS-E:116;

Input Parameters

Table 3-308 RTRV-SLV-WDMANS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "WDMANS" section on page 4-59. Must not be null

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

Table 3-309 RTRV-SLV-WDMANS Output Parameters

Parameter and Values	Description
AID	Access identifier from the "WDMANS" section on page 4-59
HIGHSLVEXP	The high range value of the expected span loss verification. Float. Optional
LOWSLVEXP	The low range value of the expected span loss verification. Float. Optional
SLVACT	The value of the calculated span loss verification. Float. Optional
RESOLUTION	The value of the resolution applied to the calculated span loss verification. Float. Optional

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.230 RTRV-STS

Retrieve STS

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the attributes associated with an STS path based on the granularity level of NE/SLOT-specific STSs.

Supported AIDs are ALL, SLOT-N (N=1,2,...,ALL), STS-<SLOT>[-<PORT>]-<STS NUMBER>.

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

The path trace message is a 64 character string including the terminating CR (carriage return) and LF (line feed) that is transported in the J1 byte of the SONET STS Path overhead.

The EXPTRC indicates the contents of the expected incoming path trace are provisioned by the user in the ED-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 and OC192.

TRC and INCTRC are supported on DS1(N), DS3(N)E, DS3-EC1-48 and DS3XM cards.

In this release, 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

Related Commands

RTRV-<PATH> RTRV-VT

Input Format

RTRV-STS:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-STS:TID:STS-2-1-1:1;

Input Parameters

Table 3-310 RTRV-STS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "AidUnionId" section on page 4-25

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

Table 3-311 RTRV-STS Output Parameters

Parameter and Values	Description
AID	Access identifier from the "AidUnionId" section on page 4-25
LEVEL	The rate of the cross-connect. Applicable only to STS paths in SONET. Optional
	Parameter type is STS_PATH—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	An STS path SFBER that applies only to path protection and only to STS-level paths in SONET. Defaults to 1E-4. Optional
	Parameter type is SF_BER—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	An STS path SDBER that applies only to path protection and only to STS-level paths in SONET. Defaults to 1E-6. Optional
	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

Table 3-311 RTRV-STS Output Parameters (continued)

Parameter and Values	Description
RVRTV	Revertive mode. The value Y indicates that the protection switching system reverts service to the original line after restoration. The value N indicates that the 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
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time. RVTM is not allowed to be set while "RVRTV" is N. Only applies to path protection
	Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
SWPDIP	Switch on PDI-P. Applicable only to STS-level paths in SONET (STSn). Optional
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
HOLDOFFTIMER	Hold off timer. Integer. Optional
EXPTRC	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. Optional
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 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). String. Optional
INCTRC	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. String. Optional
TRCMODE	Path trace mode. Applicable only to STS-level Paths in SONET (STSn). Defaults to the OFF mode. Optional
	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

Table 3-311 RTRV-STS Output Parameters (continued)

Parameter and Values	Description
• 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
TACC	Indicates whether the digroup being provisioned is to be used as a test access digroup. Default is N. Integer. Optional
TAPTYPE	TAP type. Optional
	Parameter type is TAPTYPE—test access point type
• DUAL	Dual FAD
• SINGLE	Single FAD
UPSRPTHSTATE	Indicates whether a given AID is the working or standby path of a path protection cross-connect. Optional
	Parameter type is STATUS—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	The c2 byte hex code. Applicable only to STS-level paths in SONET (STSn). Optional
	Parameter type is C2_BYTE—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

Table 3-311 RTRV-STS Output Parameters (continued)

Parameter and Values	Description
• 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	The BLSR path state only if the port is on the BLSR. Applicable only to STS-level paths in SONET (STSn). Optional Parameter type is BLSR_PTH_STATE—the BLSR path state only if the port is on the BLSR
• PCAPTHACT	Indicates the BLSR ring un-switched and its PCA path is in the active state
• PCAPTHSTB	Indicates the BLSR ring switched and its PCA path is in the standby state
• PROTPTHACT	Indicates the BLSR ring switched and its protection path is in the active state
• WKGPTHACT	Indicates the BLSR ring un-switched and its working path is in the active state
• WKGPTHSTB	Indicates the BLSR ring switched and its working path is in the standby state
PST_PSTQ	Admin state in the PST_PSTQ format Parameter type is PST_PSTQ—service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ)

Table 3-311 RTRV-STS Output Parameters (continued)

Parameter and Values	Description
• IS-NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SSTQ	Secondary state of the entity. Optional
	Parameter type is SST—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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.231 RTRV-SYNCN

Retrieve Synchronization

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the synchronization reference list used to determine the sources for the NE's reference clock and the BITS output clock. For each clock, up to three synchronization sources may be specified (e.g. PRIMARY, SECOND, THIRD).

Notes:

1. To retrieve/set the timing mode, SSM message Set or Quality of RES information, use the RTRV-NE-SYNCN and ED-NE-SYNCN commands.
2. The output example shown here is under line timing mode.

Category Synchronization

Security Retrieve

Related Commands

ED-BITS	REPT ALM SYNCN	RTRV-ALM-SYNCN
ED-NE-SYNCN	REPT EVT BITS	RTRV-BITS
ED-SYNCN	REPT EVT SYNCN	RTRV-COND-BITS
OPR-SYNCNSW	RLS-SYNCNSW	RTRV-COND-SYNCN
REPT ALM BITS	RTRV-ALM-BITS	RTRV-NE-SYNCN

Input Format

RTRV-SYNCN:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-SYNCN:BOYES:SYNC-NE:234;

Input Parameters

Table 3-312 RTRV-SYNCH Input Parameters

Parameter and Values	Description
AID	Access identifier from the "SYNC_REF" section on page 4-56. Must not be null

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

Table 3-313 RTRV-SYNCN Output Parameters

Parameter and Values	Description
AID	Access identifier from the "SYNC_REF" section on page 4-56
REF	Rank of synchronization reference. Access identifier from the "SYNCSW" section on page 4-56
REFVAL	Value of a synchronization reference. "SYN_SRC" section on page 4-55
QREF	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. Optional

Table 3-313 RTRV-SYNCN Output Parameters (continued)

Parameter and Values	Description
	Parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL—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)
STATUS	Status. Optional
	Parameter type is STATUS—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	Applicable to 1+1. Designates the role of the entity in the protection group. Either it is the working or the protect entity. Not applicable to the ONS 15600 Platform. Optional
	Parameter type is SIDE—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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.232 RTRV-T1

Retrieve T1 Facility

Usage Guidelines Cisco ONS 15454, 15327, 15310-CL

This command retrieves the DS-1 facilities configuration.

Note T1 facilities on the ONS 15327/15310-CL are on the XTC/15310-CL-CTX cards.

Category

Ports

Security

Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RTRV-T1:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-T1:TID:FAC-2-1:1223;

Input Parameters

Table 3-314 RTRV-T1 Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>::[LINECDE=<LINECDE>,][FMT=<FMT>,][LBO=<LBO>,][TACC=<TAP>,]
   [TAPTYPE=<TAPTYPE>,][SOAK=<SOAK>,][SOAKLEFT=<SOAKLEFT>,]
   [SFBER=<SFBER>,][SDBER=<SDBER>,][NAME=<NAME>]:<PST_PSTQ>,[<SSTQ>]"
;
```

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\":OOS-AU,AINS"
;
```

Output Parameters

Table 3-315 RTRV-T1 Output Parameters

Parameter and Values	Description
AID	Access identifier from the "SYNC_REF" section on page 4-56
LINECDE	Line code. Optional
	Parameter type is LINE_CODE—line code
• AMI	Line code value is AMI
• B8ZS	Line code value is B8ZS (bipolar with three-zero substitution)
FMT	Digital signal frame format. Optional
	Parameter type is FRAME_FORMAT—frame format for a T1 port
• D4	Frame format is D4
• ESF	Frame format is ESF
• UNFRAMED	Frame format is unframed

Table 3-315 RTRV-T1 Output Parameters (continued)

Parameter and Values	Description
LBO	Line build out settings. Integer. Optional
	Parameter type is LINE_BUILDOUT—Line buildout
• 0–131	Line buildout range is 0–131
• 132–262	Line buildout range is 132–262
• 263–393	Line buildout range is 263–393
• 394–524	Line buildout range is 394–524
• 525–655	Line buildout range is 525–655
TAP	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. Optional
TAPTYPE	TAP type. Optional
	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. Integer. Optional
SOAKLEFT	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. String. Optional Rules for <SOAKLEFT> are as follows: • When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed. • 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	The port signal failure threshold. Defaults to 1E-4. Optional
	Parameter type is SF_BER—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. Defaults to 1E-7. Optional
	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

Table 3-315 RTRV-T1 Output Parameters (continued)

Parameter and Values	Description
• 1E-8	SDBER is 1E-8
• 1E-9	SDBER is 1E-9
NAME	Port name. String. Optional
PST_PSTQ	Primary state
	Parameter type is PST_PSTQ—service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ)
• IS-NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SSTQ	Secondary state. Optional
	Parameter type is SST—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

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.233 RTRV-T3

Retrieve T3

Usage Guidelines

Cisco ONS 15454, 15327, 15310-CL

This command retrieves the facility properties of a DS3 and a DS3XM card.

Notes:

1. T3 facilities on the ONS 15327/15310-CL are on the XTC/15310-CL-CTX cards.
2. CTC can set the FMT attribute of a DS3(N)E line to autoprovision to set the framing based on the framing is coming in. This would result in the FMT field being blanked out for a few seconds blanked forever for a preprovisioned DS3(N)E card on CTC.

3. 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).
4. TL1 does not have the autoprovision mode according to GR-199. TL1 maps/returns the autoprovision to be unframed.
5. For the DS3XM-12 card, the DS3/T3 configurable attributes (PM, TH, alarm, etc.) only apply on the ported ports (1-12) 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.
6. For the DS3XM-12 card, if the admin state is already set for a portless port the state setting operation over its associated ported port is an invalid operation.

Category Ports

Security Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RTRV-T3:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-T3:CISCO:FAC-1-2:123;

Input Parameters

Table 3-316 RTRV-T3 Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>::[FMT=<FMT>,][LINECDE=<LINECDE>,][LBO=<LBO>,]
   [INHFELPBK=<INHFELPBK>,][TACC=<TAP>,][TAPTYPE=<TAPTYPE>,]
   [SOAK=<SOAK>,][SOAKLEFT=<SOAKLEFT>,][SFBER=<SFBER>,][SDBER=<SDBER>,]
   [NAME=<NAME>]:<PST_PSTQ>,[<SSTQ>]"
;
```

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\":OOS-AU,AINS"
;
```

Output Parameters

Table 3-317 RTRV-T3 Output Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45
FMT	Digital signal format. Optional
	Parameter type is DS_LINE_TYPE—DS123 line type
• C-BIT	C-BIT line type applies to the DS3XM and DS3E cards
• M13	M13 line type applies to the DS3XM and DS3E cards
• UNFRAMED	Line type is unframed. The old DS3 (L3M) and DS3CR cards can only run in unframed mode
LINECDE	Line code. Optional
	Parameter type is DS_LINE_CODE—DS123 line code
• B3ZS	Bipolar with three-zero substitution
LBO	Line build out settings. Integer. Optional
	Parameter type is E_LBO—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	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. Optional

Table 3-317 RTRV-T3 Output Parameters (continued)

Parameter and Values	Description
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
TAP	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. Optional
TAPTYPE	TAP type. Optional
	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. Integer. Optional
SOAKLEFT	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. String. Optional Rules for <SOAKLEFT> are as follows: • When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed. • 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	The port signal failure threshold. Defaults to 1E-4. Optional
	Parameter type is SF_BER—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. Defaults to 1E-7. Optional
	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
NAME	Port name. String. Optional
PST_PSTQ	Primary state

Table 3-317 RTRV-T3 Output Parameters (continued)

Parameter and Values	Description
	Parameter type is PST_PSTQ—service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ)
• IS-NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management
SSTQ	Secondary state. Optional
	Parameter type is SST—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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.234 RTRV-TACC

Retrieve Test Access

Usage Guidelines Cisco ONS 15454, 15327, 15600

This command retrieves details associated with a TAP. The TAP is identified by the TAP number. The ALL input TAP value means that the command will return all the configured TACCs in the NE.

Category Troubleshooting and Test Access

Security Retrieve

Related Commands

CHG-ACCMD-<MOD_TACC> CONN-TACC-<MOD_TACC> DISC-TACC

Input Format

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

Input Example

RTRV-TACC:CISCO:241:CTAG;

Input Parameters

Table 3-318 RTRV-TACC Input Parameters

Parameter and Values	Description
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. String. TAP must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<TAP>:<TACC_AIDA>,<TACC_AIDB>,[<MD>],[<CROSSCONNECTID1>],
   [<CROSSCONNECTID2>]"
;
```

Output Example

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

Output Parameters

Table 3-319 RTRV-TACC Output Parameters

Parameter and Values	Description
TAP	The assigned number for the AID being used as a test access point. Integer
TACC_AIDA	Access identifier from the "CrossConnectId" section on page 4-31. The A path of the test access point. The first STS/VT path of the TAP
TACC_AIDB	Access identifier from the "CrossConnectId" section on page 4-31. 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	Test access mode. It identifies the mode of access between the TAP and the circuit connected to the TAP. Optional Parameter type is TACC_MODE—test access mode

Table 3-319 RTRV-TACC Output Parameters (continued)

Parameter and Values	Description
• LOOPE	Indicates to split both the A and B paths. Connect the line incoming from E direction to the line outgoing in the E direction, and connect this looped configuration to the FAD. The line outgoing in the F direction shall have a QRS connected, and the line incoming from the F direction shall be terminated by the nominal characteristic impedance of the line. 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
CROSSCONNECTID1	Access identifier from the "CrossConnectId" section on page 4-31. The E path of the cross-connect. Optional
CROSSCONNECTID2	Access identifier from the "CrossConnectId" section on page 4-31. The F path of the cross-connect. Optional

Errors Errors are listed in Table 4-11 on page 4-5

3.2.235 RTRV-TH-<MOD2>

Retrieve Threshold (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, D1VIDEO, DS1, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, VT2)

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the threshold level of one or more monitored parameters.

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

Notes:

1. After the BLSR switching, the working path is switched out, the traffic goes through the protection path and the threshold can be retrieved from the protection path.
2. If there is a STS PCA on the protection path, during the BLSR switching, the PCA path is pre-emptive; sending this command on the protection path after BLSR switch, the command returns the PMs off the protection path, not from the PCA path.

   The message is issued to retrieve the thresholds for PM and the alarm thresholds. If it is used to retrieve the alarm thresholds, the time-period is not applicable.

   The presentation rules are as follows: Client port only–Laser, Alarm and SONET Thresholds are applicable and will be displayed. Laser and alarm thresholds are only for Near End. If the card payload is in SONET mode, then SONET Thresholds will be displayed. The Receiver Temperature Montypes (RXT) are only applicable to the Trunk Port. The Transceiver Voltage Montypes (XCVR) are not applicable, though it is displayed or handled.

   Laser and Alarm thresholds are always available. Laser and alarm thresholds are only for Near End. If G.709 is enabled, then the OTN thresholds will be displayed. If G.709 is enabled and FEC is enabled, then the FEC thresholds will be displayed. If the card payload is in SONET mode, then SONET Thresholds will be displayed. The Transceiver Voltage Montypes (XCVR) are not applicable, though it is displayed or handled.

See the "Provisioning Rules for Transponder and Muxponder Cards" section on page 1-10 for specific card provisioning rules.

Category Performance

Security Retrieve

Related Commands

ALW-PMREPT-ALL
DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
DLT-RMONTH-<MOD2_RMON>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
ENT-RMONTH-<MOD2_RMON>
INH-PMREPT-ALL
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMMODE-<STS_PATH>
RTRV-PMSCHED-<MOD2>
RTRV-PMSCHED-ALL
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-RMONTH-<MOD2_RMON>
RTRV-T1
RTRV-T3
RTRV-TH-ALL
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-PMMODE-<STS_PATH>

Input Format

RTRV-TH-<MOD2>:[<TID>]:<AID>:<CTAG>::[<MONTYPE>],[<LOCN>],<TMPER>[::];

Input Example

RTRV-TH-T3:CISCO:FAC-1-3:1234::CVL,NEND,15-MIN;

Input Parameters

Table 3-320 RTRV-TH-<MOD2> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17. Must not be null
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 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 1/10th of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as 1/10th of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• 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
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• 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
• ESR	Errored Second—Ratio

Table 3-320 RTRV-TH-<MOD2> Input Parameters (continued)

Parameter and Values	Description
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as 1/10th of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as 1/10th of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• FCP	Failure Count—Line
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in uA
• LBCL-MIN	Max Laser Bias current in uA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-MAX	Maximum value for LBCN
• LOSSL	Loss of Signal Seconds—Line
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OBED	FEC—One Bit Errors Detected
• OPR-AVG	Average Receive Power in 1/10 uW
• OPR-MAX	Maximum Receive Power in 1/10 uW
• OPR-MIN	Minimum Receive Power in 1/10 uW
• 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 1/10 uW
• OPT-MAX	Maximum Transmit Power in 1/10 uW
• OPT-MIN	Minimum Transmit Power in 1/10uW
• 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 1/10th of dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in 1/10th of dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in 1/10th of dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification

Table 3-320 RTRV-TH-<MOD2> Input Parameters (continued)

Parameter and Values	Description
• 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
• SES-PM	OTN—Severely Errored Second—Path
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• 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
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as 1/10th of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as 1/10th of a percentage
• SESS	Severely Errored Second—Section
• SESV	Severely Errored Second—VT Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second - Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count

Table 3-320 RTRV-TH-<MOD2> Input Parameters (continued)

Parameter and Values	Description
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
	Parameter type is LOCATION—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
	Parameter type is TMPER—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

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "FAC-1-3,DS3:CVL,NEND,,1,15-MIN"
;
```

Output Parameters

Table 3-321 RTRV-TH-<MOD2> Output Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17. Must not be null
AIDTYPE	Type of facility, link or other addressable entity targeted by the message. Optional
	Parameter type is MOD2B—alarm type
• 1GFC	1 Gigabit Fiber Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fiber Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 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	GIG Ethernet port alarm
• MIC	MIC alarm (ONS 15327)
• MIC-EXT	MIC-EXT (ONS 15327)
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS port alarm
• STS1	STS1 alarm
• STS3C	STS3C alarm
• STS6C	STS6C alarm
• STS9C	STS9C alarm
• STS18C	STS18C alarm

Table 3-321 RTRV-TH-<MOD2> Output Parameters (continued)

Parameter and Values	Description
• 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
• XTC	XTC alarm (ONS 15327)
MONTYPE	Monitored type
	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 1/10th of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as 1/10th of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• 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
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• 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)

Table 3-321 RTRV-TH-<MOD2> Output Parameters (continued)

Parameter and Values	Description
• ESP	Errored Seconds—Path
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as 1/10th of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as 1/10th of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• FCP	Failure Count—Line
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in uA
• LBCL-MIN	Max Laser Bias current in uA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-MAX	Maximum value for LBCN
• LOSSL	Loss of Signal Seconds—Line
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OBED	FEC—One Bit Errors Detected
• OPR-AVG	Average Receive Power in 1/10 uW
• OPR-MAX	Maximum Receive Power in 1/10 uW
• OPR-MIN	Minimum Receive Power in 1/10 uW
• 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 1/10 uW
• OPT-MAX	Maximum Transmit Power in 1/10 uW
• OPT-MIN	Minimum Transmit Power in 1/10uW
• 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 1/10th of dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in 1/10th of dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in 1/10th of dBm

Table 3-321 RTRV-TH-<MOD2> Output Parameters (continued)

Parameter and Values	Description
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SES-PM	OTN—Severely Errored Second—Path
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• 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
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as 1/10th of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as 1/10th of a percentage
• SESS	Severely Errored Second—Section
• SESV	Severely Errored Second—VT Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second - Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count

Table 3-321 RTRV-TH-<MOD2> Output Parameters (continued)

Parameter and Values	Description
LOCN	Location associated with a particular command. Optional
	Parameter type is LOCATION—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. Float
TMPER	Accumulation time period for performance counters. Optional
	Parameter type is TMPER—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.

Errors Errors are listed in Table 4-11 on page 4-5

3.2.236 RTRV-TH-ALL

Retrieve Threshold All

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the threshold level of all monitored parameters on the NE.

Notes:

1. After the BLSR switching, the working path is switched out, the traffic goes through the protection path and the threshold can be retrieved from the protection STS path.

2. If there is a STS PCA on the protection path, during the BLSR switching, the PCA path is pre-emptive; sending this command on the protection path after BLSR switch, the command returns the PMs off the protection path, not from the PCA path.
3. Multiple RTRV completion codes will be seen after the execution of this command according to GR-1831-CORE for bulk retrievals. The final completion code after the multiple RTRV codes is COMPLD.
4. Some monitored types are not available for some cards or cross-connect types. In that case, a 0 value will be displayed for the monitored type. This will happen only in the scenario where a user requests the thresholds of a specific monitored parameter on the NE and the monitored type does not apply to that card or cross-connect type. When the user does not filter by monitored type, the applicable thresholds will be retrieved.
5. If the user requests the thresholds of a particular monitored type and if the monitored type is not applicable to some of the entities, DENY will not be returned.

See the "Provisioning Rules for Transponder and Muxponder Cards" section on page 1-10 for specific card provisioning rules.

Category

Performance

Security

Retrieve

Related Commands

ALW-PMREPT-ALL	RTRV-PM-<MOD2>	RTRV-TH-<MOD2>
INH-PMREPT-ALL	RTRV-PMMODE-<STS_PATH>	SCHED-PMREPT-<MOD2>
INIT-REG-<MOD2>	RTRV-PMSCHED-<MOD2>	SET-PMMODE-<STS_PATH>
REPT PM <MOD2>	RTRV-PMSCHED-ALL	SET-TH-<MOD2>

Input Format

RTRV-TH-ALL:[<TID>]::<CTAG>::[<MONTYPE>],[<LOCATION>],[<TMPER>][::];

Input Example

RTRV-TH-ALL:CHARGERS6::123::CVL,NEND,15-MIN;

Input Parameters

Table 3-322 RTRV-TH-ALL Input Parameters

Parameter and Values	Description
MONTYPE	Monitored type. A null value defaults to ALL
	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

Table 3-322 RTRV-TH-ALL Input Parameters (continued)

Parameter and Values	Description
• BBER-PM	OTN—Background Block Error Ratio—Path Monitor Point expressed as 1/10th of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as 1/10th of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• 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
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• 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
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as 1/10th of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as 1/10th of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• FCP	Failure Count—Line
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in uA
• LBCL-MIN	Max Laser Bias current in uA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-MAX	Maximum value for LBCN

Table 3-322 RTRV-TH-ALL Input Parameters (continued)

Parameter and Values	Description
• LOSSL	Loss of Signal Seconds—Line
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OBED	FEC—One Bit Errors Detected
• OPR-AVG	Average Receive Power in 1/10 uW
• OPR-MAX	Maximum Receive Power in 1/10 uW
• OPR-MIN	Minimum Receive Power in 1/10 uW
• 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 1/10 uW
• OPT-MAX	Maximum Transmit Power in 1/10 uW
• OPT-MIN	Minimum Transmit Power in 1/10uW
• 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 1/10th of dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in 1/10th of dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in 1/10th of dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SES-PM	OTN—Severely Errored Second—Path
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESCPP	Severely Errored Second—CP-Bit Path

Table 3-322 RTRV-TH-ALL Input Parameters (continued)

Parameter and Values	Description
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second - Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as 1/10th of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as 1/10th of a percentage
• SESS	Severely Errored Second—Section
• SESV	Severely Errored Second—VT Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second - Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
LOCATION	The location. A null value defaults to NEND
	Parameter type is LOCATION—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
	Parameter type is TMPER—accumulation time period for the performance management counter
• 1-DAY	Performance parameter accumulation interval length—every 24 hours
• 1-HR	Performance parameter accumulation interval length—every 1 hour
• 1-MIN	Performance parameter accumulation interval length—every 1 minute
• 15-MIN	Performance parameter accumulation interval length—every 15 minutes
• 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>,<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

Table 3-323 RTRV-TH-ALL Output Parameters

Parameter and Values	Description
AID	Access identifier from the "AidUnionId" section on page 4-25
AIDTYPE	Specifies the type of facility, link, or other addressable entity targeted by the message
	Parameter type is MOD2B—alarm type for certain generic TL1 commands
• 1GFC	1 Gigabit Fiber Channel
• 1GFICON	1 Gigabit FICON
• 2GFC	2 Gigabit Fiber Channel
• 2GFICON	2 Gigabit FICON
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FC	Fiber Channel alarm
• FSTE	FSTE alarm
• G1000	G1000 alarm
• GIGE	GIGE alarm
• MIC	MIC alarm (ONS 15327)
• MIC-EXT	MIC-EXT Alarm (ONS 15327)
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section

Table 3-323 RTRV-TH-ALL Output Parameters (continued)

Parameter and Values	Description
• POS	POS alarm
• 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
• XTC	ONS 15327 XTC alarm
MONTYPE	Monitored type. A null value defaults to ALL
	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 1/10th of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as 1/10th of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• 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
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point

Table 3-323 RTRV-TH-ALL Output Parameters (continued)

Parameter and Values	Description
• 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
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as 1/10th of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as 1/10th of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• FCP	Failure Count—Line
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in uA
• LBCL-MIN	Max Laser Bias current in uA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-MAX	Maximum value for LBCN
• LOSSL	Loss of Signal Seconds—Line
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OBED	FEC—One Bit Errors Detected
• OPR-AVG	Average Receive Power in 1/10 uW
• OPR-MAX	Maximum Receive Power in 1/10 uW
• OPR-MIN	Minimum Receive Power in 1/10 uW
• 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 1/10 uW
• OPT-MAX	Maximum Transmit Power in 1/10 uW
• OPT-MIN	Minimum Transmit Power in 1/10uW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card

Table 3-323 RTRV-TH-ALL Output Parameters (continued)

Parameter and Values	Description
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in 1/10th of dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in 1/10th of dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in 1/10th of dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SES-PM	OTN—Severely Errored Second—Path
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• 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
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as 1/10th of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as 1/10th of a percentage
• SESS	Severely Errored Second—Section
• SESV	Severely Errored Second—VT Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second - Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path

Table 3-323 RTRV-TH-ALL Output Parameters (continued)

Parameter and Values	Description
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
LOCATION	The location. A null value defaults to NEND
	Parameter type is LOCATION—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. Float
TMPER	The accumulation time period for performance counters. A null value defaults to 15-MIN
	Parameter type is TMPER—accumulation time period for the performance management counter
• 1-DAY	Performance parameter accumulation interval length—every 24 hours
• 1-HR	Performance parameter accumulation interval length—every 1 hour
• 1-MIN	Performance parameter accumulation interval length—every 1 minute
• 15-MIN	Performance parameter accumulation interval length—every 15 minutes
• RAW-DATA	Performance parameter accumulation interval length—starting from the last time the counters were cleared. This is only applicable to RMON-managed PMs

Errors Errors are listed in Table 4-11 on page 4-5.

3.2.237 RTRV-TOD

Retrieve Time of Day

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the system date and time at the instant when the command was executed. The time returned is in Coordinated Universal Time (UTC).

