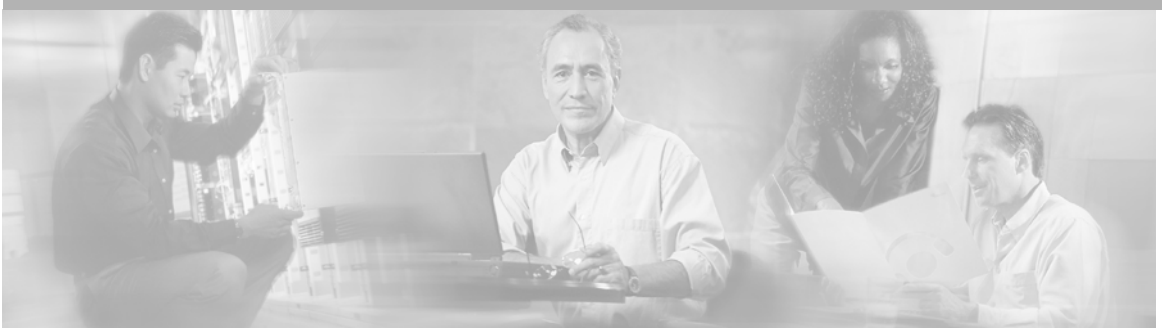

Cisco ONS SONET TL1 Command Guide

Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS-15310-MA, ONS 15600
Product and Documentation Release 7.0.1
August 2012

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

Text Part Number: OL-9222-01

Cisco ONS SONET TL1 Command Guide, Release 7.0.1

CONTENTS

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.

This section provides the following information:

Revision History

Date	Notes
February 2007	• Revision History Table added for the first time • Changed fuse rating and power consumption specifications in Appendix A
October 2007	Updated About this Guide chapter.
April 2008	Changed the minute range for REPTINVL from 1-1440 min to 5-1440 min for SCHED-PMREPT command in the SCHED Commands chapter.
May 2008	Added a note to the COPY-RFILE command.

Date	Notes
June 2008	• Deleted the <PH> parameter and updated the Input Format and Example for the INIT-SYS command in section 15.2 of Chapter 15, INIT Commands. • Added a note to the RTRV-FAC command.
November 2008	Added the table “CTC Port Numbers and TL1 Aids” in the chapter, Access Identifiers.
May 2009	• Added Facility AID format for CE-100T-8 and MS-ISC-100T cards in Chapter 25, Access Identifiers. • Added prerequisites to COPY-RFILE command. • Updated the supported platform for SW-DX-EQPT in Chapter 24, SW Commands.
June 2009	• Updated the input parameters for the APPLY command in Chapter 3, APPLY Commands. • Updated the output parameter for the RTRV-FAC command in Chapter 21, RTRV Commands. • Updated the following: – The output example and output parameters for the RTRV-CMD-SECU command in Chapter 21, RTRV Commands. – The input example and input parameters for the ED-CMD-SECU command in Chapter 11, ED Commands.
August 2009	Updated the input parameter description for APPLY command in Chapter 3, APPLY Commands.
September 2009	Updated the PH parameter description in Chapter 15, INIT Commands.
November 2009	• Updated “OPR-PROTNSW-OCH” command description in Chapter 16, OPR Commands. • Updated the <PJMON> parameter description in Chapter 11, ED Commands. • Updated the <PJMON> parameter description in Chapter 21, RTRV Commands.
January 2010	Updated the input format, input example, and added a new parameter <OPRNOMINAL> for ED-<OCN_TYPE> command in Chapter 11, ED Commands.
February 2010	Updated Input Parameters table in Chapter “INIT Commands”.
July 2010	Updated the “RTRV-AUDIT-LOG” command in the chapter “RTRV Commands”.
September 2010	Updated the table RFILE in the chapter “Access Identifiers”.
November 2010	• Removed the “prerequisite” section from the “COPY-RFILE” command. • Removed the “ISPROXYSERVER” and “ISFIREWALL” parameters from the ED-NE-GEN command in the chapter “ED Commands”.

Date	Notes
April 2011	Updated the input parameter description for the ED-<OCN_TYPE> command in the chapter, ED Commands.
May 2011	Updated the output parameter description for the RTRV-<OCN_TYPE> command in the chapter, RTRV Commands.
July 2011	Updated the description for RFILE-DB in “RFILE” section in the chapter, “Access Identifiers”
February 2012	Added “MS-ISC-100T” parameter to the ENT-EQPT command and removed “XCVXC-2.5G” parameter from the ENT-EQPT command in the chapter “ENT Commands”.
March 2012	Added Facility AID for CE1000 cards in the chapter “Access Identifiers”.
August 2012	The full length book-PDF was generated.

Document Objectives

This guide explains the use of Transaction Language 1 (TL1) for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600 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

The *Cisco ONS SONET TL1 Command Guide, R7.0.1* is organized into the following chapters:

Table 1 Cisco ONS SONET TL1 Command Guide Chapters

Title	Summary
Chapter 1, “ACT Commands”	Lists activate commands.
Chapter 2, “ALW Commands”	Lists allow commands.
Chapter 3, “APPLY Commands”	Lists apply commands.
Chapter 4, “CANC Commands”	Lists cancel commands.
Chapter 5, “CHG Commands”	Lists change commands.
Chapter 6, “CLR Commands”	Lists clear commands.
Chapter 7, “CONN Commands”	Lists connect commands.
Chapter 8, “COPY Commands”	Lists copy commands.
Chapter 9, “DISC Commands”	Lists disconnect commands.

Table 1 Cisco ONS SONET TL1 Command Guide Chapters (continued)

Title	Summary
Chapter 10, “DLT Commands”	Lists delete commands.
Chapter 11, “ED Commands”	Lists edit commands.
Chapter 12, “ENT Commands”	Lists enter commands.
Chapter 13, “EX Commands”	Lists exercise commands.
Chapter 14, “INH Commands”	Lists inhibit commands.
Chapter 15, “INIT Commands”	Lists initialize commands.
Chapter 16, “OPR Commands”	Lists operate commands.
Chapter 17, “REPT Messages”	Lists report autonomous messages.
Chapter 18, “RLS Commands”	Lists release commands.
Chapter 19, “RMV Commands”	Lists remove commands.
Chapter 20, “RST Commands”	Lists restore commands.
Chapter 21, “RTRV Commands”	Lists retrieve commands.
Chapter 22, “SCHED Commands”	Lists schedule commands.
Chapter 23, “SET Commands”	Lists set commands.
Chapter 24, “SW Commands”	Lists switch commands.
Chapter 25, “Access Identifiers”	Lists access identifiers.
Chapter 26, “Conditions”	Lists conditions.
Chapter 27, “Modifiers”	Lists modifiers.

Related Documentation

Use the *Cisco ONS SONET TL1 Command Guide, R7.0.1* in conjunction with the following referenced publications:

- *Cisco ONS SONET TL1 Reference Guide*
  Provides general information, procedures, and errors related to using TL1 in the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.
- *Cisco ONS SONET TL1 Command Quick Reference Guide*
  Provides input formats and output formats (where applicable) for all R7.0 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-CL and Cisco ONS 15310-MA 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-CL and Cisco ONS 15310-MA 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-CL and Cisco ONS 15310-MA Troubleshooting Guide
  Cisco ONS 15600 Troubleshooting Guide
  Provides general troubleshooting procedures, alarm descriptions, performance monitoring parameters, and Simple Network Management Protocol (SNMP) parameters for the corresponding Cisco ONS node and network.
- *Cisco ONS 15454 DWDM Procedure Guide*
  Explains installation, turn up, provisioning, and maintenance for Cisco ONS 15454 dense wavelength division (DWDM) systems.
- *Cisco ONS 15454 DWDM Reference Manual*
  Explains installation, turn up, provisioning, and maintenance for Cisco ONS 15454 dense wavelength division (DWDM) systems.
- *Cisco ONS 15454 DWDM Troubleshooting Guide*
  Provides troubleshooting information and troubleshooting-related parameters for the Cisco ONS 15454 (ANSI) and Cisco ONS 15454 SDH (ETSI) platforms, specifically the dense wavelength division multiplexing (DWDM) application that can operate on either platform.
- *Ethernet Card Software Feature and Configuration Guide for the Cisco ONS 15454, Cisco ONS 15454 SDH, and Cisco ONS 15327*
  Provides software features for all Ethernet cards and configuration information for Cisco IOS on ML-Series cards.
- *Cisco ONS 15310-CL and Cisco ONS 15310-MA Ethernet Card Software Feature and Configuration Guide*
  Provides software features and operations of the ML-100T-8 and the CE-100T-8 Ethernet cards for the Cisco ONS 15310-CL and the Cisco ONS 15310-MA.
- *Release Notes for the Cisco ONS 15454 Release 7.0*
  Release Notes for the Cisco ONS 15327 Release 7.0
  Release Notes for the Cisco ONS 15310-CL and Cisco ONS 15310-MA Release 7.0
  Release Notes for the Cisco ONS 15600 Release 7.0
  Provides caveats, closed issues, and new feature and functionality information.

For an update on End-of-Life and End-of-Sale notices, refer to
http://cisco.com/en/US/products/hw/optical/ps2001/prod_eol_notices_list.html

Document Conventions

This publication uses the following conventions:

Convention	Application
[ ]	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

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

Obtaining Optical Networking Information

This section contains information that is specific to optical networking products. For information that pertains to all of Cisco, refer to the Obtaining Documentation and Submitting a Service Request section.

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 15454 system. It also includes translations of the safety warnings that appear in the ONS 15454 system documentation.

Cisco Optical Networking Product Documentation CD-ROM

Optical networking-related documentation, including Cisco ONS 15xxx 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.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation,* which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.

ACT Commands

This chapter provides activate (ACT) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

1.1 ACT-USER

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Activate User (ACT-USER) command opens a session with the network element (NE).

Usage Guidelines

- Passwords are masked for the following security commands: ACT-USER, COPY-RFILE, COPY-IOSCFG, ED-PID, ENT-USER-SECU, and ED-USER-SECU. The password will be masked when accessing a TL1 session through any means. The Cisco Transport Controller (CTC) Request History and Message Log also show the commands as masked. When a password-masked command is reissued by double-clicking the command from CTC Request History, the password is masked in the CTC Request History and Message Log. The actual password that was previously issued is sent to the NE. To use a former command as a template only, single-click the command in CTC Request History. The command is placed in the Command Request text box, where you can edit the appropriate fields prior to reissuing it.
- This command is backwards compatible with user IDs and passwords from ONS 15454 2.x software versions according to the following rules:
- ACT-USER:[TID]:[STRING]:CTAG::[STRING]
- The syntax of the user ID (first [STRING]) and the password (second [STRING]) are not checked.
- Invalid syntax for both the user ID and password is permitted, but the user can only log in if the user ID and password match what is in the database.
- The user ID and password cannot exceed 10 characters.
- For the ACT-USER command, no error code is transmitted except to convey that the login is granted or denied. According to Telcordia TR-835, Appendix A, Section A.2, "... the error codes corresponding to ACT ... do not apply to the ACT-USER command because this command requires that no error code be provided to the session request except to indicate that it has been denied. Before a session is established, a specific error code might reveal clues to an intruder attempting unauthorized entry."
- In some configurations, a new user must change his or her password after establishing a session for the first time before continuing. All TL1 commands except for ED-PID and CANC-USER are denied until the password is changed. When the password has been changed, a user can execute any

command that his security level allows. If the user logs out without changing his password, each following session will DENY all commands, except ED-PID and CANC-USER, until the password is changed. Starting with Release 4.6, this feature can be turned on or off. The default is off.

Category

Security

Security

N/A

Input Format

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

Input Example

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

Input Parameters

<UID>	The user identifier (user ID) of the person logged in. UID can be any combination of up to 10 alphanumeric characters. UID is a string. It must not be null.
<PID>	The user password. PID is any combination of up to 10 alphanumeric characters. Passwords are encrypted for security reasons and will be displayed as asterisks (*). PID is a string. It 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

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

CHAPTER 2

ALW Commands

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 allow (ALW) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

2.1 ALW-CONSOLE-PORT

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Allow Console Port (ALW-CONSOLE-PORT) command is used to turn on the console port for the ML1000-2, ML100T-12 and ML-100T-8 cards.

Usage Guidelines None.

Category Security

Security Superuser

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

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

Input Parameters

<AID>	Access identifier. Values are in the "25.14 EQPT" section on page 25-31.

2.2 ALW-MSG-ALL

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Allow Message All (ALW-MSG-ALL) command instructs the NE to enter a mode where all the REPT ALM and REPT EVT autonomous messages are transmitted. Use the INH-MSG-ALL command to inhibit these autonomous messages. When a TL1 session starts, the REPT ALM and REPT EVT messages are allowed by default.

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

Category System

Security Retrieve

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

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

Input Parameters

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

2.3 ALW-MSG-DBCHG

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Allow Database Change Message (ALW-MSG-DBCHG) command enables REPT DBCHG. When a TL1 session starts, the REPT DBCHG messages are not allowed by default.

Note This command is not defined in the GR.

Usage Guidelines None.

Category Log

Security Retrieve

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

Input Example ALW-MSG-DBCHG:CISCO::123;

Input Parameters None.

2.4 ALW-MSG-SECU

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Allow Message Security (ALW-MSG-SECU) command enables the REPT EVT SECU and REPT ALM SECU autonomous messages.

Usage Guidelines None.

Category Security

Security Superuser

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

Input Example ALW-MSG-SECU:PETALUMA::123;

Input Parameters None.

2.5 ALW-PMREPT-ALL

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Allow Performance Report All (ALW-PMREPT-ALL) command resumes the processing of 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.

Usage Guidelines None.

Category Performance

Security Retrieve

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

Input Example ALW-PMREPT-ALL:CISCONODE::123;

Input Parameters None.

2.6 ALW-SWDX-EQPT

(Cisco ONS 15454) The Allow Switch Duplex Equipment (ALW-SWDX-EQPT) command allows automatic or manual switching on a duplex system containing duplexed or redundant equipment. To inhibit an NE from switching to duplex, use the INH-SWDX-EQPT command.

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

Note This command applies to the XCVT, XC10G, and XC-VXC-10G equipment units only in this release.

Category Equipment

Security Maintenance

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

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

Input Parameters

AID	Access identifier for the XCVT, XC10G, or XC-VXC-10G card from the "25.14 EQPT" section on page 25-31.

2.7 ALW-SWTOPROTN-EQPT

(Cisco ONS 15454, ONS 15310-MA) The Allow Switch to Protection Equipment (ALW-SWTOPROTN-EQPT) command allows automatic or manual switching of an equipment unit back to a protection status. Use the INH-SWTOPROTN-EQPT command to inhibit an NE from switching to protection.

Usage Guidelines

ALW-SWTOPROTN-EQPT is used for electrical line cards, for example, DS-1, DS-3, DS3XM, and EC-1. DS-1, DS-3, and DS3XM cards have 1:1 and 1:N equipment protection. EC-1 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.

Note

- This command only supports only the BTH value of the <DIRN> parameter. A command with any other value is considered an incorrect use of the command. An IDNV (Input, Data Not Valid) error message is returned.
- This command is not used for the common control cards (TCC2/TCC2P, XCVT, XC10G, and XC-VXC-10G). 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.
- This command is not used for OC-N 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.
- If this command is used on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message is returned.
- If this command is used on a card that is not in the inhibit state, the SAAL (Status, Already Allowed) error message is returned.
- As long as none of the previous error conditions apply, you are allowed to send this command to cards that have been uninstalled. This will not generate any error response.

Category

Equipment

Security

Maintenance

Input Format

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

Input Example

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

Input Parameters

<AID>	Access identifier. This parameter can either be the protection unit for which carrying traffic will be allowed (release of lockout) or the working unit for which switching to protect will be allowed (release of lock-on). Values are in the "25.14 EQPT" section on page 25-31.
<DIRN>	The switching direction relative to the entity defined in the AID field. This command only supports the BTH value of the DIRN parameter. Defaults to BTH. The parameter type is DIRECTION—transmit and receive directions.
• BTH	Both transmit and receive directions.

2.8 ALW-SWTOWKG-EQPT

(Cisco ONS 15454, ONS 15310-MA) The Allow Switch to Working Equipment (ALW-SWTOWKG-EQPT) 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.

Usage Guidelines

ALW-SWTOWKG-EQPT is used for electrical line cards, for example, DS-1, DS-3, DS3XM, and EC-1. DS-1, DS-3 and DS3XM cards have 1:1 and 1:N equipment protection. EC-1 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 nonrevertive 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.

Note

- This command only supports the BTH value of the <DIRN> parameter. A command with any other value is an incorrect use of the command. An IDNV (Input, Data Not Valid) error message is returned.
- This command is not used for the common control cards (TCC2/TCC2P, XCVT, XC10G, and XC-VXC-10G). 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.
- This command is not used for OC-N cards. A command on an optical card will receive an IIAC (Input, Invalid Access Identifier) error message. For OC-N cards, use the OPR-PROTNSW and RLS-PROTNSW commands.
- If this command is used on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message is returned.
- If this command is used on a card that is not in the inhibit state, the SAAL (Status, Already Allowed) error message is returned.

- As long as none of the previous error conditions apply, you are allowed to send this command to cards that have been uninstalled. This will not generate any error response.

Category Equipment

Security Maintenance

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

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

Input Parameters

<AID>	Access identifier. This parameter can either be the protection unit for which carrying traffic will be allowed (release of lockout) or the working unit for which switching to protect will be allowed (release of lock-on). Values are in the "25.14 EQPT" section on page 25-31.
<DIRN>	The switching direction relative to the entity defined in the AID field. This command only supports the BTH value of the DIRN parameter. Defaults to BTH. The parameter type is DIRECTION—transmit and receive directions.
• BTH	Both transmit and receive directions.

2.9 ALW-USER-SECU

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Allow User Security (ALW-USER-SECU) command enables a user ID that has been disabled using the INH-USER-SECU command so the user can reestablish a session with the NE.

Usage Guidelines None.

Category Security

Security Superuser

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

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

Input Parameters

<UID>	The user identifier (user ID) of the person logged in. UID can be a list of user IDs separated by "&". The keyword ALL cannot be used to specify all users on an NE. UID is a string.

APPLY Commands

This chapter provides apply (APPLY) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

3.1 APPLY

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Apply (APPLY) command activates or reverts a software load during a software upgrade or downgrade process.

Usage Guidelines

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

Category

File Transfer

Security

Superuser

Input Format

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

Input Example

APPLY:CISCO::123::ACT;

Input Parameters

<MEM_SW_TYPE>	(Optional) Memory switch action during the software upgrade. The parameter type is DL_TYPE, which indicates the software download type. The default value is ACT.
• ACPT	(ONS 15600) Activates to a newer software load on the active controller card and resets the active card.
• CANC	(ONS 15600) Cancels the software download.