Category System

Security Retrieve

Related Commands

ACT-USER	ED-TRAPTABLE	RTRV-MAP-NETWORK
ALW-MSG-ALL	ENT-TRAPTABLE	RTRV-NE-APC
ALW-MSG-DBCHG	INH-MSG-ALL	RTRV-NE-GEN
ALW-MSG-SECU	INH-MSG-DBCHG	RTRV-NE-IPMAP
COPY-RFILE	INH-MSG-SECU	RTRV-NE-PATH
DLT-TRAPTABLE	INIT-SYS	RTRV-NE-SYNCN
ED-DAT	REPT EVT FXFR	RTRV-NE-WDMANS
ED-NE-GEN	RTRV-HDR	RTRV-TRAPTABLE
ED-NE-PATH	RTRV-INV	SET-TOD
ED-NE-SYNCN		

Input Format

RTRV-TOD:[<TID>]::<CTAG>;

Input Example

RTRV-TOD:CAZADERO::230;

Input Parameters

Table 3-324 RTRV-TOD Input Parameters

Parameter and Values	Description
—	

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<YEAR>,<MONTH>,<DAY>,<HOUR>,<MINUTE>,<SECOND>,<TMTYPE>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "1998,05,08,17,01,33,UTC"
;
```

Output Parameters

Table 3-325 RTRV-TOD Output Parameters

Parameter and Values	Description
YEAR	The current calendar year. String
MONTH	The month of the year. Ranges from 01 to 12. String
DAY	The day of the month. Ranges from 01 to 31. String
HOUR	The hour of the day. Ranges from 00 to 23. String

Table 3-325 RTRV-TOD Output Parameters (continued)

Parameter and Values	Description
MINUTE	The minute of the hour. Ranges from 00 to 59. String
SECOND	The second of the minute. Ranges from 00 to 59. String
TMTYPE	Identifies the time zone. String

Errors Errors are listed in Table 4-11 on page 4-5

3.2.238 RTRV-TRAPTABLE

Retrieve Trap Table

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves a trap destination entry identified by a specific trap destination address.

Category System

Security Retrieve

Related Commands

ACT-USER	ED-NE-SYNCN	RTRV-INV
ALW-MSG-ALL	ED-TRAPTABLE	RTRV-NE-GEN
ALW-MSG-DBCHG	ENT-TRAPTABLE	RTRV-NE-IPMAP
ALW-MSG-SECU	INH-MSG-ALL	RTRV-NE-PATH
DLT-TRAPTABLE	INH-MSG-DBCHG	RTRV-NE-SYNCN
ED-DAT	INH-MSG-SECU	RTRV-NE-WDMANS
ED-NE-GEN	INIT-SYS	RTRV-TOD
ED-NE-PATH	RTRV-HDR	SET-TOD

Input Format RTRV-TRAPTABLE:[<TID>]:[<AID>]:<CTAG>;

Input Example RTRV-TRAPTABLE::1.2.3.4:1;

Input Parameters

Table 3-326 RTRV-TRAPTABLE Input Parameters

Parameter and Values	Description
AID	Access identifier from the "IPADDR" section on page 4-47. 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

Table 3-327 RTRV-TRAPTABLE Output Parameters

Parameter and Values	Description
DEST	Access identifier from the "IPADDR" section on page 4-47
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. String
SNMPVERSION	SNMP version number. Defaults to SNMPv1 Parameter type is SNMP_VERSION—SNMP version
• SNMPV1	SNMP version 1 (default)
• SNMPV2	SNMP version 2

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.239 RTRV-TRC-<MOD2DWDMPAYLOAD>

Retrieve Trace (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, HDTV, ISC1, ISC3, PASSTHRU)

Usage Guidelines

Cisco ONS 15454

This command retrieves trace-related attributes on DWDM client facilities.

For the client port, only the J0 Section trace applies.

In transparent termination mode and SONET payload, the trace can be displayed (snoop mode) and the expected string provisioned. The sent string is the one that cannot be provisioned.

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 without a TRCLEVEL, the given MSGTYPE for all TRCLEVELS are displayed.

Category

DWDM

Security

Retrieve

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE ED-G1000
ED-GFP ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-ALMTH-<MOD2>
SET-TH-<MOD2>

Input Format

RTRV-TRC-<MOD2DWDMPAYLOAD>:[<TID>]:<SRC>:<CTAG>::[<MSGTYPE>],
[<TRCLEVEL>][::];

Input Example

RTRV-TRC-HDTV:CISCO:FAC-2-1-1:100::EXPTRC,J0;

Input Parameters

Table 3-328 RTRV-TRC-<MOD2DWDMPAYLOAD> Input Parameters

Parameter and Values	Description
SRC	Access identifier from the "FACILITY" section on page 4-45. Must not be null
MSGTYPE	Type of autonomous message to be retrieved. A null value is equivalent to ALL
	Parameter type is MSGTYPE—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. String
	Parameter type is TRCLEVEL—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
   "<AIDUNIONID>,<MOD1PAYLOAD>::[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
   "FAC-2-1-1,HDTV::TRCLEVEL=J0,EXPTRC=\"AAA\",TRC=\"AAA\",INCTRC=\"AAA\",
   TRCMODE=MAN,TRCFORMAT=16-BYTE"
;
```

Output Parameters

Table 3-329 RTRV-TRC-<MOD2DWDMPAYLOAD> Output Parameters

Parameter and Values	Description
AIDUNIONID	Access identifier from the "FACILITY" section on page 4-45
MOD1PAYLOAD	Payload type
	Parameter type is MO2DWDMPAYLOAD—payload types applicable to DWDM ports
• 10GFC	10 gigabit fiber channel payload
• 10GIGE	10 gigabit Ethernet
• 1GFC	1 gigabit fiber channel payload

Table 3-329 RTRV-TRC-<MOD2DWDMPAYLOAD> Output Parameters (continued)

Parameter and Values	Description
• 1GFICON	1 gigabit FICON payload
• 2GFC	2 gigabit fiber channel payload
• 2GFICON	2 gigabit FICON payload
• D1VIDEO	D1Video payload
• DV6000	DV6000 payload
• ETRCLO	ETRCLO payload
• GIGE	Gigabit Ethernet payload
• HDTV	HDTV payload
• ISC1	ISC1 payload
• ISC3	ISC3 payload
• PASSTHRU	Any pass through (2R) payload
TRCLEVEL	The trace level to be managed. A null value is equivalent to ALL. String
	Parameter type is TRCLEVEL—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	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. String. Optional
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. String. Optional
INCTRC	The incoming path trace message contents. String. Optional
TRCMODE	Trace mode. Optional
	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	Trace message size. Optional
	Parameter type is TRCFORMAT—trace format
• 1-BYTE	1 byte trace message

Table 3-329 RTRV-TRC-<MOD2DWDMPAYLOAD> Output Parameters (continued)

Parameter and Values	Description
• 16-BYTE	16 byte trace message
• 64-BYTE	64 byte trace message
• Y	Enable an attribute

Errors Errors are listed in Table 4-11 on page 4-5

3.2.240 RTRV-TRC-<OCN_BLSR>

Retrieve Trace Client (OC12, OC192, OC48)

Usage Guidelines Cisco ONS 15454, 15327, 15600

This command retrieves the valid J1 expected trace string, retrieved trace string, trace mode, C2 byte, and STS bandwidth of the OCn port only if the port has a BLSR.

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

Note This command only applies to OC48AS and OC192 cards.

Note Sending this command over unsupported BLSR path trace cards, or unequipped cards will result in a J1 Trace Not Supported On This Card (IIAC) error.

Category BLSR

Security Retrieve

Related Commands

DLT-<MOD_RING>	ENT-<MOD_RING>	RTRV-<MOD_RING>
ED-<MOD_RING>	EX-SW-<OCN_BLSR>	

Input Format RTRV-TRC-<OCN_BLSR>:[<TID>]:<AID>:<CTAG>;

Input Example RTRV-TRC-OC48:CISCO:FAC-6-1:238;

Input Parameters

Table 3-330 RTRV-TRC-<OCN_BLSR> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "FACILITY" section on page 4-45. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>::[LEVEL=<LEVEL>,][EXPTRC=<EXPTRC>,][INCTRC=<INCTRC>,]
   [TRCMODE=<TRCMODE>,][C2=<C2>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "STS-6-1-25::LEVEL=STS1,EXPTRC="EXPTRCSTRING",INCTRC="INCTRCSTRING",
   TRCMODE=AUTO,C2=0X04"
;
```

Output Parameters

Table 3-331 RTRV-TRC-<OCN_BLSR> Output Parameters

Parameter and Values	Description
AID	Access identifier from the "STS" section on page 4-50
LEVEL	The rate of the cross-connect. Optional
	Parameter type is STS_PATH—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)
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). String. Optional
INCTRC	The incoming path trace message contents. INCTRC is any combination of 64 characters including CR and LF. String. Optional
TRCMODE	Trace mode. Optional

Table 3-331 RTRV-TRC-<OCN_BLSR> Output Parameters (continued)

Parameter and Values	Description
	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
C2	The c2 byte hex code. Applicable only to STS-level paths in SONET (STSn). Optional
	Parameter type is C2_BYTE—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

Table 3-331 RTRV-TRC-<OCN_BLSR> Output Parameters (continued)

Parameter and Values	Description
• 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

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.241 RTRV-TRC-OCH

Retrieve Trace Optical Channel

Usage Guidelines

Cisco ONS 15454

This command retrieves the sent trace string, expected trace string, received trace string, trace mode, and the trace level for the SONET J0 Section, the TTI PATH and SECTION monitoring levels of the DWDM facility.

The following rules apply: Client port–only the J0 Section trace applies. The J0 Section trace applies only if the card termination mode is not transparent and the payload is SONET/SDH. On the DWDM port the J0 Section trace, the TTI Path, Section trace monitoring point traces are allowed. The J0 Section trace is allowed only if the payload for the card is set to SONET/SDH. The J0 Section trace is allowed only if the card termination mode is not transparent. The TTI Path, Section trace is allowed only if the G.709 (DWRAP) is enabled.

Depending on the settings, the following filtering applies: If no TRCLEVEL is provided, all TRCLEVELS are reported as applicable. If TRCLEVEL is provided and no MSGTYPE is provided, all applicable MSGTYPES for the given level is displayed. If no MSGTYPE is provided, all MSGTYPES are reported as applicable. If a MSGTYPE is provided with out a TRCLEVEL, then the given MSGTYPE for all TRCLEVELS are displayed.

Category DWDM

Security Retrieve

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-DWDM
DLT-LNKTERM	ED-WDMANS	RTRV-FFP-OCH
DLT-OSC	ED-WLEN	RTRV-LNK-<MOD2O>
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-LNKTERM
ED-DWDM	ENT-LNKTERM	RTRV-NE-WDMANS
ED-FFP-OCH	ENT-OSC	RTRV-OCH
ED-LNK-<MOD2O>	ENT-WLEN	RTRV-OMS
ED-LNKTERM	OPR-LASER-OTS	RTRV-OSC
ED-OCH	OPR-PROTNSW-OCH	RTRV-OTS
ED-OMS	OPR-SLV-WDMANS	RTRV-PROTNSW-OCH
ED-OSC	OPR-WDMANS	RTRV-SLV-WDMANS
ED-OTS	RLS-LASER-OTS	RTRV-WDMANS
ED-SLV-WDMANS	RLS-PROTNSW-OCH	RTRV-WLEN

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

Table 3-332 RTRV-TRC-OCH Input Parameters

Parameter and Values	Description
SRC	Access identifier from the "CHANNEL" section on page 4-30. Must not be null
MSGTYPE	Type of autonomous message to be retrieved. A null value is equivalent to ALL
	Parameter type is MSGTYPE—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
	Parameter type is TRCLEVEL—the trace mode options
• J0	Identifies the SONET J0 Section trace level

Table 3-332 RTRV-TRC-OCH Input Parameters (continued)

Parameter and Values	Description
• 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

Table 3-333 RTRV-TRC-OCH Output Parameters

Parameter and Values	Description
CHANNEL	Access identifier from the "CHANNEL" section on page 4-30
MOD	Indicates an OCH AID type
	Parameter type is MOD2—line/path modifier
• 10GFC	10 Gigabit Fiber Channel
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit Fiber Channel
• 1GFICON	1 Gigabit FICON
• 2GFC	2 Gigabit Fiber Channel
• 2GFICON	2 Gigabit FICON
• D1VIDEO	D1 Video
• DS1	DS1 line of a DS3XM card
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETRCLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	Generic Framing Protocol over Packet Over SONET. Virtual Ports partitioned using GFP's Multiplexing Capability

Table 3-333 RTRV-TRC-OCH Output Parameters (continued)

Parameter and Values	Description
• GIGE	GIG Ethernet
• HDTV	HDTV
• ISC1	ISC1
• OC3	OC3 facility
• OC12	OC12 facility
• OC48	OC48 facility
• OC192	OC192 facility
• OCH	Optical channel
• 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
• SYNCN	SYNCN alarm
• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 Path
• VT2	VT2 Path
TRCLEVEL	The trace level to be managed. Optional
	Parameter type is TRCLEVEL—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	Expected path trace content. A 64 character ASCII string. Optional
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. String. Optional
INCTRC	The incoming path trace message contents. String. Optional

Table 3-333 RTRV-TRC-OCH Output Parameters (continued)

Parameter and Values	Description
TRCMODE	Trace mode. Optional
	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	The size of the trace message. If in SONET/SDH mode, only 1 or 16 bytes is applicable for the J0 section trace. The TTI level trace is only 64 bytes. Optional
	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

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.242 RTRV-USER-SECU

Retrieve User Security

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command retrieves the security information of a specified user or list of users. The keyword ALL can be used to obtain a list of all users. For security reasons the password cannot be retrieved.

A Superuser can retrieve any user's security information. A user with MAINT, PROV, or RTRV privileges can only retrieve their own information.

Note When using the keyword ALL, all users created for the system are displayed. This includes users created outside of the TL1 environment (i.e., userids/passwords greater than 10 characters in length). Although displayed via the RTRV-USER-SECU command, these users will not be able to log into the TL1 environment.

Category

Security

Security

Superuser

Note Maintenance, Provisioning and Retrieve users can retrieve their own information only.

Related Commands

ACT-USER	DLT-USER-SECU	REPT ALM SECU
ALW-MSG-SECU	ED-CMD-SECU	REPT EVT SECU
ALW-USER-SECU	ED-PID	REPT EVT SESSION
CANC	ED-USER-SECU	RTRV-CMD-SECU
CANC-USER	ENT-USER-SECU	RTRV-DFLT-SECU
CANC-USER-SECU	INH-MSG-SECU	SET-ATTR-SECUDFLT
CLR-COND-SECU	INH-USER-SECU	

Input Format

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

Input Example

RTRV-USER-SECU::CISCO15:1;

Input Parameters

Table 3-334 RTRV-USER-SECU Input Parameters

Parameter and Values	Description
UID	User identifier. The userid or the keyword ALL. A non-superuser can only specify his own userid. Must not be null. 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

Table 3-335 RTRV-USER-SECU Output Parameters

Parameter and Values	Description
UID	User identifier. The userid that was retrieved. String
PRIVILEGE	The privilege level of the user Parameter type is PRIVILEGE—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
LOGGEDIN	Indicates if the user is logged in to the NE Parameter type is YES_NO—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	The number of times the user is logged into the NE. Integer. Optional
LOCKEDOUT	Indicates if the user is locked out of the NE. Optional Parameter type is YES_NO—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

Table 3-335 RTRV-USER-SECU Output Parameters (continued)

Parameter and Values	Description
DISABLED	Indicates if the user is disabled. Optional Parameter type is YES_NO—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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.243 RTRV-VCG

Retrieve Virtual Concatenated Group

Usage Guidelines Cisco ONS 15454, 15310-CL

This command retrieves all the attributes provisioned for a VCG.

Category VCAT

Security Retrieve

Related Commands

DLT-VCG ED-VCG ENT-VCG

Input Format RTRV-VCG:[<TID>]:<SRC>:<CTAG>[::::];

Input Example RTRV-VCG:NODE1:FAC-1-1:1234;

Input Parameters

Table 3-336 RTRV-VCG Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "FACILITY" section on page 4-45. ML1000-2 and ML100T-12 cards use the VFAC AID. The FC_MR-4 card uses the FAC AID. Must not be null

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

Table 3-337 RTRV-VCG Output Parameters

Parameter and Values	Description
SRC	Source access identifier from the "FACILITY" section on page 4-45. 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 common language equipment identifier (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 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 VCG members in the 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. Integer
CCT	Type of connection; one-way or two-way. Cross-connect type for the VCG member cross-connects Parameter type is CCT—type of cross-connect to be created

Table 3-337 RTRV-VCG Output Parameters (continued)

Parameter and Values	Description
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	Path protection mcast drop with (1-way) continue
• 1WAYEN	Path protection mcast end node (1-way continue)
• 1WAYMON	A bidirectional connection between the two tributaries **Note** Starting with ONS 15454 R3.0 and ONS 15327 R3.3, 1WAYMON is not supported with TL1. However, it is still supported from CTC. Using CTC you can create 1WAYMON cross-connects and can be retrieved via TL1.
• 1WAYPCA	A unidirectional connection from a source tributary to a destination tributary on the protection path/fiber
• 2WAY	A bidirectional connection between the two tributaries
• 2WAYDC	A Bidirectional Drop and Continue connection applicable only to path protection Traditional and Integrated Dual Ring InterConnections
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber
• DIAG	Diagnostics cross-connect. Supports BERT (BLSR PCA diagnostics cross-connect)
LCAS	Link capacity adjustment scheme. Optional Parameter type is LCAS—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	Buffer type. The default value is DEFAULT. The FC_MR-4 card supports DEFAULT and EXPANDED buffers. Other data cards support DEFAULT buffers only. Optional Parameter type is BUFFER_TYPE—buffer type (used in VCAT)
• DEFAULT	Default buffer value
• EXPANDED	Expanded buffer value
NAME	Name of the VCAT group. String. Optional
PST	Primary state. Optional Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service

Errors Errors are listed in Table 4-11 on page 4-5

3.2.244 RTRV-VT

Retrieve Virtual Tributary

Usage Guidelines

Cisco ONS 15454

This command retrieves the attributes associated with a VT path based on the granularity level of NE/Slot-specific VTs.

Supported AIDs are ALL, SLOT-N (N=1,2,...ALL), VT-<SLOT>[-<PORT>]-<STS NUMBER>-<VT GROUP>-<VT NUMBER>.

Note The RVRTV, RVTM, HOLDOFFTIMER and UPSRPTHSTATE parameters only apply to path protection.

Category Paths

Security Retrieve

Related Commands

RTRV-<PATH> RTRV-STS

Input Format

RTRV-VT:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-VT:TID:VT1-1-1-1-1:1;

Input Parameters

Table 3-338 RTRV-VT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "AidUnionId" section on page 4-25. Must not be null

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

Table 3-339 RTRV-VT Output Parameters

Parameter and Values	Description
AID	Access identifier from the "AidUnionId" section on page 4-25
LEVEL	The rate of the cross-connect. Indicates the rate of the cross connected channel. Applicable only to VT1 path in SONET. Optional
	Parameter type is VT_PATH—modifier for some VT commands
• VT1	Virtual Tributary 1
• VT2	Virtual Tributary 2
RVRTV	Revertive mode. Only applies to path protection. The value Y indicates that the protection switching system reverts service to the original line after restoration. The value N indicates that the 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. Optional
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute
RVTM	Revertive time. Only applies to path protection. Defaults to empty because RVRTV is N when a path protection path is created. Optional
	Parameter type is REVERTIVE_TIME—revertive time
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
HOLDOFFTIMER	Hold off timer. Integer. Optional
TACC	Test access. Indicates whether the digroup being provisioned is to be used as a test access digroup. Defaults to N. Optional
TAPTYPE	TAP type. Optional
	Parameter type is TAPTYPE—test access point type
• DUAL	Dual FAD
• SINGLE	Single FAD

Table 3-339 RTRV-VT Output Parameters (continued)

Parameter and Values	Description
UPSRPTHSTATE	Indicates whether a given AID is the working or standby path of a path protection cross-connect. Optional
	Parameter type is STATUS—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
	Parameter type is PST—indicates the current overall service condition of an entity
• IS	In service
• OOS	Out of service
SST	Secondary state
	Parameter type is SST—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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.245 RTRV-WDMANS

Retrieve Wavelength Division Multiplexing Automatic Node Setup

Usage Guidelines Cisco ONS 15454

This command edits the automatic optical node setup (AONS) application attributes.

Category DWDM

Security

Maintenance

Related Commands

DLT-LNK-<MOD2O>	ED-TRC-OCH	RTRV-DWDM
DLT-LNKTERM	ED-WDMANS	RTRV-FFP-OCH
DLT-OSC	ED-WLEN	RTRV-LNK-<MOD2O>
DLT-WLEN	ENT-LNK-<MOD2O>	RTRV-LNKTERM
ED-DWDM	ENT-LNKTERM	RTRV-NE-WDMANS
ED-FFP-OCH	ENT-OSC	RTRV-OCH
ED-LNK-<MOD2O>	ENT-WLEN	RTRV-OMS
ED-LNKTERM	OPR-LASER-OTS	RTRV-OSC
ED-OCH	OPR-PROTNSW-OCH	RTRV-OTS
ED-OMS	OPR-WDMANS	RTRV-PROTNSW-OCH
ED-OSC	RLS-LASER-OTS	RTRV-TRC-OCH
ED-OTS	RLS-PROTNSW-OCH	RTRV-WLEN

Input Format

RTRV-WDMANS:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-WDMANS:PENNGROVE:WDMANS-W:114;

Input Parameters

Table 3-340 RTRV-WDMANS Input Parameters

Parameter and Values	Description
AID	Access identifier from the "WDMANS" section on page 4-59. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
  "<AID>::[POWERIN=<POWERIN>,][POWEROUT=<POWEROUT>,]
  [POWEREXP=<POWEREXP>,][NTWTYPE=<NTWTYPE>,]
  [OPTICALTYPE=<OPTICALTYPE>,][LASTRUNDAT=<LASTRUNDAT>,]
  [LASTRUNTM=<LASTRUNTM>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
  "WDMANS-W::POWERIN=10.0,POWEROUT=10.0,POWEREXP=10.0,
  NTWTYPE=METRO-CORE,OPTICALTYPE=OADM,LASTRUNDAT=01-01-01,
  LASTRUNTM=10-55-00"
;
```

Output Parameters

Table 3-341 RTRV-WDMANS Output Parameters

Parameter and Values	Description
AID	Access identifier from the "WDMANS" section on page 4-59
POWERIN	Input power for an OADM section of an OADM NE. Float. Optional
POWEROUT	Output power for an OADM or Mux/Demux section of HUB, TERMINAL or OADM nodes. Float. Optional
POWEREXP	Express power for a Mux/Demux section of a HUB or TERMINAL NE. Float. Optional
NTWTYPE	Type of network with DWDM node installed. Optional
	Parameter type is DWDM_RING_TYPE—network type where NE is installed
• METRO-ACCESS	The network where a DWDM node is installed is a metro access network
• METRO-CORE	The network where a DWDM node is installed is a metro core network
• NONE	A node that does not have a standard DWDM configuration
OPTICALTYPE	The optical configuration type for the NE. Optional
	Parameter type is OPTICAL_NODE_TYPE—optical configuration types for NEs
• HUB	A terminal site EAST, WEST or both with 32 channel mux/demux card
• LINE-AMPLIFIED	A line site with booster card
• OADM	A site with OADM cards
• OSC-REG	An OSC regeneration site with only 2 OSC-CSM cards in both sides
• ROADM	A site with R-OADM cards
• TDM-HYBRID	A TDM node with an amplifier directly connected to a TXP/MXP card
• UNKNOWN	The node type is undefined
LASTRUNDAT	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. Optional
LASTRUNTM	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. Optional

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.246 RTRV-WLEN

Retrieve Wavelength

Usage Guidelines

Cisco ONS 15454

This command retrieves the wavelength provisioning information.

Category

DWDM

Security

Retrieve

Related Commands

DLT-LNK-<MOD2O>	ED-OTS	RTRV-DWDM
DLT-LNKTERM	ED-TRC-OCH	RTRV-FFP-OCH
DLT-OSC	ED-WLEN	RTRV-LNK-<MOD2O>
DLT-WDMANS	ENT-LNK-<MOD2O>	RTRV-LNKTERM
DLT-WLEN	ENT-LNKTERM	RTRV-NE-WDMANS
ED-DWDM	ENT-OSC	RTRV-OCH
ED-FFP-OCH	ENT-WLEN	RTRV-OMS
ED-LNK-<MOD2O>	OPR-LASER-OTS	RTRV-OSC
ED-LNKTERM	OPR-PROTNSW-OCH	RTRV-OTS
ED-OCH	OPR-WDMANS	RTRV-PROTNSW-OCH
ED-OMS	RLS-LASER-OTS	RTRV-TRC-OCH
ED-OSC	RLS-PROTNSW-OCH	RTRV-WDMANS

Input Format

RTRV-WLEN:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-WLEN:PENNGROVE:WLEN-W-ADD-1530.33:114;

Input Parameters

Table 3-342 RTRV-WLEN Input Parameters

Parameter and Values	Description
AID	Access identifier from the "WLEN" section on page 4-59. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:<CCT>:[SIZE=<SIZE>,][CKTID=<CKTID>]:<PST_PSTQ>,[<SSTQ>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "WLEN-W-ADD-1530.33:1WAY:SIZE=MULTI-RATE,CKTID=CKTID:OOS-AU,AINS"
;
```

Output Parameters

Table 3-343 RTRV-WLEN Output Parameters

Parameter and Values	Description
AID	Access identifier from the "WLEN" section on page 4-59
CCT	The wavelength connection type
	Parameter type is WCT—wavelength connection types
• 1WAY	A unidirectional wavelength connection for one specified ring direction
• 2WAY	A bidirectional wavelength connection for both ring directions
SIZE	Size of the switching network. Optional
	Parameter type is CIRCUIT_SIZE—the DWDM circuit size used on a wavelength
• 10G-FEC	The circuit size is 10 Gbps with FEC
• 10G-NO-FEC	The circuit size is10 Gbps without FEC
• 2G5-FEC	The circuit size is 2.5 Gbps with FEC
• 2G5-NO-FEC	The circuit size is 2.5 Gbps without FEC
• MULTI-RATE	The circuit size is supports multi-rate
• NOT-SPEC	The circuit size is not equipment specific
CKTID	Circuit identification parameter that contains the common language circuit ID or other alias of the circuit being provisioned. Cannot contain blank spaces. CKTID is a string of ASCII characters with a maximum length of 48 characters. String. Optional
PST_PSTQ	The primary state and the primary state qualifier separated by a colon
	Parameter type is PST_PSTQ—service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ)
• IS-NR	In service - normal
• OOS-AU	Out of service - autonomous
• OOS-AUMA	Out of service - autonomous and management
• OOS-MA	Out of service - management

Table 3-343 RTRV-WLEN Output Parameters (continued)

Parameter and Values	Description
SST	One or more secondary states separated by & in alphabetical order. Optional Parameter type is SST—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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.247 SCHED-PMREPT-<MOD2>

Schedule Performance Monitoring Report (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, D1VIDEO, DS1, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, VT2)

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command schedules/reschedules the NE to report the performance monitoring data for a line facility or for an STS/VT path periodically, using the automatic REPT PM message. This command can also remove the previously created schedule.

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

The automatic performance monitoring reporting scheduled by this command is inhibited by default. ALW-PMREPT-ALL can be used to allow the NE to send the performance monitoring report. INH-PMREPT-ALL can be used to stop the NE from sending the performance monitoring report. The schedules created for the NE can be retrieved by RTRV-PMSCHED command.

The deletion of the schedule for the automatic performance monitoring reporting can be done by issuing SCHED-PMREPT-<MOD2> with the <NUMREPT> parameter equal to zero.

Notes:

1. The current maximum number of schedules allowed to be created for a NE is 1000. If this number of schedules has been created for the NE, an error message “Reach Limits Of MAX Schedules Allowed. Can Not Add More” will be returned if another schedule creation is attempted on the NE. Frequent use of automatic performance monitoring reporting will significantly degrade the performance of the NE.
2. A schedule cannot be created if the card associated with the schedule is not provisioned, or if the cross-connection associated with the schedule has not been created. However, a schedule is allowed to be deleted even if a card is not provisioned, or if the cross-connection has not been created.
3. The number of outstanding performance monitoring reports counter <NUMREPT> will not be decremented, and the scheduled automatic performance monitoring reporting will not start if the card associated with the schedule is not physically plugged into the slot.
4. An expired schedule would not be automatically removed. The SCHED-PMREPT command has to be issued with the <NUMREPT> parameter equal to zero in order to delete the expired schedule.
5. Identical schedules for an NE is not allowed. Two schedules are considered identical if they have the same AID, MOD2 type, performance monitor type, performance monitor level, location, direction and time period.

   An error message “Duplicate Schedule” is returned when trying to create a schedule which is a duplicate of a existing schedule. However, if the existing schedule expires (with the parameter <NUMINVL> equal to zero when retrieved by the RTRV-PMSCHED command, i.e., no more performance monitoring reporting sent) the new schedule with the identical parameter will replace the existing schedule.
6. When a electrical or optical card is unprovisioned by the DLT-EQPT command, or a cross-connection is deleted by the DLT-CRS command, the schedules associated with that card or that cross-connection will be removed silently by the NE. This removal prevents another type of card or cross-connection with the same AID to be provisioned on the NE, and prevents the NE from trying to send automatic performance monitoring reports based on the existing schedules.

   The card or cross connect can be unprovisioned or deleted through CTC. The schedules associated with that card or that cross-connection will also be removed silently by the NE.
7. When creating schedules on an ONS 15327 XTC card, only schedules against the working XTC card (in Slot 6) are allowed. An error message “Can Not Create Schedule On Protect Card” will be returned if you try to create a schedule on protect XTC card in Slot 5.

Category Performance

Security Retrieve

Related Commands

ALW-PMREPT-ALL
DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
DLT-RMONTH-<MOD2_RMON>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
ENT-RMONTH-<MOD2_RMON>
INH-PMREPT-ALL
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMMODE-<STS_PATH>
RTRV-PMSCHED-<MOD2>
RTRV-PMSCHED-ALL
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-RMONTH-<MOD2_RMON>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TH-ALL
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SET-ALMTH-<MOD2>
SET-PMMODE-<STS_PATH>

Input Format

SCHED-PMREPT-<MOD2>:[<TID>]:<SRC>:<CTAG>::[<REPTINVL>],[<REPTSTATM>],[<NUMREPT>],,[<MONLEV>],[<LOCN>],,[<TMPER>],[<TMOFST>];

Input Example

SCHED-PMREPT-OC3:NE-NAME:FAC-3-1:123::60-MIN,15-30,100,,1-UP,NEND,,15-MIN,0-0-15;

Input Parameters

Table 3-344 SCHED-PMREPT-<MOD2> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17. Must not be null
REPTINVL	Reporting interval. How often a report is to generated and sent to the appropriate OS. 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, or VAL is 1 to 24 if UN is HR, or VAL is 1 to 1440 if UN is MIN. Examples are: 10-DAY, or 12-HR, or 100-MIN. A null value for the input defaults to 15-MIN. 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	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. String
NUMREPT	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. Integer
MONLEV	The discriminating level of the requested monitored parameter. It applies to all MONTYPE 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. String
LOCN	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 Parameter type is LOCATION—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

Table 3-344 SCHED-PMREPT-<MOD2> Input Parameters (continued)

Parameter and Values	Description
TMPER	Accumulation time period for performance counters. Defaults to 15-MIN. Optional Parameter type is TMPER—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	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 OC48 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. String

Errors

Errors are listed in Table 4-11 on page 4-5.

3.2.248 SET-ALMTH-<MOD2>

Set Alarm Threshold (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, D1VIDEO, DS1, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, VT2)

Usage Guidelines

Cisco ONS 15454, 15327, 15310-CL

This command sets the alarm thresholds on the following cards/ports/channels: MXP_2.5G_10G/TXP_MR_10G, optical service channel, optical amplifier, dispersion compensation units, multiplex/demultiplex and OADM.

The only applicable MOD2 values are CLNT/OCH/OMS/OTS.

Category

DWDM

Security

Provisioning

Related Commands

DLT-<MOD1PAYLOAD>
DLT-FFP-<MOD2DWDMPAYLOAD>
DLT-FFP-<OCN_TYPE>
ED-<GIGE_TYPE>
ED-<MOD1FCPAYLOAD>
ED-<MOD1FICONPAYLOAD>
ED-<MOD2DWDMPAYLOAD>
ED-<OCN_TYPE>
ED-ALS
ED-DS1
ED-EC1
ED-FFP-<MOD2DWDMPAYLOAD>
ED-FFP-<OCN_TYPE>
ED-FSTE
ED-G1000
ED-GFP
ED-HDLC
ED-POS
ED-T1
ED-T3
ED-TRC-<MOD2DWDMPAYLOAD>
ED-TRC-<OCN_TYPE>
ENT-<MOD1PAYLOAD>
ENT-FFP-<MOD2DWDMPAYLOAD>
ENT-FFP-<OCN_TYPE>
INIT-REG-<MOD2>
OPR-ALS
OPR-LPBK-<MOD2>
OPR-PROTNSW-<MOD2DWDMPAYLOAD>
OPR-PROTNSW-<OCN_TYPE>
REPT PM <MOD2>
RLS-LPBK-<MOD2>
RLS-PROTNSW-<MOD2DWDMPAYLOAD>
RLS-PROTNSW-<OCN_TYPE>
RMV-<MOD2>
RST-<MOD2>
RTRV-<MOD1FCPAYLOAD>
RTRV-<MOD1FICONPAYLOAD>
RTRV-<MOD2DWDMPAYLOAD>
RTRV-<OCN_TYPE>
RTRV-10GIGE
RTRV-ALMTH-<MOD2>
RTRV-ALS
RTRV-DS1
RTRV-EC1
RTRV-FAC
RTRV-FFP-<MOD2DWDMPAYLOAD>
RTRV-FFP-<OCN_TYPE>
RTRV-FSTE
RTRV-G1000
RTRV-GFP
RTRV-GIGE
RTRV-HDLC
RTRV-PM-<MOD2>
RTRV-PMSCHED-<MOD2>
RTRV-POS
RTRV-PROTNSW-<MOD2DWDMPAYLOAD>
RTRV-PROTNSW-<OCN_TYPE>
RTRV-T1
RTRV-T3
RTRV-TH-<MOD2>
RTRV-TRC-<MOD2DWDMPAYLOAD>
RTRV-TRC-<OCN_TYPE>
SCHED-PMREPT-<MOD2>
SET-TH-<MOD2>

Input Format

SET-ALMTH-<MOD2>:[<TID>]:<AID>:<CTAG>::<CONDTYPE>,<THLEV>[,,,];

Input Example

SET-ALMTH-{MOD2}::FAC-1-1:1::OPT-LOW,10;

Input Parameters

Table 3-345 SET-ALMTH-<MOD2> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17. Must not be null
CONDTYPE	Condition type for an alarm or a reported event
	Parameter type is ALM_THR—alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B cards
• BATV-EHIGH	Battery Voltage - Extremely High
• BATV-ELOW	Battery Voltage - Extremely Low
• BATV-HIGH	Battery Voltage - High
• BATV-LOW	Battery Voltage - Low
• GAIN-HDEG	Gain not reached—High Degrade Threshold
• GAIN-HFAIL	Gain not reached—High Failure Threshold
• GAIN-LDEG	Gain not reached—Low Degrade Threshold
• GAIN-LFAIL	Gain not reached—Low Failure Threshold
• LBCL-HIGH	Laser Bias current in uA as 1/10% High Warning Threshold, Low Warning Threshold Measured value [0.0%, 100.0%]
• OPR-HIGH	Receive power in 1/10 uW Measured value [-40.0 dBm,+30.0 dBm]
• OPR-LOW	Receive power in 1/10 uW Measured value [-40.0 dBm,+30.0 dBm
• OPT-HIGH	Transmit power in 1/10 uW. Measured value [-40.0 dBm,+30.0 dBm]
• OPT-LOW	Transmit power in 1/10 uW. Measured value [-40.0 dBm,+30.0 dBm]
• OPWR-HDEG	Optical Power—High Degrade Threshold
• OPWR-HFAIL	Optical Power—High Failure Threshold
• OPWR-LDEG	Optical Power—Low Degrade Threshold
• OPWR-LFAIL	Optical Power—Low Failure Threshold
• 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. Float

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.249 SET-ALMTH-EQPT

Set Alarm Equipment

Usage Guidelines

Cisco ONS 15454, 15310-CL

This command sets the alarm thresholds to manage the power level monitoring on an NE.

Category

Equipment

Security

Provisioning

Related Commands

ALW-SWDX-EQPT	INH-SWTOPROTN-EQPT	RTRV-ALMTH-EQPT
ALW-SWTOPROTN-EQPT	INH-SWTOWKG-EQPT	RTRV-COND-EQPT
ALW-SWTOWKG-EQPT	REPT ALM EQPT	RTRV-EQPT
DLT-EQPT	REPT EVT EQPT	SW-DX-EQPT
ED-EQPT	REPT RMV EQPT	SW-TOPROTN-EQPT
ENT-EQPT	REPT RST EQPT	SW-TOWKG-EQPT
INH-SWDX-EQPT	RTRV-ALM-EQPT	

Input Format

SET-ALMTH-EQPT:[<TID>]::<CTAG>::<ALMTHTYPE>,<THLEV>[,,,];

Input Example

SET-ALMTH-EQPT:::1::BATV-HIGH,-53.5;

Input Parameters

Table 3-346 SET-ALMTH-EQPT Input Parameters

Parameter and Values	Description
ALMTHTYPE	Alarm threshold type Parameter type is ALM_THR—alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B cards
• BATV-EHIGH	Battery Voltage - Extremely High
• BATV-ELOW	Battery Voltage - Extremely Low
• BATV-HIGH	Battery Voltage - High
• BATV-LOW	Battery Voltage - Low

Table 3-346 SET-ALMTH-EQPT Input Parameters (continued)

Parameter and Values	Description
• GAIN-HDEG	Gain not reached—High Degrade Threshold
• GAIN-HFAIL	Gain not reached—High Failure Threshold
• GAIN-LDEG	Gain not reached—Low Degrade Threshold
• GAIN-LFAIL	Gain not reached—Low Failure Threshold
• LBCL-HIGH	Laser Bias current in uA as 1/10% High Warning Threshold, Low Warning Threshold Measured value [0.0%, 100.0%]
• OPR-HIGH	Receive power in 1/10 uW Measured value [-40.0 dBm,+30.0 dBm]
• OPR-LOW	Receive power in 1/10 uW Measured value [-40.0 dBm,+30.0 dBm
• OPT-HIGH	Transmit power in 1/10 uW. Measured value [-40.0 dBm,+30.0 dBm]
• OPT-LOW	Transmit power in 1/10 uW. Measured value [-40.0 dBm,+30.0 dBm]
• OPWR-HDEG	Optical Power—High Degrade Threshold
• OPWR-HFAIL	Optical Power—High Failure Threshold
• OPWR-LDEG	Optical Power—Low Degrade Threshold
• OPWR-LFAIL	Optical Power—Low Failure Threshold
• 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. Float

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.250 SET-ATTR-CONT

Set Attribute Control

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command sets the attributes associated with an external control. The attributes are used when an external control is operated or released. To send the attributes, use the RTRV-ATTR-CONT command.

Notes:

1. If the <CONTTYPE> parameter is not specified, the control specified by <AID> is unprovisioned.
2. A control should be unprovisioned before it is reprovisioned to another type of control.

Category

Environment

Security

Provisioning

Related Commands

OPR-ACO-ALL	RLS-EXT-CONT	RTRV-COND-ENV
OPR-EXT-CONT	RTRV-ALM-ENV	RTRV-EXT-CONT
REPT ALM ENV	RTRV-ATTR-CONT	SET-ATTR-ENV
REPT EVT ENV	RTRV-ATTR-ENV	SET-ATTR-SECUDFLT

Input Format

SET-ATTR-CONT:[<TID>]:<AID>:<CTAG>::<CONTTYPE>;

Input Example

SET-ATTR-CONT:CISCO:ENV-OUT-1:123::AIRCOND;

Input Parameters

Table 3-347 SET-ATTR-CONT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ENV" section on page 4-42. Identifies the external control for which attributes are being retrieved
CONTTYPE	Environmental control type. A null value is equivalent to ALL
	Parameter type is CONTTYPE—Environmental control types
• AIRCOND	Air conditioning
• ENGINE	Engine
• FAN	Fan
• GEN	Generator
• HEAT	Heat
• LIGHT	Light
• MISC	Miscellaneous
• SPKLR	Sprinkler

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.251 SET-ATTR-ENV

Set Attribute Environment

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command sets the attributes associated with an external control.

Notes:

1. If the <NTFCNCDE>, <ALMTYPE>, and <ALMMSG> parameters are omitted, the environmental alarm specified by <AID> is unprovisioned.
2. An alarm should be unprovisioned and you should wait for any raised alarm to clear before reprovisioning the alarm to another alarm type.

Category

Environment

Security

Provisioning

Related Commands

OPR-ACO-ALL	RLS-EXT-CONT	RTRV-COND-ENV
OPR-EXT-CONT	RTRV-ALM-ENV	RTRV-EXT-CONT
REPT ALM ENV	RTRV-ATTR-CONT	SET-ATTR-CONT
REPT EVT ENV	RTRV-ATTR-ENV	SET-ATTR-SECUDFLT

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

Table 3-348 SET-ATTR-ENV Input Parameters

Parameter and Values	Description
AID	Access identifier from the “ENV” section on page 4-42. Must not be null
NTFCNCDE	Two-letter notification code. Must not be null

Table 3-348 SET-ATTR-ENV Input Parameters (continued)

Parameter and Values	Description
	Parameter type is NOTIF_CODE—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
	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
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUSE	Fuse failure
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature

Table 3-348 SET-ATTR-ENV Input Parameters (continued)

Parameter and Values	Description
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 Volt power supply failure
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• SMOKE	Smoke
• TOXICGAS	Toxic gas
• VENTN	Ventilation system failure
ALMMSG	Alarm message. String. Must not be null

Errors Errors are listed in Table 4-11 on page 4-5

3.2.252 SET-ATTR-SECUDFLT

Set Attribute Security Default

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command sets the system-wide default values associated with several security parameters.

The following parameters are set on a system-wide basis for all users and all privilege levels: MXINV, DURAL, UOUT, PFRCD, POLD, PINT, and LOGIN. The PRIVLVL keyword cannot be used to set these parameters for a specific privilege level.

The following parameters are set on a privilege-level basis: PAGE, PCND, and 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.

Category

Security

Security

Superuser

Related Commands

ACT-USER	ENT-USER-SECU	RTRV-ALM-ENV
ALW-MSG-SECU	INH-MSG-SECU	RTRV-ATTR-CONT
ALW-USER-SECU	INH-USER-SECU	RTRV-ATTR-ENV
CANC	OPR-ACO-ALL	RTRV-CMD-SECU
CANC-USER	OPR-EXT-CONT	RTRV-COND-ENV
CANC-USER-SECU	REPT ALM ENV	RTRV-DFLT-SECU
CLR-COND-SECU	REPT ALM SECU	RTRV-EXT-CONT
DLT-USER-SECU	REPT EVT ENV	RTRV-USER-SECU
ED-CMD-SECU	REPT EVT SECU	SET-ATTR-CONT
ED-PID	REPT EVT SESSION	SET-ATTR-ENV
ED-USER-SECU	RLS-EXT-CONT	

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>];

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;

Input Parameters

Table 3-349 SET-ATTR-SECUDFLT Input Parameters

Parameter and Values	Description
PAGE	Password aging interval. It is the number of days before a user is prompted to change his/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. Integer
PCND	Number of days a password can be used before a new one is mandatory (i.e., the warning period). Default is 5 days. PCND ranges from 2 to 20 days. Integer

Table 3-349 SET-ATTR-SECUDFLT Input Parameters (continued)

Parameter and Values	Description
MXINV	Maximum number of consecutive and invalid session setup attempts allowed to occur before an intrusion attempt is suspected (i.e., "Failed Logins Before Lockout" from CTC). 0 indicates the policy is turned off. Default is 5. MXINV ranges from 0 to 10. Integer
DURAL	Time interval (in seconds) during which a userid is locked out when an intrusion attempt is suspected (i.e., 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. 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 0 for RTRV users, 60 minutes for MAINT users, 30 minutes for PROV users, and 15 minutes for SUPER users. 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 45 to 90 days. Integer
PFRCD	Indicates a password change is required when a new user establishes a session to the NE for the first time (i.e., "Require password change on 1st login"). Default is NO Parameter type is YES_NO—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 (i.e.,"Prevent reusing last X passwords"). Default is 1. POLD ranges from 0 to 10. 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. 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 (i.e., CTC, TL1, etc.). Default is MUL TIPLE Parameter type is USER_LOGINS—the number of times a user can log into the same NE with the same userid
• 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)
UAP	User's access privilege

Table 3-349 SET-ATTR-SECUDFLT Input Parameters (continued)

Parameter and Values	Description
	Parameter type is PRIVILEGE—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

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.253 SET-PMMODE-<STS_PATH>

Set Performance Mode of PM Data Collection (STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C)

Usage Guidelines

Cisco ONS 15454

This command sets the mode and turns the PM data collection mode on or off.

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

The PM mode and state of an entity are retrieved by using the RTRV-PMMODE command.

Notes:

1. The near end monitoring of the intermediate-path PM (IPPM) only supports OC-3, OC-12, OC-48, OC-48AS, OC-192, and EC-1 on STS Path.
2. The far end PM data collection is not supported in this release.
3. This release of software will support only the Path (P) mode type PM parameters with this command, that is, this command is not applicable for Line (L) and Section (S) mode types.

   The PM monitoring for Line (L) and Section (S) are supported by the ONS 15454, and the storing PM data is always performed.

Category

Performance

Security

Provisioning

Related Commands

ALW-PMREPT-ALL	REPT PM <MOD2>	RTRV-RMONTH-<MOD2_RMON>
DLT-RMONTH-<MOD2_RMON>	RTRV-PM-<MOD2>	RTRV-TH-<MOD2>
ENT-RMONTH-<MOD2_RMON>	RTRV-PMMODE-<STS_PATH>	RTRV-TH-ALL
INH-PMREPT-ALL	RTRV-PMSCHED-<MOD2>	SCHED-PMREPT-<MOD2>
INIT-REG-<MOD2>	RTRV-PMSCHED-ALL	SET-TH-<MOD2>

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

Table 3-350 SET-PMMODE-<STS_PATH> Input Parameters

Parameter and Values	Description
SRC	Source access identifier from the "CrossConnectId" section on page 4-31
LOCN	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. Only the near end PM data collection is supported
	Parameter type is LOCATION—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
	Parameter type is PM_MODE—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
	Parameter type is PM_STATE—directs the named PM mode type - path (P) state
• OFF	Disable the mode
• ON	Enable the mode

Errors

Errors are listed in Table 4-11 on page 4-5.

3.2.254 SET-TH-<MOD2>

Set Threshold (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, D1VIDEO, DS1, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, VT2)

Usage Guidelines

Cisco ONS 15454, 15327, 15600, 15310-CL

This command sets the threshold for PM and sets the alarm thresholds for the MXP_2.5G_10G/TXP_MR_10G cards. If this command is used to set the alarm thresholds, the time-period is not applicable.

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

The rules are as follows: The PM Thresholds have a default of NEND for the location. The Alarm Thresholds do not require or interpret the location. The TMPER is not applicable to alarm thresholds. The TMPER default is 15-MIN. The client ports only accept SONET, Laser and alarm MONTYPES. The trunk ports accept SONET, Laser, alarm, FEC, OTN and 8B10B MONTYPES.

See the "Provisioning Rules for Transponder and Muxponder Cards" section on page 1-10 for specific card provisioning rules.

Category

Performance

Security

Provisioning

Related Commands

ALW-PMREPT-ALL	REPT PM <MOD2>	RTRV-RMONTH-<MOD2_RMON>
DLT-RMONTH-<MOD2_RMON>	RTRV-PM-<MOD2>	RTRV-TH-<MOD2>
ENT-RMONTH-<MOD2_RMON>	RTRV-PMMODE-<STS_PATH>	RTRV-TH-ALL
INH-PMREPT-ALL	RTRV-PMSCHED-<MOD2>	SCHED-PMREPT-<MOD2>
INIT-REG-<MOD2>	RTRV-PMSCHED-ALL	SET-TH-<MOD2>

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

Table 3-351 SET-PMMODE-<STS_PATH> Input Parameters

Parameter and Values	Description
AID	Access identifier from the "ALL" section on page 4-17. All the STS, VT1, Facility, and DS1 AIDs are supported
MONTYPE	Monitored type
	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 1/10th of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as 1/10th of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• 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