• RVRT	Reverts to an older software load during software download.
• ACT	Activates to a new software load. (For ONS 15600, the new software load is activated on the standby controller card only).

CANC Commands

This chapter provides cancel (CANC) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

4.1 CANC

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Cancel (CANC) message reports the occurrence of a session timeout event.

Usage Guidelines

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. Starting with Release 4.0, timeouts can be provisioned through CTC. Starting with Software Release 4.6, timeouts can be provisioned through TL1 with the SET-ATTR-SECUDFLT command. The default timeouts based on privilege/security level are:

- A Superuser [SUPER] has a timeout period of 15 minutes.
- A Provisioning [PROV] user has a timeout period of 30 minutes.
- A Maintenance [MAINT] user has a timeout period of 60 minutes.
- A Retrieve [RTRV] user has no timeout period.

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

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

Category

Security

Security

Retrieve

Output Format

```
   SID DATE TIME
A  ATAG CANC
   "<UID>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
A 100.100 CANC
   "CISCO15"
;
```

Output Parameters

<UID>	The user identifier (user ID) of the person logged in. Refers to the user ID of a user whose session is terminated due to timeout. UID is a string.

4.2 CANC-USER

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Cancel User (CANC-USER) command logs a user out of an active session with the NE.

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

Usage Guidelines

For the CANC-USER command:

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

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

Category Security

Security Retrieve

Input Format

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

Input Example

```
CANC-USER:PETALUMA:TERRI:101;
```

Input Parameters

<USERID>	Identifies the user to the system. user ID can be up to 10 alphanumeric characters. It is a string.

4.3 CANC-USER-SECU

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Cancel User Security (CANC-USER-SECU) command forces a user off of the NE.

Usage Guidelines

The UID specified can be a single user ID or a list of user IDs separated by "&". The keyword ALL is not permitted. The UID specified cannot be the user ID of the administrator issuing the command.

Note This command will log out ALL sessions on the NE (TL1 and Cisco Transport Controller [CTC]) of a user whose user ID matches the UID specified in the command.

Category

Security

Security

Superuser

Input Format

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

Input Example

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

Input Parameters

<UID>	The user identifier (user ID) of the person logged in. UID can be a list of user IDs separated by "&". The keyword ALL may not be used to specify all users on an NE. UID is a string.

CHG Commands

This chapter provides change (CHG) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-MA, and ONS 15600.

5.1 CHG-ACCMD-<MOD_TACC>

(Cisco ONS 15454, ONS 15327, ONS 15310-MA, ONS 15600) The Change Test Access Mode for the DS1, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, or VT2 (CHG-ACCMD-<MOD_TACC>) command changes the test access (TACC) mode for the circuit being tested. This can be a change from monitoring the data to inserting data into the synchronous transport signal (STS). For more information about TACC, refer to the *Cisco ONS SONET TL1 Reference Guide*. See Table 27-1 on page 27-1 for supported modifiers by platform.

Usage Guidelines

This command can only be applied to an existing test access point (TAP) connection.

Caution

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 Out of Service, Maintenance (OOS-MT) state. The forced transition could be traffic-affecting. The present state of the facility/path is stored by the network element (NE) and is restored when the TAP connection is terminated. Test access connections are dropped automatically if the TL1 session is terminated or is timed out.

Note

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

Category

Troubleshooting and Test Access

Security Maintenance

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

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

Input Parameters

<TAP>	The test access point number. The TAP number must be an integer with a range of 1 to 999. It is a string. **Note** This command only supports changing the mode for a single TAP number at a time.
<MD>	The test access mode. (SPLTE, SPLTF, LOOPE, and LOOPF require an external quasi-random signal [QRS] input signal.) Single facility access digroup (FAD) test access does not support MONEF, SPLTEF, and SPLTAB modes. The parameter type is test access mode (TACC_MODE).
• LOOPE	Splits both the A and B paths. Connect the line incoming from the E direction to the line outgoing in the E direction, and connect this looped configuration to the FAD. The line outgoing in the F direction will have a QRS connected, and the line incoming from the F direction will be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.
• LOOPF	Splits both the A and B paths. Connect the line incoming from F direction to the line outgoing in the F direction, and connect this looped configuration to the FAD. The line outgoing in the E direction will have a QRS connected, and the line incoming from the E direction will be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.
• MONE	Indicates that a monitor connection will be provided from the FAD to the A transmission path of the accessed circuit.
• MONEF	Indicates that a monitor connection will be provided for the following: • From the FAD1 to a dual FAD (DFAD), or from the odd pair of a facility access path (FAP) to the A transmission path • From the FAD2 of the same DFAD or the even pair of a FAP, to the B transmission path of the accessed circuit
• MONF	Indicates that a monitor connection will be provided from the FAD to the B transmission path of the accessed circuit.
• SPLTA	Indicates that a connection will be provided from both the E and F sides of the A transmission path of the circuit under test to the FAD and split the A transmission path. Intrusive test access mode.
• SPLTB	Indicates that a connection will be provided from both the E and F sides of the B transmission path of the circuit under test to the FAD and split the B transmission path. Intrusive test access mode.

• SPLTE	Splits both the A and B paths and connect the E side of the accessed circuit to the FAD. The line outgoing in the F direction will have a QRS connected, the line incoming from the F direction will have a QRS connected, and the line incoming from the E direction will be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.
• SPLTEF	Splits both the A and B paths, and connect the E side of the accessed circuit to FAD1 and the F side to FAD2. Intrusive test access mode.
• SPLTF	Splits both the A and B paths, and connect the F side of the accessed circuit to the FAD. The line outgoing in the E direction will have a QRS connected, the line incoming in the E direction will have a QRS connected, and the line incoming from the E direction will be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.

5.2 CHG-EQPT

(Cisco ONS 15454) The Change Equipment (CHG-EQPT) command performs an in-service upgrade from low density (LD) electrical cards (DS1 [DS1-14, DS1N-14], DS3 [DS3-12, DS3N-12, DS3NE-12], EC1, and DS3XM-6) to high density (HD) electrical cards (DS1/E1-56, DS3/EC1-48, and DS3XM-12).

Usage Guidelines

- For Software Release 6.0 and later, only limited upgrades are supported, such as upgrading one LD DS3-12 card to one HD DS3/EC1-48 card.
- Optical (OC-N) card upgrades and downgrades are supported with the limitations of the MRC-12 card.
- Compatible equipment types for card upgrade:
  - DS3XM-6 to DS3XM-12
  - DS-3/DS3-N/DS3-E/DS3N-E to DS3/EC1-48
  - DS-1/DS1-N to DS1/E1-56
- Provisioning rules for card upgrade:
  - DS1-14 and DS1N-14 cards that are provisioned in Slot 1, 2, 3, 15, 16, or 17 should be upgraded to DS1/E1-56.
  - DS1-14 and DSN-14 cards that are provisioned in Slot 4, 5, 6, 12, 13, or 14 will fail when upgrading to DS1/E1-56.
  - DS3-12, DS3N-12, DS3E-12, and DS3N-12E cards that are provisioned in Slot 1, 2, 3, 15, 16, or 17 can be upgraded to DS3/EC1-48.
  - DS3-12, DS3N-12, DS3E-12, and DS3N-12E cards that are provisioned in Slot 4, 5, 6, 12, 13, or 14 will fail when upgrading to DS3/EC1-48.
  - Two upgradable cards provisioned in a 1:1 protection group cannot be upgraded.

Category Equipment

Security Maintenance

Input Format

CHG-EQPT:[<TID>]:<SRC>:<CTAG>::<EQPTTYPE>;

Input Example

CHG-EQPT::SLOT-1:1::DS3-EC1-48;

Input Parameters

<SRC>	The source access identifier from the "25.14 EQPT" section on page 25-31.
<EQPTTYPE>	The equipment type to be upgraded. The parameter type is EQUIPMENT_TYPE.
• 10DME-C	10DME-C card
• 10DME-L	10DME-L card
• 32DMX	(ONS 15454) 32 channel demultiplexer
• 32DMX-L	(ONS 15454) 32 channel demultiplexer unit for L-band
• 32DMX-O	(ONS 15454) 32 channel unidirectional optical demultiplexer
• 32MUX-O	(ONS 15454) 32 channel unidirectional optical multiplexer
• 32WSS	(ONS 15454) 32 channel optical wavelength selective switch
• 32WSS-L	(ONS 15454) 32 channel wavelength switch selector unit for L-band
• 4MD-xx.x	(ONS 15454) Optical multiplexer/demultiplexer with 4 channels
• AD-1B-xx.x	(ONS 15454) Optical add/drop multiplexed (OADM) 1 band filter
• AD-1C-xx.x	(ONS 15454) Optical add/drop multiplexed (OADM) 1 channel filter
• AD-2C-xx.x	(ONS 15454) Optical add/drop multiplexed (OADM) 2 channel filter
• AD-4B-xx.x	(ONS 15454) Optical add/drop multiplexed (OADM) 4 band filter
• AD-4C-xx.x	(ONS 15454) Optical add/drop multiplexed (OADM) 4 channel filter
• AIC-I	(ONS 15454) AIC-I card
• ASAP	(ONS 15600) Any service any port carrier card with 4 PIM slots
• CE-1000-4	(ONS 15454) CE-1000-4 card
• CE-100T-8	(ONS 15454, ONS 15310-CL, ONS 15310-MA) Eight port 100T card
• CTX2500	(ONS 15310-MA) CTX2500 card
• DS1	(ONS 15454) DS1 card
• DS1-28/DS3-EC1-3	(ONS 15310-MA) DS1-28/DS3-EC1-3 card
• DS1-84/DS3-EC1-3	(ONS 15310-MA) DS1-84/DS3-3 card
• DS1/E1-56	(ONS 15454) DS1/E1-56 card
• DS1N	(ONS 15454) DS1N card
• DS3	(ONS 15454) DS3 card
• DS3/EC1-48	(ONS 15454) DS3/EC1-48 card
• DS3i-N-12	(ONS 15454) DS3i-N-12 card
• DS3N	(ONS 15454) DS3N card
• DS3NE	(ONS 15454) DS3NE card
• DS3XM-6	(ONS 15454) DS3XM-6 card
• DS3XM-12	(ONS 15454) DS3XM-12 card
• E1000-2	(ONS 15454) E1000-2 card
• E1000-2-G	(ONS 15454) E1000-2-G card

• E100T	(ONS 15454) E100T card
• EC1	(ONS 15454) EC1 card
• FC_MR-4	(ONS 15454) FC_MR-4 card
• FILLER-CARD	Blank Filler card
• G1000-2	(ONS 15327) Two port G1000 card
• G1K-4	(ONS 15454) Four port G1000 card
• MIC A	(ONS 15327) MIC A card
• MIC B	(ONS 15327) MIC B card
• ML100T-8	(ONS 15310-CL, ONS 15310-MA) Mapper card
• ML1000-2	(ONS 15454) ML-Series two port gigabit Ethernet card
• ML100T-12	(ONS 15454) ML-Series 12 port FSTE card
• ML100X-8	(ONS 15454) Eight port 100T card with optical interface
• MMU	(ONS 15454) Multiring/mesh upgrade unit
• MRC-12	(ONS 15454) 12 port multirate optical card
• MXP_2.5G_10E	(ONS 15454) 2.5-Gbps-10-Gbps Muxponder-100 GHz-Tunable xx.xx-xx.xx card
• MXP_2.5G_10E_L	(ONS 15454) 2.5-Gbps-10-Gbps Muxponder-100 GHz-Tunable xx.xx-xx.xx card for L-band
• MXP_2.5G_10E_C	(ONS 15454) 2.5-Gbps-10-Gbps Muxponder-100 GHz-Tunable xx.xx-xx.xx card for C-band
• MXP_2.5G_10G	(ONS 15454) 2.5-Gbps-10-Gbps muxponder-100 GHz-tunable xx.xx-xx.xx card
• MXP_MR_2.5G	(ONS 15454) 2.5-Gbps multirate muxponder-100 GHz-tunable 15xx.xx-15yy.yy card
• MXPP_2.5G_10G	(ONS 15454) 2.5-Gbps-10-Gbps muxponder-protected-100 GHz-tunable xx.xx-xx.xx card
• MXPP_MR_2.5G	(ONS 15454) 2.5-Gbps multirate muxponder-protected-100 GHz-tunable 15xx.xx-15yy.yy card
• OC3	(ONS 15454, ONS 15327) OC-3 card
• OC3-8	(ONS 15454) Eight port OC-3 card
• OC12	(ONS 15454, ONS 15327) OC-12 card
• OC12-4	(ONS 15454) Four port OC-12 card
• OC48	(ONS 15454, ONS 15327, ONS 15600) OC-48 card
• OC48-16	(ONS 15454) 16 port OC-48 card
• OC192	(ONS 15454, ONS 15600) OC-192 card
• OC192-4	(ONS 15454) Four port OC-192 card
• OC192-XFP	(ONS 15454) One port OC-192 XFP
• OPT-AMP-L	(ONS 15454) Optical preamplifier unit for L-Band
• OPT-BST	(ONS 15454) Optical booster amplifier
• OPT-BST-L	(ONS 15454) Optical booster unit for L-Band
• OPT-PRE	(ONS 15454) Optical preamplifier
• OSC-CSM	(ONS 15454) Optical service channel (OSC) with combiner/separator Module (SCM)

• OSCM	(ONS 15454) Optical service channel module
• PIM-1	(ONS 15600) One port pluggable interface module
• PIM-4	(ONS 15600) Four port pluggable interface module
• PPM-1	(ONS 15454, ONS 15600, ONS 15310-CL, ONS 15310-MA) Pluggable port module with one SFP port
• SHELF	Shelf entity
• SSXC	(ONS 15600) Cross-connect card
• TCC	(ONS 15454) TCC card
• TXP_MR_10E	(ONS 15454) 10-Gbps multirate transponder-100-GHz-tunable xx.xx-xx.xx card
• TXP_MR_10E_C	(ONS 15454) 10-Gbps multirate transponder-100-GHz-tunable xx.xx-xx.xx card for C-band
• TXP_MR_10E-L	(ONS 15454) 10-Gbps multirate transponder-100-GHz-tunable xx.xx-xx.xx card for L-band
• TXP_MR_10G	(ONS 15454) 10-Gbps multirate transponder-100-GHz-tunable xx.xx-xx.xx card
• TXP_MR_2.5G	(ONS 15454) 2.5-Gbps multirate transponder-100-GHz-tunable xx.xx-xx.xx card
• TXPP_MR_2.5G	(ONS 15454) 2.5-Gbps multirate transponder-protected-100-GHz-tunable xx.xx-xx.xx card
• UNKNOWN	Unknown equipment type
• UNPROVISIONED	Unprovisioned type
• XC10G	(ONS 15454) XC10G card
• XCVT	(ONS 15454) XCVT card
• XC-VXC-10G	(ONS 15454) XC-VXC-10G card
• XTC	(ONS 15327) XTC card

CLR Commands

This chapter provides clear (CLR) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

6.1 CLR-COND-SECU

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Clear Security Condition (CLR-COND-SECU) command clears the specified standing condition.

Usage Guidelines

In Software Release 6.0 and later, only the INTRUSION-PSWD parameter value is supported.

Category

Security

Security

Superuser

Input Formats

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

Input Examples

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

Input Parameters

<SECUALMTYPE>	Secure alarm type. Defaults to INTRUSION-PSWD. The parameter type is security alarm type (SECUALMTYPE).
• 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.

CONN Commands

This chapter provides connect (CONN) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-MA, and ONS 15600.

7.1 CONN-TACC-<MOD_TACC>

(Cisco ONS 15454, ONS 15327, ONS 15310-MA, ONS 15600) The Connect Test Access for DS1, STS1, STS12C, STS18C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, or VT2 (CONN-TACC-<MOD_TACC> command connects the synchronous transport signal (STS) or Virtual Tributary (VT) defined by the access identifier (AID) to the STS specified by the test access point (TAP) number.

See Table 27-1 on page 27-1 for supported modifiers by platform. For more information about TACC, refer to the *Cisco ONS SONET TL1 Reference Guide*.

Usage Guidelines

Caution 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 Out of Service, Maintenance (OOS-MT) state. The forced transition could be traffic-affecting. The present state of the facility/path is stored by the network element (NE) and is restored when the TAP connection is brought down. Test access connections are dropped automatically if the TL1 session is terminated or is timed out.

Note

- If all TAPs are busy, a RABY error message is returned.
- If a requested TAP is busy, a RTBY error message is returned.
- If a requested TAP does not exist, a RTEN error message is returned.
- If a circuit is already connected to another TAP, a SCAT error message is returned.
- If a requested condition already exists, a SRCN error message is returned.
- If the AID is invalid, an IIAC (Input, Invalid Access Identifier) error message is returned.
- If an access is not supported, an EANS error message is returned.
- If a requested access configuration is invalid, a SRAC error message is returned.

- A connection can be made to a cross-connection, in which case all modes of access are supported. A connection to an Unmapped AID (an AID without a cross-connect on it) will allow only MONE, SPLTE, and LOOPE modes.
- A connection to the protect path of a 1+1, 1:1, or 1:N protection scheme is not allowed; however, connecting to the protection channel access (PCA) path of a two-fiber or four-fiber bidirectional line switched ring (BLSR) is supported. This will be preempted when a BLSR switch occurs.
- When you connect a TACC to a protect unidirectional path switched ring (UPSR) trunk, you will always be connected to the working trunk instead.
- STS36C is not supported in this release.
- You cannot connect a TACC to a cross-connect that is in roll pending.

Category

Troubleshooting and Test Access

Security

Maintenance

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

<SRC>	Source AID from the "25.1 ALL" section on page 25-1. SRC must not be null.
<TAP>	The test access point number. The TAP number is used to identify all messages between the TSC and the NE until the access point is released. The TAP number must be an integer with a range of 1 to 999. The TAP must not be null.
<MD>	The test access mode. (SPLTE, SPLTF, LOOPE, and LOOPF require an external quasi-random signal [QRS] input signal.) Single facility access digroup (FAD) test access does not support MONEF, SPLTEF, and SPLTAB modes. MD must not be null. The parameter type is test access mode (TACC_MODE).
• LOOPE	Splits both the A and B paths. Connect the line incoming from E direction to the line outgoing in the E direction, and connect this looped configuration to the FAD. The line outgoing in the F direction will have a QRS connected, and the line incoming from the F direction will be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.
• LOOPF	Splits both the A and B paths. Connects the line incoming from F direction to the line outgoing in the F direction, and connects this looped configuration to the FAD. The line outgoing in the E direction will have a QRS connected, and the line incoming from the E direction will be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.