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• 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
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as 1/10th of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as 1/10th of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point

Table 3-351 SET-PMMODE-<STS_PATH> Input Parameters (continued)

Parameter and Values	Description
• FCP	Failure Count—Line
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in uA
• LBCL-MIN	Max Laser Bias current in uA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-MAX	Maximum value for LBCN
• LOSSL	Loss of Signal Seconds—Line
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OBED	FEC—One Bit Errors Detected
• OPR-AVG	Average Receive Power in 1/10 uW
• OPR-MAX	Maximum Receive Power in 1/10 uW
• OPR-MIN	Minimum Receive Power in 1/10 uW
• 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 1/10 uW
• OPT-MAX	Maximum Transmit Power in 1/10 uW
• OPT-MIN	Minimum Transmit Power in 1/10uW
• 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 1/10th of dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in 1/10th of dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in 1/10th of dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span

Table 3-351 SET-PMMODE-<STS_PATH> Input Parameters (continued)

Parameter and Values	Description
• 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
• SES-PM	OTN—Severely Errored Second—Path
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• 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
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as 1/10th of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as 1/10th of a percentage
• SESS	Severely Errored Second—Section
• SESV	Severely Errored Second—VT Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second - Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
THELV	Threshold level. Float
LOCN	Location associated with a particular command
	Parameter type is LOCATION—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. Optional
	Parameter type is TMPER—accumulation time period for the performance management center

Table 3-351 SET-PMMODE-<STS_PATH> Input Parameters (continued)

Parameter and Values	Description
• 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.

Errors Errors are listed in Table 4-11 on page 4-5.

3.2.255 SET-TOD

Set Time of Day

Usage Guidelines Cisco ONS 15454, 15327, 15600, 15310-CL

This command sets the system date and time for the NE. The year should be entered using four digits while the hour should be entered using a 24-hour time period (i.e., military time).

Category System

Security Provisioning

Related Commands

ACT-USER	ED-TRAPTABLE	RTRV-MAP-NETWORK
ALW-MSG-ALL	ENT-TRAPTABLE	RTRV-NE-APC
ALW-MSG-DBCHG	INH-MSG-ALL	RTRV-NE-GEN
ALW-MSG-SECU	INH-MSG-DBCHG	RTRV-NE-IPMAP
COPY-RFILE	INH-MSG-SECU	RTRV-NE-PATH
DLT-TRAPTABLE	INIT-SYS	RTRV-NE-SYNCN
ED-DAT	REPT EVT FXFR	RTRV-NE-WDMANS
ED-NE-GEN	RTRV-HDR	RTRV-TOD
ED-NE-PATH	RTRV-INV	RTRV-TRAPTABLE
ED-NE-SYNCN		

Input Format

SET-TOD:[<TID>]::<CTAG>::<YEAR>,<MONTH>,<DAY>,<HOUR>,<MINUTE>,<SECOND>,[<DIFFERENCE>][:DST=<DST>];

Input Example

SET-TOD:CAZADERO::240::1998,05,08,13,18,55,480:DST=Y;

Input Parameters

Table 3-352 SET-TOD Input Parameters

Parameter and Values	Description
YEAR	The current calendar year. Integer
MONTH	The month of the year. Ranges from 01 to 12. Integer
DAY	The day of the month. Ranges from 01 to 31. Integer
HOUR	The hour of the day. Ranges from 00 to 23. Integer
MINUTE	The minute of the hour. Ranges from 00 to 59. Integer
SECOND	The second of the minute. Ranges from 00 to 59. Integer
DIFFERENCE	The number of minutes off UTC. Integer
DST	Daylight savings time
	Parameter type is ON_OFF—disable or enable an attribute
• N	Disable an attribute
• Y	Enable an attribute

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.256 SW-DX-EQPT

Switch Duplex Equipment

Usage Guidelines

Cisco ONS 15454, 15600

This command switches an XCVT/XC10G card with the mate card within the NE.

Note If sending a mode parameter with a value other than NORM, FRCD, or NULL, the IDNV (Input, Data Not Valid) error message will be returned.

Category

Equipment

Security

Maintenance

Related Commands

ALW-SWDX-EQPT	INH-SWDX-EQPT	RTRV-ALMTH-EQPT
ALW-SWTOPROTN-EQPT	INH-SWTOPROTN-EQPT	RTRV-COND-EQPT
ALW-SWTOWKG-EQPT	INH-SWTOWKG-EQPT	RTRV-EQPT
DLT-EQPT	REPT ALM EQPT	SET-ALMTH-EQPT
ED-EQPT	REPT EVT EQPT	SW-TOPROTN-EQPT
ENT-EQPT	RTRV-ALM-EQPT	SW-TOWKG-EQPT
EX-SW-<OCN_BLSR>		

Input Format

SW-DX-EQPT:[<TID>]:<AID>:<CTAG>::[<MODE>][,];

Input Example

SW-DX-EQPT:CISCO:SLOT-1:123::FRCD;

Input Parameters

Table 3-353 SW-DX-EQPT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "EQPT" section on page 4-43. Identifies the equipment unit in the NE that is to be switched with it's mate
MODE	Command mode

Table 3-353 SW-DX-EQPT Input Parameters (continued)

Parameter and Values	Description
	Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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

Errors Errors are listed in Table 4-11 on page 4-5

3.2.257 SW-TOPROTN-EQPT

Switch to Protection Equipment

Usage Guidelines Cisco ONS 15454

This command performs an equipment unit protection switch.

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

This command will switch the traffic from the working card specified in the AID to the protect card.

There is a priority for the switch to protection commands. In a 1:N protection group with N > 1, consider two working cards - A and B. Card A is switched to the protect card with the SW-TOPROTN command. If card B is pulled from the system, the protect card will carry the traffic of card B and card A will raise the FAILTOSW condition and carry traffic. When card B is replaced and the revert timer expires, card B will carry traffic and card A will switch to the protect card. The FAILTOSW condition on card A will be cleared. Note:1:N protection groups in the system are always revertive.

In a revertive protection group, the unit specified by the AID will raise the standing condition of WKSWPR if the command were executed without an error. In a non-revertive protection group, the unit specified by the AID will raise the transient condition of WKSWPR if the command were executed without an error.

Notes:

1. The default PROTID is the protecting unit if there is only one protection unit per protection group in the NE, otherwise a DENY error message will be responsed.
2. This command only supports one value of the <DIRN> parameter - BTH or null. A command with any other value is considered an incorrect use of the command. An IDNV (Input, Data Not Valid) error message will be responsed.

3. This command is not used for the common control (TCC2/TCC2P or XCVT/XC10G) cards. A command on a common control card will generate an IIAC (Input, Invalid Access Identifier) error message. To use the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
4. This command is not used for SONET (OCN) cards. A command on a SONET card will generate an IIAC (Input, Invalid Access Identifier) error message. To use a SONET card switching command, use the OPR-PROTNSW and RLS-PROTNSW commands.
5. If this command is used on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message will be responsed.
6. If this command is sent to a missing working card, the SWFA (Status, Working Unit Failed) error message will be responsed.
7. If this command is used on a protection card, the IIAC (Input, Invalid Access Identifier) error message will be responsed.
8. If sending a mode parameter with a value other than NORM, FRCD, or null, the IDNV (Input, Data Not Valid) error message will be responsed.
9. If sending the SW-TOPROTN command to a working card when the working card has raised INHSWPR, the SWLD (Status, Working Unit Locked) error message will be responsed.
10. If sending the SW-TOPROTN command to a working card when the protection card has raised INHSWPR, the SPLD (Status, Protection Unit Locked) error message will be responsed.
11. If sending the SW-TOPROTN command to an active working card when the protect card is already carrying traffic. This only occurs in a 1:N protection group with N greater than one, the SNVS (Status, Not in Valid State) error message will be responsed.
12. If sending the SW-TOPROTN command to an active working card when the protect card is failed or missing, the SPFA (Status, Protection Unit Failed) error message will be responsed.
13. If sending this command to a standby working card, the SNVS (Status, Not in Valid State) error message will be responsed.

Category Equipment

Security Maintenance

Related Commands

ALW-SWDX-EQPT	INH-SWDX-EQPT	RTRV-ALMTH-EQPT
ALW-SWTOPROTN-EQPT	INH-SWTOPROTN-EQPT	RTRV-COND-EQPT
ALW-SWTOWKG-EQPT	INH-SWTOWKG-EQPT	RTRV-EQPT
DLT-EQPT	REPT ALM EQPT	SET-ALMTH-EQPT
ED-EQPT	REPT EVT EQPT	SW-DX-EQPT
ENT-EQPT	RTRV-ALM-EQPT	SW-TOWKG-EQPT
EX-SW-<OCN_BLSR>		

Input Format SW-TOPROTN-EQPT:[<TID>]:<AID>:<CTAG>::[<MODE>],[<PROTID>],[<DIRN>];

Input Example

SW-TOPROTN-EQPT:CISCO:SLOT-1:123::FRCD,SLOT-3,BTH;

Input Parameters

Table 3-354 SW-TOPROTN-EQPT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "EQPT" section on page 4-43. Specifies the working unit which will have traffic switched to protection
MODE	Mode with which the command is to be implemented.The parameter will only support the NORM value. A null value defaults to NORM. Sending the FRCD value for will generate the same switching behavior as sending the NORM value
	Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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	Access identifier from the "PRSLOT" section on page 4-49. Identifies the protection unit to be switched when there is more than one protection unit within the NE. Optional
DIRN	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
	Parameter type is DIRECTION—transmit and receive directions
• BTH	Both transmit and receive directions

Errors

Errors are listed in Table 4-11 on page 4-5

3.2.258 SW-TOWKG-EQPT

Switch to Working Equipment

Usage Guidelines

Cisco ONS 15454

This command switches the protected working unit back to working unit.

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

This command will switch the traffic from the protection card to the working card specified by the AID.

In a revertive protection group, the unit specified by the AID will clear the standing condition of WKSWPR if the command were executed without an error. In a non-revertive protection group, the unit specified by the AID will raise the transient condition of WKSWBK if the command were executed without an error.

Notes:

1. This command only supports one value of the <DIRN> parameter - BTH or null. A command with any other value is considered an incorrect use of the command. An IDNV (Input, Data Not Valid) error message should be responsed
2. This command is not used for the common control (TCC2/TCC2P or XCVT/XC10G) cards. A command on a common control card will generate an IIAC (Input, Invalid Access Identifier) error message. To use the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
3. This command is not used for SONET (OCN) cards. A command on a SONET card will generate an IIAC (Input, Invalid Access Identifier) error message. To use a SONET card switching command, use the OPR-PROTNSW and RLS-PROTNSW commands.
4. If this command is used on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message will be responsed.
5. If this command is sent to a missing working card, the SWFA (Status, Working Unit Failed) error message will be responsed.
6. If this command is used on a protection card, the IIAC (Input, Invalid Access Identifier) error message will be responsed.
7. If sending a mode parameter with a value other than NORM, FRCD, or null, the IDNV (Input, Data Not Valid) error message will be responsed.
8. If sending the SW-TOWKG command to a working card when the working card has raised INHSWWKG, the SWLD (Status, Working Unit Locked) error message will be responsed.
9. If sending the SW-TOWKG command to a working card when the protection card has raised INHSWWKG, the SPLD (Status, Protection Unit Locked) error message will be responsed.
10. If sending the SW-TOWKG command to an active working card, the SNVS (Status, Not in Valid State) error message will be responsed.

Category

Equipment

Security

Maintenance

Related Commands

ALW-SWDX-EQPT
ALW-SWTOPROTN-EQPT
ALW-SWTOWKG-EQPT
DLT-EQPT
ED-EQPT
ENT-EQPT
EX-SW-<OCN_BLSR>
INH-SWDX-EQPT
INH-SWTOPROTN-EQPT
INH-SWTOWKG-EQPT
REPT ALM EQPT
REPT EVT EQPT
RTRV-ALM-EQPT
RTRV-ALMTH-EQPT
RTRV-COND-EQPT
RTRV-EQPT
SET-ALMTH-EQPT
SW-DX-EQPT
SW-TOWKG-EQPT

Input Format

SW-TOWKG-EQPT:[<TID>]:<AID>:<CTAG>::[<MODE>],[<DIRN>];

Input Example

SW-TOWKG-EQPT:CISCO:SLOT-2:123::FRCD,BTH;

Input Parameters

Table 3-355 SW-TOWKG-EQPT Input Parameters

Parameter and Values	Description
AID	Access identifier from the "PRSLOT" section on page 4-49. Specifies the working unit which will have traffic switched to protection
MODE	Mode with which the command is to be implemented.The parameter will only support the NORM value. A null value defaults to NORM. Sending the FRCD value for will generate the same switching behavior as sending the NORM value
	Parameter type is CMDMDE—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 in which the command would normally be denied
• FRC D	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	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
	Parameter type is DIRECTION—transmit and receive directions
• BTH	Both transmit and receive directions

Errors

Errors are listed in Table 4-11 on page 4-5

CHAPTER 4

TL1 Command Components

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

This chapter describes the components of TL1 commands and autonomous messages for the Cisco ONS 15454, 15327, 15600, 15310-CL, Release 5.0, including:

- TL1 default values
- Modifier support by platform
- Starting positions for an STS-Mc SPE
- Access identifiers (AIDs)
- Parameter Notes

4.1 TL1 Default Values

4.1.1 BLSR

Table 4-1 BLSR Default Values

BLSR	Default
RVRTV	Y
RVTM	5.0 minutes
SRVRTV	Y
SRVTM	5.0 minutes

4.1.2 Cross Connections

Table 4-2 Cross Connections Default Values

Cross Connections	Default
CCT	2WAY for both STSp and VT1 cross-connections

4.1.3 Environment Alarms and Controls

Table 4-3 Environment Alarms and Controls Default Values

Environment Alarms and Controls	Default
OPR-EXT-CONT	CONTTYPE is set as one provisioned in the respective AID, there is not default for it. It is only used as a filter if entered. DUR is always taken as CONT.
RTRV-ATTR-CONT	There is no default for CONTTYPE. It is only used as a filter if entered.
RTRV-ATTR-ENV	There is no default for both NTFCNCDE and ALMTYPE, which are only used as filters if entered.
RTRV-EXT-CONT	CONTTYPE defaults to the conttype associated with the AID.
SET-ATTR-ENV	NTFCNCDE defaults to NR. ALMTYPE defaults to NULL. ALMMSG defaults to \“Env Alarm Input 1\”.

4.1.4 Equipment

Table 4-4 Equipment Default Values

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

4.1.5 Performance

Table 4-5 Performance Default Values

Performance	Default
INIT-REG-<MOD2>	LOCN defaults to NEND (near end)
RTRV-PM-<MOD2>	LOCN defaults to NEND TMPER defaults to 15 minutes
RTRV-TH-<MOD2>	MONTYPE defaults to CVL for OCN, EC1, and DSN MONTYPE defaults to ESP for STSp MONTYPE defaults to UASV for VT1 MONTYPE defaults to AISSP for the DS1 layer of the DS3XM card LOCN defaults to NEND TMPER defaults to 15 minutes
SET-PMMODE-<STS_PATH>	PMSTATE defaults to ON
SET-TH-<MOD2>	LOCN defaults to NEND TMPER defaults to 15 minutes

4.1.6 Ports

Table 4-6 Ports Default Values

Ports	Default
OCN 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 SONET PST defaults to OOS
EC1 Line	PJMON defaults to 0 (zero) LBO defaults to 0-225 RXEQUAL is Y PST defaults to defaults to OOS
T1 Line (DS1/DS1N)	LINECDE defaults to AMI FMT defaults to D4 LBO defaults to 0-133 PST defaults to OOS
T3 Line (DS3, DS3E, DS3NE, DS3XM)	DS3/T3 LINECDE defaults to 0-225 DS3 PST defaults to OOS DS3E/DS3NE FMT defaults to UNFRAMED DS3E/DS3NE LINECDE defaults to B3ZS DS3E/DS3NE LBO defaults to 0-225 DS3 of DS3XM PST defaults to OOS

4.1.7 SONET Line Protection

Table 4-7 SONET Line Protection Default Values

SONET Line Protection	Default
EX-SW-<OCN>	ST (switch type) is optional and for BLSR protection switch only ST defaults to BLSR RING switch type
OCN Line Protection	PROTID defaults to the protecting port of the protection group (SLOT-#(OCN)PORT-#). It is a string that can have a maximum length of 32 characters RVRTV defaults to N (non-revertive mode) RVTM defaults to 5.0 minutes PSDIRN defaults to UNI
OPR-PROTNSW-<OCN>	ST (switch type) is optional and for BLSR protection switch only ST defaults to BLSR RING switch type

4.1.8 STS and VT Paths

Table 4-8 STS and VT Paths Default Values

STS and VT Paths	Default
STS Path	SFBER, SDBER, RVRTV, and RVTM apply to path protection STS paths only SFBER defaults to 1E-4 SDBER defaults to 1E-6 RVRTV defaults to N RVTM defaults to empty because RVRTV is N when path protection STSp is created J1 is implemented on DS1, DS1N, DS3, DS3E, DS3NE, DS3XM, EC1, OC3, OC48AS AND OC192 cards TRCMODE defaults to the OFF mode 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
VT Path	RVRTV, RVTM apply to path protection VT paths only RVRTV defaults to N RVTM defaults to empty because RVRTV is N when path protection VT1 is created

4.1.9 Synchronization

Table 4-9 Synchronization Default Values

Synchronization	Default
BITS	LINECDE defaults to B8ZS FMT defaults to ESF SYNCMSG defaults to Y PST defaults to OOS
NE-SYNCN	TMMDE defaults to EXTERNAL SSMGEN defaults to GEN1 QRES defaults to SAME-AS-DUS RVRTV defaults to Y RVTM defaults to 5.0 minutes
SYNCN	PRI/SEC QREF defaults to PRS PRI STATUS defaults to ACT SEC STATUS defaults to STBY THIRD QREF defaults to ST3 STATUS defaults to STBY

4.1.10 Testing

Table 4-10 Testing Default Values

Testing	Default
OPR-LPBK	LPBKTYPE defaults to FACILITY
RLS-LPBK	LPBKTYPE defaults to current existing loopback type

4.2 Modifier Support by Platform

Table 4-11 details the TL1 modifiers supported on the ONS SONET 15454, 15327, 15310-CL, and 15600 for commands that have carets (< >) in part of their input format; for example, RTRV-<OCN_TYPE>. A “Yes” in the platform column indicates that a particular modifier is supported in that platform. A “No” in the platform column indicates that a particular modifier is not supported in that platform. A “—” indicates that a particular modifier is not applicable to that platform.

Table 4-11 Modifier Support

Modifier	ONS 15454	ONS 15327	ONS 15310-CL	ONS 15600
DS1	Yes	—	—	—
EC1	Yes	—	Yes	—
T1	Yes	Yes	Yes	—
T3	Yes	Yes	Yes	—
VT1	Yes	Yes	Yes	—

Table 4-11 Modifier Support (continued)

Modifier	ONS 15454	ONS 15327	ONS 15310-CL	ONS 15600
STS1	Yes	Yes	Yes	Yes
STS3C	Yes	Yes	Yes	Yes
STS6C	Yes	Yes	Yes	No
STS9C	Yes	Yes	Yes	No
STS12C	Yes	Yes	Yes	Yes
STS24C	Yes	Yes	No	No
STS48C	Yes	Yes	No	Yes
STS192C	Yes	No	No	Yes
OC3	Yes	Yes	Yes	—
OC12	Yes	Yes	Yes	—
OC48	Yes	Yes	No	Yes
OC192	Yes	No	No	Yes
G1000	Yes	Yes	No	—
GIGE	Yes	No	No	—
FSTE	Yes	No	Yes	—
POS	Yes	No	Yes	—
E100	Yes	Yes	No	—
E1000	Yes	Yes	No	—
CLNT	Yes	No	No	—
OCH	Yes	No	No	—
OMS	No	—	—	—
OTS	No	—	—	—

4.3 Starting Positions for an STS-Mc SPE

Table 4-12, Table 4-13, and Table 4-14 list possible starting positions for the ONS 15454, ONS 15327, ONS 15310-CL and ONS 15600 STS-Mc SPE. In each of the tables a "Y" indicates "Yes, this position is supported" and an "N" indicates, "No, this position is not supported". More information about the generic NE support requirement can be found in *GR-253-CORE: Synchronous Optical Network (SONET) Transport Systems: Common Generic Criteria*.

Table 4-12 Starting Positions for an STS-Mc SPE in an OC-12 Signal

STS-1 Number	STS-3c SPE	STS-6c SPE	STS-9c SPE	STS-12c SPE
1	Y	Y	Y	Y
4	Y	Y	Y	N
7	Y	Y	N	N
10	Y	N	Y	N

Table 4-13 Starting Positions for an STS-Mc SPE in an OC-48 Signal

STS-1 Number	STS-3c SPE	STS-6c SPE	STS-9c SPE	STS-12c SPE	STS-24c SPE	STS-48c SPE
1	Y	Y	Y	Y	Y	Y
4	Y	Y	Y	N	Y	N
7	Y	Y	N	N	Y	N
10	Y	N	Y	N	Y	N
13	Y	Y	Y	Y	Y	N
16	Y	Y	Y	N	Y	N
19	Y	Y	Y	N	Y	N
22	Y	N	N	N	Y	N
25	Y	Y	Y	Y	Y	N
28	Y	Y	Y	N	N	N
31	Y	Y	N	N	N	N
34	Y	N	N	N	N	N
37	Y	Y	Y	Y	N	N
40	Y	Y	Y	N	N	N
43	Y	Y	N	N	N	N
46	Y	N	Y	N	N	N

Table 4-14 Starting positions for an STS-Mc SPE in an OC-192 Signal

STS-1 Number	STS-3c SPE	STS-6c SPE	STS-9c SPE	STS-12c SPE	STS-24c SPE	STS-48c SPE	STS-192c SPE
1	Y	Y	Y	Y	Y	Y	Y
4	Y	Y	Y	N	N	N	N
7	Y	Y	N	N	N	N	N
10	Y	N	Y	N	N	N	N
13	Y	Y	Y	Y	N	N	N
16	Y	Y	Y	N	N	N	N
19	Y	Y	Y	N	N	N	N
22	Y	N	N	N	N	N	N
25	Y	Y	Y	Y	N	N	N
28	Y	Y	Y	N	N	N	N
31	Y	Y	N	N	N	N	N
34	Y	N	N	N	N	N	N
37	Y	Y	Y	Y	N	N	N
40	Y	Y	Y	N	N	N	N
43	Y	Y	N	N	N	N	N

Table 4-14 Starting positions for an STS-Mc SPE in an OC-192 Signal (continued)

STS-1 Number	STS-3c SPE	STS-6c SPE	STS-9c SPE	STS-12c SPE	STS-24c SPE	STS-48c SPE	STS-192c SPE
46	Y	N	Y	N	N	N	N
49	Y	Y	Y	Y	Y	Y	N
52	Y	Y	Y	N	N	N	N
55	Y	Y	Y	N	N	N	N
58	Y	N	N	N	N	N	N
61	Y	Y	Y	Y	N	N	N
64	Y	Y	Y	N	N	N	N
67	Y	Y	N	N	N	N	N
70	Y	N	N	N	N	N	N
73	Y	Y	Y	Y	N	N	N
76	Y	Y	Y	N	N	N	N
79	Y	Y	N	N	N	N	N
82	Y	N	Y	N	N	N	N
85	Y	Y	Y	Y	N	N	N
88	Y	Y	Y	N	N	N	N
91	Y	Y	Y	N	N	N	N
94	Y	N	N	N	N	N	N
97	Y	Y	Y	Y	Y	Y	N
100	Y	Y	Y	N	N	N	N
103	Y	Y	N	N	N	N	N
106	Y	N	N	N	N	N	N
109	Y	Y	Y	Y	N	N	N
112	Y	Y	Y	N	N	N	N
115	Y	Y	N	N	N	N	N
118	Y	N	Y	N	N	N	N
121	Y	Y	Y	Y	N	N	N
124	Y	Y	Y	N	N	N	N
127	Y	Y	Y	N	N	N	N
130	Y	N	N	N	N	N	N
133	Y	Y	Y	Y	N	N	N
136	Y	Y	Y	N	N	N	N
139	Y	Y	N	N	N	N	N
142	Y	N	N	N	N	Y	N
145	Y	Y	Y	Y	Y	N	N
148	Y	Y	Y	N	N	N	N

Table 4-14 Starting positions for an STS-Mc SPE in an OC-192 Signal (continued)

STS-1 Number	STS-3c SPE	STS-6c SPE	STS-9c SPE	STS-12c SPE	STS-24c SPE	STS-48c SPE	STS-192c SPE
151	Y	Y	N	N	N	N	N
154	Y	N	Y	N	N	N	N
157	Y	Y	Y	Y	N	N	N
160	Y	Y	Y	N	N	N	N
163	Y	Y	Y	N	N	N	N
166	Y	N	N	N	N	N	N
169	Y	Y	Y	Y	N	N	N
172	Y	Y	Y	N	N	N	N
175	Y	Y	N	N	N	N	N
178	Y	N	N	N	N	N	N
181	Y	Y	Y	Y	N	N	N
184	Y	Y	Y	N	N	N	N
187	Y	Y	N	N	N	N	N
190	Y	N	Y	N	N	N	N

4.4 Conditions

Conditions include any problem detected on an ONS 15454, 15327, 15310-CL, and 15600 shelf. 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 CTC Conditions window or using the RTRV-COND commands. (In addition, some but not all cleared conditions are also found in the History tab.)

Table 4-15 Conditions

Condition	Description
AIS	Alarm Indication Signal
AIS-L	Alarm Indication Signal - Line
AIS-P	Alarm Indication Signal - Path
AIS-V	Alarm Indication Signal - VT
ALS	Automatic Laser Shutdown
APC-DISABLED	Automatic Power Control Disabled
APC-FAIL	Automatic Power Control Failure
APSB	Byte Failure
APSC-IMP	Improper APS Code
APSCDFLTK	Default K Byte
APSCINCON	Inconsistent APS Code
APSCM	Protection Switching Channel Match Failure

Table 4-15 Conditions (continued)

Condition	Description
APSCNMIS	Node Id Mismatch
APSIMP	APS Invalid Mode
APSMM	Automatic Protection Switch Mode Mismatch
AS-CMD	Alarms Suppressed By User Command
AS-MT	Alarms Suppressed For Maintenance
AU-LOF	LOF - Administration Unit - Loss of Multi Frame
AUD-LOG-LOSS	Audit Log 100 Percent Full - Oldest records will be lost
AUD-LOG-LOW	Audit Log 80 Percent Full
AUTOLSROFF	Automatic Laser Shutoff Due To High Temperature
AUTORESET	Automatic System Reset
AUTOSW-AIS	Automatic path protection Switch Caused By AIS
AUTOSW-LOP	Automatic path protection Switch Caused By LOP
AUTOSW-PDI	Automatic path protection Switch Caused By PDI
AUTOSW-SDBER	Automatic path protection Switch Caused By SDBER
AUTOSW-SFBER	Automatic path protection Switch Caused By SFBER
AUTOSW-UNEQ	Automatic path protection Switch Caused By UNEQ
BAT-FAIL	Battery Failure
BKUPMEMP	Primary Non-Volatile Backup Memory Failure