• MONE	Indicates that a monitor connection 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 dual FAD (DFAD), or the odd pair of a facility access path (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	Splits both the A and B paths and connects the E side of the accessed circuit to the FAD. The line outgoing in the F direction will have a QRS connected, the line incoming from the F direction will have a QRS connected, and the line incoming from the E direction will be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.
• SPLTEF	Splits both the A and B paths, and connects the E side of the accessed circuit to FAD1 and the F side to FAD2. Intrusive test access mode.
• SPLTF	Splits both the A and B paths and connects the F side of the accessed circuit to the FAD. The line outgoing in the E direction will have a QRS connected, and the line incoming in the E direction will have a QRS connected. The line incoming from the E direction will be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<TAP>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "8"
;
```

Output Parameters

<TAP>	The test access point number. The TAP number is used to identify all messages between TSC and NE until the access point is released. The TAP number must be an integer with a range of 1 to 999.

COPY Commands

This chapter provides copy (COPY) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

8.1 COPY-IOSCFG

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Copy Cisco IOS Configuration File (COPY-IOSCFG) command supports the following types of operations on the Cisco IOS configuration file of ML-Series Ethernet cards:

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

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

2. Downloading the startup Cisco 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 an FTP URL string specifying the user name and password for FTP authentication, and specifying the host and the directory to store the startup configuration file on the network.

Usage Guidelines

- This FTP timeout is 30 seconds and is not configurable.
- The Cisco IOS configuration file is unique for each ML-Series card, and is specified by the SLOT number in the AID field of the command.
- In the gateway network element/end network element (GNE/ENE) environment, if a GNE firewall exists, the download (backup) of the Cisco IOS configuration file through TL1 is not allowed. Any such attempt will receive a "Data Connection Error" from the GNE. If uploading the Cisco IOS configuration file through TL1, the GNE will allow it to go through the firewall only if the file contains the header "! Cisco IOS config <text>". If the configuration file does not contain this header, GNE will block the upload with "Data Connection Error."
- The format of the FTP URL string used in the SRC or DEST field of the command is as follows:
  - In a nonfirewall environment, the format of the URL should be:

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

    where:

FTPUSER is the user ID to connect to the computer with the package file.

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

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

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

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

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

"FTPHOST <-> GNE3 <->GNE2 <-> GNE1 <-> ENE"

your FTP URL will be:

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

Category File Transfer

Security Provisioning

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

Input Example COPY-IOSCFG::SLOT-1:CTAG::SRC="LONG_FTP_PATH",DEST="STARTUP";

Input Parameters

<AID>	Access identifier. Specifies the slot number of the card where the Cisco IOS configuration file belongs. The AID is from the "25.14 EQPT" section on page 25-31.
<SRC>	Source AID. Specifies where the Cisco IOS configuration file is copied from. SRC is a string.
<DEST>	Specifies where the Cisco IOS configuration file is copied to. DEST is a string.

8.2 COPY-RFILE

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Copy File (COPY-RFILE) command downloads a new software package from the location specified by the FTP URL. It is also used to back up and restore the system database.

Usage Guidelines

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

- User ID is the user's ID used to connect to the computer hosting the package file or system database.
- Password is the password used to connect to the computer hosting the package file or system database.
- Hostname is the hostname or IP address of the computer hosting 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. For example:

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

Note

- The SWDL type is used for software package uploads. The RFBU type is used for system database backups, and the RFR type is used for system database restores. The SRC input is required when the type is SWDL or RFR. The DEST input is needed when the type is RFBU. The SRC and DEST inputs cannot both be used in the same command.
- The extended FTP URL syntax is required by the COPY-RFILE syntax.
- If using an FTP URL, port number (21) is optional. Leaving this field blank defaults to 21. However, if using an FTTD URL, then port number (21) is mandatory and no default is defined.
- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. In order to obtain the current value, issue the RTRV-XX command.
- If using an FTTD URL, the firewall on the GNE must be disabled.

Note FTP timeout is 30 seconds and is not configurable.

Note In the gateway network element/end network element (GNE/ENE) environment, if a GNE firewall exists, the backup of the ENE database through TL1 is not allowed. Any such attempt will receive a 'ERROR --5502 - Command not implemented' from the GNE.

Category

File Transfer

Security

Superuser

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_URL";

Input Parameters

<SRC>	Source AID. The type of file being transferred. Defaults to RFILE-PKG. From the AID "25.23 RFILE" section on page 25-40.
<XFERTYPE>	The file transfer protocol. The parameter type is TX_TYPE, which specifies the type and direction of the file transferred.
• RFBU	Remote File Backup. Applicable for Maintenance User (and higher).
• RFR	Remote File Restore. Applicable for Superuser.
• SWDL	Software Download. Applicable for Maintenance User (and higher).

<SRC1>	Specifies the source of the file to be transferred. Only the FTP URL is supported. In a nonfirewall environment, the format of the URL should be: "FTP://FTP_USER[:FTP_PASSWORD]]@FTP_HOST_IP[:21]/PACKAGE_PATH[;TYPE=I]" where: • <FTP_USER> is the user ID to connect to the computer hosting the package file. • <FTP_PASSWORD> is the password used to connect to the computer hosting the package file. • <FTP_HOST_IP> is the IP address of the computer hosting the package file. DNS lookup of host names is not supported. • <PACKAGE_PATH> is the long path name to the package file starting from the home directory of the logged-in user. **Note** User ID and password are optional if the user does not need to log into the host computer. All the other portions of the URL are required, including the initial "FTP://" string. **Note** In Software Release 5.0 and later, PACKAGE_PATH is relative to your home directory, instead of being an absolute path from the root directory of the network element (NE). If you want to specify an absolute path, start the path with the string "%2F". 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 SRC1 is a string.
<DEST>	Specifies the destination of the file to be transferred. The comments for the SRC parameter (above) also apply to the DEST parameter. DEST is a string.
<OVWRT>	If OVWRT is YES, the files should be overwritten. If OVWRT is NO, the file transfer will fail if the file already exists at the destination. Using the NO value will result in an error message. The NO value is not supported for database restore or software download. The parameter type is YES_NO, which indicates whether the user password is about to expire, the user is logged into the N or the user is locked out of the NE.
• NO	No
• YES	Yes
<FTTD>	This is a string

DISC Commands

This chapter provides disconnect (DISC) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-MA, and ONS 15600.

9.1 DISC-TACC

(Cisco ONS 15454, ONS 15327, ONS 15310-MA, ONS 15600) The Disconnect Test Access (DISC-TACC) command disconnects the test access point (TAP) and puts the connection back to its original state (no splits). For more information on test access (TACC), refer to the *Cisco ONS SONET TL1 Reference Guide*.

Usage Guidelines

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

Note If you send this command to an already disconnected TAP connection, an SADC error message is returned.

Note If the system cannot release TAP, an SRTN error message is returned.

Category

Troubleshooting and Test Access

Security

Maintenance

Input Format

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

Input Example

DISC-TACC:CISCO:8:123;

Input Parameters

<TAP>	The test access point number. The 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.

CHAPTER 10

DLT Commands

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 delete (DLT) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

10.1 DLT-<MOD1PAYLOAD>

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Delete 10GFC, 10GIGE, 1GFC, 1GFICON, 1GISC3, 2GFC, 2GFICON, 2GISC3, 4GFC, 4GFICON, D1VIDEO, DV6000, EC1, ESCON, ETRCLO, GIGE, HDTV, ISC3PEER1G, ISC3PEER2G, ISC3PEER2R, ISCCOMPAT, OC12, OC192, OC3, OC48, or T3 (DLT-<MOD1PAYLOAD>) command deletes the specified port.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Note This command supports ports with pluggable port modules (PPMs), for example, the ASAP card, the 15310-CL-CTX card, the FC_MR-4 card, and ONS 15454 dense wavelength division multiplexing (DWDM) cards.

Category

Ports

Security

Provisioning

Input Format

DLT-<MOD1PAYLOAD>:[<TID>]:<AID>:<CTAG>[::::];

Input Example DLT-GIGE:TID:FAC-5-1:1;

Input Parameters		
	<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.

10.2 DLT-<MOD_RING>

(Cisco ONS 15454, ONS 15327, ONS 15600) The Delete Bidirectional Line Switched Ring (DLT-<MOD_RING>) command deletes the BLSR of the NE.

Note ONS 15327 does not support four-fiber BLSR.

Usage Guidelines

- If the system fails on getting IOR, a SROG (Status, Get IOR Failed) error message is returned.
- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- If the BLSR does not exist, a SRQN (BLSR Does Not Exist) error message is returned.
- The ALL AID is invalid for this command.
- The list AID format has been supported since Software Release 4.6.
- The SROF (Facility Not Provisioned or Cannot Access BLSR) error message will be returned for an invalid query.
- If the BLSR is in use, a SROF (BLSR In Use) error message is returned.
- The SRQN (BLSR Deletion Failed) error message is returned for the invalid deletion query.

Category BLSR

Security Provisioning

Input Format DLT-<MOD_RING>:[<TID>]:<AID>:<CTAG>[:::];

Input Example DLT-BLSR:PETALUMA:BLSR-2:123;

Input Parameters		
	<AID>	Access identifier from the "25.3 AidUnionId1" section on page 25-16. Identifies the BLSR of the NE. The ALL and BLSR-ALL AIDs are not allowed for editing BLSRs.

10.3 DLT-BULKROLL-<OCN_TYPE>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Delete Bulkroll for OC12, OC192, OC3, OC48 (DLT-BULKROLL-<OCN_TYPE>) command deletes an attempted bulk rolling operation of a facility or completes an attempted rolling operation. This command is used for bulk line level rolling. Use DLT-ROLL-<MOD_PATH> for single path level rolling.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Category

Bridge and Roll

Security

Provisioning

Input Format

DLT-BULKROLL-<OCN_TYPE>:[<TID>]:<FROM>:<CTAG>:::
[RFROMSTART=<RFROMSTART>],[RFROMEND=<RFROMEND>],WHY=<WHY>;

Input Example

DLT-BULKROLL-OC12:CISCO:FAC-1-1:6:::RFROMSTART=STS-1-1-1,
RFROMEND=STS-1-1-11,WHY=STOP;

Input Parameters

<FROM>	One of the end points. Access identifier from the "25.15 FACILITY" section on page 25-33 for line level rolling and bulk rolling.
<RFROMSTART>	The starting time slot in the source roll port. For bulk rolling only. The AID is from the "25.11 CrossConnectId1" section on page 25-24 (except VCM and FACILITY). Defaults to STS-<FROMSLOT>-<FROMPORT>-1, where <FROMSLOT> and <FROMPORT> are the slot and port of the <FROM> AID.
<RFROMEND>	The ending time slot in the source roll port. For bulk rolling only. The AID is from the "25.11 CrossConnectId1" section on page 25-24 (except VCM and FACILITY). Defaults to STS-<FROMSLOT>-<FROMPORT>-N, where <FROMSLOT> and <FROMPORT> are the slot and port of the <FROM> AID and N is the value of OC-N (for example, in the case of OC48, N=48).
<WHY>	The reason for deletion. The parameter type is WHY, which is the reason for deletion.
• END	Drop the leg to be rolled. The leg that is identified by the RFROM in ENT-ROLL/ENT-BULKROLL.
• STOP	The rolling operation will be aborted and reverted to the previous configuration.

10.4 DLT-CRS-<PATH>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Delete Cross-Connection for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VT1, or VT2 (DLT-CRS-<PATH>) command deletes a cross-connection between synchronous transport signal (STS) paths. STS paths are specified using their STS AIDs.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Note

- The fields after CTAG (trailing colons) are optional.
- For 1-way cross-connections, the AIDs must be in the same order as originally entered; for 2-way cross-connections, either order will work.
- This command does not support the deletion of multiple STS cross-connections.
- Using "&" in the AID field of this command can delete a UPSR STS cross-connection.
  - 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>;
  - 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>;
  - 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>;
  - The AID format in the deletion command is the same as the AID format in the retrieved response message. For example, if the output of any retrieved AID is "F1&F2,T1:CCT,STS3C", the deletion command with the AID format (F1&F2,T1) is required to delete this cross-connection.
  - The following command is used to delete a UPSR 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 UPSR IDRI cross-connections.
  - The following command is used to delete a UPSR dual-ring interconnect (DRI) cross-connection:

DLT-CRS-{STS_PATH}:[<TID>]:A&B,C:<CTAG>;

A – Path on Ring X to which traffic from ring Y is bridged

B – Path on Ring X to which traffic from the same ring is bridged

C – Traffic to and from Ring Y

A, B, C, and D have a positional meaning. Connection type 2WAYDC is used for UPSR DRI cross-connections.

- All A&B AIDs in the TL1 cross-connection command are in the format of WorkingAID&ProtectAID.
- You can experience some implementation behavior problems if additional drops have been added to the connection object.
- The facility AID is only valid for slots holding the G1K-4 card.
- The virtual facility AID (VFAC) is only valid on slots holding an ML-Series card.
- CKTID is a string of ASCII characters. The maximum length of CKTID can be 48 characters. If the CKTID is EMPTY or NULL, the field will not appear.
- The default values for all optional parameters are network element (NE) default values. These values might not be the current value for a parameter. Use the RTRV-XX command to retrieve current values.

Category

Cross Connections

Security

Provisioning

Input Format

DLT-CRS-<PATH>:[<TID>]:<SRC>,<DST>:<CTAG>[:::[CKTID=<CKTID>],[CMDMDE=<CMDMDE>]];

Input Example

DLT-CRS-STS12C:VINBURG:STS-1-1-1,STS-12-1-1:102:::CKTID=CKTID,CMDMDE=CMDMDE;

Input Parameters

<SRC>	Source AID from the "25.11 CrossConnectId1" section on page 25-24.
<DST>	Destination AID from the "25.11 CrossConnectId1" section on page 25-24.
<CKTID>	String.
<CMDMDE>	The parameter type is command mode, which forces the system to execute a given command regardless of any standing conditions. NORM mode is the default behavior for all commands but you can specify FRCD to force the system to override a state in which the command would normally be denied.

• FRCD	Force the system to override a state in which the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that may make the command fail.

10.5 DLT-EQPT

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Delete Equipment (DLT-EQPT) command deletes a card from the NE.

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

The DLT-EQPT command also deletes a shelf that is no longer used. A shelf can only be deleted if there is no equipment present or if the equipment and it's attributes are not in use and can be deleted as well. Only one REPT-DBCHG on SHELF-{1-8} will be reported in the latter case. The node controller shelf (the shelf whose shelf ID is 1) cannot be deleted.

Usage Guidelines

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

Error conditions for deleting equipment can be:

- The error message SPLD (Equipment In Use) will be returned in the following conditions:
  - The card is in a protection group.
  - The card has a cross-connection or a data communications channel (DCC), generic communications channel (GCC), or optical service channel (OSC), or provisionable patchcord termination.
  - If any of its facilities is being used as a synchronization source.
- If a card is not provisioned, an error message will be returned.

Note On the Cisco ONS 15310-MA, automatic 1:1 protection groups are created when both the working and protect cards are provisioned. A protection group is deleted when the protect card is deleted. Deletion of the protect card in a 1:1 protection group is allowed, but trying to delete the working card will result in the Equipment In Use (SPLD) error.

Category

Equipment

Security

Provisioning

Input Format

DLT-EQPT:[<TID>]:<AID>:<CTAG>[:::];

Input Example DLT-EQPT:SONOMA:SLOT-1:104;

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31. Identifies an equipment unit to act on.

10.6 DLT-FFP-<MOD2DWDMPAYLOAD>

(Cisco ONS 15454) The Delete Facility Protection Group for 10GFC, 10GIGE, 1GFC, 1GFICON, 1GISC3, 2GFC, 2GFICON, 2GISC3, 4GFC, 4GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, HDTV, ISC1, ISC3, or PASSTHRU (DLT-FFP-<MOD2DWDMPAYLOAD>) command deletes Y-cable protection on client facilities.

Usage Guidelines None.

Category DWDM

Security Provisioning

Input Format DLT-FFP-<MOD2DWDMPAYLOAD>:[<TID>]:<SRC>,<DST>:<CTAG>[:::];

Input Example DLT-FFP-HDTV:CISCO:FAC-1-1-1,FAC-2-1-1:100;

Input Parameters

<SRC>	The working facility AID from the "25.15 FACILITY" section on page 25-33.
<DST>	The protecting facility AID from the "25.15 FACILITY" section on page 25-33.

10.7 DLT-FFP-<OCN_TYPE>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Delete Facility Protection Group for OC3, OC12, OC48, or OC192 (DLT-FFP-<OCN_TYPE>) command deletes an OC-N facility protection group in a 1+1 protection scheme.

Usage Guidelines See Table 27-1 on page 27-1 for supported modifiers by platform.

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

Category Protection

Security Provisioning

Input Format DLT-FFP-<OCN_TYPE>:[<TID>]:<WORK>,<PROTECT>:<CTAG>[:::];

Input Example DLT-FFP-OC3:PETALUMA:FAC-2-1,FAC-1-1:1;

Input Parameters

<WORK>	The working facility AID from the "25.15 FACILITY" section on page 25-33.
<PROTECT>	The protect facility AID from the "25.15 FACILITY" section on page 25-33.

10.8 DLT-LNK

(Cisco ONS 15454) The Delete Optical Link for OCH, OMS, or OTS (DLT-LNK) command deletes an optical link between two optical connection points. The optical link is specified by using the AID of the involved optical connection points.

Usage Guidelines None.

Category DWDM

Security Provisioning

Input Format DLT-LNK:[<TID>]:<FROM>,<TO>:<CTAG>;

Input Example DLT-LNK:PENNGROVE:BAND-6-1-TX,BAND-13-1-RX:114;

Input Parameters

<FROM>	The identifier at one end of the optical link from the AID "25.4 BAND" section on page 25-16
<TO>	The identifier at the other end of the optical link from the AID "25.4 BAND" section on page 25-16

10.9 DLT-LNKTERM

(Cisco ONS 15454, ONS 15310-CL) The Delete a Provisionable Patchcord Termination (DLT-LNKTERM) command deletes a provisionable patchcord termination that is present on a node. All termination points of a link/provisionable patchcord have to be deleted in order for the link to be deleted fully.

Usage Guidelines

This command accepts multiple AIDs, but does not accept the ALL AID.

A suitable error will be responsed if the link termination does not exist.

Category

Provisionable Patchcords

Security

Provisioning

Input Format

DLT-LNKTERM:[<TID>]:<AID>:<CTAG>;

Input Example

DLT-LNKTERM::LNKTERM-1:CTAG;

Input Parameters

<AID>	Access identifier from the "25.19 LNKTERM" section on page 25-39. Indicates a link (provisionable patchcord) termination on the local node.

10.10 DLT-OCHCC

(Cisco ONS 15454) The Delete Optical Channel Client Connection (DLT-OCHCC) command deletes the OCH client connection.

Usage Guidelines

None

Category

DWDM

Security

Provisioning

Input Format

DLT-OCHCC:[<TID>]:<AID>:<CTAG>[:::CKTID=<CKTID>],[CMDMDE=<CMDMDE>];

Input Example DLT-OCHCC:VA454-22:FAC-2-1-1:116:::CKTID=\"OCHCC-1\",CMDMDE=FRCD;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null the CKTID field will not be displayed.
<CMDMDE>	The parameter type is command mode, which forces the system to execute a given command regardless of any standing conditions. NORM mode is the default behavior for all commands but you can specify FRCD to force the system to override a state in which the command would normally be denied.
• FRCD	Force the system to override a state in which the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that may make the command fail.

10.11 DLT-OCHNC

(Cisco ONS 15454) The Delete Optical Channel Network Connection (DLT-OCHNC) command deletes the OCH network connection.

Usage Guidelines Two network connection channel endpoints must be specified in order to identify the wavelength channel inside the node.

Category DWDM

Security Provisioning

Input Format DLT-OCHNC:[<TID>]:<SRC>,<DST>:<CTAG>:::[CKTID=<CKTID>],[CMDMDE=<CMDMDE>];

Input Example DLT-OCHNC:VA454-22:CHANWL-1-3-TX-1530.33,
CHANWL-4-1-RX-1530.33:116:::CKTID=CIRCUIT,CMDMDE=FRCD;

Input Parameters		
	<SRC>	Source access identifier from the "25.8 CHANNEL" section on page 25-18. In 2-way wavelength connection sources both directions need to be indicated.
	<DST>	Destination access identifier from the "25.18 LINEWL" section on page 25-38. In 2-way wavelength connection sources both directions need to be indicated.
	<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null the CKTID field will not be displayed.
	<CMDMDE>	The parameter type is command mode, which forces the system to execute a given command regardless of any standing conditions. NORM mode is the default behavior for all commands but you can specify FRCD to force the system to override a state in which the command would normally be denied.
	• FRCD	Force the system to override a state in which the command would normally be denied.
	• NORM	Execute the command normally. Do not override any conditions that may make the command fail.

10.12 DLT-OSC

(Cisco ONS 15454) The Delete Optical Service Channel (DLT-OSC) command deletes the OSC group of the NE.

Usage Guidelines

None.

Category

DWDM

Security

Provisioning

Input Format

DLT-OSC:[<TID>]:<AID>:<CTAG>;

Input Example

DLT-OSC:PENNGROVE:OSC-1:114;

Input Parameters		
	<AID>	Access identifier from the "25.21 OSC" section on page 25-40. Identifies the OSC group of the NE.

10.13 DLT-RMONTH-<MOD2_RMON>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA) The Delete Remote Monitoring Threshold for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 4GFC, 4GFICON, FSTE, G1K-4, GFPOS, GIGE, OCH, or POS (DLT-RMONTH-<MOD2_RMON>) command deletes a threshold entry in the remote monitoring (RMON) alarm table. Because there can be multiple thresholds created for a particular MONTYPE, you must specify all of the necessary parameters for the specific threshold that you want to delete.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Category

Performance

Security

Provisioning

Input Format

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

Input Example

DLT-RMONTH-GIGE:CISCO:FAC-2-1:1234::ETHERSTATSOCTETS,,,,100:RISE=1000,FALL=100 SAMPLE=DELTA,STARTUP=RISING;

Input Parameters

<SRC>	Source access identifier from the "25.15 FACILITY" section on page 25-33. AID for the facility that manages the data statistics.
<MONTYPE>	Monitored type. Type of RMON monitored data statistics. The parameter type is monitoring type list (ALL_MONTYPE).
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• BBE-PM	OTN—Background Block Errors—Path Monitor Point
• BBE-SM	OTN—Background Block Errors—Section Monitor Point
• BBER-PM	OTN—Background Block Error Ratio—Path Monitor Point expressed as one tenth of a percentage
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path

• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A—Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B—Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address.
• etherStatsCollisions	Number of transmit packets that are collisions.
• etherStatsCRCAlignErrors	The total number of packets received that have a length between 64 and 1518 octets (excluding framing bits, but including frame check sequence [FCS] octets).
• etherStatsDropEvents	Number of received frames dropped at the port level.
• etherStatsFragments	The total number of packets received that were less than 64 octets.
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets.
• etherStatsOctets	The total number of octets of data.
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets.
• etherStatsPkts	The total number of packets received (including bad packets, broadcast packets, and multicast packets).
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets.
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A

• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High Order Path Negative Pointer Justification Count
• HP-NPJC-PGEN	High Order Path, Negative Pointer Justification Count
• HP-OI	Outage Intensity
• HP-PJCDIFF	High Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High Order Path Pointer Justification Count
• HP-PJCS-PGEN	High Order Path Pointer Justification Count Seconds
• HP-PPJC-PDET	High Order Path Positive Pointer Justification Count
• HP-PPJC-PGEN	High Order Path, Positive Pointer Justification Count
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset.
• ifInDiscards	The number of inbound packets.
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors.
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset.
• ifInOctets	Number of bytes transmitted since the last counter reset.
• ifInUcastPkts	Number of unicast packets received since the last counter reset.
• ifOutBroadcastPkts	Number of broadcast packets transmitted.
• ifOutDiscards	The number of outbound packets.
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors.
• ifOutMulticastPkts	Number of multicast packets transmitted.
• ifOutPayloadCrcErrors	Received payload cyclic redundancy check (CRC) errors.
• ifOutUcastPkts	Number of unicast packets transmitted.
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in uA
• LBCL-MAX	Maximum Laser Bias current in uA
• LBCL-MIN	Minimum Laser Bias current in uA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error

• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds—A
• LP-ESB	Low-Order Path Errored Seconds—B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET: Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN: Negative Pointer Justification
• OPR-AVG	Average Receive Power in 1/10 microW
• OPR-MAX	Maximum Receive Power in 1/10 microW
• OPR-MIN	Minimum Receive Power in 1/10 microW
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in 1/10 microW
• OPT-MAX	Maximum Transmit Power in 1/10 microW
• OPT-MIN	Minimum Transmit Power in 1/10 microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of dBm
• PPJC-PDET	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/Alarm Indication signal (AIS) Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<INTVL>	The interval in seconds during which the data is sampled and compared with the rising and falling threshold. A valid value is any integer greater than or equal to 10 (seconds).
<RISE>	The rising threshold for the sampled statistics. A valid value is any integer.
<FALL>	The falling threshold. A valid value is any integer smaller than the rising threshold.
<SAMPLE>	The method of calculating the value to be compared to the thresholds. The parameter type is SAMPLE_TYPE, which describes how the data will be calculated during the sampling period.
• ABSOLUTE	Comparing directly

• DELTA	Comparing with the current value of the selected variable subtracted by the last sample
<STARTUP>	Dictates whether an event will generate if the first valid sample is greater than or equal to the rising threshold, less than or equal to the falling threshold, or both. The parameter type is STARTUP_TYPE, which indicates whether an event will be generated when the first valid sample is crossing the rising or falling threshold.
• FALLING	Generates the event when the sample is smaller than or equal to the falling threshold
• RISING	Generates the event when the sample is greater than or equal to the rising threshold
• RISING-OR-FALLING	Generates the event when the sample is crossing the rising threshold, or the falling threshold

10.14 DLT-ROLL-<MOD_PATH>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Delete Roll on STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VT1, or VT2 (DLT-ROLL-MOD_PATH>) command deletes or completes an attempted rolling operation of a facility or completes an attempted rolling operation.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Note STS18C and STS36 are not supported for this command in this release.

Category

Bridge and Roll

Security

Provisioning

Input Format

DLT-ROLL-<MOD_PATH>:[<TID>]:<FROM>,<TO>:<CTAG>:::WHY=<WHY>;

Input Example

DLT-ROLL-STS1:CISCO:STS-1-1-1,STS-2-1-1:6:::WHY=STOP;

Input Parameters		
	<FROM>	Source access identifier from the "25.11 CrossConnectId1" section on page 25-24 (except VCM and FACILITY). It is one of the termination points (legs) of the existing cross-connection. If the existing cross-connection is one-way, this termination point (leg) should be the FROM-AID termination point. Otherwise, FROM is not significant. FROM and TO should be entered as they are entered in the ENT-CRS command. You can issue RTRV-CRS command, and use the response for the FROM and TO parameters.
	<TO>	Destination access identifier from the "25.11 CrossConnectId1" section on page 25-24 (except VCM and FACILITY). It is one of the termination points (legs) of the existing cross-connection. If the existing cross-connection is one-way, this termination point (leg) should be the TO-AID termination point. Otherwise, TO is not significant. FROM and TO should be entered as they are entered in the ENT-CRS command. You can issue RTRV-CRS command, and use the response for the FROM and TO parameters.
	<WHY>	The reason for deletion. The parameter type is WHY, which is the reason for deletion.
	• END	Drop the leg to be rolled; the leg that is identified by the RFROM in the ENT-ROLL command.
	• STOP	The rolling operation will be deleted and reverted to the previous configuration.

10.15 DLT-ROUTE

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Delete Route (DLT-ROUTE) command deletes the static routes.

Usage Guidelines

None.

Category

System

Security

Provisioning

Input Format

DLT-ROUTE:[<TID>]::<CTAG>::<DESPID>;

Input Example

DLT-ROUTE:CISCO::123::10.64.72.57;

Input Parameters		
	<DESPID>	Destination IP. DESPID is a string.

10.16 DLT-ROUTE-GRE

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Delete Route Generic Routing Encapsulation (DLT-ROUTE-GRE) command deletes a GRE tunnel.

Usage Guidelines None.

Category System

Security Provisioning

Input Format DLT-ROUTE-GRE:[<TID>]::<CTAG>:::IPADDR=<IPADDR>,IPMASK=<IPMASK>, NSAP=<NSAP>;

Input Example DLT-ROUTE-GRE:CISCO::123:::IPADDR=10.64.72.57,IPMASK=255.255.255.0, NSAP=39840F80FFFFFF0000DDDDAA000010CFB4910200;

Input Parameters

<IPADDR>	IP address of the tunnel endpoint. IPADDR is a string.
<IPMASK>	Subnet mask for the tunnel endpoint. IPMASK is a string.
<NSAP>	NSAP address for the tunnel endpoint. NSAP is a string.

10.17 DLT-TADRMAP

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Delete Target Identifier Address Mapping (DLT-TADRMAP) command instructs a gateway NE to delete an entry in the TADRMAP table.

Usage Guidelines None.

Category System

Security Provisioning

Input Format DLT-TADRMAP:[<TID>]::<CTAG>:::[TIDNAME=<TIDNAME>],[ADDRTYPE=<ADDRTYPE>];

Input Example DLT-TADRMAP:TID::CTAG:::TIDNAME=ENENODENAME,ADDRTYPE=IPADDR;

Input Parameters

<TIDNAME>	TID of the entity to be removed from the TADRMAP. TIDNAME is a string.
<ADDRTYPE>	Specifies either to remove and IP, NSAP, or IP-AND-NSAP entry in the TADRMAP. The parameter type is ADDRTYPE, which specifies whether the address is an IP address or an NSAP address.
• IP	IP address
• IP-AND-NSAP	IP and NSAP address
• NSAP	NSAP address

10.18 DLT-TRAPTABLE

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Delete Trap Table (DLT-TRAPTABLE) command deletes a Simple Network Management Protocol (SNMP) trap destination entry. Entering ALL will delete the whole table.

Usage Guidelines None.

Category System

Security Provisioning

Input Format DLT-TRAPTABLE:[<TID>]:<AID>:<CTAG>;

Input Example DLT-TRAPTABLE::1.2.3.4:1;

Input Parameters

<AID>	Access identifier from the "25.16 IPADDR" section on page 25-36. IP address identifies the trap destination. Only numeric IP addresses are allowed.

10.19 DLT-TUNNEL-FIREWALL

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Delete Tunnel Firewall (DLT-TUNNEL-FIREWALL) command deletes a firewall tunnel.

Usage Guidelines None.

Category System

Security Provisioning

Input Format DLT-TUNNEL-FIREWALL:[<TID>]::<CTAG>:::SRCADDR=<SRCADDR>, SRCMASK=<SRCMASK>,DESTADDR=<DESTADDR>,DESTMASK=<DESTMASK>;

Input Example DLT-TUNNEL-FIREWALL:TID::CTAG:::SRCADDR=192.168.100.52, SRCMASK=255.255.255.0,DESTADDR=192.168.101.14,DESTMASK=255.255.255.0;

Input Parameters

<SRCADDR>	Source IP address. SRCADDR is a string.
<SRCMASK>	Source mask. SRCMASK is a string.
<DESTADDR>	Destination IP address. DESTADDR is a string.
<DESTMASK>	Destination mask. DESTMASK is a string.

10.20 DLT-TUNNEL-PROXY

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Delete Tunnel Proxy (DLT-TUNNEL-PROXY) command deletes a proxy tunnel.

Usage Guidelines None.

Category System

Security Provisioning

Input Format DLT-TUNNEL-PROXY:[<TID>]::<CTAG>:::SRCADDR=<SRCADDR>, SRCMASK=<SRCMASK>,DESTADDR=<DESTADDR>,DESTMASK=<DESTMASK>;

Input Example DLT-TUNNEL-PROXY:TID::CTAG:::SRCADDR=192.168.100.52, SRCMASK=255.255.255.0,DESTADDR=192.168.101.14,DESTMASK=255.255.255.0;

Input Parameters		
	<SRCADDR>	Source IP address. SRCADDR is a string.
	<SRCMASK>	Source mask. SRCMASK is a string.
	<DESTADDR>	Destination IP address. DESTADDR is a string.
	<DESTMASK>	Destination mask. DESTMASK is a string.

10.21 DLT-USER-SECU

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 156000) The Delete User Security (DLT-USER-SECU) command deletes a user. It can only be performed by a Superuser. Privilege levels are described in the ENT-USER-SECU command.

Usage Guidelines

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

For the DLT-USER-SECU command, the syntax of <UID> is not checked. The user is deleted if the <UID> exists in the database.

Category

Security

Security

Superuser

Input Format

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

Input Example

DLT-USER-SECU:PETALUMA:CISCO15:123;

Input Parameters		
	<UID>	User identifier. Can be up to 10 alphanumeric characters. UID is a string.

10.22 DLT-VCG

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Delete Virtual Concatenated Group (DLT-VCG) command deletes a virtual concatenation group (VCG) object.

Usage Guidelines

None.

Category

VCAT

Security

Provisioning

Input Format

DLT-VCG:[<TID>]:<SRC>:<CTAG>:::[CMDMDE=<CMDMDE>][:];

Input Example

DLT-VCG:NODE1:FAC-1-1:1234:::CMDMDE=FRCD;

Input Parameters

<SRC>	Source AID from the "25.15 FACILITY" section on page 25-33. ML-Series cards use the VFAC AID and FC_MR-4 cards use the FAC AID.
<CMDMDE>	The parameter type is command mode, which forces the system to execute a given command regardless of any standing conditions. NORM mode is the default behavior for all commands but you can specify FRCD to force the system to override a state in which the command would normally be denied.
• FRCD	Force the system to override a state in which the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that may make the command fail.

ED Commands

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 edit (ED) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

11.1 ED-<GIGE_TYPE>

(Cisco ONS 15454, ONS 15600) The Edit 10GIGE or GIGE (ED-<GIGE_TYPE>) command edits Ethernet facility attributes.

Usage Guidelines

- See Table 27-1 on page 27-1 for supported modifiers by platform.
- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. In order to obtain the current value, issue the RTRV-XX command.
- The following parameters apply only to ED-GIGE; ADMINSTATE, LINKSTATE, MTU, FLOWCTRL, AUTONEG, HIWMRK, LOWMRK, DUPLEX, SPEED, SOAK.
- The MACADDR parameter is applicable for ED-10GIGE only.

Category Ports

Security Provisioning

Input Format ED-<GIGE_TYPE>:[<TID>]:<AID>:<CTAG>:::[ADMINSTATE=<ADMINSTATE>], [LINKSTATE=<LINKSTATE>],[MTU=<MTU>],[FLOWCTRL=<FLOWCTRL>], [AUTONEG=<AUTONEG>],[HIWMRK=<HIWMRK>],[LOWMRK=<LOWMRK>],

[OPTICS=<OPTICS>],[DUPLEX=<DUPLEX>],[SPEED=<SPEED>],[NAME=<NAME>],
[CMDMDE=<CMDMDE>],[MACADDR=<MACADDR>],[FREQ=<FREQ>],[LOSSB=<LOSSB>],
[SOAK=<SOAK>]:[<PST>[,<SST>]];

Input Example

ED-GIGE:CISCO:FAC-1-1:123:::ADMINSTATE=DOWN,LINKSTATE=DOWN,MTU=1548,
FLOWCTRL=NONE,AUTONEG=Y,HIWMRK=485,LOWMRK=25,OPTICS=1000_BASE_LX,
DUPLEX=AUTO,SPEED=AUTO,NAME="GIGE PORT",CMDMDE=FRCD,