BLSROSYNC	BLSR Out Of Sync
CARLOSS	Carrier Loss On The LAN
CKTDOWN	Signaling Unable to setup circuit
CLDRESTART	Cold Restart
COMIOXC	IO Slot To XCON Communication Failure
COMM-FAIL	Plug-in Module Communication Failure
CONTBUS-A-18	TCC A To DCC A Processor Communication Failure
CONTBUS-B-18	TCC B To DCC B Processor Communication Failure
CONTBUS_A	Controller A To Shelf Slot Communication Failure
CONTBUS_B	Controller B To Shelf Slot Communication Failure
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

Table 4-15 Conditions (continued)

Condition	Description
DSP-FAIL	DSP Failure
DUP-IPADDR	IP address already in use within the same DCC Area
DUP-NODENAME	Node name already in use within the same DCC Area
E-W-MISMATCH	Both Ends Of Fiber Provisioned As East Or Both As West
EHIBATVG	Extreme High Volt
ELWBATVG	Extreme Low Volt
EOC	SDCC Termination Failure
EOC-L	Line DCC Termination Failure
EQPT	Equipment Failure
EQPT-MISS	Replaceable Equipment/Unit is Missing
ERFI-P-CONN	Enhanced Remote Failure Indication - Path - Connectivity
ERFI-P-PAYLD	Enhanced Remote Failure Indication - Path - Payload
ERFI-P-SRVR	Enhanced Remote Failure Indication - Path - Server
ERROR-CONFIG	Error in Startup Config
ETH-LINKLOSS	Rear Panel Ethernet Link Removed
EXCCOL	Excess Collisions On The LAN
EXERCISE-RING-FAIL	Exercise Request on Ring Failed
EXERCISE-RING-REQ	Exercise Request on Ring
EXERCISE-SPAN-FAIL	Exercise Request on Span Failed
EXERCISE-SPAN-REQ	Exercise Request on Span
EXT	Failure Detected External To The NE
EXTRA-TRAF-PREEMPT	Extra Traffic Preempted
FAILTOSW	Failure To Switch To Protection
FAILTOSW-PATH	Failure To Switch To Protection - Path
FAILTOSWR	Failure To Switch To Protection - Ring
FAILTOSWS	Failure To Switch To Protection - Span
FAN	Fan Failure
FANDEGRADE	Partial Fan Failure
FE-AIS	Far End AIS
FE-DS1-MULTLOS	Far End Multiple DS1 LOS Detected On DS3
FE-DS1-NSA	Far End DS1 Equipment Failure - Non Service Affecting
FE-DS1-SA	Far End DS1 Equipment Failure - Service Affecting
FE-DS1-SNGLLOS	Far End Single DS1 LOS
FE-DS3-NSA	Far End DS3 Equipment Failure - Non Service Affecting
FE-DS3-SA	Far End DS3 Equipment Failure - Service Affecting

Table 4-15 Conditions (continued)

Condition	Description
FE-EQPT-NSA	Far End Common Equipment Failure - Non Service Affecting
FE-EXERCISING-RING	Far End Exercising Ring
FE-EXERCISING-SPAN	Far End Exercising Span
FE-FRCDWKSWPR-RING	Far End Working Facility Forced To Switch To Protection - Ring
FE-FRCDWKSWPR-SPAN	Far End Working Facility Forced To Switch To Protection - Span
FE-IDLE	Far End IDLE
FE-LOCKOUTOFPR-SPAN	Far End Lockout Of Protection - Span
FE-LOF	Far End LOF
FE-LOS	Far End LOS
FE-MANWKSWPR-RING	Far End Manual Switch Of Working Facility To Protection - Ring
FE-MANWKSWPR-SPAN	Far End Manual Switch Of Working Facility To Protection - Span
FEC-MISM	FEC Mismatch
FEPRLF	Far End Protection Line Failure
FORCED-REQ	Forced Switch Request
FORCED-REQ-RING	Forced Switch Request On Ring
FORCED-REQ-SPAN	Forced Switch Request On Span
FRCDSWTOINT	Forced Switch To Internal Clock
FRCDSWTOPRI	Forced Switch To Primary Reference
FRCDSWTOSEC	Forced Switch To Second Reference
FRCDSWTOTHIRD	Forced Switch To Third Reference
FRNGSYNC	Free Running Synchronization Mode
FSTSYNC	Fast Start Synchronization Mode
FULLPASSTHR-BI	Bidirectional Full Pass Through Is Active
GCC-EOC	GCC Termination Failure
GE-OOSYNC	GigaBit Ethernet Out of Sync
HI-LASERBIAS	Equipment High Laser Bias
HI-RXPOWER	Equipment High Rx power
HI-TXPOWER	Equipment High Tx power
HIBATVG	High Volt
HITEMP	High Temperature
HLDOVRSYNC	Holdover Synchronization Mode
I-HITEMP	Industrial High Temperature

Table 4-15 Conditions (continued)

Condition	Description
IMPROPRMVL	Improper Removal
INC-GFP-OUTOFFRAME	Out Of Frame Detected by GFP Receiver
INC-GFP-SIGLOSS	Client Signal Loss Frames Detected by GFP Receiver
INC-ISD	DS3 Idle Condition
INC-SIGLOSS	Incoming Signal Loss on Fibre Channel Interface
INC-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
LASEREOL	Laser Approaching End of Life
LKOUTPR-S	Lockout Of Protection - Span
LMP-HELLODOWN	LMP Hello FSM to Control Channel down
LMP-NDFAIL	LMP Neighbor Discovery has failed
LO-RXPOWER	Equipment Low Rx power
LO-TXPOWER	Equipment Low Tx power
LOA	Loss of Alignment
LOC	Loss of Channel
LOCKOUT-REQ	Lockout Switch Request On Facility or Equipment
LOCKOUT-REQ-RING	Lockout Switch Request On Ring
LOF	Loss Of Frame
LOM	Loss of Multi-Frame
LOP-P	Loss Of Pointer - Path
LOP-V	Loss Of Pointer - VT
LOS	Loss Of Signal
LPBKCRS	Cross-connect Loopback
LPBKDS1FEAC	DS1 Loopback Due To FEAC Command
LPBKDS1FEAC-CMD	DS1 Loopback Command Sent To Far End
LPBKDS3FEAC	DS3 Loopback Due To FEAC Command
LPBKDS3FEAC-CMD	DS3 Loopback Command Sent To Far End

Table 4-15 Conditions (continued)

Condition	Description
LPBKFACILITY	Facility Loopback
LPBKTERMINAL	Terminal Loopback
LWBATVG	Low Volt
MAN-REQ	Manual Switch Request
MANRESET	Manual System Reset
MANSWTOINT	Manual Switch To Internal Clock
MANSWTOPRI	Manual Switch To Primary Reference
MANSWTOSEC	Manual Switch To Second Reference
MANSWTOTHIRD	Manual Switch To Third Reference
MANUAL-REQ-RING	Manual Switch Request On Ring
MANUAL-REQ-SPAN	Manual Switch Request On Span
MEA	Mismatch Of Equipment And Attributes
MEM-GONE	Free Memory On Card Near Zero
MEM-LOW	Free Memory On Card Very Low
MFGMEM	Manufacturing Data Memory (EEPROM Failure
NO-CONFIG	No Startup Config
NTWTPINC	Network Topology Incomplete
OCHNC-ACTIV-FAIL	Optical Channel Activation Failure
OCHNC-DEACTIV-FAIL	Optical Channel De-Activation Failure
OCHNC-FAIL	Optical Channel Connection Failure
OCHNC-INC	Optical Channel Incomplete
ODUK-AIS-PM	ODUk: Alarm Indication Signal
ODUK-BDI-PM	ODUk: PM Backward Defect Indication
ODUK-LCK-PM	ODUk: Locked Defect - PM
ODUK-OCI-PM	ODUk: Open Connection Indication
ODUK-SD-PM	ODUk: Signal Degrade
ODUK-SF-PM	ODUk: Signal Failure
ODUK-TIM-PM	ODUk: Trail Trace Identifier Mismatch
OOU-TPT	Out of Use - Transport Failure
OPTNTWMIS	Optical Network Type Mismatch
OTUK-AIS	OTUk: Alarm Indication Signal
OTUK-BDI	OTUk: Backward Defect Indication
OTUK-LOF	OTUk: Loss Of Frame
OTUK-SD	OTUk: Signal Degrade
OTUK-SF	OTUk: Signal Failure
OTUK-TIM	OTUk: Trail Trace Identifier Mismatch

Table 4-15 Conditions (continued)

Condition	Description
OUT-OF-SYNC	8B10B Out of Sync
PDI-P	Payload Defect Indication - Path
PEER-NORESPONSE	Peer Card Not Responding
PLM-P	Payload Label Mismatch - Path
PLM-V	Signal Label Mismatch Failure - Payload Label Mismatch - VT
PORT-CODE-MISM	Pluggable Port security code mismatch
PORT-COMM-FAIL	Module Communication Failure
PORT-MISMATCH	Pluggable Port rate mismatch
PORT-MISSING	Pluggable Port missing
PRC-DUPID	Duplicate Node ID
PROTNA	Protection Unit Not Available
PTIM	Payload Type Identifier Mismatch
PWR-REDUN	Redundant Power Capability Lost
RAI	Remote Alarm Indication
RCVR-MISS	Facility Termination Equipment - Receiver Missing
RFI	Remote Failure Indication
RFI-L	Remote Failure Indication - Line
RFI-P	One-Bit Remote Failure Indication - Path
RFI-V	Remote Failure Indication - VT
RING-ID-MIS	Ring Id Mismatch
RING-MISMATCH	Far End Of Fiber Is Provisioned With Different Ring ID
RING-SW-EAST	Ring Switch Is Active On The East Side
RING-SW-WEST	Ring Switch Is Active On The West Side
RSVP-HELLODOWN	RSVP Hello FSM to Neighbor down
RUNCFG-SAVENEED	Need to Save Running Config
SD	Signal Degrade
SD-L	BER Threshold Exceeded For Signal Degrade - Line
SD-P	BER Threshold Exceeded For Signal Degrade - Path
SF	Signal Failure
SF-L	BER Threshold Exceeded For Signal Failure - Line
SF-P	BER Threshold Exceeded For Signal Failure - Path
SFTWDOWN	Software Download In Progress
SNTP-HOST	SNTP Host Failure
SPAN-SW-EAST	Span Switch Is Active On The East Side
SPAN-SW-WEST	Span Switch Is Active On The West Side

Table 4-15 Conditions (continued)

Condition	Description
SQM	Sequence Mismatch
SQUELCH	Ring Is Squelching Traffic
SQUELCHED	Equipment Squelched
SSM-DUS	Do Not Use For Synchronization
SSM-FAIL	Failed To Receive Synchronization Status Message
SSM-LNC	G812 - Local Node Clock traceable
SSM-OFF	Synchronization Status Messages Are Disabled On This Interface
SSM-PRC	G811 - Primary Reference Clock traceable
SSM-PRS	Stratum 1 Primary Reference Source Traceable
SSM-RES	Reserved For Network Synchronization Use
SSM-SDH-TN	G812 - Transit Node Clock traceable
SSM-SETS	G813 - Synchronous Equipment Timing Source traceable
SSM-SMC	SONET Minimum Clock Traceable
SSM-ST2	Stratum 2 Traceable
SSM-ST3	Stratum 3 Traceable
SSM-ST3E	Stratum 3E Traceable
SSM-ST4	Stratum 4 Traceable
SSM-STU	Synchronized - Traceability Unknown
SSM-TNC	Transit Node Clock Traceable
SWMTXMOD	Switching Matrix Module Failure
SWTOPRI	Switch To Primary Reference
SWTOSEC	Switch To Second Reference
SWTOTHIRD	Switch To Third Reference
SYNC-FREQ	Synchronization Reference Frequency Out Of Bounds
SYNCPRI	Primary Synchronization Reference Failure
SYNCSEC	Secondary Synchronization Reference Failure
SYNCTHIRD	Third Synchronization Reference Failure
SYSBOOT	System Reboot
TIM	TIM Section - Trace Identifier Mismatch Failure
TIM-MON	TIM Section Monitor - Trace Identifier Mismatch Failure
TIM-P	STS Path Trace Identifier Mismatch
TPTFAIL	Transport layer failure
TRMT	Transmit Failure
TRMT-MISS	Facility Termination Equipment - Transmitter Missing
TUNDERRUN	Ether tx underrun

Table 4-15 Conditions (continued)

Condition	Description
TX-AIS	Alarm Indication Signal in TX
TX-RAI	Remote Alarm Indication in TX
UNC-WORD	FEC Uncorrected Word
UNEQ-P	Unequipped - Path
UNEQ-V	Signal Label Mismatch Failure - Unequipped VT
VCG-DEG	VCAT Group Degraded
VCG-DOWN	VCAT Group Down
WKSWPR	Switched To Protection
WTR	Wait To Restore
WVL-MISMATCH	Equipment Wavelength Mismatch

4.5 Access Identifiers

The AID code directs an input command to its intended physical or data entity inside the NE. Equipment modules and facilities are typical examples of entities addressed by the access code. The AIDs in this section apply to the ONS SONET 15454, 15327, 15310-CL, and 15600 except where noted.

4.5.1 ALL

Table 4-16 ALL

AID	Pattern
AidUnionId	FACILITY
	STS
	VT
AidUnionId1	BLSR
BAND	ALL
	BAND-{1-6,12-17}-{1-4}-ALL
	BAND-{1-6,12-17}-{1-4}-{RX,TX}
	BAND-{1-6,12-17}-{1}-ALL
	BAND-{1-6,12-17}-{1}-{RX,TX}
BITS	ALL
	BITS-ALL
	BITS-{1,2}
	SYNC-BITS {1,2}
BLSR	ALL
	BLSR-RINGID

Table 4-16 ALL (continued)

AID	Pattern	
CHANNEL	ALL	
	CHAN-{1-6,12-17}-ALL	
	CHAN-{1-6,12-17}-{1-32}-ALL	
	CHAN-{1-6,12-17}-{1-32}-{RX,TX}	
	CHAN-{1-6,12-17}-{1-4}-ALL	
	CHAN-{1-6,12-17}-{1-4}-{RX,TX}	
	CHAN-{1-6,12-17}-{2,3}	
	CHAN-{1-6,12-17}-{2,5}	
COM	Common	
CrossConnectId	FACILITY	
	STS	
CrossConnectId1	VCM	
	FACILITY	
	STS	
	VT	
DS1	ALL	
	DS1-{1-6,12-17}-{1-12,13,15,17,19,21,23,25,27,29,31,33,35}-{1-28}	
	DS1-{1-6,12-17}-{1-12,13,15,17,19,21,23}-{1-28}	
	DS1-{1-6,12-17}-{1-6}-{1-28}	
ENV	ALL	ENV-IN-{1-6}
	ENV-IN-ALL	ENV-OUT-ALL
	ENV-IN-{1-20}	ENV-OUT-{1-16}
	ENV-IN-{1-32}	ENV-OUT-{1-2}
	ENV-IN-{1-3}	ENV-OUT-{1-4}
	ENV-IN-{1-4}	ENV-{IN,OUT}-{1-16}

Table 4-16 ALL (continued)

AID	Pattern	
EQPT	AIP	PPM-{1-6,12-17}-{1-4}
	ALL	PPM-{1-6,12-17}-{1-8}
	BIC-ALL	PWR-ALL
	BIC-{A,B}	PWR-{A,B}
	BP	SLOT-ALL
	FAN	SLOT-{1-14}
	PIM-{1-4,11-14}-ALL	SLOT-{1-17}
	PIM-{1-4,11-14}-{1-4}	SLOT-{1-2}
	PPM-1-{1,2}	SLOT-{1-4,11-14}
	PPM-2-{1,2}	SLOT-{1-6,12-17}
	PPM-{1-4,11-14}-{1-4}-ALL	SLOT-{1-8}
	PPM-{1-4,11-14}-{1-4}-{1-4}	
FACILITY	ALL	FAC-{1-6,12-17}-{1}
	EC1-{2}-{1-3}	FAC-{1-6}-ALL
	FAC-{1-4,11-14}-ALL	FAC-{5,6,12,13}-{1}
	FAC-{1-4,11-14}-{1-16}	FAC-{5-6}-{1-28}
	FAC-{1-4,11-14}-{1-4}	FAC-{5-6}-{1-3}
	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}	FAC-{8,10}-{1}
	FAC-{1-4,14-17}-{1-8}	FSTE-{1}-{0-7}
	FAC-{1-4}-1	FSTE-{1}-{1-8}
	FAC-{1-4}-{1-4}	OC12-{2}-{1-2}-{1}
	FAC-{1-6,12-17}-1	OC3-{2}-{1-2}-{1}
	FAC-{1-6,12-17}-ALL	T1-{2}-{1-21}
	FAC-{1-6,12-17}-{0-11}	T3-{2}-{1-3}
	FAC-{1-6,12-17}-{0-1}	VFAC-{1-4,11-14}-{1-4}-{1-4}-1
	FAC-{1-6,12-17}-{1-12,14,16,18,20,22,24,26,28,30,32,34,36}	VFAC-{1-6,12-17}-{0-1}
	FAC-{1-6,12-17}-{1-12,14,16,18,20,22,24}	VFAC-{1-6,12-17}-{1,2}
	FAC-{1-6,12-17}-{1-12}	VFAC-{1-6,12-17}-{1,2}-{1,8}
	FAC-{1-6,12-17}-{1-4}	VFAC-{1}-{0-1}
	FAC-{1-6,12-17}-{1-6}	VFAC-{1}-{1-8}

Table 4-16 ALL (continued)

AID	Pattern
LINE	ALL
	LINE-{1-6,12-17}-{1-2}-ALL
	LINE-{1-6,12-17}-{1-2}-{RX,TX}
	LINE-{1-6,12-17}-{1-3}-ALL
	LINE-{1-6,12-17}-{1-3}-{RX,TX}
	LINE-{8,10}-{1}-ALL
	LINE-{8,10}-{1}-{RX,TX}
OSC	ALL
	OSC-RINGID
OPM	OPM-{1-5,12-16}--{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}
PRSLOT	NULL
	SLOT-1
	SLOT-13
	SLOT-15
	SLOT-17
	SLOT-3
	SLOT-5
RFILE	RFILE-DB
	RFILE-PKG

Table 4-16 ALL (continued)

AID	Pattern
STS	ALL
	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}
	FAC-{1-6,12-17}-{1-4}
	STS-{1-4,11-14}-{1-16}-1
	STS-{1-4,11-14}-{1-16}-ALL
	STS-{1-4,11-14}-{1-16}-{1,13,25,37}
	STS-{1-4,11-14}-{1-16}-{1,25}
	STS-{1-4,11-14}-{1-16}-{1,4,7,10,-,46}
	STS-{1-4,11-14}-{1-4}-1
	STS-{1-4,11-14}-{1-4}-ALL
	STS-{1-4,11-14}-{1-4}-{1,13,25,37,-,181}
	STS-{1-4,11-14}-{1-4}-{1,25,49,73,-,169}
	STS-{1-4,11-14}-{1-4}-{1,4,7,10,-,190}
	STS-{1-4,11-14}-{1-4}-{1,49,97,145}
	STS-{1-4,11-14}-{1-4}-{1,4}-{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-{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}

Table 4-16 ALL (continued)

AID	Pattern
STS (continued)	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-{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}

Table 4-16 ALL (continued)

AID	Pattern	
STS (continued)	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-{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}	
SYN	SYNC-NE	
SYN_SRC	BITS-1	FAC-{5,6,12,13}-{1}
	BITS-2	INTERNAL
	FAC-{1-4,11-14}-{1-16}	NONE
	FAC-{1-4,11-14}-{1-4}	OC12-{2}-{1-2}-{1}
	FAC-{1-4}-1	OC3-{2}-{1-2}-{1}
	FAC-{1-4}-{1-4}	SYNC-NE
	FAC-{1-6,12-17}-{1-4}	T1-{2}-{1-21}
	FAC-{1-6,12-17}-{1}	
SYNC_REF	ALL	
	SYNC-ALL	
	SYNC-NE	
	SYNC-{BITS1,BITS2}	

Table 4-16 ALL (continued)

AID	Pattern	
SYNCSW	INT	
	PRI	
	SEC	
	THIRD	
UDC	ALL	
	UDC-{F,DCC}-{A,B}	
VT	ALL	VT1-{2}-{1-2}-{1}-{1-3}-{1-7}-{1-4}
	VT1-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-4}	VT1-{2}-{1-3}-{1}-{1-7}-{1-4}
	VT1-{1-4}-1-{1-12}-{1-7}-{1-4}	VT1-{2}-{1}-{1-7}-{1-3}
	VT1-{1-4}-1-{1-48}-{1-7}-{1-4}	VT1-{5,6,12,13}-1-{1-192}-{1-7}-{1-4}
	VT1-{1-4}-{1-4}-{1-3}-{1-7}-{1-4}	VT1-{5,6,12,13}-1-{1-48}-{1-7}-{1-4}
	VT1-{1-6,12-17}-1-{1-12}-{1-7}-{1-4}	VT1-{5-6}-1-{1-7}-{1-2}
	VT1-{1-6,12-17}-1-{1-48}-{1-7}-{1-4}	VT1-{5-6}-1-{1-7}-{1-4}
	VT1-{1-6,12-17}-1-{1-7}-{1-2}	VT2-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-3}
	VT1-{1-6,12-17}-{1-12}-1-{1-7}-{1-4}	VT2-{1-6,12-17}-1-{1-12}-{1-7}-{1-3}
	VT1-{1-6,12-17}-{1-24}-1-{1-7}-{1-4}	VT2-{1-6,12-17}-1-{1-48}-{1-7}-{1-3}
	VT1-{1-6,12-17}-{1-36}-1-{1-7}-{1-4}	VT2-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-3}
	VT1-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-4}	VT2-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-3}
	VT1-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-4}	VT2-{5,6,12,13}-1-{1-192}-{1-7}-{1-3}
	VT1-{1-6,12-17}-{1-6}-{1-7}-{1-4}	VT2-{5,6,12,13}-1-{1-48}-{1-7}-{1-3}
	VT1-{2}-{1-2}-{1}-{1-12}-{1-7}-{1-4}	
WDMANS	AONS-{E,W}	
	WDMANS-{E,W}	
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}	

4.5.2 AidUnionId

Table 4-17 AidUnionId

AID	Patterns	
Facility	ALL	FAC-{1-6,12-17}-{1}
	EC1-{2}-{1-3}	FAC-{1-6}-ALL
	FAC-{1-4,11-14}-ALL	FAC-{5,6,12,13}-{1}
	FAC-{1-4,11-14}-{1-16}	FAC-{5-6}-{1-28}
	FAC-{1-4,11-14}-{1-4}	FAC-{5-6}-{1-3}
	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}	FAC-{8,10}-{1}
	FAC-{1-4,14-17}-{1-8}	FSTE-{1}-{0-7}
	FAC-{1-4}-1	FSTE-{1}-{1-8}
	FAC-{1-4}-{1-4}	OC12-{2}-{1-2}-{1}
	FAC-{1-6,12-17}-1	OC3-{2}-{1-2}-{1}
	FAC-{1-6,12-17}-ALL	T1-{2}-{1-21}
	FAC-{1-6,12-17}-{0-11}	T3-{2}-{1-3}
	FAC-{1-6,12-17}-{0-1}	VFAC-{1-4,11-14}-{1-4}-{1-4}-1
	FAC-{1-6,12-17}-{1-12,14,16,18,20,22,24,26,28,30,32,34,36}	VFAC-{1-6,12-17}-{0-1}
		VFAC-{1-6,12-17}-{1,2}
	FAC-{1-6,12-17}-{1-12,14,16,18,20,22,24}	VFAC-{1-6,12-17}-{1,2}-{1,8}
	FAC-{1-6,12-17}-{1-12}	VFAC-{1}-{0-1}
	FAC-{1-6,12-17}-{1-4}	VFAC-{1}-{1-8}
	FAC-{1-6,12-17}-{1-6}	
STS	ALL	
	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}	
	FAC-{1-6,12-17}-{1-4}	
	STS-{1-4,11-14}-{1-16}-1	
	STS-{1-4,11-14}-{1-16}-ALL	
	STS-{1-4,11-14}-{1-16}-{1,13,25,37}	
	STS-{1-4,11-14}-{1-16}-{1,25}	
	STS-{1-4,11-14}-{1-16}-{1,4,7,10,-,46}	
	STS-{1-4,11-14}-{1-4}-1	
	STS-{1-4,11-14}-{1-4}-ALL	
	STS-{1-4,11-14}-{1-4}-{1,13,25,37,-,181}	
	STS-{1-4,11-14}-{1-4}-{1,25,49,73,-,169}	
	STS-{1-4,11-14}-{1-4}-{1,4,7,10,-,190}	
	STS-{1-4,11-14}-{1-4}-{1,49,97,145}	

Table 4-17 AidUnionId (continued)

AID	Patterns
STS (continued)	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-{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

Table 4-17 AidUnionId (continued)

AID	Patterns
STS (continued)	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-{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-{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}

Table 4-17 AidUnionId (continued)

AID	Patterns	
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}	
VT	ALL	VT1-{2}-{1-2}-{1}-{1-3}-{1-7}-{1-4}
	VT1-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-4}	VT1-{2}-{1-3}-{1}-{1-7}-{1-4}
	VT1-{1-4}-1-{1-12}-{1-7}-{1-4}	VT1-{2}-{1}-{1-7}-{1-3}
	VT1-{1-4}-1-{1-48}-{1-7}-{1-4}	VT1-{5,6,12,13}-1-{1-192}-{1-7}-{1-4}
	VT1-{1-4}-{1-4}-{1-3}-{1-7}-{1-4}	VT1-{5,6,12,13}-1-{1-48}-{1-7}-{1-4}
	VT1-{1-6,12-17}-1-{1-12}-{1-7}-{1-4}	VT1-{5-6}-1-{1-7}-{1-2}
	VT1-{1-6,12-17}-1-{1-48}-{1-7}-{1-4}	VT1-{5-6}-1-{1-7}-{1-4}
	VT1-{1-6,12-17}-1-{1-7}-{1-2}	VT2-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-3}
	VT1-{1-6,12-17}-{1-12}-1-{1-7}-{1-4}	VT2-{1-6,12-17}-1-{1-12}-{1-7}-{1-3}
	VT1-{1-6,12-17}-{1-24}-1-{1-7}-{1-4}	VT2-{1-6,12-17}-1-{1-48}-{1-7}-{1-3}
	VT1-{1-6,12-17}-{1-36}-1-{1-7}-{1-4}	VT2-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-3}
	VT1-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-4}	VT2-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-3}
	VT1-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-4}	VT2-{5,6,12,13}-1-{1-192}-{1-7}-{1-3}
	VT1-{1-6,12-17}-{1-6}-{1-7}-{1-4}	VT2-{5,6,12,13}-1-{1-48}-{1-7}-{1-3}
	VT1-{2}-{1-2}-{1}-{1-12}-{1-7}-{1-4}	

4.5.3 AidUnionId1

Table 4-18 AidUnionId1

AID	Patterns
BLSR	ALL BLSR-RINGID

4.5.4 BAND

(Cisco ONS 15454 only)

The BAND AID is used to access Optical Multiplex Section (OMS) layer of Optical Network units.

Table 4-19 BAND

Pattern	Description
ALL	All of the OMSs of the NE. The ALL AID is applicable for retrieve-only commands
BAND-{1-6,12-17}-{1-4}-ALL	All the Channels in a Band OADM (1Bn, 4Bn) units
BAND-{1-6,12-17}-{1-4}-{RX,TX}	The Receive/Transmit Channels in a Band OADM (1Bn, 4Bn) units
BAND-{1-6,12-17}-{1}-ALL	All the Channels in an Optical Multiplexer/Demultiplexer (4Ch) units
BAND-{1-6,12-17}-{1}-{RX,TX}	The Receive/Transmit Channels in an Optical Multiplexer/Demultiplexer (4Ch) units

4.5.5 BITS

AID for BITS (Building Integrated Timing Supply).

Table 4-20 BITS

Pattern	Description
ALL	The ALL AID is applicable to RTRV commands only (RTRV-BITS and RTRV-ALM/COND-BITS). The All AID is equivalent to BITS-ALL for these commands. For RTRV-ALM/COND-SYNCN, the ALL AID translates to BITS-ALL, SYNC-BITS1, and SYNC-BITS2
BITS-ALL	BITS AIDS of both BITS-1 and BITS-2 in the RTRV-BITS command
BITS-{1,2}	Individual BITS AID **Note** ONS 15310-CL does not support SYNC-BITS2.
SYNC-BITS{1,2}	BITS-OUT AIDs of BITS-1 and BITS-2. These AIDs are applicable only in ED/RTRV-BITS commands and are used for setting and retrieving the BITS-OUT parameters.

4.5.6 BLSR

BLSR AIDs are used to access the specific BLSR of the NE. Applies to ONS 15454, 15454, and 15600.

Table 4-21 BLSR

Pattern	Description
ALL	All the BLSRs in the NE. The ALL AID is applicable for retrieve-only commands like RTRV-<MOD_RING> (BLSR)
BLSR-RINGID	RINGID is a string of up to six characters. Valid characters are [A–Z,0–9] (case insensitive)

4.5.7 CHANNEL

(Cisco ONS 15454 only)

Accesses the Optical Channels (OCH) layer of Optical Network/Client units.

Table 4-22 CHANNEL

CHANNEL Values	Description
ALL	ALL OCHs of the NE. The ALL AID is applicable for retrieve-only commands
CHAN-{1-6,12-17}-ALL	All the Channels of an Optical Transponder/Muxponder. The format is CHAN-[SLOT]-ALL
CHAN-{1-6,12-17}-{1-32}-ALL	All the Channels in an Optical Multiplexer/Demultiplexer (32Ch) units. The format is CHAN-[SLOT]-[PORT]-ALL
CHAN-{1-6,12-17}-{1-32}-{RX,TX}	The Receive/Transmit Channels in an Optical Multiplexer/Demultiplexer (32Ch) units. The format is CHAN-[SLOT]-[PORT]-[DIRECTION]
CHAN-{1-6,12-17}-{1-4}-ALL	All the Channels in an OADM (1Ch, 2Ch, 4Ch) units and Optical and Optical Multiplexer/Demultiplexer (4Ch) units. The format is CHAN-[SLOT]-[PORT]-ALL
CHAN-{1-6,12-17}-{1-4}-{RX,TX}	The Receive/Transmit Channels in an OADM (1Ch, 2Ch, 4Ch) units and Optical Multiplexer/Demultiplexer (4Ch) units. The format is CHAN-[SLOT]-[PORT]-[DIRECTION]
CHAN-{1-6,12-17}-{2,3}	A single channel of an Optical Transponder/Muxponder. The TXP_MR_10G and TXP_MR_2.5G use CHAN-slot-2 for the 1 DWDM Facility. TXPP_MR_2.5G uses CHAN-slot-{2,3} for the 2 DWDM facilities. The format is CHAN-[SLOT]-[PORT]
CHAN-{1-6,12-17}-{2,5}	A single channel of an Optical Transponder/Muxponder. The TXP_MR_10G uses CHAN-slot-2 for the 1 DWDM facility. MXP_2.5G_10G uses the CHAN-slot-5 for the 1 DWDM facility. The format is CHAN-[SLOT]-[PORT]

4.5.8 COM

Common

Table 4-23 COM

Pattern	Description
COM	Common

4.5.9 CrossConnectId

Table 4-24 CrossConnect Id

Pattern	Description
FACILITY	ALL
	EC1-{2}-{1-3}
	FAC-{1-4,11-14}-ALL
	FAC-{1-4,11-14}-{1-16}
	FAC-{1-4,11-14}-{1-4}
	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}
	FAC-{1-4,14-17}-{1-8}
	FAC-{1-4}-1
	FAC-{1-4}-{1-4}
	FAC-{1-6,12-17}-1
	FAC-{1-6,12-17}-ALL
	FAC-{1-6,12-17}-{0-11}
	FAC-{1-6,12-17}-{0-1}
	FAC-{1-6,12-17}-{1-12,14,16,18,20,22,24,26,28,30,32,34,36}
	FAC-{1-6,12-17}-{1-12,14,16,18,20,22,24}
	FAC-{1-6,12-17}-{1-12}
	FAC-{1-6,12-17}-{1-4}
	FAC-{1-6,12-17}-{1-6}
	FAC-{1-6,12-17}-{1}
	FAC-{1-6}-ALL
	FAC-{5,6,12,13}-{1}

Table 4-24 CrossConnect Id (continued)

Pattern	Description
Facility	FAC-{5-6}-{1-28}
	FAC-{5-6}-{1-3}
	FAC-{8,10}-{1}
	FSTE-{1}-{0-7}
	FSTE-{1}-{1-8}
	OC12-{2}-{1-2}-{1}
	OC3-{2}-{1-2}-{1}
	T1-{2}-{1-21}
	T3-{2}-{1-3}
	VFAC-{1-4,11-14}-{1-4}-{1-4}-1
	VFAC-{1-6,12-17}-{0-1}
	VFAC-{1-6,12-17}-{1,2}
	VFAC-{1-6,12-17}-{1,2}-{1,8}
	VFAC-{1}-{0-1}
	VFAC-{1}-{1-8}

Table 4-24 CrossConnect Id (continued)

Pattern	Description
STS	ALL
	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}
	FAC-{1-6,12-17}-{1-4}
	STS-{1-4,11-14}-{1-16}-1
	STS-{1-4,11-14}-{1-16}-ALL
	STS-{1-4,11-14}-{1-16}-{1,13,25,37}
	STS-{1-4,11-14}-{1-16}-{1,25}
	STS-{1-4,11-14}-{1-16}-{1,4,7,10,-,46}
	STS-{1-4,11-14}-{1-4}-1
	STS-{1-4,11-14}-{1-4}-ALL
	STS-{1-4,11-14}-{1-4}-{1,13,25,37,-,181}
	STS-{1-4,11-14}-{1-4}-{1,25,49,73,-,169}
	STS-{1-4,11-14}-{1-4}-{1,4,7,10,-,190}
	STS-{1-4,11-14}-{1-4}-{1,49,97,145}
	STS-{1-4,11-14}-{1-4}-{1,4}-{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}

Table 4-24 CrossConnect Id (continued)

Pattern	Description
STS	STS-{1-4,14-17}-{1-16}-{1-48}
	STS-{1-4,14-17}-{1-4}-1
	STS-{1-4,14-17}-{1-4}-ALL
	STS-{1-4,14-17}-{1-4}-{1,4,7,10}
	STS-{1-4,14-17}-{1-4}-{1,4,7}
	STS-{1-4,14-17}-{1-4}-{1-3}
	STS-{1-4,14-17}-{1-8}-1
	STS-{1-4,14-17}-{1-8}-ALL
	STS-{1-4,14-17}-{1-8}-{1-3}
	STS-{1-4}-1-1
	STS-{1-4}-1-ALL
	STS-{1-4}-1-{1,13,25,37}
	STS-{1-4}-1-{1,4,7,10,-.,46}
	STS-{1-4}-1-{1,4,7,10}
	STS-{1-4}-1-{1,7,13,19,-,43}
	STS-{1-4}-1-{1,7}
	STS-{1-4}-1-{1-12}
	STS-{1-4}-1-{1-48}
	STS-{1-6,12-17}-1
	STS-{1-6,12-17}-1-1
	STS-{1-6,12-17}-1-ALL
	STS-{1-6,12-17}-1-{1,13,25,37}
	STS-{1-6,12-17}-1-{1,4,10,13,16,19,25,28,37,40}
	STS-{1-6,12-17}-1-{1,4,7,10,13,16,19,22,25}
	STS-{1-6,12-17}-1-{1,4,7,10-46}
	STS-{1-6,12-17}-1-{1,4,7,10}
	STS-{1-6,12-17}-1-{1,4,7,13,16,19,25,28,37,40,43}
	STS-{1-6,12-17}-1-{1,4,7}
	STS-{1-6,12-17}-1-{1,4}
	STS-{1-6,12-17}-1-{1-12}
	STS-{1-6,12-17}-1-{1-48}
	STS-{1-6,12-17}-ALL

Table 4-24 CrossConnect Id (continued)

Pattern	Description
STS	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-{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}

4.5.10 CrossConnectId1

Table 4-25 CrossConnectId1

AID	Pattern
VCM	VCM-{1-6,12-17}-{0-1}-ALL
	VCM-{1-6,12-17}-{0-1}-{1-256}
	VCM-{1-6,12-17}-{1-4}-ALL
	VCM-{1-6,12-17}-{1-4}-{1-256}
FACILITY	ALL
	EC1-{2}-{1-3}
	FAC-{1-4,11-14}-ALL
	FAC-{1-4,11-14}-{1-16}
	FAC-{1-4,11-14}-{1-4}
	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}
	FAC-{1-4,14-17}-{1-8}
	FAC-{1-4}-1
	FAC-{1-4}-{1-4}
	FAC-{1-6,12-17}-1
	FAC-{1-6,12-17}-ALL
	FAC-{1-6,12-17}-{0-11}
	FAC-{1-6,12-17}-{0-1}
	FAC-{1-6,12-17}-{1-12,14,16,18,20,22,24,26,28,30,32,34,36}
	FAC-{1-6,12-17}-{1-12,14,16,18,20,22,24}
	FAC-{1-6,12-17}-{1-12}
	FAC-{1-6,12-17}-{1-4}
	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}
	FAC-{5-6}-{1-3}
	FAC-{8,10}-{1}

Table 4-25 CrossConnectId1 (continued)

AID	Pattern
Facility (continued)	FSTE-{1}-{0-7}
	FSTE-{1}-{1-8}
	OC12-{2}-{1-2}-{1}
	OC3-{2}-{1-2}-{1}
	T1-{2}-{1-21}
	T3-{2}-{1-3}
	VFAC-{1-4,11-14}-{1-4}-{1-4}-1
	VFAC-{1-6,12-17}-{0-1}
	VFAC-{1-6,12-17}-{1,2}
	VFAC-{1-6,12-17}-{1,2}-{1,8}
	VFAC-{1}-{0-1}
	VFAC-{1}-{1-8}

Table 4-25 CrossConnectId1 (continued)

AID	Pattern
STS	ALL
	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}
	FAC-{1-6,12-17}-{1-4}
	STS-{1-4,11-14}-{1-16}-1
	STS-{1-4,11-14}-{1-16}-ALL
	STS-{1-4,11-14}-{1-16}-{1,13,25,37}
	STS-{1-4,11-14}-{1-16}-{1,25}
	STS-{1-4,11-14}-{1-16}-{1,4,7,10,-,46}
	STS-{1-4,11-14}-{1-4}-1
	STS-{1-4,11-14}-{1-4}-ALL
	STS-{1-4,11-14}-{1-4}-{1,13,25,37,-,181}
	STS-{1-4,11-14}-{1-4}-{1,25,49,73,-,169}
	STS-{1-4,11-14}-{1-4}-{1,4,7,10,-,190}
	STS-{1-4,11-14}-{1-4}-{1,49,97,145}
	STS-{1-4,11-14}-{1-4}-{1,4}-{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-{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}

Table 4-25 CrossConnectId1 (continued)

AID	Pattern
STS (continued)	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-{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}

Table 4-25 CrossConnectId1 (continued)

AID	Pattern
STS (continued)	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-{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}

Table 4-25 CrossConnectId1 (continued)

AID	Pattern
VT	ALL
	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-{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}

4.5.11 DS1

(Cisco ONS 15454 only)

Used to access the DS-1 frame layer of the DS3XM. The format is DS1-[SLOT]-[DS3PORT]-[DS1PORT]

Table 4-26 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 DS3XM-12 (ONS 15454) STS48 Backplane Rate. Ports 1 to12 are always available, odd ports after 12 are available
DS1-{1-6,12-17}-{1-12,13,15,17,19,21,23}-{1-28}	DS1 AIDs for DS3XM-12 (ONS 15454) STS12 Backplane Rate. Ports 1 to 12 are always available, odd ports after 12 are available
DS1-{1-6,12-17}-{1-6}-{1-28}	DS1 AIDs for the DS3XM-6 card (ONS 15454)

4.5.12 ENV

The environmental AID for the AIC/AICI cards

Table 4-27 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 ONS 15454, 15327, 15600, 15310-CL
ONS 15454 Environmental AIDs	
ENV-IN-{1-4}	Environmental AID for the AIC Card on the ONS 15454. “IN” is used for Environmental Alarms
ENV-IN-{1-20}	Environmental AID for the AICI Card on the ONS 15454. “IN” is used for Environmental Alarms
ENV-IN-{1-32}	Environmental AID for AICI Card Extensions on the ONS 15454. “IN” is used for Environmental Alarms
ENV-IN-{1-16}	Environmental AID on the ONS 15454. “IN” is used for Environmental Alarms
ENV-OUT-{1-4}	Environmental AID for the AIC/AICI Cards on the ONS 15454. “OUT” is used for Environmental Controls
ENV-OUT-{1-16}	Environmental AID for AICI Card Extensions on the ONS 15454. “OUT” is used for Environmental Controls
ONS 15327 Environmental AIDs	

Table 4-27 ENV (continued)

Pattern	Description
ENV-IN-{1-6}	Environmental AID for the ONS 15327. “IN” is used for Environmental Alarms
ENV-OUT-{1-2}	Environmental AID for the ONS 15327. “OUT” is used for Environmental Controls
ONS 15600 Environmental AIDs	
ENV-IN-ALL	Environmental AID for ALL Environmental alarms on the Cisco ONS 15454, 15327, 15600, 15310-CL
ENV-OUT-{1-16}	Environmental AID for the ONS 15600. “OUT” is used for Environmental Controls
ENV-OUT-ALL	All Environmental Control Output contacts
ONS 15310-CL Environmental AIDs	
ENV-IN-{1-3}	Environmental AID for the ONS 15310-CL. “IN” is used for Environmental Alarms
ENV-OUT-{1-2}	Environmental AID for the ONS 15310-CL. “OUT” is used for Environmental Controls

4.5.13 EQPT

Equipment AIDs are used to access specific cards.

In the ONS 15454, the OC48/OC192 cards can only use the high speed slots (Slot 5, Slot 6, Slot 12, Slot 13).

In the ONS 15327, Slots 1 to 4 are for I/O cards (Ethernet and Optical cards). Slots 5 and 6 are for the XTC cards, and Slots 7 and 8 are for the MIC cards.

In the ONS 15600, Slots 1 through 4 and Slots 11 through 14 are used for I/O cards. Slot 5 and 10 are reserved for the TSC card. Slots 6, 7, and Slots 8, 9 are reserved for the CXC/SSXC card.

Table 4-28 EQPT

Pattern	Description
AIP	The AID for the AIP. It is used for RTRV-INV output only (ONS 15454)
ALL	Only used for RTRV-INV, RTRV-EQPT, and RTRV-ALM/COND-EQPT commands. RTRV-INV returns all the inventory information for the NE. The ONS 15454 includes the I/O cards, controller cards, and the AIP, BP, and FAN. The ONS 15327 includes the I/O cards and controller cards. RTRV-EQPT with ALL AID returns EQPT information on all the slots. RTRV-ALM/COND-EQPT with ALL AID returns EQPT and PWR-A and PWR-B type of alarms/conditions
BIC-ALL	AIDs for the BIC (Backplane Interface Connector), BIC-A and BIC-B. These AIDs are valid only for the RTRV-ALM-EQPT and RTRV-COND-EQPT commands
BIC-{A,B}	AIDs for the BIC (Backplane Interface Connectors). These AIDs are valid only for the RTRV-ALM-EQPT and RTRV-COND-EQPT commands
BP	The AID for the backplane. It is used for RTRV-INV output only (ONS 15454 only)
FAN	The AID for the fan tray. It is used for RTRV-INV output only
PIM-{1-4,11-14}-ALL	Pluggable Interface Module. Applicable for RTRV-EQPT and RTRV-INV commands pertaining to the ONS 15600 ASAP Card only. Format is PIM-[SLOT]-[PIM]-[PPM]

Table 4-28 EQPT (continued)

Pattern	Description
PIM-{1-4,11-14}-{1-4}	Pluggable Interface Module. Applicable for ENT/ED/RTRV/DLT-EQPT and RTRV-INV commands pertaining to the ONS 15600 ASAP Card only. Format is PPM-[SLOT]-[PIM]-[PPM]
PPM-1-{1,2}	Pluggable Port Module AID for the ONS 15310-CL ML-100T-8/CE-100T-8 Card. Format is PPM-[SLOT]-[PPM]
PPM-2-{1,2}	PPM AID for the ONS 15310-CL. Format is PPM-[SLOT]-[PPM]
PPM-{1-4,11-14}-{1-4}-ALL	PPM. Applicable for the RTRV-EQPT and RTRV-INV commands pertaining to the ONS 15600 ASAP Card only. Format is PPM-[SLOT]-[PIM]-[PPM]
PPM-{1-4,11-14}-{1-4}-{1-4}	PPM. Applicable for the ENT/ED/RTRV/DLT-EQPT and RTRV-INV commands pertaining to the ONS 15600 ASAP Card only. Format is PPM-[SLOT]-[PIM]-[PPM]
PPM-{1-6,12-17}-{1-4}	PPM AID for 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-{1-6,12-17}-{1-8}	PPM AID for the ONS 15454 MXP_MR_2.5G and MXPP_MR_2.5G Card. Format of AID is PPM-[SLOT]-[PPM]
PWR-ALL	AIDs for the Power Supply Sources. These AIDs are valid only for the RTRV-ALM-EQPT and RTRV-COND-EQPT commands.
PWR-{A,B}	AIDs for the Power Supply Sources. These AIDs are valid only for the RTRV-ALM-EQPT and RTRV-COND-EQPT commands.
SLOT-ALL	All of the NE equipment AIDs
SLOT-{1-14}	EQPT AID for the ONS 15600 where format is SLOT-[SLOT]
SLOT-{1-17}	EQPT AID for the ONS 15454 where format is SLOT-[SLOT]
SLOT-{1-2}	EQPT AID for the ONS 15310-CL where format is SLOT-[SLOT]
SLOT-{1-4,11-14}	ONS 15600 I/O Slots only
SLOT-{1-6,12-17}	Individual equipment AID of the I/O card units or slots for the ONS 15454 where format is SLOT-[SLOT]
SLOT-{1-8}	EQPT AID for ONS 15327 where format is SLOT-[SLOT]

4.5.14 FACILITY

Facilities AIDs are used to access specific ports. Applicable to Cisco ONS 15454, 15327, 15600, 15310-CL.

Note Because the ONS 15310-CL supports more than one type of facility per slot, the FAC-AID format is not supported. The format Tn-, EC1- , and OCn- is used instead.

ONS 15454, 15327, and 15600 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 POS Ports: VFAC-[SLOT]-[PORT]
- Format for POS Port with PIM and PPM:VFAC-[SLOT]-[PIM]-[PPM]-[PORT]

ONS 15310-CL Facility AID format:

- Format for Optical Facilities Without PPM: OCn-[SLOT]-[PORT]
- Format for Optical Facilities With PPM: OCn-[SLOT]-[PPM]-[PORT]
- Format for EC1 Facilities: EC1-[SLOT]-[PORT]
- Format for DS1-Flavored Electrical Facilities: T1-[SLOT]-[PORT]
- Format for DS3-Flavored Electrical Facilities: T3-[SLOT]-[PORT]
- Format for POS Ports: VFAC-[SLOT]-[PORT]
- Format for FSTE Ethernet Facilities: FSTE-[SLOT]-[PORT]

Table 4-29 FACILITY

Pattern	Description
ALL	The ALL AID is applicable for RTRV-only commands (RTRV-rr type of commands), for example: RTRV-OC48 with ALL AID returns all OC48 facilities on the node. RTRV-T1 with ALL AID returns all T1 facilities on the node.
EC1-{2}-{1-3}	Facility AIDs for EC1 ports on the 15310-CL-CTX (ONS 15310-CL), where format is EC1-[SLOT]-[PORT]
FAC-{1-4,11-14}-ALL	Facility AID for all I/O Unit or Slot on the ONS 15600, where format is FAC-[SLOT]-ALL
FAC-{1-4,11-14}-{1-16}	Facility AIDs for the 16-Port OC48 (ONS 15600), where format is FAC-[SLOT]-[PORT]
FAC-{1-4,11-14}-{1-4}	Facility AID for the 4-Port OC192 (ONS 15600), where format is FAC-[SLOT]-[PORT]
FAC-{1-4,11-14}-{1-4}-{1-4}-{1}	Facility AID for the ASAP Card with PIM and PPM. Format is FAC-[SLOT]-[PIM]-[PPM]-[PORT]
FAC-{1-4,14-17}-{1-8}	Facilities for an OC3-8 card (ONS 15454) where the format is FAC-[SLOT]-[PORT]

Table 4-29 FACILITY (continued)

Pattern	Description
FAC-{1-4}-1	Facility AIDs for OC12, OC48 (ONS 15327) where the format is FAC-[SLOT]-[PORT]
FAC-{1-4}-{1-4}	Facility AIDs for 4-Port OC3 (ONS 15327) where the format is FAC-[SLOT]-[PORT]
FAC-{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 (ONS 15454) where the format is FAC-[SLOT]-[PORT]
FAC-{1-6,12-17}-ALL	All the facilities of an I/O unit or slot (ONS 15454) where the format is FAC-[SLOT]-[ALL]
FAC-{1-6,12-17}-{0-11}	Facilities for the Ethernet Front-end ports on the ML100T-12 card. Ports are numbered starting with 0 (i.e. the first port is FAC-SLOT-0, second port is FAC-SLOT-1, ..., last port is FAC-SLOT-11 for ML100T-12 and first port is FAC-SLOT-0 and second port is FAC-SLOT-1 for ML1000-2) (ONS 15454). The format is FAC-[SLOT]-[PORT]
FAC-{1-6,12-17}-{0-1}	Facilities for the Ethernet Backend Ports on the ML1000-2 card. Ports are 0-based, (i.e the first port is FAC-SLOT-0 and the second port is FAC-SLOT-1) (ONS 15454). The format is FAC-[SLOT]-[PORT]
FAC-{1-6,12-17}-{1-12,14,16,18, 20,22,24,26,28,30,32,34,36}	Facility AIDs for the DS3XM-12 STS48 Backplane Rate where format is FAC-[SLOT]-[PORT]. Ports 1 through 12 are always available, but only even ports after 12 are available
FAC-{1-6,12-17}-{1-12,14,16,18, 20,22,24}	Facility AIDs for DS3XM-12 STS12 Backplane Rate where format is FAC-[SLOT]-[PORT]. Ports 1 through 12 are always available, but only even ports after 12 are available
FAC-{1-6,12-17}-{1-12}	Facilities AID for the EC1 and DS3 cards (ONS 15454) where format is FAC-[SLOT]-[PORT]
FAC-{1-6,12-17}-{1-4}	Facility AID for the four Client (CLNT) facilities on the MXP_2.5G_10G card. Facility AID for 4-Port G1000/FC_MR-4 Card. Facility AID for creating/editing cross-connects (STS1/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 (ONS 15454) where format is FAC-[SLOT]-[PORT]
FAC-{1-6,12-17}-{1-6}	Facilities for the DS3XM card (ONS 15454) where format FAC-[SLOT]-[PORT]
FAC-{1-6,12-17}-{1}	Facility AID for the 1-Port OC12, OC48AS and OC3 in OSC-CSM cards. Facility AID for the client ports on the MXP/TXP and TXP_MR_2.5G cards (ONS 15454) where format is FAC-[SLOT]-[PORT]
FAC-{1-6}-ALL	Facility AIDs for I/O unit or slots (ONS 15327) where format is FAC-[SLOT]-[ALL]
FAC-{5,6,12,13}-{1}	Facility AID for the OC48/OC192 cards. The OC48/OC192 cards can only use the high speed slots (Slot 5, Slot 6, Slot 12, Slot 13) (ONS 15454) where format is FAC-[SLOT]-[PORT]
FAC-{5-6}-{1-28}	Facility AID for the T1 Ports on the XTC-28-3 (ONS 15327) where format is FAC-[SLOT]-[PORT]
FAC-{5-6}-{1-3}	Facility AIDs on the TR Ports in the XTC-28-3 (ONS 15327) where format is FAC-[SLOT]-[PORT]
FAC-{8,10}-{1}	Facility AID for the OSCM card. The OSCM cards can only use the XC slots (Slot-8, Slot-10) (ONS 15454) where format is FAC-[SLOT]-[PORT]

Table 4-29 FACILITY (continued)

Pattern	Description
FSTE-{1}-{0-7}	Facility AIDs for front end ports on the ML-100T-8 card (ONS 15310-CL), when provisioned in L2L3 mode. Format is FSTE-[SLOT]-[PORT]. Port numbering is 0-based
FSTE-{1}-{1-8}	Facility AIDs for front end ports on the CE-100T-8 card (ONS 15310-CL), when provisioned in Mapper mode. Format is FSTE-[SLOT]-[PORT]. Port numbering is 1-based
OC12-{2}-{1-2}-{1}	Facility AIDs for OC12 ports on the 15310-CL-CTX (ONS 15310-CL) where format is OC12-[SLOT]-[PPM]-[PORT]
OC3-{2}-{1-2}-{1}	Facility AIDs for OC3 ports on the 15310-CL-CTX (ONS 15310-CL) where format is OC3-[SLOT]-[PPM]-[PORT]
T1-{2}-{1-21}	Facility AIDs for T1 ports on the 15310-CL-CTX (ONS 15310-CL) where format is T1-[SLOT]-[PORT]
T3-{2}-{1-3}	Facility AIDs for T3 ports on the 15310-CL-CTX (ONS 15310-CL) where format is T3-[SLOT]-[PORT]
VFAC-{1-4,11-14}-{1-4}-{1-4}-1	Facilities for the back end POS ports on the L1P_ETHERNET PORT on an ASAP Card. Applicable on the ONS15600 only. Format is VFAC-[SLOT]-[PIM]-[PPM]-[PORT]
VFAC-{1-6,12-17}-{0-1}	Facilities for the back end POS ports on the ML-Series card. Port numbering is 0-based (first POS port is VFAC-SLOT-0, second POS port is VFAC-SLOT-1). VC4, VC4-2C, VC4-3C, VC4-4C, VC4-8C for the ML1000 and ML100T Cards (ONS 15454). Format is VFAC-[SLOT]-[PORT]
VFAC-{1-6,12-17}-{1,2}	GFP facilities on the MXP-MR-2.5G and MXPP-MR-2.5G card
VFAC-{1-6,12-17}-{1,2}-{1,8}	GFP Client facilities for MXP-MR-2.5G and MXPP-MR-2.5G cards
VFAC-{1}-{0-1}	Facility AIDs for back end ports on the ML card (ONS 15310-CL), when provisioned in L2L3 mode. Format is VFAC-[SLOT]-[PORT]. Port numbering is 0-based
VFAC-{1}-{1-8}	Facility AIDs for back end ports on the ML card (ONS 15310-CL), when provisioned in L2L3 mode. Format is VFAC-[SLOT]-[PORT]. Port numbering is 1-based

4.5.15 IPADDR

IP Address

Table 4-30 IPADDR

Pattern	Description
111.222.333.444	Standard 4 Part IP Address Notation
ALL	ALL

4.5.16 LINE

(Cisco ONS 15454 only)

The LINE AID is used to access the Optical Transport Section (OTS) layer of optical network units. Applicable only to ONS 15454 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 and 32DMX-O cards. The format is LINE-[SLOT]-[PORT]-[DIRECTION].

Table 4-31 LINE

Values	Description
ALL	All of the OTSs of the NE. The ALL AID applies for retrieve-only commands
LINE-{1-6,12-17}-{1-2}-ALL	All the Lines in a OPT-PRE, OCS-CSM, AD-1B, AD-4B, AD-1C, AD-2C, AD-4C units
LINE-{1-6,12-17}-{1-2}-{RX,TX}	The receive/transmit Lines in a OPT-PRE, OCS-CSM, AD-1B, AD-4B, AD-1C, AD-2C, AD-4C units
LINE-{1-6,12-17}-{1-3}-ALL	All the Lines in a OPT-BST units
LINE-{1-6,12-17}-{1-3}-{RX,TX}	The receive/transmit Lines in a OPT-BST units
LINE-{8,10}-{1}-ALL	All the Lines in a OSCM units
LINE-{8,10}-{1}-{RX,TX}	The receive/transmit Lines in an OSCM units

4.5.17 LNKTERM

Link Termination AIDs that are used to access the termination points of a provisionable patchcord.

Table 4-32 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 format is LNKTERM-

4.5.18 OPM

OPM AIDs represent the single wavelength inside an optical power monitoring object

Table 4-33 OPM

Values	Description
OPM-{1-5,12-16}--{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}	The second index is the slot where the 32-WSS unit is configured. The last index of the wavelength is the value of the wavelength as described in OPTICAL_WLEN

4.5.19 OSC

(Cisco ONS 15454 only)

OSC AIDs are used to access the OSC of the NE

Table 4-34 OSC

Values	Description
ALL	All of the OSCs of the NE. The ALL AID applies to the retrieve-only commands
OSC-RINGID	RINGID is a string of up to six characters, valid characters are [A–Z,0–9] (case insensitive)

4.5.20 PRSLOT

(Cisco ONS 15454 only)

Valid protection slots for the electrical cards

Table 4-35 PRSLOT

Pattern	Description
NULL	Indicates there is no protection group. Used when trying to delete a protection group.
SLOT-1	The No.1 slot of an NE
SLOT-3	The No.3 slot of an NE
SLOT-5	The No.5 slot of an NE
SLOT-13	The No.13 slot of an NE
SLOT-15	The No.15 slot of an NE
SLOT-17	The No.17 slot of an NE

4.5.21 RFILE

File transfer type. Applicable to ONS 15454, 15327, and 15310-CL.

Table 4-36 RFILE

Pattern	Description
RFILE-DB	Transferring the system database
RFILE-PKG	Transferring a software package

4.5.22 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 PPM: STS-[SLOT]-[PPM]-[PORT]-[STS]
- STS AID Format for Optical Facilities With PIM and PPM: 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 G1000 Card GIGE Facilities: FAC-[SLOT]-[PORT]

Table 4-37 STS

Pattern	Description
ALL	The ALL AID applies to the RTRV-only commands: RTRV-STS with ALL AID retrieves all STS interfaces on the NE. RTRV-STS1 with ALL AID retrieves all STS1 interfaces on the NE. RTRV-STS3c with ALL AID retrieves all STS3c interfaces on the NE.
FAC-{1-4,11-14}-{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 G1000-4 card (ONS 15454). Format is FAC-[SLOT]-[PORT]
STS-{1-4,11-14}-{1-16}-1	STS48c AID for 16-Port OC48 (ONS 15600). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4,11-14}-{1-16}-ALL	All the STS of all path width on the 16-Port OC48 (ONS 15600). Format is STS-[SLOT]-[PORT]-ALL
STS-{1-4,11-14}-{1-16}-{1,13,25,37}	STS12C AID for 16-port OC48 (ONS 15600). Format is STS-[SLOT]-[PORT]-ALL
STS-{1-4,11-14}-{1-16}-{1,25}	STS24C AID for 16-Port OC48 (ONS 15600). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4,11-14}-{1-16}-{1,4,7,10,-,46}	STS3c AID for 16-Port OC48 (ONS 15600). Format is STS-[SLOT]-[PORT]-[STS]

Table 4-37 STS (continued)

Pattern	Description
STS-{1-4,11-14}-{1-4}-1	STS192c AID for 4-Port OC192 (ONS 15600). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4,11-14}-{1-4}-ALL	All the STS of all path width on 4-Port OC192 (ONS 15600). Format is STS-[SLOT]-[PORT]-ALL
STS-{1-4,11-14}-{1-4}-{1,13,25,37,-,181}	STS12c AID for 4-Port OC192 (ONS 15600). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4,11-14}-{1-4}-{1,25,49,73,-,169}	STS24c AID for 4-Port OC192 (ONS 15600). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4,11-14}-{1-4}-{1,4,7,10,-,190}	STS3c AID for 4-Port OC192 (ONS 15600). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4,11-14}-{1-4}-{1,49,97,145}	STS48c AID for 4-Port OC192 (ONS 15600). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4,11-14}-{1-4}-{1,4}-{1}	StS3c AID for the ASAP Card with OC3 PORT provisioned. STS12C AID for the ASAP Card with 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 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 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 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 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 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 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 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 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 OC48 Port Provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS]
STS-{1-4,11-14}-{1-4}-{1-4}-{1}-ALL	STS1,STS3C,6C,9C,12C,24C,48C AID for the ASAP Card with 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 OC48 Port Provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS]

Table 4-37 STS (continued)

Pattern	Description
STS-{1-4,14-17}-{1-16}-{1-48}	STS1 AID for 16-Port OC48 (ONS 15600). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4,14-17}-{1-4}-1	STS12C aids for a 4-port OC12 card (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4,14-17}-{1-4}-ALL	All the STSs for a given 4-port OC12 card (OSN 15454). Format is STS-[SLOT]-[PORT]-ALL
STS-{1-4,14-17}-{1-4}-{1,4,7,10}	STS3C for the 4-port OC12 card (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4,14-17}-{1-4}-{1,4,7}	STS6C AIDs for a 4-port OC12 (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4,14-17}-{1-4}-{1-3}	STS1 AID for the 4-port OC3 card (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4,14-17}-{1-8}-1	STS3C for the 8-port OC3 card (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4,14-17}-{1-8}-ALL	All the STSs for a given 8-port OC3 card (ONS 15454). Format is STS-[SLOT]-[PORT]-ALL
STS-{1-4,14-17}-{1-8}-{1-3}	STS1 AID for the 8-port OC3 card (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4}-1-1	STS48c AID for 1-Port OC48 (ONS 15327). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4}-1-ALL	STS ALL AID for 1-Port Cards (ONS 15327). Format is STS-[SLOT]-ALL
STS-{1-4}-1-{1,13,25,37}	STS12c AID for 1-Port OC48 (ONS 15327). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4}-1-{1,4,7,10,-.,46}	STS3c AID for 1-Port OC48 (ONS 15327). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4}-1-{1,4,7,10}	STS3c AID for 4-Port OC3 and 1-Port OC12 (ONS 15327). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4}-1-{1,7,13,19,-,43}	STS6c AID for 1-Port OC48 (ONS 15327). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4}-1-{1,7}	STS6c AID for 1-Port OC12 (ONS 15327). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4}-1-{1-12}	STS1 AID for 4-Port OC3, 1-Port OC12 (ONS 15327). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-4}-1-{1-48}	STS1 AID for 1-Port OC48 (ONS 15327). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-6,12-17}-1	STS1 AID for a DS1 card (ONS 15454). 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 1-port OC12 card STS48C AID for an OC48AS card (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]

Table 4-37 STS (continued)

Pattern	Description
STS-{1-6,12-17}-1-ALL	All the STSs of an STS bandwidth on a single port optical card (ONS 15454). Format is STS-[SLOT]-[PORT]-ALL
STS-{1-6,12-17}-1-{1,13,25,37}	STS12C AIDs for an OC48AS card (ONS 15454). 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 (ONS 15454). 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 (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-6,12-17}-1-{1,4,7,10-46}	STS3C AID for an OC48AS card (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-6,12-17}-1-{1,4,7,10}	STS3C for a 1-port OC12 card (ONS 15454). 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 (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-6,12-17}-1-{1,4,7}	STS6C AID for an OC12 card (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-6,12-17}-1-{1,4}	STS9C AID for a 1-port OC12 card (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-6,12-17}-1-{1-12}	STS1 AID for a 1-port OC12 card (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-6,12-17}-1-{1-48}	STS1 AID for an OC48AS card (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-6,12-17}-ALL	STS ALL AID for the card in the given slot (ONS 15454). Format is STS-[SLOT]-[ALL]
STS-{1-6,12-17}-{1-12}-1	STS1 AID for EC1 and DS3 cards (ONS 15454). 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 (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-6,12-17}-{1-4}-ALL	All the STSs for a 4-port OC3 card (ONS 15454). 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 4-Port OC12 (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-6,12-17}-{1-4}-{1,4}	STS9C AID for a 4-port OC12 card (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{1-6,12-17}-{1-4}-{1-12}	STS1 AID for a 4-port OC12 card (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]