MACADDR=00-0E-AA-BB-CC-FF,FREQ=1550,LOSSB=SX,SOAK=32:IS,AINS;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<ADMINSTATE>	The parameter type is UP_DOWN which indicates an up or down value
• DOWN	Down
• UP	Up
<LINKSTATE>	The parameter type is UP_DOWN which indicates an up or down value
• DOWN	Down
• UP	Up
<MTU>	Maximum transport unit. The parameter type is MTU_TYPE which indicates the maximum transport unit used by an Ethernet card. Defaults to 9600.
• 10004	10004. Indicates jumbo size.
• 1500	1500
• 1548	1548
• 9600	9600. Indicates the jumbo size.
<FLOWCTRL>	Flow control. The parameter is FLOW which indicates the type of flow control that has been negotiated for an Ethernet port. Defaults to NONE.
• ASYMMETRIC	Asymmetric flow control
• ASYMMETRIC_LOCAL	Asymmetric local flow control
• NONE	No flow control
• PASSTHRU	Passthrough flow control
• SYMMETRIC	Symmetric flow control
<AUTONEG>	Autonegotiation. The parameter is ON_OFF which disables or enables an attribute. Defaults to Y.
• N	Disable an attribute
• Y	Enable an attribute
<HIWMRK>	High water mark. Integer. Defaults to 485.
<LOWMRK>	Low water mark. Integer. Defaults to 25.
<OPTICS>	The parameter is OPTICS which indicates the type of Gigabyte 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
• 100_BASE_FX	100 Base FX
• 100_BASE_LX	100 Base LX
• CWDM_1470	Coarse wavelength division multiplexing (CWDM) 1470
• CWDM_1490	CWDM 1490
• CWDM_1510	CWDM 1510
• CWDM_1530	CWDM 1530
• CWDM_1550	CWDM 1550
• CWDM_1570	CWDM 1570
• CWDM_1590	CWDM 1590
• CWDM_1610	CWDM 1610
• ITU_100G_1530_33	ITU-100G 1530.33
• ITU_100G_1531_12	ITU-100G 1531.12
• ITU_100G_1531_90	ITU-100G 1531.90
• ITU_100G_1532_68	ITU-100G 1532.68
• ITU_100G_1534_25	ITU-100G 1534.25
• ITU_100G_1535_04	ITU-100G 1535.04
• ITU_100G_1535_82	ITU-100G 1535.82
• ITU_100G_1536_61	ITU-100G 1536.61
• ITU_100G_1538_19	ITU-100G 1538.19
• ITU_100G_1538_98	ITU-100G 1538.98
• ITU_100G_1539_77	ITU-100G 1539.77
• ITU_100G_1540_56	ITU-100G 1540.56
• ITU_100G_1542_14	ITU-100G 1542.14
• ITU_100G_1542_94	ITU-100G 1542.94
• ITU_100G_1543_73	ITU-100G 1543.73
• ITU_100G_1544_53	ITU-100G 1544.53
• ITU_100G_1546_12	ITU-100G 1546.12
• ITU_100G_1546_92	ITU-100G 1546.92
• ITU_100G_1547_72	ITU-100G 1547.72
• ITU_100G_1548_51	ITU-100G 1548.51
• ITU_100G_1550_12	ITU-100G 1550.12
• ITU_100G_1550_92	ITU-100G 1550.92
• ITU_100G_1551_72	ITU-100G 1551.72
• ITU_100G_1552_52	ITU-100G 1552.52
• ITU_100G_1554_13	ITU-100G 1554.13
• ITU_100G_1554_94	ITU-100G 1554.94
• ITU_100G_1555_75	ITU-100G 1555.75
• ITU_100G_1556_55	ITU-100G 156.55

• ITU_100G_1558_17	ITU-100G 1558.17
• ITU_100G_1558_98	ITU-100G 1558.98
• ITU_100G_1559_79	ITU-100G 1559.79
• ITU_100G_1560_61	ITU-100G 1560.61
• UNKNOWN	Unknown
• UNPLUGGED	Unplugged
<DUPLEX>	The parameter is ETHER_DUPLEX which indicates duplex mode. Defaults to AUTO.
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode
<SPEED>	The parameter type is ETHER_SPEED which indicates Ethernet speed. Defaults to AUTO.
• 100_MBPS	100 Mbps
• 10_GBPS	10 Gbps
• 10_MBPS	10 Mbps
• 1_GBPS	1 Gbps
• AUTO	Automatic
<NAME>	Port name. NAME is a string. Defaults to NULL. Maximum length is 32 characters.
<CMDMDE>	Command execution mode. NORM for normal (default) and FRCD for forced. FRCD will override any safeguards that normally reject a request to delete an in service resource. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<MACADDR>	MACADDR is a string. Defaults to NULL. Maximum length is 18 characters.
<FREQ>	The parameter type is OPTICAL_WLEN which indicates the optical wavelength.
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33

• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12

• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570

• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46

• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	The parameter type is REACH which indicates the reach values.

• AUTOPROV	Autoprovisioning
• CX	Reach CX
• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• VX	Reach VX
• ZX	Reach ZX
<SOAK>	IS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer. Defaults to 32.
<PST>	The primary state. The parameter type is PST, which indicates the current overall service condition of an entity. Defaults to OOS.
• IS	In service
• OOS	Out of service
SST	The secondary state. The parameter type is SST, which provides additional information pertaining to PST and primary state qualifier (PSTQ). Defaults to DSBLD.
• 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

11.2 ED-<MOD1FCPAYLOAD>

(Cisco ONS 15454) The Edit 1GFC, 2GFC, 4GFC, or ESCON (ED-<MODFCPAYLOAD>) command edits the attributes related to the Fibre Channel (FC) facility. The state IS,AINS is not supported on the FC port.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Note

- The port parameters VIZ, LINKRCVRY, DISTEXTN, AUTODETECTION, LINKCREDITS, and MFS can be edited only if the port state is OOS,MT or OOS,DSBLD.
- The port parameters AUTODETECTION, LINKCREDITS, and MFS can be edited only if distance extension is enabled (set to B2B).
- When 1GFICON and 2GFICON payloads are provisioned, distance extension=B2B is the default and only valid setting. Setting distance extension (using the ED-nGFICON command) to any other setting will be denied with an error message, for example, Provisioning Rules Failed.

Category

Ports

Security

Provisioning

Input Format

ED-<MOD1FCPAYLOAD>:[<TID>]:<AID>:<CTAG>:::[LINKRCVRY=<LINKRCVRY>],
[DISTEXTN=<DISTEXTN>],[AUTODETECTION=<AUTODETECTION>],
[LINKCREDITS=<LINKCREDITS>],[MFS=<MFS>],[NAME=<NAME>],
[CMDMDE=<CMDMDE>],[SOAK=<SOAK>],[FREQ=<FREQ>],
[LOSSB=<LOSSB>]:[<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,
FREQ=1550,LOSSB=LR-1:OOS,MT;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<LINKRCVRY>	Link recovery. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.

<DISTEXTN>	Distance extension. It can be set to Buffer-to-Buffer (B2B) Credit Management state or None. **Note** B2B and link recovery are mutually exclusive. You cannot turn on both B2B and link recovery at the same time. The parameter type is DISTANCE_EXTENSION (distance extension).
• B2B	Buffer to buffer flow control
• NONE	No distance extension
<AUTODETECTION>	Autodetection. Turns autodetection on or off. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute
• Y	Enable an attribute
<LINKCREDITS>	Number of link credits. If autodetection is set to off, the value of the link credits will be used to configure the hardware. LINKCREDITS is an integer.
<MFS>	Maximum frame size. MFS is an 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, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<SOAK>	OOS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer.
<FREQ>	The parameter type is OPTICAL_WLEN, which is the optical wavelength.
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12

• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92

• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24

• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30

• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	the parameter type is REACH, which is the reach value.
• AUTOPROV	Autoprovisioning
• CX	Reach CX

• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• VX	Reach VX
• ZX	Reach ZX
<PST>	Primary state. the parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.3 ED-<MOD1FICONPAYLOAD>

(Cisco ONS 15454) The Edit 1GFICON, 2GFICON, 4GFICON, or ESCON (ED-<MOD1FICONPAYLOAD>) command edits the attributes related with the fiber connectivity (FICON) payload facility. The state IS,AINS is not supported on the FICON port.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Category

Ports

Security

Provisioning

Input Format

ED-<MOD1FICONPAYLOAD>:[<TID>]:<AID>:<CTAG>:::[LINKRCVRY=<LINKRCVRY>],
[DISTEXTN=<DISTEXTN>],[AUTODETECTION=<AUTODETECTION>],
[LINKCREDITS=<LINKCREDITS>],[MFS=<MFS>],[NAME=<NAME>],
[CMDMDE=<CMDMDE>],[SOAK=<SOAK>],[FREQ=<FREQ>],
[LOSSB=<LOSSB>]:[<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,FREQ=1550,
LOSSB=LR-1:OOS,MT;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<LINKRCVRY>	Link recovery. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute
• Y	Enable an attribute
<DISTEXTN>	Distance extension. It can be set to B2B Credit Management state or None. **Note** B2B and link recovery are mutually exclusive. You cannot turn on both B2B and link recovery at the same time. The parameter type is DISTANCE_EXTENSION (distance extension).
• B2B	Buffer to buffer flow control
• NONE	No distance extension
<AUTODETECTION>	Autodetection. Turns autodetection on or off. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute
• Y	Enable an attribute
<LINKCREDITS>	Number of link credits. If autodetection is set to off the value of the link credits will be used to configure the hardware. LINKCREDITS is an integer.
<MFS>	Maximum frame size. MFS is an integer.
<NAME>	String

<CMDMDE>	Command execution mode, forced or normal. FRCD deletes all the VCG members and member cross-connects of a VCG. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<SOAK>	OOS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer.
<FREQ>	The parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79

• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33

• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27

• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06

• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	The parameter type is REACH, which is the reach value.
• AUTOPROV	Autoprovisioning
• CX	Reach CX
• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX

• T	Reach T
• VX	Reach VX
• ZX	Reach ZX
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.4 ED-<MOD2DWDMPAYLOAD>

(Cisco ONS 15454) The Edit 10GFC, 10GIGE, 1GFC, 1GFICON, 1GISC3, 2GFC, 2GFICON, 2GISC3, 4GFC, 4GFICON, D1VIDEO, DV6000, ESCON, ETRCLO, GIGE, HDTV, ISC1, ISC3, or PASSTHRU (ED-<MOD2DWDMPAYLOAD>) command edits the operating parameters for a dense wavelength division multiplexing (DWDM) client facility.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Category

DWDM

Security

Provisioning

Input Format

ED-<MOD2DWDMPAYLOAD>:[<TID>]:<AID>:<CTAG>:::[NAME=<NAME>],[CMDMDE=<CMDMDE>],[FREQ=<FREQ>],[LOSSB=<LOSSB>]:[<PST>[,<SST>]];

Input Example

ED-HDTV::FAC-1-1:1:::NAME="PORTNAME",CMDMDE=CMDMDE,FREQ=1550,LOSSB=LR-1:IS,AINS;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<LINKCREDITS>	Number of link credits. If autodetection is set to off the value of the link credits will be used to configure the hardware. LINKCREDITS is an integer.
<NAME>	String
<CMDMDE>	Command execution mode, forced or normal. FRCD deletes all the VCG members and member cross-connects of a VCG. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<FREQ>	The parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537

• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52

• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44

• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22

• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	the parameter type is REACH, which is the reach value.
• AUTOPROV	Autoprovisioning
• CX	Reach CX
• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR

• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• VX	Reach VX
• ZX	Reach ZX
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.5 ED-<MOD_PATH>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VC12, VC3, VT1, or VT2 (ED-<MOD_PATH>) command edits the attributes associated with synchronous transport signal (STS) and Virtual Tributary (VT) paths.

Usage Guidelines

The SFBER, SDBER, RVRTV, and RVTM parameters only apply to path protection configurations at the STS path level and ONS 15310_CL and ONS 15454 VT paths.

SFBER and SDBER also apply to the VT path level on the ONS 15310-CL and ONS 15454 when the ONS 15454 has an XC-VXC-10G card.

SWPDIP does not apply to the VT path level (VT1 and VT2).

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

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

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

The TACC parameter edits an existing single STS or VT and changes it to a test access point. When an editing command on TACC is executed, it assigns the STS or VT for the first two-way connection and STS+1 as the second two-way connection. For single facility access digroup (FAD) test access, only a single STS/VT is used for the test access point (TAP) creation. For more information on TACC, refer to the *Cisco ONS SONET TL1 Reference Guide*.

J1 is implemented on the DS1/DS1N, DS3E/DS3NE, DS3XM, EC1, OC3, OC12-4, OC48AS, and OC192 cards.

DS3/DS3N, OC12, OC48, E100, and E1000 cards do not support path trace.

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

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

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

The following actions will produce error messages:

- Sending this command to edit SFBER, SDBER, RVRTV, or RVTM for the non-path protection STS path.
- Sending this command to edit the EXPTRC string with the AUTO path trace mode (TRCMODE=AUTO).
- Sending this command to edit TRC on any card other than DS3(N)E, DS1(N), and DS3XM cards, will return the “TRC-not allowed for monitor paths. Incorrect card type” error message.
- Sending this command to edit both TACC and any other attribute(s) will return the “Parameters Not compatible” error message.
- Sending this command to edit TACC on an AID with cross-connections will return the “STS in Use” error message.

Note

- TACC creation will be denied on the protect ports/cards for 1:1, 1:N, and 1+1 protection.
- The VFAC AID is only valid on slots containing an ML-Series card. TACC is not supported for the ML-Series cards.
- After bidirectional line switched ring (BLSR) switching, provisioning of the J1 trace string or trace mode is not allowed on the protection path.
- TACC creation is allowed on protection channel access (PCA) for two-fiber and four-fiber BLSR.
- TACC is not supported on G1000, MXP_2.5G_10G, TXP_MR_10G, ML1000-2, and ML100T-12 cards.

- HOLDOFFTIMER is not specific to a path. It is applicable to the path protection selector. If HOLDOFFTIMER is changed on one path associated with the selector, the HOLDOFFTIMER of the other path associated with the same selector is also changed.
- The test set physical connection set up through ED-T3/DS1/STS1/VT1 of the DS3XM-12 card is only allowed on the physical front ports (PORTED ports, Ports 1 to 12), which are the monitoring ports.
  - The monitoring test access ports follow the common rules for the other cards. For example, with an ED-T3 command on Port 2 (FAC-6-2) that has a TACC number (8), the next port, Port 3 (FAC-6-3) is used as the monitoring point also. The RTRV-T3 on both Port 2 and Port 3 return the same TACC number (8) used to monitor the cross-connection end (A-B). The last port (Port 12) is not allowed to set up a physical connection with the test set because there is no next available port to be the monitoring port.
  - The TACC disconnection (DISC-TACC) and the test access mode change command (CHG-TACC) follow the same requirement as in the previous step, but it is applied on the ported ports of the DS3XM-12 card.
  - The test access connection setup command (CONN-TACC) has monitored points, which can be portless ports. This command is applied on both ported and portless ports of the DS3XM-12 card.
- If the entity has a TACC connection, the entity is not allowed to have ported or portless STS/VT cross-connection (or circuit) provisioning on the DS3XM-12 card.
- Test access is not supported on the ONS 15310-CL.
- J2 path trace is not supported on the 15310-CL-CTX card of the ONS 15310-CL, however the CE-100T-8 or ML-100T-8 card provisioned in mapper mode does allow J2 provisioning.
- The cross-connects on the DS3i-N-12 card will be STS3c width, but the individual STS 1s within the 3C will be accessible. To edit the path attributes, use the ED-STS1 command with the FAC AID.

  For TACC creation, use the ED-STS3C command because the TACC path width (like the cross-connect) has to be 3C on the DS3i-N-12 card. In this case, you are creating a new entity (TAP) on the DS3i-N-12 card that has to be of 3C width. On the DS3i-N-12 card, the ED0STS command can be used either with STS1 or STS3C depending on the parameter to be modified.
- For the selector path on a BLSR, the SWPDIP is not editable and is always in the ON state. If you attempt to edit SWPDIP (for the selector path on a BLSR), an error message will be returned.
- You can create an STS1 or VT1.5 single TAP on the DS3XM-12 card's last ported port (12) if the bandwidth is available on that port.
- Optical ports do not support MAN and AUTO trace mode because they are not capable of raising AIS on TIM-P. Use the AUTO-NO-AIS or MAN-NO-AIS trace mode on optical ports.
- Sending the ED-VT1/VT2 commands over ONS 15454 path protection paths to edit SFBER or SDBER (when the ONS 15454 does not have an XC-VXC-10G cross-connect) will return the "Invalid Operation For The XCON" error message.
- Sending the ED-VT1/VT2 commands to edit SDBER with 1E-9 will return the "Out Of Range" error message.
- On the ONS 15310-MA, J2 path trace is supported on DS1 ports only. J2 path trace is not supported on ONS 15310-MA OCn ports and EC1 ports.

Category Paths

Security

Provisioning

Input Format

ED-<MOD_PATH>:[<TID>]:<AID>:<CTAG>:::[SFBER=<SFBER>],[SDBER=<SDBER>],
[RVRTV=<RVRTV>],[RVTM=<RVTM>],[SWPDIP=<SWPDIP>],
[HOLDOFFTIMER=<HOLDOFFTIMER>],[EXPTRC=<EXPTRC>],[TRC=<TRC>],
[TRCMODE=<TRCMODE>],[TRCFORMAT=<TRCFORMAT>][TACC=<TACC>],
[TAPTYPE=<TAPTYPE>],[CMDMDE=<CMDMDE>]:[<PST>[,<SST>]];

Input Example

ED-STS3C:FERNDALE:STS-2-1-4:115:::SFBER=1E-3,SDBER=1E-5,RVRTV=Y,RVTM=1.0,
SWPDIP=Y,HOLDOFFTIMER=2000,EXPTRC="EXPTRCSTRING",TRC="TRCSTRING",
TRCMODE=OFF,TRCFORMAT=64-BYTE,TACC=8,TAPTYPE=SINGLE,
CMDMDE=CMDMDE:IS,AINS;

Input Parameters

<AID>	Access identifier from the "25.11 CrossConnectId1" section on page 25-24.
<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 with an XC-VXC-10G card. Defaults to 1E-4. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	Signal degrade threshold. Applies only to path protection. Applies to STS-level paths in SONET (STSn) and to VT-level paths on the ONS 15310-CL with an XC-VXC-10G card. 1E-9 is not allowed for VT-level/LO paths. Defaults to 1E-6. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<RVRTV>	Revertive mode. The value Y indicates that 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. The parameter type is ON_OFF, which disables or enables 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. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<SWPDIP>	On/off switch for path protection payload defect level switching. Applicable only to STS-level paths in SONET (STSn). For the selector path on a BLSR, SWPDIP is not editable and always ON. Defaults to N. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<HOLDOFFTIMER>	Hold off timer for path protection dual-ring interconnect (DRI). Values must be within 0 and 10000 ms (0 to 10 seconds), with increments of 100 ms. Defaults to “existed value.” HOLDOFFTIMER is an integer.