Table 4-37 STS (continued)

Pattern	Description
STS-{1-6,12-17}-{1-6}	STS1 AID for a DS3XM card (ONS 15454). Format is STS-[SLOT]-[STS]
STS-{2}-{1-2}-{1}-{1,4,7,10}	STS3c AID for the OC12 port (ONS 15310-CL). Format is STS-[SLOT]-[PPM]-[PORT]-[STS]
STS-{2}-{1-2}-{1}-{1,7}	STS6c AID for the OC12 port (ONS 15310-CL). Format is STS-[SLOT]-[PPM]-[PORT]-[STS]
STS-{2}-{1-2}-{1}-{1-12}	STS1 AID for the OC12 port (ONS 15310-CL). 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 (ONS 15310-CL). Format is STS-[SLOT]-[PPM]-[PORT]-[STS]
STS-{2}-{1-3}-{1}	STS1 AID for the 15310-CL-CTX T3 ports (ONS 15310-CL). Format is STS-[SLOT]-[PORT]-[STS]. The AIDs are port based and presented as 1 STS per port
STS-{2}-{1}	STS1 AID for the 15310-CL-CTX T1 port (ONS 15310-CL). Format is STS-[SLOT]-[STS]. There is only 1 STS for the WBE ports on the 15310-CL-CTX card
STS-{5,6,12,13}-1-1	STS48C AID for an OC48 card STS192 AID for an OC192 card (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{5,6,12,13}-1-{1,13,25,37-180}	STS12C AID for an OC192 card (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{5,6,12,13}-1-{1,13,25,37}	STS12C AIDs for an OC48 card (ONS 15454). 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 (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{5,6,12,13}-1-{1,4,7,10-190}	STS3C for an OC192 card (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{5,6,12,13}-1-{1,4,7,10-46}	STS3C AID for an OC48 card (ONS 15454). 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 (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{5,6,12,13}-1-{1,49,97,145}	STS48C AID for an OC192 card (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{5,6,12,13}-1-{1-192}	STS1 AID for an OC192 card (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{5,6,12,13}-1-{1-48}	STS1 AID for an OC48 card (ONS 15454). Format is STS-[SLOT]-[PORT]-[STS]
STS-{5,6}-1	STS1 AID for XTC-14, XTC-28-3 for the T1 Port (ONS 15327). Format is STS-[SLOT]-[STS]. There is only 1 STS for the T1 ports

Table 4-37 STS (continued)

Pattern	Description
STS-{5,6}-{1-4}-1	STS1 on a DS3 port on the 327 XTC-28 card
STS-{5-6}-ALL	STS ALL AID for the T1 and T3 Ports within the XTC-14 and XTC-28-3 (ONS 15327). Format is STS-[SLOT]-ALL
VFAC-{1-6,12-17}-{0-1}	Virtual facility AIDs for the ML-Series cards back end POS ports. Both the ML1000-2 and ML100T-12 have two POS ports and are 0-based (ONS 15454). Format is VFAC-[SLOT]-[PORT]

4.5.23 SYN

Synchronization AIDs

Table 4-38 SYN

Pattern	Description
SYNC-NE	NE sync AID

4.5.24 SYN_SRC

Synchronization source

Table 4-39 SYN_SRC

Pattern	Description
BITS-1	Sync source is BITS-1. Format is BITS-[PORT] (ONS 15454, 15327, 15600, 15310-CL)
BITS-2	Sync source is BITS-2. Format is BITS-[PORT] (ONS 15454, 15327, 15600)
FAC-{1-4,11-14}-{1-16}	Sync Source is 16-Port OC48 (ONS 15600). Format is FAC-[SLOT]-[PORT]
FAC-{1-4,11-14}-{1-4}	Sync source is 4-Port OC192. Format is FAC-[SLOT]-[PORT]
FAC-{1-4}-1	Sync Source is the Optical Card (1-Port OC12, OC48) facility in ONS 15327. Format is FAC-[SLOT]-[PORT]
FAC-{1-4}-{1-4}	Sync Source is the Optical Card (4-Port OC3) facility in ONS 15327. Format is FAC-[SLOT]-[PORT]
FAC-{1-6,12-17}-{1-4}	Sync source is the optical card (four-port OC3 and four-port OC12) facility in ONS 15454. Format is FAC-[SLOT]-[PORT]
FAC-{1-6,12-17}-{1}	Sync source is the optical card (one-port OC12 and OC48AS) facility in ONS 15454. Format is FAC-[SLOT]-[PORT]
FAC-{5,6,12,13}-{1}	Sync 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

Table 4-39 SYN_SRC (continued)

Pattern	Description
OC12-{2}-{1-2}-{1}	Sync source is the OC12 facility (ONS 15310-CL). Format is OC12-[SLOT]-[PPM]-[PORT]
OC3-{2}-{1-2}-{1}	Sync source is the OC3 facility (ONS 15310-CL). Format is OC3-[SLOT]-[PPM]-[PORT]
SYNC-NE	SYNC-NE source. It is only used in the alarm report or alarm retrieve commands.
T1-{2}-{1-21}	Sync source is the T1 facility (ONS 15310-CL). Format is T1-[SLOT]-[PORT]

4.5.25 SYNC_REF

Synchronization AIDs

ONS 15454 Facility AID format for line timing:

- Format for Optical Facilities Without PPM: FAC-[SLOT]-[PORT]
- Format for Optical Facilities With PPM: FAC-[slot]-[PPM]-[PORT]

ONS 15600 Facility AID format for line timing:

- Format for Optical 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]

ONS 15310-CL Facility AID format for line timing:

- Format for Optical Facilities With PPM: OCn-[SLOT]-[PPM]-[PORT] where n={3,12}
- Format for DS1-Flavored Electrical Facilities: T1-[SLOT]-[PORT]

Table 4-40 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-NE	NE sync AID
SYNC-{BITS1,BITS2}	BITS1 and BITS2 sync AIDs (not supported on the ONS 15310-CL)

4.5.26 SYNCSW

New synchronization reference that will be used

Table 4-41 SYNCSW

Pattern	Description
INT	Internal clock. The “INT” value of the syncsw is only applied for the SYNC-NE AID on the OPR-SYNCSW command.
PRI	Primary timing reference

Table 4-41 SYNCSW (continued)

Pattern	Description
SEC	Secondary timing reference
THIRD	Third timing reference

4.5.27 UDC

(Cisco ONS 15454 only)

UDC AIDs for F-UDC and DCC-UDC channels on the AICI card. Applicable to ONS 15454. Applicable to ONS 15310-CL (F-UDC only).

Table 4-42 UDC

Pattern	Description
ALL	ALL AID is applicable to RTRV-only commands, for example: RTRV-ALM/COND-UDCF and RTRV-ALM/COND-UDCDCC. It corresponds to a superset of F-UDC and DCC-UDC AIDs
UDC-{F,DCC}-{A,B}	F-UDC and DCC-UDC AIDs for A and B channels

4.5.28 VT

Virtual tributary. Applicable to ONS 15454 and 15327.

- 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 4-43 VT

Pattern	Description
ALL	The ALL AID applies to RTRV-only commands; for example, RTRV-VT and RTRV-VT1 with ALL AID returns all VT1 interfaces on the node
VT1-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-4}	8-port OC3 card (ONS 15454)
VT1-{1-4}-1-{1-12}-{1-7}-{1-4}	VT AIDs for 1-Port OC12 (ONS 15327)
VT1-{1-4}-1-{1-48}-{1-7}-{1-4}	VT AIDs for 1-Port OC48 (ONS 15327)
VT1-{1-4}-{1-4}-{1-3}-{1-7}-{1-4}	VT AIDs for 4-Port OC3 (ONS 15327)
VT1-{1-6,12-17}-1-{1-12}-{1-7}-{1-4}	1-port OC12 card (ONS 15454)
VT1-{1-6,12-17}-1-{1-48}-{1-7}-{1-4}	OC48AS card (ONS 15454)
VT1-{1-6,12-17}-1-{1-7}-{1-2}	DS1 card (ONS 15454)
VT1-{1-6,12-17}-{1-12}-1-{1-7}-{1-4}	EC1 card (ONS 15454)
VT1-{1-6,12-17}-{1-24}-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 (ONS 15454)
VT1-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-4}	4-port OC3 card (ONS 15454)
VT1-{1-6,12-17}-{1-6}-{1-7}-{1-4}	DS3XM-6 card (ONS 15454)
VT1-{2}-{1-2}-{1}-{1-12}-{1-7}-{1-4}	VT1 AIDs for OC3 Port on a 15310-CL-CTX card (ONS 15310-CL)
VT1-{2}-{1-2}-{1}-{1-3}-{1-7}-{1-4}	VT1 AIDs for OC3 Port on a 15310-CL-CTX card (ONS 15310-CL)
VT1-{2}-{1-3}-{1}-{1-7}-{1-4}	VT1 AIDs for BBE Port on a 15310-CL-CTX card (ONS 15310-CL). The AIDs are port based and presented as 1 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 (ONS 15310-CL). There is only 1 STS for the WBE ports on the 15310-CL-CTX card. There are 7 VT groups that each have 3 VTs within
VT1-{5,6,12,13}-1-{1-192}-{1-7}-{1-4}	OC192 Card (ONS 15454)
VT1-{5,6,12,13}-1-{1-48}-{1-7}-{1-4}	OC48 Card (ONS 15454)

Table 4-43 VT (continued)

Pattern	Description
VT1-{5-6}-1-{1-7}-{1-2}	VT AIDs for T1 Port within XTC-14 (ONS 15327). There is only 1 STS for the T1 ports within the XTC-14 card
VT1-{5-6}-1-{1-7}-{1-4}	VT AID for T1 Port with XTC-28-3 (ONS 15327). There is only 1 STS for the T1 ports within the XTC-28 card
VT2-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-3}	8-port OC3 card (ONS 15454)
VT2-{1-6,12-17}-1-{1-12}-{1-7}-{1-3}	1-port OC12 card (ONS 15454)
VT2-{1-6,12-17}-1-{1-48}-{1-7}-{1-3}	OC48AS card (ONS 15454)
VT2-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-3}	4-port OC12 card (ONS 15454)
VT2-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-3}	4-port OC3 card (ONS 15454)
VT2-{5,6,12,13}-1-{1-192}-{1-7}-{1-3}	OC192 Card (ONS 15454)
VT2-{5,6,12,13}-1-{1-48}-{1-7}-{1-3}	OC48 card (ONS 15454)

4.5.29 WDMANS

(Cisco ONS 15454 only)

This AID is used to access the AONS application of the NE.

Table 4-44 WDMANS

Pattern	Description
AONS-{E,W}	Automatic Optical Node Setup identifier (is per ring direction based)
WDMANS-{E,W}	Automatic Optical Node Setup identifier (is per ring direction based)

4.5.30 WLEN

(Cisco ONS 15454 only)

This AID represents the single wavelength inside an external facility. If the facility is of type OTS (line) the wavelengths contained are all the available in the node: currently 32. If the facility is of type OCH (CHAN) the wavelength is just one and it is the same of the correspondent wavelength customized for that channel.

Table 4-45 WLEN

Pattern	Description
WLEN-{E,W}-{ADD,DROP,EXP}-{1530.33,1531.12,1531.90, 1532.68,1534.25,1535.04,1535.82,1536.61,1538.19,1538.98,1539.77, 1540.56,1542.14,1542.94,1543.73,1544.53,1546.12,1546.92,,1547.72, 1548.51,1550.12,1550.92,1551.72,1552.52,1554.13,1554.94, 1555.75,1556.55,1558.17,1558.98,1559.79,1560.61}	Wavelength identifier

4.6 Parameter Types

This section provides a description of all message parameter types defined for the TL1 messages used in the ONS SONET 15454, 15327, 15310-CL, and 15600. Individual parameters are listed within each command description in Chapter 3, "TL1 Command Descriptions".

4.6.1 ATAG Description

The autonomous message tag (ATAG) is used for message sequencing. There are four streams of autonomous messages and each stream corresponds to a sequence. The sequence numbers increment by one for each autonomous message within that stream. The format and range of ATAG differs for each stream. The four streams are:

1. Alarmed events:

   These include REPT ALM and REPT EVT (except REPT EVT SESSION) messages as well as the REPT SW autonomous message.

   ATAG Format: x.y
   where
   x – sequence number of this alarmed event. This is an integer in the range of 0–9999.
   y – sequence number of the previous alarmed event which is related to this alarmed event. This is an integer in the range of 0-9999.

   If there is no such previous related event, then y will be the same as x. For example, the first time an alarm is raised you will receive the autonomous message:

   TID-000 1998-06-20 14:30:00
   * 1346.1346 REPT ALM T1
   "FAC-1-1:MN,LOS,NSA,,,,:\"Loss Of Signal\",DS1-14"
   ;

   When this alarmed event/condition is cleared, you will receive the autonomous message:

   TID-000 1998-06-20 14:31:00
   A 1349.1346 REPT ALM T1
   "FAC-1-1:CL,LOS,NSA,,,,:\"Loss Of Signal\",DS1-14"
   ;

2. Database change messages:

   The REPT DBCHG message falls into this category.

   ATAG Format: x
   where:
   x – sequence number of the database change update message. This is an integer in the range of 0–9999. For example:

   TID-000 1998-06-20 14:30:00
   A 96 REPT DBCHG
   "TIME=18-01-05,DATE=1970-01-01,SOURCE=2,USERID=CISCO15,
   DBCHGSEQ=96:ENT-EQPT:SLOT-3"
   ;

Note The ATAG is the same as the DBCHGSEQ field in the REPT DBCHG output.

3. PM Reports:

   The REPT PM messages fall into this category.

   ATAG format: x
   where:
   x – sequence number of the PM report. This is an integer in the range of 0–9999. For example:

   TID-000 1998-06-20 14:30:00
   A5 REPT PM DS1
   “FAC-3-1:CVL,10,PRTL,NEND,BTH,15-MIN,05-25,14-46”
   ;

   This sequence number is global across all existing PM schedules.

4. Autonomous messages specific to a TL1 session. These messages are usually related to the security aspect of the TL1 session. Only the autonomous messages REPT EVT SESSION and CAN fall under this category. This is an integer in the range 0–9999.

   For example:

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

4.6.2 CTAG Description

The correlation tag (CTAG) is included in each command by the user and is repeated by the NE in the response to allow the user to associate the command and response messages. The valid values for a CTAG are strings of up to 6 characters comprised of identifiers (alphanumeric, beginning with a letter) or non-zero decimal numbers (a string of decimal digits with an optional non-trailing “.”).

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

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

4.6.3 TID Description

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

4.6.4 Parameter Notes

1. If a parameter is set to a value that is inconsistent with something already in the database, and that value is not changed to a consistent value then the command will be denied.
2. If a parameter is set to a value that is consistent with what is already in the database, but another parameter in the same command is incompatible, then the command will be denied.
3. The correct way to issue a command where parameters may be in conflict is to:

a. First issue that command and change all relevant parameters to compatible values,

b. Then issue the command again to change the target values.

For example, OC-N is syncmsg=y, to change SDH to y, ED-OCN needs to be called to set syncmsg=N, then called again to set SDH=y.

4. The attribute defaults have also been presented under RTRV commands, and they can be retrieved only if the RTRV commands follow the card/entity original provision.

5. The default for an optional field of an ED command is either the provisioned default value or the last provisioned value in the previous ED command.

CHAPTER 5

Ring Provisioning

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

This chapter provides information and sample procedures for setting up STS or VT circuits over existing path protection and bidirectional line switch ring (BLSR) configurations using TL1, including:

- Path Protection topology
- Path Protection cross-connections
- Ring-to-ring interconnection
- 1-way drop and continue

Note Because the ONS 15454, ONS 15327, ONS 15310-CL and ONS 15600 implements logical path protection, there are no defined east and west ports. Instead, the east STS path for one circuit can exit a different port than the east STS path of another circuit, even though the west STS paths for both circuits may share the same port.

Note The ONS 15310-CL does not support BLSR.

Note The ONS 15600 does not support four-fiber BLSR.

5.1 Path Protection Topology

No special configuration of the physical path protection 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

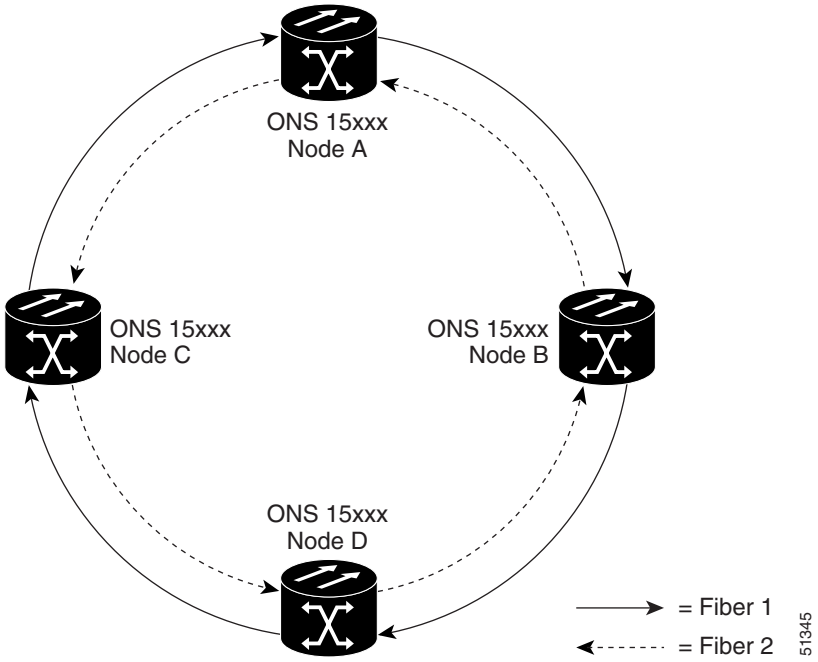
ONS 15xxx networks give you the option to set up path-protected mesh networks (PPMNs). PPMNs extend the protection scheme of a path protection from the basic ring configuration to the meshed architecture of several interconnected rings. For more information about PPMN, refer to the Cisco Procedure Guide applicable to your platform.

5.2 Path Protection Cross-Connections

To create a path protection cross-connection using TL1, you only need to designate whether it is a 1-way or 2-way cross-connect, but the access identifier (AID) must be more explicit. For example, to create a 1-way path protection circuit over the network with nodes A, B, C, and D and segments A-B, B-D, A-C, C-D as shown in Figure 5-1, enter the following commands (Node A is the source node and Node D is the destination node):

ENT-CRS-STS1:A:FROM,TO1&TO2:CTAG1::1WAY;
ENT-CRS-STS1:B:FROM,TO:CTAG2::1WAY;
ENT-CRS-STS1:C:FROM,TO:CTAG3::1WAY;
ENT-CRS-STS1:D:FROM1&FROM2,TO:CTAG4::1WAY;

Figure 5-1 Network Configured With a 1-Way Path Protection Circuit

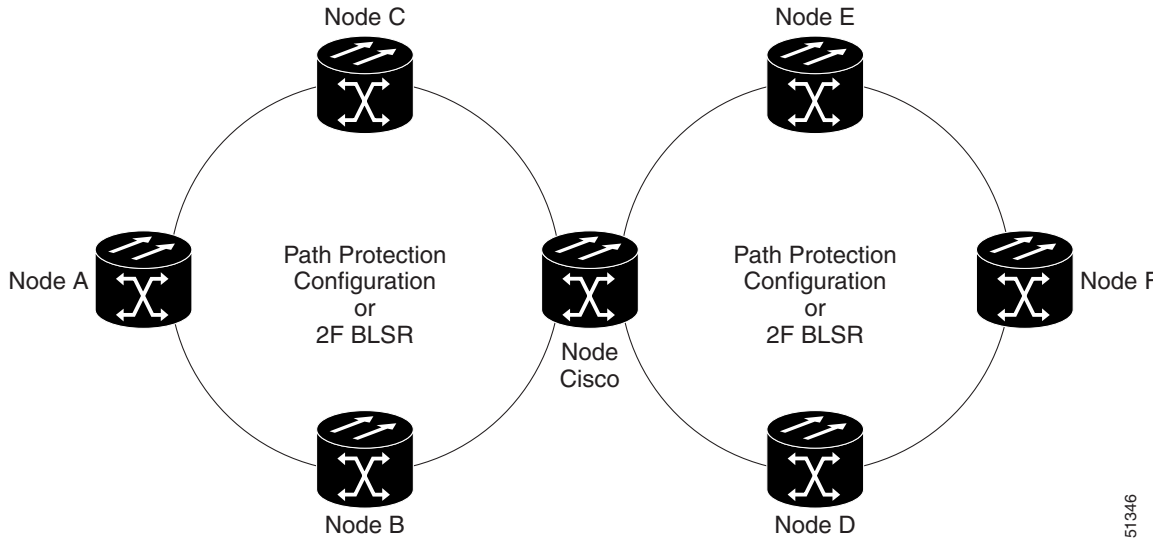


5.3 Ring-to-Ring Interconnection

In the following examples, the form “5/1/1” represents “Slot 5, Port 1, STS 1.” For VTs add the normal VT Group and VT ID extensions. These examples also assume that the slots/ports have been auto-provisioned (via a plug-in event) and that the ports involved have been placed into the in service state using a port configuration command, for example, ED-OCN.

For the examples in this section, both rings traverse the same node; therefore, only a single cross-connection is required to create the ring-to-ring connection. Use the network map shown in Figure 5-2 with the node named “Cisco” in the nexus.

Figure 5-2 Network Map With Cisco Node Showing Ring-to-Ring Interconnection



5.3.1 Sample Path Protection to Path Protection Connection

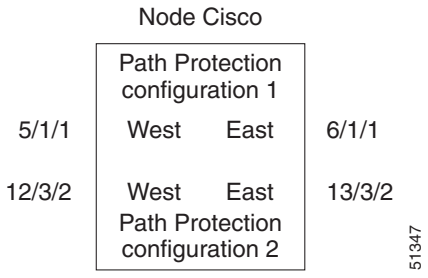
Ring 1 = Path Protection

Ring 2 = Path Protection

This example, illustrated in Figure 5-3, uses a OC-3-4 to feed Ring 2. Ring 1 can have any OC-N trunk card, but the trunk card is most likely a single-port OC-48 or OC-12.

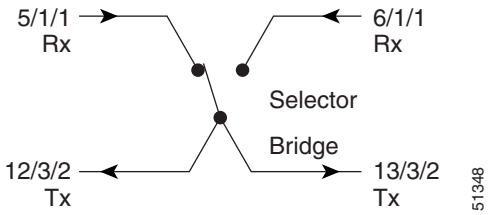
Note STS 12/3/2 maps to STS-12-8 (((3-1)*3) +2).
The STS calculation formula is: (((Port # -1)*Number of STS per port)+STS#).

Figure 5-3 Path Protection to Path Protection Connection Specifications Through the Cisco Node



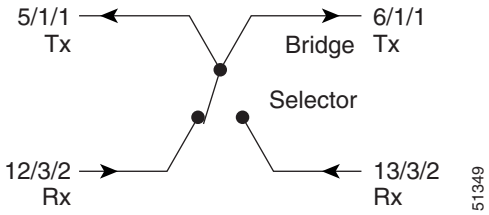
Use the ENT-CRS-STS1:CISCO:**STS-5-1&STS-6-1,STS-12-8&STS-13-8**:CTAG1::2WAY;
to create a selector between 5/1/1 and 6/1/1 which is bridged to Ring 2 (12/3/2 and 13/3/2), as shown in Figure 5-4.

Figure 5-4 Selector Between 5/1/1 and 6/1/1



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 5-5.

Figure 5-5 Selector Between 12/3/2 and 13/3/2



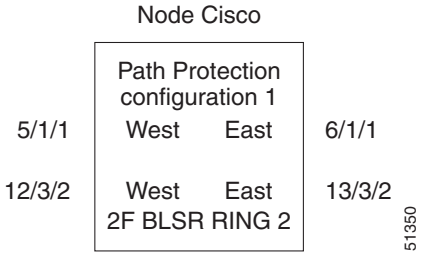
5.3.2 Sample Path Protection to Two-Fiber BLSR Connection

Ring 1 = Path Protection

Ring 2 = Two-fiber BLSR

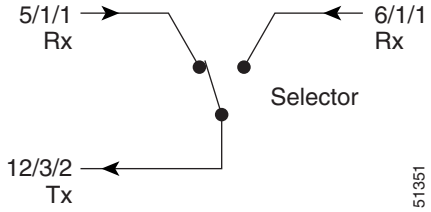
This example, illustrated in Figure 5-6, uses a path protection end-point with a drop on a two-fiber BLSR and the west span of the two-fiber BLSR (Ring 2) for the active path of the circuit. The example also uses multiport addressing for Ring 2 and is based on a multiport OC12-4 card (this is only important for computing the STS AID for multiport cards) where 13/3/2 = STS-13-26 and where 26 = (((3-1)*12) +2).

Figure 5-6 Path Protection to Two-Fiber BLSR



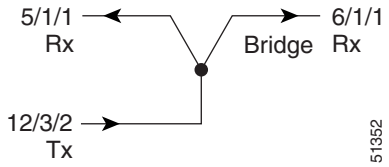
Use the ENT-CRS-STS1:CISCO:**STS-5-1&STS-6-1,STS12-26**:CTAG2::2WAY;
to create a selector between 5/1/1 and 6/1/1 which connects to 12/3/2 on Ring 2, as shown in Figure 5-7.

Figure 5-7 Selector Between 5/1/1 and 6/1/1



The command also creates a bridge from 12/3/2 to Ring 1 (5/1/1 and 6/1/1), as shown in Figure 5-8.

Figure 5-8 Bridge from 12/3/2 to Ring 1



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

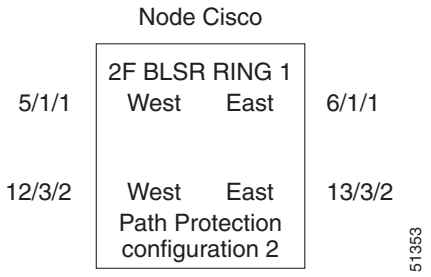
5.3.3 Sample Two-Fiber BLSR to Path Protection Connection

Ring 1 = Two-fiber BLSR

Ring 2 = Path Protection

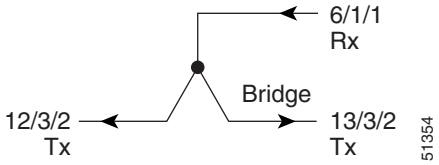
This example, illustrated in Figure 5-9, uses a Path Protection end-point with a drop on a two-fiber BLSR and uses the east span of the two-fiber BLSR (Ring 1) for the active path of the circuit. For STS addressing, the path protection is an OC-3 (e.g. STS-13-8).

Figure 5-9 Two-Fiber BLSR to Path Protection



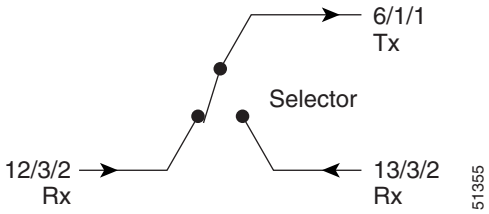
Use the ENT-CRS-STS1:CISCO:**STS-6-1,STS-12-8&STS-13-8**:CTAG3::2WAY;
to create a bridge from 6/1/1 to Ring 2 (12/3/2 and 13/3/2), as shown in Figure 5-10.

Figure 5-10 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 Figure 5-11.

Figure 5-11 Selector Between 12/3/2 and 13/3/2 to Ring 1



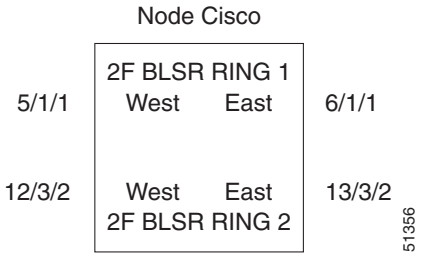
5.3.4 Sample Two-Fiber BLSR to Two-Fiber BLSR Connection

Ring 1 = Two-fiber BLSR

Ring 2 = Two-fiber BLSR

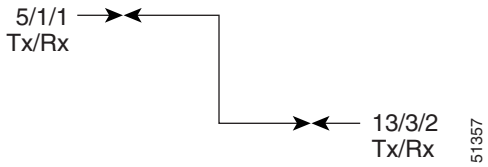
All protection for a two-fiber BLSR interconnecting to a two-fiber BLSR is performed at the line level. You can make the connection with a 2-way cross-connect from an STS on the working side of the two-fiber BLSR span of Ring 1 to an STS on the working side of a two-fiber BLSR span on Ring 2. The connections can be east to east, east to west, west to east, and west to west. This example, illustrated in Figure 5-12, uses Ring 1 west to Ring 2 east and assumes a OC-12-4 in Slots 12 and 13 for subtending to a two-fiber BLSR (Ring 2).

Figure 5-12 Two-Fiber BLSR to Two-Fiber BLSR



Use the ENT-CRS-STS1:CISCO:**STS-5-1,STS-13-26**:CTAG4::2WAY;
to create a 2-way connection from 5/1/1 to 13/3/2 as shown in Figure 5-13.

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



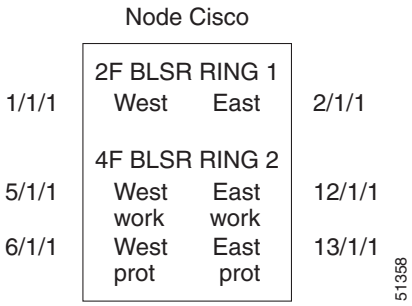
5.3.5 Sample Two-Fiber BLSR to Four-Fiber BLSR Connection (ONS 15454)

Ring 1 = Two-fiber BLSR

Ring 2 = Four-fiber BLSR

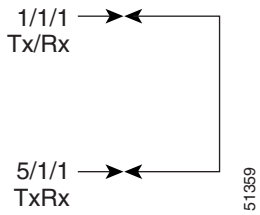
All protection for a two-fiber BLSR interconnecting to a four-fiber BLSR is performed at the line level. You can make the connection with a simple 2-way cross-connect from the appropriate side, east or west, of the two-fiber BLSR to the working fiber of the appropriate side, east or west, of the four-fiber BLSR, as shown in Figure 5-14.

Figure 5-14 Two-Fiber BLSR to Four-Fiber BLSR



Use the ENT-CRS-STS1:CISCO:**STS-1-1,STS-5-1**:CTAG5::2WAY;
to create a 2-way connection from 1/1/1 to 5/1/1, as shown in Figure 5-15.

Figure 5-15 2-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.

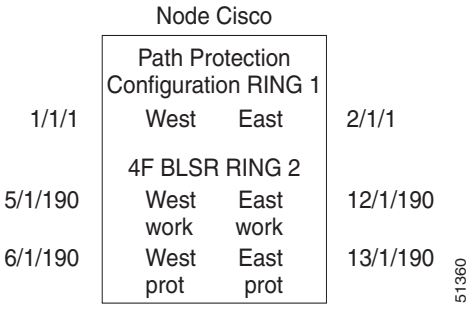
5.3.6 Sample Path Protection to Four-Fiber BLSR Connection (ONS 15454)

Ring 1 = Path Protection

Ring 2 = Four-fiber BLSR

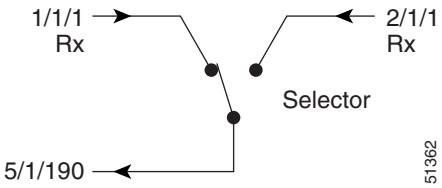
This example uses the west span of the four-fiber BLSR (Ring 2) for the active path of the circuit. The example also assumes that the four-fiber BLSR travels over OC-192 spans, as shown in Figure 5-16.

Figure 5-16 Path Protection to Four-Fiber BLSR



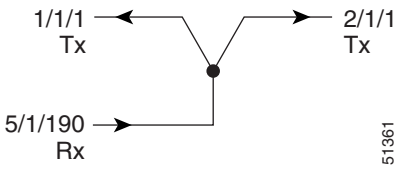
Use the ENT-CRS-STS1:CISCO:**STS-1-1&STS-2-1&STS-5-190**:CTAG6::2WAY;
to create a selector between 1/1/1 and 2/1/1 to Ring 2 (5/1/190), as shown in Figure 5-17.

Figure 5-17 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 Figure 5-18.

Figure 5-18 Bridge From 5/1/190 to Ring 1 (1/1/1 and 2/1/1)



5.4 1-Way Drop and Continue

The following examples show how to create a 1-way drop and continue cross-connect. The examples use three nodes (Node 1, Node 2, and Node 3) in a ring configuration (Figure 5-19). Node 1 is the source node, Node 2 has the drop and continue, and Node 3 is the destination.

Figure 5-19 1-Way Drop and Continue

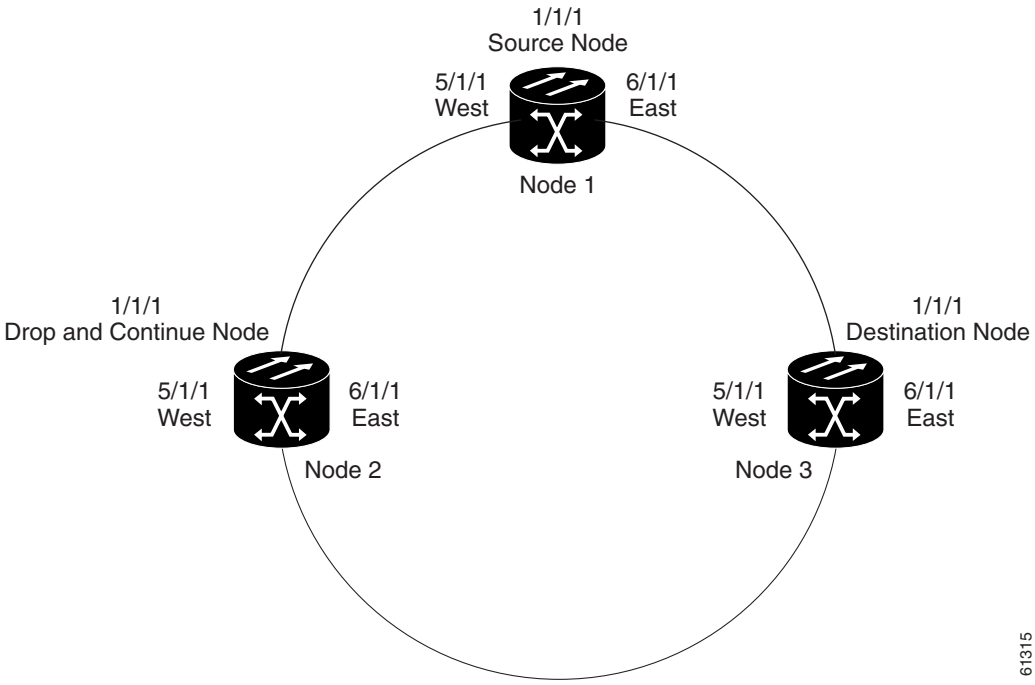
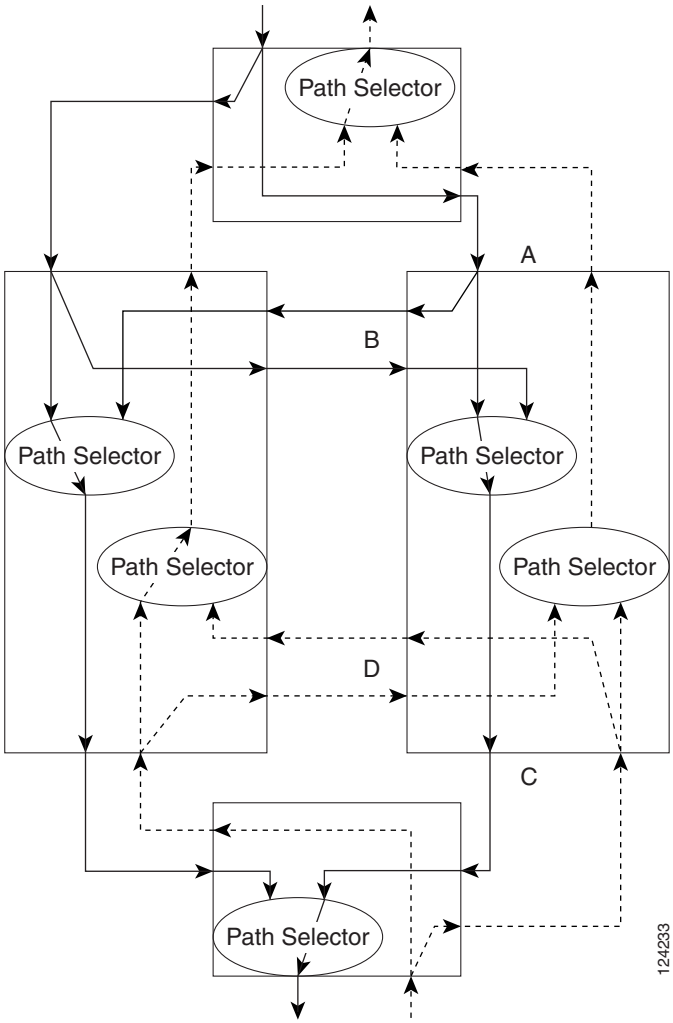


Figure 5-20 shows a circuit diagram example of the orientation of AIDs associated with the ENT-CRS command used to establish drop and continue connections.

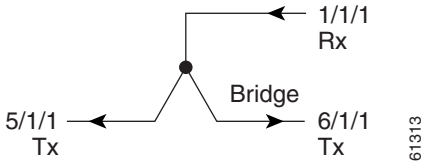
Figure 5-20 Orientation of AIDs Used to Establish Drop and Continue Connections



5.4.1 Sample Node 1 Configuration (Source Node)

Issue the ENT-CRS-STSn::STS-1-1,STS-5-1&STS-6-1:CTAG::1WAY; command on Node 1.

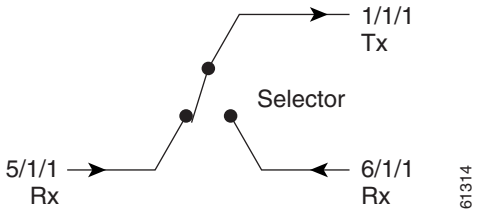
Figure 5-21 Bridge from 1/1/1 to 5/1/1 and 6/1/1



5.4.2 Sample Node 2 Configuration (Drop and Continue Node)

Issue the ENT-CRS-STSn::STS-5-1&STS-6-1,STS-1-1:CTAG::1WAYDC; on Node 2.

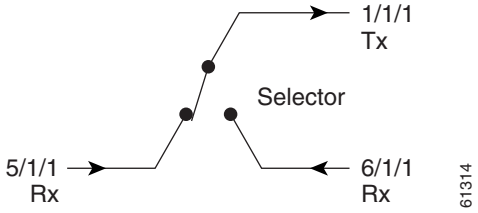
Figure 5-22 Selector Between 5/1/1 and 6/1/1 to 1/1/1



5.4.3 Sample Node 3 Configuration (Destination Node)

Issue the ENT-CRS-STSn::STS-5-1&STS-6-1,STS-1-1:CTAG::1WAY; on Node 3.

Figure 5-23 Selector Between 5/1/1 and 6/1/1 to 1/1/1



TL1 Errors

This chapter provides TL1 error information supported by the Cisco ONS 15454, 15327, 15600 and 15310-CL. For alarm information, Refer to the platform-specific Cisco ONS Procedure Guide, Cisco ONS Troubleshooting Guide and Cisco ONS Reference Manual.

6.1 Errors

Errors can be generated by any command or command response message. You can find errors listed by error code in Table 6-1. The format of an error message is as follows:

```
   SID DATE TIME
M CTAG DENY
   <ERRCDE>
    /* <ERRMSG> */
;
```

Table 6-1 TL1 Errors

Error Code	Error messages	
ENEQ	Communication Failed	IP Address Not Found
	Control Not Provisioned	IP Mask Not Found
	Cost Not Found	Next Hop Not Found
	Equipment Is Deleted	No standby present
	Equipment Not Found	No standby provisioned
	Equipment Not Present	Not Equipped
	Equipment Not Provisioned	Sensor IF Is Not Found
IBEX	Extra Datablock	
	Extra parameters	
ICNV	Equipment In Use	
	Invalid Command	
	PM Type Not Supported	

Table 6-1 TL1 Errors (continued)

Error Code	Error messages	
IDMS	Data Missing	
	Loopback Type Missing	
	Missing Internal Data	
IDNC	Invalid Data	
	Invalid PST Value	
	Invalid SST Value	
IDNV	AISONLPBK Not Supported	Invalid Reference
	AMPLMODE Not Supported	Invalid Regen Group AID
	CALOPWR Not Supported	Invalid Report Interval
	CALTILT Not Supported	Invalid Start Time
	CHPOWER Not Supported	Invalid TAP Number
	Cannot Access DCC	Invalid TXCOUNT Or RXCOUNT
	DCC is in use	Invalid TXCOUNT Or RXCOUNT
	Description Too Long	Invalid TXCOUNT
	Edit Line Code Failed	Invalid Time Offset
	Interval Out Of Range	Invalid Trace Level
	Invalid Alarm Message	Invalid User Name
	Invalid Data Rate	Invalid VCAT Group Name
	Invalid Data Rate	Keyword All Not Allowed
	Invalid Drop Path	Line Code Not Supported
	Invalid Equipment Type	OSRI Not Supported
	Invalid Interval	PPM Does Not Exist
	Invalid Log Name	Rate Capacity Exceeded
	Invalid MONLEV Value	SDCC is in use
	Invalid MONTYPE Value	TMPER Type Not Supported
	Invalid Mac Address	Tap Out Of Range
	Invalid Next Hop	Trace Level Required
	Invalid Notification Code	VOA Not Supported
	Invalid PM Interval	VOA Out Of Range
	Invalid PPM Port	Value Or Threshold Read Only
	Invalid Protid	

Table 6-1 TL1 Errors (continued)

Error Code	Error messages	
IDRG	Difference Value Range Error	Invalid POLD Value
	Invalid DURAL Value	Invalid TMOUT Value
	Invalid MXINV Value	Invalid Threshold Value
	Invalid PAGE Value	Invalid UOUT Value
	Invalid PCND Value	Invalid Watermark Value
	Invalid PINT Value	PJMON Out Of Range
	Invalid PJMON Value	
IIAC	AID PARSE ERROR	Invalid PJMON Value
	ALL AID Not Allowed	Invalid Protect AID
	Bad Ring Id	Invalid RTO AID
	DS1 Out of Range	Invalid Reference
	FAC parse failed	Invalid RingId
	Incorrect Card Type	Invalid Source AID
	Input, Invalid Access	Invalid TAPI
	Invalid AID	Invalid TO= AID
	Invalid DRI Node Type	Invalid TPORT AID
	Invalid DRI Topology	Invalid Time
	Invalid DS1 AID	Invalid VCG Member Number
	Invalid FROM= AID	Invalid Year
	Invalid Month Or Day	Invalid fac-n-m input
	Invalid Node Side	Loopback type mismatch
	Invalid NodeId	Multiple AIDs Not Allowed
IICM	Input, Invalid Command	
	Input, Invalid MOD1	
	Input, Invalid MOD2	
	Input, Invalid MOD2	
	Input, Invalid VERB	
IICT	Invalid Correlation Tag	

Table 6-1 TL1 Errors (continued)

Error Code	Error messages	
IIDT	CMDMDE Must Be FRCD	Invalid Phase Number
	Duplicate Schedule	Invalid Port In URL
	FRCD mode not supported	Invalid Revertive Time
	FTTD URL Missing	Invalid State Value
	File Name Missing In URL	Invalid West work Port
	Flash Manager Not Active	Memory Out Of Range
	Hostname Missing In URL	Missing/Invalid Source
	IOS Config File Too Big	Password Missing In URL
	Invalid Data Parameter	Port Missing In URL
	Invalid East work Port	SRC Required For RFR Type
	Invalid FTTD Host	Unsupported Locn Value
	Invalid NSAP Character	Username Missing In URL
	Invalid NSAP Length	ftp:// Missing In FTP URL
IIFM	Invalid Data Format	
	Invalid Password	
	Invalid User ID	
IISP	Input, Garbage	
INUP	General Block Unsupported	
IPEX	Duplicate N/V field	
IPMS	Invalid syntax	
IPNC	Description Too Long	
	Invalid Encapsulation Type	
	Invalid Flow Control Value	
	Invalid Maximum Frame Size	
	Invalid Parameter	
	Invalid Trans Value	
	Parameter Not Valid	
	Parameters Not Compatible	

Table 6-1 TL1 Errors (continued)

Error Code	Error messages	
IPNV	Bad Parameter	Invalid IP Mask
	Bad Reference	Invalid MONLEV Value
	Empty parameter	Invalid PM register
	INVALID SAMPLE TYPE	Invalid Parameter
	Internal-Ip Lookup Failed	Invalid Report Interval
	Invalid BITS Framing	Invalid SNTP Host Address
	Invalid BITS-OUT Rate	Invalid Start Time
	Invalid Clock Source	Invalid Switch Type
	Invalid Condition Type	Invalid Threshold Value
	Invalid DRITYPE	Invalid why parameter
	Invalid IIOP Port number	PM Not Supported
	Invalid IP Address	Parameter Not Valid
NO	No error	
PICC	AID Required	
	Can't login	
	Logout failed	
	Password Recently Changed	
	Unexpected Default Case	
	Unknown User	
	User Already Exists	
	User Not Authorized	
	User Password Required	
PIMA	Memory Out Of Range	
PIUC	Unauthorized	
	User Is Not Superuser	
	User Not Logged In	
RALB	Requested DCC In Use	
RRNG	Invalid Slot Number	
RTBY	Connection In Service	
	TAP Already In Use	
	TAP Number In Use	

Table 6-1 TL1 Errors (continued)

Error Code	Error messages
RTEN	Cannot Set Access Mode
	Invalid Access Mode
	Invalid TAP AID
	Invalid TAP Mode
	Invalid TAP Number
	Requested Tap Busy
	TAP Not Found
SAAL	Already Allowed
SADC	GNE: ENE is down
	TAP Not Connected
SAIN	Already Inhibited
SAIS	Port Already In Service
SAOP	Control Already Operated
	Control Already Released
SAOS	Port Already Out Of Service
SCAT	Connection is tapped
	Test Access Busy

Table 6-1 TL1 Errors (continued)

Error Code	Error messages	
SDBE	AID Parser Failed	IP Configuration Failed
	Bad Parameter	Incorrect Facility Type
	Cannot Access Alarms	Internal Access Failed
	Cannot Access Conditions	Internal Data Base Error
	Cannot Access Controls	Internal Database Error
	Cannot Access Date/Time	Invalid Command
	Cannot Access Equipment	Invalid DCC
	Cannot Access Facility	Invalid Mondat Format
	Cannot Access Interface	Invalid Montm Format
	Cannot Access Node ID	Invalid Protection Group
	Cannot Access Node Name	Invalid Time Period
	Cannot Access Object	Location Value Invalid
	Cannot Access Orderwire	Loopback Is Invalid
	Cannot Access SNTP Host	Loopback Port In Service
	Cannot Access Timezone	No such interface
	Cannot Configure SYNC	Not a Sonet interface
	Cannot Set Date	Object Not Provisioned
	Cannot Set Node Name	Object Not Supported
	Cannot Set Timezone	Path Width Not Supported
	DLT prg Failed	Wrong Facility Type
	Equipment Not Found	Wrong Interface Type
	Facility Does Not Exist	bind failed for sonet gen
	Facility Is Not Provisioned	getRefSources failed
	File Transfer In Progress	
SDLD	Duplex Unit Locked	
SDNA	Active TCC Not Ready	
	Standby TCC Not Ready	
SDNR	Data Not Ready	
SNCN	Bad Quality	
	Command Not Implemented	
	Invalid Clock Source	
SNPR	Cannot Get Role Of Port	
	Get Port Role Failed	

Table 6-1 TL1 Errors (continued)

Error Code	Error messages	
SNVS	CCAT Cross Connect Exists	Loopback Not In Progress
	Cannot END an AUTO roll	No Switch In Progress
	Cross Connect Exists	No loopback in progress
	Invalid AINS Soak Time	No valid roll signal
	Invalid Admin State	Protection Unit Active
	Invalid Clock Source	VCG Already Created
	Invalid Equipment State	Working Unit Already Active
SOSE	Unrecognized Message Type	
SPLD	Cannot Delete Equipment	
	Equipment In Use	
	FTP Task Is Busy	
	Facility Is Busy	
	Protection Unit Locked	
SRAC	Invalid Connection Type	
SROF	1WAYMON not supported	Cannot Set Payload Type
	APC System Is Busy	Cannot Set RingId
	All DCCs In Use	Cannot Set Wave Length
	CKTID Does Not Match	Cannot set loopback
	Cannot Access Alarm Log	Command Not Supported
	Cannot Access DCC	Connection In Loopback
	Cannot Access Facility	Connection In Roll
	Cannot Access PM Mode	Connection type error
	Cannot Access TAP	Connection type error
	Cannot Add Equipment	Could Not Delete Protection
	Cannot Add Equipment	DCC Does Not Exist
	Cannot Configure SYNC	DCC In Use DCC Not In Use
	Cannot Create TAP	DWRAP Not Enabled
	Cannot Delete Last Drop	Database Is Busy
	Cannot Delete VCAT Group	Element Not Found
	Cannot Edit Ethernet IP	Element not available
	Cannot Perform ACO	Facility Not Protected
	Cannot Provision Equipment	Fail to add RTO
	Cannot Set ALS Mode	Flash Is Busy
	Cannot Set NodeId	Get IOR Failed

Table 6-1 TL1 Errors (continued)

Error Code	Error messages	
SROF (continued)	Internal Database Error	Protect Port Active
	Internal Exercise Failure	Provisioning Rules Failed
	Invalid AID	Requested Operation Failed
	Invalid BLSR DRI Drop	Requested Tap Busy
	Invalid Drop Path	Ring Reversion Failed
	Invalid Path	SDBER Out Of Range
	Invalid Protection Group	SDCC creation failed
	Invalid RMODE	SFBER Out Of Range
	Invalid SYNC entity	Set PRG Name Failed
	Invalid Subnet Mask	Software Activation Failed
	Invalid Username/Password	Software Download Failed
	Is Not 1+1 Element Type	Software Error
	MIC Cards Cannot Be Reset	Software Reversion Failed
	Maximum User Limit Reached	Span Reversion Failed
	No Path To Regulate	TAP connected
	No Start-Up IOS Config	Tap Not Provisioned
	Operation Not Supported	Test Access Active
	Path Already In Use	Trace Mode Not Supported
	Path Specified Is Not Valid	Trap Table Full
	Path Used For Test Access	Unable to cancel roll
	Pool Does Not Exist	Unknown Internal Error
	Pool not available	VCG Does Not Exist
	Port Type Mismatch	XC Card Not Present
	Port Type Not Provisioned	
SRQN	DCC not enabled	
	Invalid Request	
	SDH Not Allowed With DCC	
	SDH Not Allowed	
SRTN	TAP Not Found	
SSRD	Switch Request Denied	
SSRE	Memory Resources Exceeded	
	Memory resource denial	
SWLD	Working Unit Locked	

6.2 Echo

In order to improve telnet functionality for automated systems, the echo function has been turned off since ONS 15454 Release 3.0. This change is transparent to users running standard UNIX-compliant telnet clients; however, PC users may need to change their client setup to enable “local echo.” This is normally accomplished by a pull-down menu or a preference attribute.

To test the local echo on your PC client, use the RTRV-HDR command. If you receive a response but no data, set local echo ON. Cisco recommends that you close any windows containing sensitive information after exiting a TL1 session.

Numerics

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