<EXPTRC>	Expected path trace content. Indicates the expected path trace message (J1) contents. EXPTRC is any 64-character ASCII string, including the terminating CR (carriage return) and LF (line feed). Applicable to STS-level paths in SONET (STSn). Applicable to VT-level paths for the DS3XM-12 and CE-100T-8 card on the ONS 15454 and the CE-100T-8 card on ONS 15310-CL. Defaults to 64 null characters. EXPTRC is a string.
<TRC>	The path trace message to be transmitted. The trace byte (J1) continuously transmits a 64-byte, fixed length ASCII string, one byte at a time. A null value defaults to the network element (NE) transmitting 62 null characters (hex 00) and CR and LF. Applicable to STS-level paths in SONET (STSn). Applicable to VT-level paths for the DS3XM-12 and CE-100T-8 card on the ONS 15454 and the CE-100T-8 card on ONS 15310-CL. For ONS 15310-CL, TRC is not provisionable on the EC/OC ports. Defaults to 64 null characters. TRC is a string.
<TRCMODE>	Path trace mode. Applicable only to STS-level paths in SONET (STSn). Defaults to the OFF mode. ONS 15310-CL EC/OC ports do not support MAN and AUTO, but can be configured as MAN-NO-AIS and AUTO-NO-AIS. **Note** The ONS 15600 does not support MAN and AUTO The parameter type is TRCMODE (trace mode).
• AUTO	Use the previously received path trace string as the expected string. Not applicable to muxponder (MXP) and transponder (TXP) cards.
• AUTO-NO-AIS	Use the previously received path trace string as the expected string and do not turn on the alarm indication signal (AIS) and remote defect indication (RDI) if TIM-P is detected.
• MAN	Use the provisioned expected string as the expected string.
• MAN-NO-AIS	Use the provisioned expected string as the expected string and do not turn on AIS and RDI if TIM-P is detected.

• OFF	Turn off path trace capability. Nothing will be reported.
<TRCFORMAT>	Path trace format. Only 64-byte is supported. Defaults to 64-byte. The parameter type is TRCFORMAT (trace format).
• 64-BYTE	64 byte trace message
<TACC>	TAP number within a range of 0 to 999. Indicates whether the digroup being provisioned is to be used as a test access digroup. When TACC is 0 (zero), the TAP is deleted. TACC is an integer.
<TAPTYPE>	TAP type. Defaults to DUA The parameter type is TAPTYPE, which is the test access point type.
• DUAL	Dual FAD
• SINGLE	Single FAD
<CMDMDE>	Command mode. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied. Defaults to NORM.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. Defaults to IS. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. Defaults to AINS. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.6 ED-<MOD_RING>

(Cisco ONS 15454, ONS 15327, ONS 15600) The Edit Bidirectional Line Switched Ring (ED-<MOD_RING>) command edits the BLSR attributes.

Usage Guidelines ONS 15327 and ONS 15600 do not support four-fiber BLSR.

The RVRTV, RVTM, SRVRTV, SRVTM, NODEID, and RINGID attributes can be edited for the four-fiber BLSR.

The RVRTV, RVTM, NODEID, and RINGID attributes can be edited for the two-fiber BLSR.

The following actions will produce errors:

- If the system fails on getting IOR, a SROF (Get IOR Failed) error message is returned.
- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- If the BLSR does not exist, a SRQN (BLSR Does Not Exist) error message is returned.
- The SROF (Facility Not Provisioned) or (Cannot Access BLSR) error message will be returned for an invalid query.
- The SRQN (BLSR Edition Failed) error message is returned for an invalid edition query.
- Sending this command to modify SRVRTV or SRVTM on a two-fiber BLSR will return an IDNV (Invalid Data For 2F-BLSR) error message.
- Sending this command to modify the nodeid with invalid data will return an IIAC (Invalid NodeId) error message.
- Sending this command to change the ringid into invalid data will return an IIAC (Invalid RingId) error message.
- Changing the BLSR nodeid with a duplicated ID will return a SROF (Cannot Set NodeId) error message.
- Changing the BLSR ringid with a duplicated ID will return a SROF (Cannot Set RingId) error message is returned.

Note

- The ALL AID is invalid for this command.
- The list AID format is supported for Software Release 4.6 and later.

Category

BLSR

Security

Provisioning

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

<AID>	Access identifier from the "25.3 AidUnionId1" section on page 25-16. Identifies the BLSR of the NE. The ALL and BLSR-ALL AIDs are not allowed for editing BLSRs.
<RINGID>	The BLSR ID of the NE up to six characters. Valid characters are A–Z and 0–9. RINGID is a string.
<NODEID>	The BLSR node ID of the NE. NODEID ranges from 0 to 31. It is an 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. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<RVTM>	Revertive time. RVTM is not allowed to be set while RVRTV is N. The 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. The parameter type is ON_OFF, which disables or enables 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. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.

11.7 ED-<OCN_TYPE>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit OC3, OC12, OC48, or OC192 (ED-OCN_TYPE>) command edits the attributes (for example, service parameters) and status of an OC-N facility. Allowable states for a facility are Out Of Service (OOS), Out Of Service and Automatic In Service (OOS-AINS), Out Of Service and Maintenance (OOS-MT), and In Service (IS).

Usage Guidelines

The LDCC parameter does not apply to ONS 15327.

The OPRNOMINAL parameter is supported only by optical card types that support Optical PM. The following cards support OPRNOMINAL: OC3-8, MRC-12, MRC-12-2.5G, MRC-4-2.5G, OC192-XFP, CTX-2500, CTX, OC192-4, OC48-16, OC192-4-DWDM, ASAP-4.

See Table 27-1 on page 27-1 for supported modifiers by platform.

The data communications channel (DCC) transmit side is bridged to both working and protect in a 1+1 protection scheme. On the receive side, the active one is selected for DCC. The DCC is provisioned on the working port only in a 1+1 protection scheme.

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

The following apply to UNI-C DCC provisioning:

- The attributes DCC(Y/N) and mode (SONET/SDH) remain the same in the ED-OCN and RTRV-OCN commands when the DCC is used for UNI-C, in which case the port attribute UNIC is enabled (UNIC=Y).
- UNI-C DCC termination cannot be deleted by the regular DCC deprovisioning command.
- 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.
- Deprovisioning UNI-C IF/IB IPCC will free up DCC termination automatically.
- The parameters ALSMODE, ALSCRINT, and ALSRCPW are valid only for OC3-8, OC-192, and OC48ELR cards.
- Section DCC/Line DCC (SDCC/LDCC) terminations cannot be unprovisioned if a provisionable patchcord termination endpoint is provisioned on the port.
- Synchronization status messaging (SSM) selectable (admssm) and synchronization messaging for output (syncmsgout) are not applicable to ONS 15600.
- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. In order to obtain the current value, issue the RTRV-XX command.
- J0 Support (EXPTRC, TRC, TRCMODE, and TRCFORMAT parameters) is supported only by DWDM cards with an OC-N payload. J0 is not supported by OC3-8, OC-12, OC-48, OC-192, and other optical cards.

Category

Ports

Security

Provisioning

Input Format

ED-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>:::[DCC=<DCC>],[AREA=<AREA>],
[SYNCMSG=<SYNCMSG>],[SENDDUS=<SENDDUS>],[PJMON=<PJMON>],
[SFBER=<SFBER>],[SDBER=<SDBER>],[MODE=<MODE>],[MUX=<MUX>],
[SOAK=<SOAK>],[OSPF=<OSPF>],[LDCC=<LDCC>],[NAME=<NAME>],
[CMDMDE=<CMDMDE>],[EXPTRC=<EXPTRC>],[TRC=<TRC>],[TRCMODE=<TRCMODE>],
[TRCFORMAT=<TRCFORMAT>],[ADMSSM=<ADMSSM>],[SENDDUSFF=<SENDDUSFF>],
[AISONLPBK=<AISONLPBK>],[FREQ=<FREQ>],[LOSSB=<LOSSB>],
[FOREIGNFEND=<FOREIGNFEND>],[FOREIGNIP=<FOREIGNIP>],OPRNOMINAL=<OPRNOM
INAL>]:[<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="OCNPORT",CMDMDE=CMDMDE,EXPTRC="AAA",
TRC="AAA",TRCMODE=MAN,TRCFORMAT=16-BYTE,ADMSSM=PRS,SENDDUSFF=N,
AISONLPBK=AIS_ON_LPBK_ALL,FREQ=1550,LOSSB=LR-1,FOREIGNFEND=N,
FOREIGNIP="IP ADDRESS"OPRNOMINAL=Y:IS,AINS;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<DCC>	Indicates whether or not the SDCC is to be used. Identifies the SDCC connection of the port. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<AREA>	The area ID and shows up only if the DCC is enabled. AREA is a string.
<SYNCMSG>	Synchronization status message. The parameter type is EXT_RING, which indicates whether the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<SENDDUS>	The facility will send the DUS (Do not use for Synchronization) value as the SSM for that facility. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<PJMON>	Identifies an OC-N port PJMON. PJMON is an integer. It defaults to 0 (zero). Set a valid STS number of the optical port. **Note** The PJMON number displayed in TL1 interface does not correspond to the PJVC4MON number in CTC, but instead corresponds to the STS number of the optical port.
<SFBER>	Signal failure threshold. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	Signal degrade threshold. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<MODE>	OC-N port mode. the parameter type is OPTICAL_MODE, which is 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). MUX cannot be configured if: • The card is SONET and the media type is SDHT. • The card has an orderwire or user data channel (UDC) connection. • This is a protect line and the working line has an orderwire or UDC connection. The parameter type is MUX_TYPE, which is the BLSR extension type.
• E2	E2 byte (orderwire)
• F1	F1 byte (user)
• K3	K3 byte
• Z2	Z2 byte
<SOAK>	OOS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). Defaults to 32. SOAK is an integer.
<OSFP>	The Open Shortest Path First discovery. Defaults to Y. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<LDCC>	The LDCC connection on the port. Defaults to N. the parameter type is EXT_RING, which indicates if the ring supports the extended K1/K2/K3 protocol. **Note** LDCC is not applicable to ONS 15327.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<NAME>	NAME is a string. It defaults to NULL. Its maximum length is 32 characters.
<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. Defaults to NORM. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might 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. Defaults to NULL. EXPTRC is a string.
<TRC>	The path trace message to be transmitted. The trace byte (J1) continuously transmits a 64-byte, fixed length ASCII string, one byte at a time. A null value defaults to the NE transmitting 62 null characters (hex 00) and CR and LF. Applicable to STS-level paths in SONET (STSn). Applicable to VT-level paths for the DS3XM-12 card on the ONS 15454. TRC is a string.
<TRCMODE>	Path trace mode. Applicable only to STS-level paths in SONET (STSn). Defaults to MAN. The parameter type is TRCMODE (trace mode).
• AUTO	Use the previously received path trace string as the expected string. Not applicable to MXP or 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. The parameter type is TRCFORMAT (trace format).
• 1-BYTE	1 byte trace message
• 16-BYTE	16 byte trace message
• 64-BYTE	64 byte trace message
<ADMSSM>	SSM selectable value. It will only appear when SSM is disabled. Defaults to STU. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not Use For Synchronization
• PRS	Primary Reference Source, Stratum 1 Traceable
• RES	Reserved For Network Synchronization Use
• SMC	SONET Minimum Clock Traceable
• ST2	Stratum 2 Traceable
• ST3	Stratum 3 Traceable
• ST3E	Stratum 3E Traceable
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<SENDDUSFF>	The parameter type is ON_OFF, which disables or enables an attribute.

• N	Disable an attribute.
• Y	Enable an attribute.
<AISONLPBK>	The parameter type is AIS_ON_LPBK, which indicates if AIS is sent on a loopback.
• AIS_ONLPBK_FACILITY	AIS is sent on facility loopbacks.
• AIS_ON_LPBK_ALL	AIS is sent on all loopbacks.
• AIS_ON_LPBK_OFF	AIS is not sent on loopbacks.
• AIS_ON_LPBK_TERMINAL	AIS is sent on terminal loopbacks.
<FREQ>	The parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16

• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75

• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77

• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04

• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	The parameter type is REACH (reach value)
• AUTOPROV	Autoprovisioning
• CX	Reach CX
• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• VX	Reach VX
• ZX	Reach ZX
<FOREIGNFEND>	Indicates whether the far-end NE on the DCC is a foreign NE. The parameter type is ON_OFF, which disables or enables an attribute.

• N	Disable an attribute.
• Y	Enable an attribute.
<FOREIGNIP>	The IP address of the far-end NE on the DCC. Used only if FOREIGNFEND is Y. FOREIGHNIP is a string.
<OPRNOMINAL>	Reads the current raw optical receive power and sets the raw OPR value as the nominal optical receive power.
• N	Not Supported.
• Y	Sets the OPR.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. Defaults to AINS. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.8 ED-ALS

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Edit Automatic Laser Shutdown (ED-ALS) command is used to modify the ALS attributes of an OC-N facility and all the facilities that support the ALS feature. For 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.

Usage Guidelines None

Category Ports

Security Provisioning

Input Format ED-ALS:[<TID>]:<SRC>:<CTAG>:::[ALSMODE=<ALSMODE>],[ALSRCINT=<ALSRCINT>], [ALSRCPW=<ALSRCPW>][:];

Input Example

ED-ALS:CISCO:FAC-1-1:100:::ALSMODE=AUTO,ALSRCINT=130,ALSRCPW=35.1;

Input Parameters

<SRC>	Access identifier from the "25.2 AidUnionId" section on page 25-11.
<ALSMODE>	ALS is enabled or disabled. The parameter type is ALS_MODE, which is the working mode for automatic laser shutdown.
• AUTO	Automatic
• DISABLED	Disabled
• MAN	Manual
• MAN-RESTART	Manual restart for test
<ALSRCINT>	ALS recovery interval. The range is 60 to 300 seconds. ALSRCINT is an integer.
<ALSRCPW>	ALS recovery pulse width. The range is 2.0 to 100.00 seconds, in increments of 100 ms. ALSRCWP is a float.

11.9 ED-APC

(Cisco ONS 15454) The Edit Amplification Power Control (ED-APC) command is used to modify the APC application attributes. The default value for an optional parameter is the NE default value. The value might not be the current value for the parameter. Use a RTRV-xx command to retrieve the current value.

Usage Guidelines

None

Category

DWDM

Security

Provisioning

Input Format

ED-APC:[<TID>]::<CTAG>[:::APCENABLE=<APCENABLE>];

Input Example

ED-APC:PENNGROVE::CTAG:::APCENABLE=N;

Input Parameters

<APCENABLE>	Enable or disable the APC application. Default is N. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.

11.10 ED-BITS

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Building Integrated Timing Supply (ED-BITS) command edits the building integrated timing supply (BITS) reference attributes.

Usage Guidelines

The SYNC-BITS1 and SYNC-BITS2 AIDs can be used to set the BITS-OUT port state. For a BITS facility, 64 k and 6 MHz are only applicable to ON. SSM selectable (ADMSSM) is not applicable to ONS 15600.

The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. In order to obtain the current value, issue the RTRV-XX command.

Category

Synchronization

Security

Provisioning

Input Format

ED-BITS:[<TID>]:<AID>:<CTAG>:::[LINECDE=<LINECDE>],[FMT=<FMT>],[LBO=<LBO>],[SYNCMSG=<SYNCMSG>],[AISTHRSHLD=<AISTHRSHLD>],[SABIT=<SABIT>],[BITSFAC=<BITSFAC>],[ADMSSM=<ADMSSM>][:<PST>];

Input Example

ED-BITS:SONOMA:BITS-2:779:::LINECDE=AMI,FMT=ESF,LBO=0-133,SYNCMSG=N,AISTHRSHLD=PRS,SABIT=BYTE-5,IMPEDANCE=120-OHM,BITSFAC=T1,ADMSSM=PRS:IS;

Input Parameters

<AID>	Access identifier from the "25.6 BITS" section on page 25-17.
<LINECDE>	The parameter type is LINE_CODE (line code).
• AMI	Line code value is AMI.
• B8ZS	Line code value is B8ZS (binary 8-zero substitution)
<FMT>	Digital signal frame format. The parameter type is FRAME_FORMAT, which is the frame format for a T1 port.
• D4	Frame format is D4.
• ESF	Frame format is Extended Superframe (ESF).
• UNFRAMED	Frame format is unframed.
<LBO>	Line build-out settings. BITS line build-out. Default value is 0 to 133. LBO is an integer. The parameter type is BITS_LineBuildOut (BITS line build-out).
• 0–133	BITS line build-out range is 0–133.
• 134–266	BITS line build-out range is 134–266.
• 267–399	BITS line build-out range is 267–399.
• 400–533	BITS line build-out range is 400–533.

• 534–655	BITS line build-out range is 534–655.
<SYNCMSG>	Indicates if the BITS facility supports synchronization status message. Default is ON (Y). The parameter type is EXT_RING, which indicates whether the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<AISTHRSHLD>	Alarm indication signal threshold. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not Use For Synchronization
• PRS	Primary Reference Source, Stratum 1 Traceable
• RES	Reserved For Network Synchronization Use
• SMC	SONET Minimum Clock Traceable
• ST2	Stratum 2 Traceable
• ST3	Stratum 3 Traceable
• ST3E	Stratum 3E Traceable
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<SABIT>	When the frame format selection is E1, SABIT is the bit used to receive and transmit the SSM. The parameter type is SABITS (SA BITS).
• BYTE-4	SABIT is BYTE-4.
• BYTE-5	SABIT is BYTE-5.
• BYTE-6	SABIT is BYTE-6.
• BYTE-7	SABIT is BYTE-7.
• BYTE-8	SABIT is BYTE-8.
<IMPEDANCE>	When the frame format selection is E1, IMPEDANCE is the terminal impedance of the BITS-IN port. The parameter type is IMPEDANCE, which is the terminal impedance of the BITS-IN port.
• 120-OHM	Impedance of 120 ohm
• 75-OHM	Impedance of 75 ohm
<BITSFAC>	BITS facility settings. BITS-2 always inherits the value of BITS-1. The parameter type is BITS_FAC (the BITS facility rate). 64 k and 6 MHz are only applicable 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. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not Use For Synchronization
• PRS	Primary Reference Source, Stratum 1 Traceable
• RES	Reserved For Network Synchronization Use
• SMC	SONET Minimum Clock Traceable
• ST2	Stratum 2 Traceable
• ST3	Stratum 3 Traceable
• ST3E	Stratum 3E Traceable
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<PST>	The primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service

11.11 ED-BULKROLL-<OCN_TYPE>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Bulkroll for OC12, OC192, OC3, or OC48 (ED-BULROLL-<OCN_TYPE>) command edits information about the rolling of traffic from one endpoint to another without interrupting service. This command uses the FORCE option to force a valid signal. The only parameters that can be edited are RMODE and FORCE. The time slots cannot be edited. Use ED-ROLL-<MOD_PATH> for single path level rolling.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Category

Bridge and Roll

Security

Provisioning

Input Format

ED-BULKROLL-<OCN_TYPE>:[<TID>]:<FROM>:<CTAG>:::
[RFROMSTART=<RFROMSTART>],[RFROMEND=<RFROMEND>],[CMDMDE=<CMDMDE>];

Input Example

ED-BULKROLL-OC48:CISCO:FAC-1-1:1:::RFROMSTART=STS-1-1-1,
RFROMEND=STS-1-1-11,CMDMDE=FRCD;

Input Parameters

<FROM>	One of the endpoints. Access identifier from the "25.15 FACILITY" section on page 25-33 for line level rolling and bulk rolling.
<RFROMSTART>	The starting time slot in the source roll port. For bulk rolling only. The AID is from the "25.11 CrossConnectId1" section on page 25-24 (except VCM and FACILITY). Defaults to STS-<FROMSLOT>-<FROMPORT>-1, where <FROMSLOT> and <FROMPORT> are the slot and port of the <FROM> AID.
<RFROMEND>	The ending time slot in the source roll port. For bulk rolling only. The AID is from the "25.11 CrossConnectId1" section on page 25-24 (except VCM and FACILITY). Defaults to STS-<FROMSLOT>-<FROMPORT>-N, where <FROMSLOT> and <FROMPORT> are the slot and port of the <FROM> AID and N is the value of OCn. (for example, OC48, n=48).
<CMDMDE>	Command execution mode. Defaults to NORM. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.

11.12 ED-CMD-SECU

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Command Security (ED-CMD-SECU) command edits the command security level of a particular command.

Usage Guidelines

None

Category

Security

Security

Superuser

Input Format

ED-CMD-SECU:[<TID>]:<AID>:<CTAG>::<CAP>;

Input Example

ED-CMD-SECU::INIT-REG:1::SUPER;

Input Parameters

<AID>	Access identifier string. Identifies the entity in the NE to which the command pertains. It is the command verb along with verb modifier(s), as it currently exists. It can be a single command or a block of commands, where the block might include all commands. Only INIT-REG will be supported. String. Must not be null.
<CAP>	Command access privilege. Must not be null. The parameter type is PRIVILEGE, which is the security level.
• PROV	Provision security level. 60 minutes of idle time.
• SUPER	Superuser security level. 15 minutes of idle time.

11.13 ED-CRS-<PATH>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Cross-Connect for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VT1, or VT2 (ED-CRS-<PATH>) command edits a cross-connection.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Note

- ADD and REMOVE cannot be used together. The example provided is for informational purposes only. ADD and REMOVE are mutually exclusive.
- Add/Remove drops is possible only on ONEWAY, UPSR_DROP, UPSR_DC, and UPSR_EN type cross-connects (one-way only).
- Traditional cross-connections cannot be upgraded to DRI cross-connections using the ED_CRS command.
- CKTID is a string of ASCII characters. The maximum length of CKTID is 48. If the CKTID is EMPTY or NULL, this field will not appear.
- You cannot add a drop onto unidirectional connections on BLSR DRI primary or secondary nodes.

Category

Cross Connections

Security

Provisioning

Input Format

ED-CRS-<PATH>:[<TID>]:<SRC>,<DST>:<CTAG>::[<CCT>]:[ADD=<ADD>],[REMOVE=<REMOVE>],[CKTID=<CKTID>],[CMDMDE=<CMDMDE>]:[<PST>[,<SST>]];

Input Example

ED-CRS-STS3C::STS-1-1-1,STS-2-1-1:1:::ADD=STS-13-1-1,REMOVE=STS-2-1-1,CKTID=CKTID CMDMDE=FRCD:IS,AINS;

Input Parameters

<SRC>	Source AID from the "25.11 CrossConnectId1" section on page 25-24.
<DST>	Destination AID from the "25.11 CrossConnectId1" section on page 25-24.
<CCT>	Cross-connection. The parameter type is CCT which indicates the type of cross-connection to be created.
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	path protection multicast drop with (1-way) continue
• 1WAYEN	path protection multicast end node (1-way continue)
• 1WAYMON	A bidirectional connection between the two tributaries **Note** In ONS 15454 Software Release 3.0 and later and ONS 15327 Software R3.3 and later, 1WAYMON is not supported with TL1. However, it is still supported from Cisco Transport Controller (CTC). Using CTC, you can create 1WAYMON cross-connects that can be retrieved with TL1.
• 1WAYPCA	A unidirectional connection from a source tributary to a destination tributary on the protection path/fiber
• 2WAY	A bidirectional connection between the two tributaries
• 2WAYDC	A bidirectional drop and continue connection applicable only to path protection traditional and integrated DRIs
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber
• DIAG	Diagnostics cross-connect. Supports BERT (BLSR PCA diagnostics cross-connect).
<ADD>	AID from the "25.2 AidUnionId" section on page 25-11.
<REMOVE>	AID from the "25.2 AidUnionId" section on page 25-11.
<CKTID>	String
<CMDMDE>	Command Mode. The FRCD mode of operation is applicable only if the PST=OOS and SST=DSBLD. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.

• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.14 ED-DAT

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Date and Time (ED-DAT) command edits the date and the time.

Usage Guidelines None

Category System

Security Provisioning

Input Format ED-DAT:[<TID>]::<CTAG>::[<DATE>],[<TIME>];

Input Example ED-DAT:CISCO::1234::99-12-21,14-35-15;

Input Parameters

<DATE>	The new date. DATE is a string
<TIME>	The new time. TIME is a string.

11.15 ED-DS1

(Cisco ONS 15454) The Edit DS1 (ED-DS1) command edits the test access attribute for DS1 access on a DS3XM card.

Usage Guidelines

- This command is not allowed if the card is a protect card.
- Both the MODE and FMT fields of this command apply to the DS3XM-12 card only.

- For the DS3XM-12 card, the DS1 frame format NE default is AUTO_PROV_FMT for the first 30 seconds to determine the real format. After 30 seconds, the DS1 frame format will be detected as FRAMED. If the frame format is not detected, it will be in the UNFRAMED format.
- For preprovisioning the DS3XM-12 card, the DS1 frame format defaults to UNFRAMED.
- For the DS3XM-12 card, the DS1 configurable attributes (PM, TH, alarm, etc.) only apply on the ported ports (Ports 1 to 12) and the VT-mapped (odd) portless ports in xxx-xxx-DS1 commands. If you provision or retrieve DS1 attributes on the DS3-mapped (even) portless port in xxx-xxx-DS1 commands, an error message will be returned.
- The test set physical connection that is set up through the ED-T3/DS1/STS1/VT1 command of the DS3XM-12 card is only allowed on the physical front ports (PORTED ports, Ports 1 to 12), which are the monitoring ports, as follows:
  - The monitoring test access ports follow the common rules for the other cards. For example, when issuing the ED-T3 command on Port 2 (FAC-6-2) with a TACC number (8), the next port, Port 3 (FAC-6-3) is used as the monitoring point also. The RTRV-T3 command on both Port 2 and Port 3 return the same TACC number (8) being used to monitor the cross-connection end (A-B). The last port (Port 12) is not allowed to set up a physical connection with the test set because there is no next available port to be the monitoring port.
  - The TACC disconnection (DISC-TACC) and the test access mode change command (CHG-TACC) follow the same requirement as in the previous step, but it is applied on the ported ports of the DS3XM-12 card.
  - The test access connection set-up command (CONN-TACC) has monitored points, which can be portless ports. This command is applied on both ported and portless ports of the DS3XM-12 card.
- If the entity has a TACC connection, the entity is not allowed to have ported or portless STS/VT cross-connection (or circuit) provisioning on the DS3XM-12 card.

Category

Ports

Security

Provisioning

Input Format

ED-DS1:[<TID>]:<AID>:<CTAG>:::[TACC=<TACC>],[TAPTYPE=<TAPTYPE>],[AISONLPBK=<AISONLPBK>],[MODE=<MODE>],[FMT=<FMT>];

Input Example

ED-DS1:PETALUMA:DS1-2-1-12:123:::TACC=8,TAPTYPE=DUAL,AISONLPBK=OFF,MODE=FDL,FMT=ESF;

Input Parameters

<AID>	Access identifier from the "25.12 DS1" section on page 25-30.
<TACC>	TAP number within a range of 0 to 999. Indicates whether the digroup being provisioned is to be used as a test access digroup. When TACC is 0 (zero), the TAP is deleted. TACC is an integer.
<TAPTYPE>	TAP type. The parameter type is TAPTYPE (test access point type).
• DUAL	Dual FAD

• SINGLE	Single FAD
<AISONLPBK>	The parameter type is AIS_ON_LPBK, which indicates whether AIS is sent on a loopback.
• AIS_ONLPBK_FACILITY	AIS is sent on facility loopbacks.
• AIS_ON_LPBK_ALL	AIS is sent on all loopbacks.
• AIS_ON_LPBK_OFF	AIS is not sent on loopbacks.
• AIS_ON_LPBK_TERMINAL	AIS is sent on terminal loopbacks.
<MODE>	Mode with which the command is to be implemented. DS1 path mode of the DS3XM-12 card. Defaults to FDL. The parameter type is DS1MODE, which is the DS1 path mode of the DS3XM-12 card.
• ATT	The DS1 path of the DS3XM-12 card is in AT&T 54016 mode.
• FDL	The DS1 path of the DS3XM-12 card is in FDL T1-403 mode.
<FMT>	Digital signal format. The DS1 path frame format of the DS3XM-12 card. Defaults to UNFRAMED. The parameter type is FRAME_FORMAT, which is the frame format for a T1 port.
• D4	Frame format is D4.
• ESF	Frame format is ESF.
• UNFRAMED	Frame format is unframed.

11.16 ED-EC1

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Edit Electrical Carrier (ED-EC1) command edits the attributes of an EC1 card.

Usage Guidelines

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

Category

Ports

Security

Provisioning

Input Format

ED-EC1:[<TID>]:<AID>:<CTAG>:::[PJMON=<PJMON>],[LBO=<LBO>],[SOAK=<SOAK>], [SFBER=<SFBER>],[SDBER=<SDBER>],[NAME=<NAME>],[EXPTRC=<EXPTRC>], [TRC=<TRC>],[TRCMODE=<TRCMODE>],[<TRCFORMAT>],[AISONLPBK=<AISONLPBK>], [CMDMDE=<CMDMDE>]:[<PST>[,<SST>]];

Input Example

ED-EC1:CISCO:FAC-1-1:123:::PJMON=0,LBO=0-225,SOAK=10,SFBER=1E-4,SDBER=1E-6, NAME="EC1 PORT",EXPTRC="AAA",TRC="AAA",TRCMODE=MAN,TRCFORMAT="16-BYTE, AISONLPBK=AIS_ON_LPBK_ALL,CMDMDE=CMDMDE:IS,AINS;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<PJMON>	A SONET pointer number (0 or 1) of an EC1 port. PJMON is an integer. It defaults to 0.
<LBO>	Line build-out settings. LBO is an integer. It defaults to 0–225. The parameter type is E_LBO (electrical signal line build-out).
• 0–225	Electrical signal line build-out range is 0–225.
• 226–450	Electrical signal line build-out range is 226–450.
<SOAK>	IS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer. Defaults to 32.
<SFBER>	Signal failure threshold. Defaults to 1E-4. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	Signal degrade threshold. Defaults to 1E-7. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<NAME>	NAME is a string. Default value is NULL. Maximum length is 32 characters.
<EXPTRC>	String
<TRC>	String
<TRCMODE>	The parameter type is TRCMODE (trace mode).
• AUTO	Use the previously received path trace string as the expected string. Not applicable to MXP/TXP cards.
• AUTO-NO-AIS	Use the previously received path trace string as the expected string and do not turn on AIS and RDI if TIM-P is detected.
• MAN	Use the provisioned expected string as the expected string.
• MAN-NO-AIS	Use the provisioned expected string as the expected string and do not turn on AIS and RDI if TIM-P is detected.
• OFF	Turn off path trace capability. Nothing will be reported.
<TRCFORMAT>	Trace message size. The parameter type is TRCFORMAT (trace format).
• 1-BYTE	1 byte trace message.
• 16-BYTE	16 byte trace message.
• 64-BYTE	64 byte trace message.

• Y	Enable an attribute.
<AISONLPBK>	Defaults to AIS_ONLPBK_FACILITY. The parameter type is AIS_ON_LPBK, which indicates whether AIS is sent on a loopback.
• AIS_ONLPBK_FACILITY	AIS is sent on facility loopbacks.
• AIS_ON_LPBK_ALL	AIS is sent on all loopbacks.
• AIS_ON_LPBK_OFF	AIS is not sent on loopbacks.
• AIS_ON_LPBK_TERMINAL	AIS is sent on terminal loopbacks.
<CMDMDE>	Command Mode. Defaults to NORM. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. Defaults to IS. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. Defaults to AINS. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.17 ED-EQPT

Note The ONS 15600 only supports the TID, AID, CTAG, PST, and SST parameters.

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Equipment (ED-EQPT) command edits the attributes for a given equipment slot in the NE. If the card is in an equipment slot, this command is allowed only on the working AID.

The ED-EQPT command also modifies a shelf role from NC to SC on an NE configured in multi-shelf mode.

Usage Guidelines

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

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

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

For example, if Slot 1, Slot 2, and Slot 4 were the only working cards in the protection group, the following command would remove Slot 4 from the protection group:

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

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

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

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

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

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

1:1 protection group:

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

1:N protection group:

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

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

- Editing the PRTYPE or PROTID (non-NULL value) parameters.
- Editing RVRTV or RVTM when no protection group exists.
- Editing RVRTV for 1:N protection.
- Failed to remove, currently switched to protect.
- The CARDMODE provisioning is allowed on the DS3XM-12 and ML-Series cards, as follows:
  - 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.
  - There is no card reboot if the CARDMODE is changed on the DS3XM-12 card.
  - The DS3XM-12 card can be upgraded or downgraded by changing the CARDMODE with the ED-EQPT command.
- 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.

- If the command mode is set to FRCD during the removal of a card in a 1:1 or 1:N protection group, there must be no cross-connects (for example, services) present on the card. 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.

Note For the FC_MR-4 card, the card mode cannot be changed to FCMR-LINERATE when the payload on any port is 1GFICON or 2GFICON. These payloads are allowed only in distance extension card mode.

Note On the Cisco ONS 15310-MA, only 1:1 protection groups are supported. Protection groups are automatically created when the protect card is provisioned. The protection group is automatically deleted when the protect card is deleted. The protection group cannot be deleted by entering NULL for the PROTID parameter, doing so will return the Provisioning Rules Failed (SROF) error.

Category Equipment

Security Provisioning

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>],[RETIME=<RETIME>],[SHELFROLE=<SHELFROLE>],
[NEWSHELFID=<NEWSHELFID>]:[<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,RETIME=Y,SHELFROLE=SC,
NEWSHELFID=2:OOS,MT;

Input Parameters

<AID>	Access identifier from the “25.14 EQPT” section on page 25-31.
<PROTID>	Protect card slot number of the protection group from the “25.22 PRSLOT” section on page 25-40.
<PRTYPE>	Protection group type. The parameter type is PROTECTION_GROUP.
• 1-1	1:1 protection group
• 1-N	1:N protection group

<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. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<RVTM>	Revertive time. The parameter type is 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. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might 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. **Note** TL1 will not set a default CARDMODE value at the management interface level if no PWL value is given. The parameter type is CARDMODE (card mode). Card mode is applicable to cards that have multiple capabilities, for example, the ML-Series card can operate in two distinct modes: Linear Mapper Mode and L2/L3 Mode.
• AMPL-BST	The optical amplifier is working as an optical booster
• AMPL-PRE	The optical amplifier is working as an optical pre-amplifier
• DS1E1-DS1ONLY	DS1 mode on DS1E1 card.
• DS1E1-E1ONLY	E1 mode on DS1E1 card.
• DS3XM12-STS12	The DS3XM-12 card in the STS12 backplane rate mode
• DS3XM12-STS48	The DS3XM-12 card in the STS48 backplane rate mode

• DWDM-LINE	Line terminating mode
• DWDM-SECTION	Section terminating mode
• DWDM-TRANS-AIS	Transparent mode AIS
• DWDM-TRANS-SQUELCH	Transparent mode SQUELCH
• FCMR-DISTEXTN	FC_MR-4 card with distance extension support
• FCMR-LINERATE	FC_MR-4 card without distance extension support
• ML-GFP	ML-Series card in DOS field-programmable gate array (FPGA) using generic framing procedure (GFP) framing type
• ML-HDLC	ML-Series card in DOS FPGA using high-level data link control (HDLC) framing type
• MXPMR10DME-4GFC	4 Gbps Fibre Channel/FICON mode for the Cisco ONS 15454 10DME-C/10DME-L card supported on ports one and five
• MXPMR10DME-4GFC-FCGEISC	4 Gbps Fibre Channel/FICON supported on port one and Fibre Channel, GIGE and ISC modes for the Cisco ONS 15454 10DME-C/10DME-L card supported on ports five to eight
• MXPMR10DME-FCGEISC	Fibre Channel, GIGE and ISC modes for the Cisco ONS 15454 10DME-C/10DME-L card supported on all eight ports
• MXPMR10DME-FCGEISC-4GFC	Fibre Channel, GIGE and ISC modes for the Cisco ONS 15454 10DME-C/10DME-L card supported on ports one to four and 4 Gbps Fibre Channel/FICON supported on port five
• MXPMR25G-ESCON	ESCON mode for the Cisco ONS 15454 MXP_2.5G_10G card
• MXPMR25G-FCGE	Fibre channel or GIGE mode for the MXP_2.5G_10G card
• MXPMR25G-MIXED	Mixed Fibre Channel, GIGE and ESCON modes for the Cisco ONS 15454 MXP_2.5G_10G card
<PEERID>	The regeneration peer slot from the "25.14 EQPT" section on page 25-31.
<REGENNAME>	The name of a regeneration group. REGENNAME is a string.
<PWL>	Provisioned wavelength. TL1 will not set a default PWL value at the management level if no PWL value is given. The parameter type is OPTICAL_WLEN (optical wavelength),
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12

• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92

• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24

• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30

• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1

<RETIME>	Indicates if retiming is needed. Applicable only to the DS1/E1-56 card (ONS 15454). The parameter type is YES_NO, which indicates whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes
<SHELFROLE>	The role of the shelf in the context of the node. When it is omitted it defaults to SC. The parameter is SHELF_ROLE.
• NC	The shelf behaves as a node controller.
• SC	The shelf behaves as a shelf controller.
<NEWSHELFID>	(Optional) New shelf identifier is used to change the value of the shelf identifier for the addressed shelf. The value must be different by one and can be in the range from two to eight. This field can only be changed if (in the same command) the SHELFROLE is equal to SC. Integer.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.18 ED-FAC

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Facility (ED-FAC) command provisions the payload (or signal) type of facility. The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. In order to obtain the current value, issue the RTRV-XX command to retrieve them.

Usage Guidelines None

Category Ports

Security Provisioning

Input Format ED-FAC:[<TID>]:<SRC>:<CTAG>:::[PAYLOAD=<PAYLOAD>], [CMDMDE=<CMDMDE>]:[<PST>[,<SST>]];

Input Example ED-FAC:CISCO:FAC-3-9:2222:::PAYLOAD=E4-FRAMED,CMDMDE=CMDMDE:IS,AINS;

Input Parameters

<SRC>	Source access identifier from the "25.15 FACILITY" section on page 25-33.
<PAYLOAD>	The payload for the card. The parameter type is PAYLOAD, which identifies the payload type.
• 10GFC	10 Gigabit Ethernet Fibre Channel mode
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit Fibre Channel mode
• 1GFICON	1 Gigabit FICON mode
• 2GFC	2 Gigabit Fibre 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 OC-12 mode
• OC3	SONET OC-3 mode
• OC48	SONET OC-48 mode
• PASS-THROUGH	Pass through mode
• SDI-D1-VIDEO	SDI-D1-Video mode
• SONET	SONET Payload Mode
CMDMDE	Command Mode. Defaults to NORM. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.

• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
PST	Primary state. Defaults to IS. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
SST	Secondary state. Defaults to AINS. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.19 ED-FFP-<MOD2DWDMPAYLOAD>

(Cisco ONS 15454) The Edit Facility Protection Group for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, HDTV, or ISC1 (ED-FFP-<MOD2DWDMPAYLOAD>) command edits a Y-cable protection group on client facilities.

Usage Guidelines None

Category DWDM

Security Provisioning

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

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<PROTAID>	The protection group identifier (protection group name). Defaults to the protecting port AID of the protection group. PROTAID can have a maximum length of 32 characters. It is a string.
<RVRTV>	Revertive mode. The value Y indicates that 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 configurations. The parameter type is ON_OFF, which disables or enables 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 configurations. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
PSDIRN	Protection switch operation. Identifies the switching mode. Defaults to UNI. **Note** The MXP_2.5G_10G and TXP_MR_10G cards do not support bidirectional switching. The parameter type is UNI_BI (unidirectional switch operations).
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching

11.20 ED-FFP-<OCN_TYPE>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Facility Protection Group for OC3, OC12, OC48, or OC192 (ED-FFP-<OCN_TYPE>) command edits the optical facility protection.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Note

- This command can be used on both protecting and working AIDs. Optimized 1+1 and related attributes are only applicable to the ONS 15454.
- Optimized 1+1 and related attributes are only applicable to ONS 15454.
- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. In order to obtain the current value, issue the RTRV-XX command to retrieve them.

Category Protection

Security Provisioning

Input Format

ED-FFP-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>:::[PROTID=<PROTID>],[RVRTV=<RVRTV>],[RVTM=<RVTM>],[PSDIRN=<PSDIRN>],[VRGRDTM=<VRGRDTM>],[DTGRDTM=<DTGRDTM>],[RCGRDTM=<RCGRDTM>][:];

Input Example

ED-FFP-OC3:PETALUMA:FAC-1-1:1:::PROTID=PROT_NAME,RVRTV=Y,RVTM=1.0,PSDIRN=BI,VRGRDTM=0.5,DTGRDTM=1.0,RCGRDTM=1.0;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<PROTAID>	The protection group identifier (protection group name). PROTAID can have a maximum length of 32 characters. It is a string.
<RVRTV>	Revertive mode. The value Y indicates that 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. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<RVTM>	Revertive time. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	Protection switch operation. Indicates the switch mode. Defaults to UNI. The parameter type is UNI_BI (unidirectional and bidirectional switch operations).
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching
<VRGRDTM>	Verification guard timer. Only applicable to optimized 1+1. The parameter type is VERIFICATION_GUARD_TIMER (optimized 1+1 verification guard timer).
• 0.5	500 ms
• 1.0	1 second
<DTGRDTM>	Detection guard timer. Only applicable to optimized 1+1. The parameter type is DETECTION _GUARD_TIMER (optimized 1+1 detection guard timer).
• 0.0	0 seconds
• 0.05	50 ms

• 0.1	100 ms
• 0.5	500 ms
• 1.0 to 5.0	1 second to 5 seconds
<RCGRDTM>	Recovery guard timer. Only applicable to optimized 1+1. The parameter type is RECOVERY_GUARD_TIMER (optimized 1+1 recovery guard timer).
• 0.0	0 seconds
• 0.05	50 ms
• 0.1	100 ms
• 0.5	500 ms
• 1.0 to 10.0	1 second to 10 seconds

11.21 ED-FFP-OCH

(Cisco ONS 15454) The Edit Facility Protection Group Optical Channel (ED-FFP-OCH) command changes the provisioning for the default protection group on the DWDM port of a TXP_MR_2.5G and TXPP_MR_2.5G card.

Usage Guidelines

None

Category

DWDM

Security

Provisioning

Input Format

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

Input Example

ED-FFP-OCH:VA454-22:CHAN-2-2:100:::PROTID="FIXEDPROTECTION",RVRTV=N, RVTM=1.0,PSDIRN=BI;

Input Parameters

<AID>	Access identifier from the "25.8 CHANNEL" section on page 25-18.
<PROTAID>	The protection group identifier (protection group name). PROTAID is a 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. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<RVTM>	Revertive time. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
<PSDIRN>	Protection switch operation. The parameter type is TRANS_MODE (G1000 transponder mode)
• BI	Bidirectional
• NONE	Not in transponder mode
• UNI	Unidirectional

11.22 ED-FSTE

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Edit Fast Ethernet (ED-FSTE) command edits the front-end port information of the fast (10/100 Mbps) Ethernet card

Usage Guidelines

The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. In order to obtain the current value, issue the RTRV-XX command to retrieve them.

Note For the ML-100T-8 card, only the NAME parameter can be set.

Category

Ports

Security

Provisioning

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

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<FLOW>	Flow control. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<EXPDUPLEX>	Ethernet duplex mode. The parameter type is ETHER_DUPLEX (duplex mode).
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode
<EXPSPEED>	Ethernet speed. The parameter type is ETHER_SPEED (Ethernet speed).
• 100_MBPS	100 Mbps
• 10_GBPS	10 Gbps
• 10_MBPS	10 Mbps
• 1_GBPS	1 Gbps
• AUTO	Auto
<VLANCOS>	Priority queuing threshold based on VLAN class of service of incoming Ethernet packets. Default value is 1175. VLANCOS is an integer.
<IPTOS>	Priority queuing threshold based on IP type of service of incoming Ethernet packets. Default value is 368. IPTOS is an integer.
<NAME>	Name. NAME is a string.
<CMDMDE>	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. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<SOAK>	OOS-AINS to IS transition soak time as measured in 15 minute intervals, so a value of 4 translates to a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in-service

• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.23 ED-G1000

(Cisco ONS 15454) The Edit G1000 (ED-G1000) command edits the attributes related to a G1000 port.

Usage Guidelines

The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. In order to obtain the current value, issue the RTRV-XX command.

Category

Ports

Security

Provisioning

Input Format

ED-G1000:[<TID>]:<AID>:<CTAG>:::[MFS=<MFS>],[FLOW=<FLOW>],
[LOWMRK=<LOWMRK>],[HIWMRK=<HIWMRK>],[AUTONEG=<AUTONEG>],
[NAME=<NAME>],[CMDMDE=<CMDMDE>],[SOAK=<SOAK>]:[<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=FRCD,SOAK=32:OOS,DSBLD;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<MFS>	Maximum frame size. the parameter type is MFS_TYPE, which is the maximum frame size used by an Ethernet card.
• 1548	Normal frame size
• JUMBO	Jumbo frame size
<FLOW>	Flow control. The parameter type is ON_OFF, which disables or enables an attribute.

• N	Disable an attribute.
• Y	Enable an attribute.
<LOWMRK>	Low watermark value. LOWMRK is an integer. Defaults to 25. LOWMRK is available in Software Release 4.0.1 and later.
<HIWMRK>	High watermark value. HIWMRK is an integer. Defaults to 485.
<AUTONEG>	Automatic negotiation. Defaults to Y. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<NAME>	Name. NAME is a string. Default is NULL. Maximum length is 32 characters.
<CMDMDE>	Command execution mode. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<SOAK>	OOS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer. Defaults to 32.
<ENCAP>	Encapsulation. ENCAP is a string.
<PST>	Primary state. Defaults to OOS. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. Defaults to DSBLD. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.24 ED-GFP

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Generic Framing Protocol (ED-GFP) command applies to the ONS 15454 CE-100T-8 card, FC_MR-4 card, and CE-1000-4 card, the ONS 15310-CL CE-100T-8 card, and the ONS 15600 ASAP card. It changes GFP parameters.

Usage Guidelines

- The ONS 15600 only supports the TID, AID, CTAG, and FCS parameters.
- This command does not apply to the ONS 15310-CL ML-100T-8 card.
- For the FC_MR-4 card, the parameters AUTOTHGFPBUF, GFPBUF, and FILTER can be edited only if distance extension is enabled (set to B2B).

Category

Ports

Security

Provisioning

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

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. **Note** VFAC AID is used for the CE-100T-8 cards on the ONS 15310-CL and ONS 15454 and for the ASAP cards on the ONS 15600. ML-100T-8 GFP management is done through the Cisco IOS command-line interface (CLI) and not through the TL1 interface. The FAC AID is used for the ONS 15454 FC_MR-4.
<FCS>	Payload frame check sequence. The parameter type is FCS (frame check sequence).
• FCS-16	Frame check sequencing using 16 bits
• FCS-32	Frame check sequencing using 32 bits
• NONE	No frame check sequence
<AUTOTHGFPBUF>	The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<FILTER>	The parameter type is GFP_FILTER, which is the filter feature in GFP.

• EGRESS	Activate filter feature on egress port.
• NONE	Turn off filter feature.

11.25 ED-HDLC

(Cisco ONS 15600) The Edit High-Level Data Link Control (ED-HDLC) command edits HDLC-related attributes for HDLC-encapsulated payloads.

Usage Guidelines

None

Category

Ports

Security

Provisioning

Input Format

ED-HDLC:[<TID>]:<SRC>:<CTAG>[:::FCS=<FCS>];

Input Example

ED-HDLC:TID:VFAC-SLOT-PORT:CTAG:::FCS=FCS-16;

Input Parameters

<SRC>	Access identifier from the "25.15 FACILITY" section on page 25-33. The ONS 15600 ASAP card uses the VFAC AID.
<FCS>	Payload frame check sequence. The parameter type is FCS (frame check sequence).
• FCS-16	Frame check sequence using 16 bits
• FCS-32	Frame check sequence using 32 bits
• NONE	No frame check sequence

11.26 ED-LNK

(Cisco ONS 15454) The Edit Link (ED-LNK) command edits an optical link state.

Usage Guidelines

The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. In order to obtain the current value, issue the RTRV-XX command.

Categories

DWDM

Security

Provisioning

Input Format

ED-LNK:[<TID>]:<FROM>,<TO>:<CTAG>:::[CMDMDE=<CMDMDE>]:[<PST>[,<SST>]];

Input Example

ED-LNK:PENNGROVE:BAND-6-1-TX,BAND-13-1-RX:114:::CMDMDE=CMDMDE:IS,AINS;

Input Parameters

<FROM>	Identifier at one end of the optical link from the "25.4 BAND" section on page 25-16.
<TO>	Identifier at the other end of the optical link from the "25.4 BAND" section on page 25-16.
<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. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. **Note** PST is not supported for optical channel (OCH) provisioning. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. **Note** SST is not supported for OCH provisioning. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group

• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.27 ED-LNKTERM

(Cisco ONS 15454, ONS 15327, ONS 15310-CL) The Edit Provisionable Patchcord Termination (ED-LNKTERM) command edits the attributes of a provisionable patchcord that has already been created. Only the remote end attributes (REMOTENODE and REMOTELNKTERMID) can be edited.

Usage Guidelines

- No two provisionable patchcord terminations on a node can have the same remote end link termination information. An attempt to modify an existing provisionable patchcord termination while not following this restriction will lead to an error message being responsed.
- If the provisionable patchcord termination does not exist, an error message will be responsed.
- This command does not accept multiple and ALL AIDs.
- REMOTENODE is a string with a maximum length of 20 characters.

Category

Provisionable Patchcords

Security

Provisioning

Input Format

ED-LNKTERM:[<TID>]:<AID>:<CTAG>:::[REMOTENODE=<REMOTENODE>], [REMOTELNKTERMID=<REMOTELNKTERMID>];

Input Example

ED-LNKTERM::LNKTERM-1:CTAG:::REMOTENODE=172.20.208.226, REMOTELNKTERMID=25;

Input Parameters

<AID>	Access identifier from the "25.19 LNKTERM" section on page 25-39. Indicates a link (provisionable patchcord) termination on the local node.
<REMOTENODE>	The node where the other end of the provisionable patchcord resides. This can be an IP address or a valid TID. Defaults to the IP address of the local node/existing value. REMOTENODE is a string.
<REMOTELNKTERMID>	The corresponding provisionable patchcord termination on the remote node (as specified by the REMOTENODE parameter). Integer value within the range of 1 to 65535. Defaults to the existing value.

11.28 ED-NE-GEN

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Network Element General (ED-NE-GEN) command edits the node attributes of the NE.

Usage Guidelines

- The node name can be a maximum of 20 characters. If the entered name exceeds 20 characters, an IPNV (Node Name Too Long) error message is returned.
- An existing NTP timing source can be removed by setting the address to 0.0.0.0.
- The maximum length of IPADDR and DEFRTR is 20 characters. The default value is the local IP address and default router.
- The maximum length of IPMASK is 18 characters. The default is the mask of the local IP address.
- ETHIPADDR and ETHIPMASK are disabled in this command. ETHIPADDR and ETHIPMASK are used to show the Ethernet interface address and mask. Both default to the nodes' IP address and masks.
- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. In order to obtain the current value, issue the RTRV-XX command.

Caution Changing the IPADDR, IPMASK, or IIOPPORT will cause a reset of the controller card.

Category System

Security Superuser

Input Format

ED-NE-GEN:[<TID>]::<CTAG>:::[NAME=<NAME>],[IPADDR=<IPADDR>],
[IPMASK=<IPMASK>],[DEFRTR=<DEFRTR>],[IIOPPORT=<IIOPPORT>],
[NTP=<NTP>],[SUPPRESSIP=<SUPPRESSIP>],[MODE=<MODE>];

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,SUPPRESSIP=NO,MODE=SINGLESHELF;

Input Parameters

<NAME>	Node name. NAME is a string. Defaults to NULL.
<IPADDR>	Node IP address. IPADDR is a string.
<IPMASK>	Node IP mask. IPMASK is a string.
<DEFRTR>	Node default router. DEFRTR is a string.
<IIOPPORT>	Node IIOP port. IIOPPORT is an integer. Defaults to 57790.
<NTP>	Node NTP timing origin address. NTP is a string. Defaults to 0.0.0.0.

<SUPPRESSIP>	Parameter type is YES_NO, which indicates whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes
<MODE>	(Optional) Indicates the AID mode to access shelf identifier objects. Defaults to SINGLESHELF. This field is always set to MULTISHELF in the case of DWDM nodes with more than one shelf managed. Parameter type is SHELF_MODE which is the NE mode.
• MULTISHELF	The NE has more than one shelf configured.
• MULTISHELFETH	The NE has more than one shelf configured and the shelves are connected by an external Ethernet switch.
• SINGLESHELF	The NE contains only one shelf and it is not considered the shelf identifier for command requests/response and autonomous reports.

11.29 ED-NE-PATH

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA) The Edit Network Element Path (ED-NE-PATH) command edits the path attributes of the NE.

Usage Guidelines

The default value for an optional parameter is the NE default value.

Category

System

Security

Provisioning

Input Format

ED-NE-PATH:[<TID>]::<CTAG>:::[PDIP=<PDIP>],[XCMODE=<XCMODE>];

Input Example

ED-NE-PATH:::CTAG:::PDIP=Y,XCMODE=MIXED;

Input Parameters

<PDIP>	Flag used to indicate whether PDI-P should be generated on the outgoing VT structured STSs. The parameter type is ON_OFF, which disables or enables an attribute.

• N	Disable an attribute.
• Y	Enable an attribute.
<XCMODE>	Cross-connect mode. The parameter type is XCMODE, which is applicable only to a node with cross-connect cards (XC-VXC-10G or XC-VXC-2.5G, for example) that support cross-connect mode change.
• MIXED	Both VT1 and VT2 cross-connects can be provisioned on the node.
• VT1	Only VT1 cross-connects can be provisioned on the node.
• VT2	Only VT2 cross-connects can be provisioned on the node.

11.30 ED-NE-SYNCN

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Network Element Synchronization (ED-NE-SYNCN) command edits the synchronization attributes of the NE.

Usage Guidelines

The existing external and line modes have the same functionality 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.

Note Although mixed mode timing is supported in this release, it is not recommended. Refer to the *Cisco ONS SONET TL1 Reference Guide* for more information.

Category

Synchronization

Security

Provisioning

Input Format

ED-NE-SYNCN:[<TID>]:[<AID>]:<CTAG>:::[TMMD=<TMMD>],[SSMGEN=<SSMGEN>],[QRES=<QRES>],[RVRTV=<RVRTV>],[RVTM=<RVTM>];

Input Example

ED-NE-SYNCN:CISCO::123:::TMMD=LINE,SSMGEN=GEN1,QRES=ABOVE-PRS,RVRTV=Y,RVTM=8.0;

ED-NE-SYNCN:CISCO:SHELF-2:123:::TMMD=LINE,SSMGEN=GEN1,QRES=ABOVE-PRS,RVRTV=Y,RVTM=8.0;

Input Parameters

<AID>	The node or shelf access identifier from the "25.24 SHELF" section on page 25-41. If omitted it addresses the node or first shelf of the node. Must not be null.
<TMMD>	Timing mode. A null value is equivalent to ALL. Defaults to EXTERNAL. The parameter type is TIMING_MODE, which is the timing mode for the current node.
• EXTERNAL	The node derives its clock from the BITS input.
• LINE	The node derives its clock from the SONET lines.
• MIXED	The node derives its clock from the mixed timing mode.
<SSMGEN>	Synchronization status message set. Defaults to GEN1. A null value is equivalent to ALL. The default is ABOVE-STU. The parameter type is SYNC_GENERATION (synchronization status message set generation).
• GEN1	First generation SSM set
• GEN2	Second generation SSM set
<QRES>	Quality of the RES. A null value is equivalent to ALL. Defaults to DUS. The parameter type is SYNC_QUALITY_LEVEL, which is the network synchronization quality level.
• ABOVE-PRS	Better than primary reference source. Valid setting for Generation-1 and Generation-2 SSM Set.
• ABOVE-SMC	Between SMC and ST3. Valid setting for Generation-1 and Generation-2 SSM Set.
• ABOVE-ST2	Between ST2 and STU. Valid setting for Generation-1 and Generation-2 SSM Set.
• ABOVE-ST3	For Generation-1 SSM set, between ST3 and ST2. For Generation-2 SSM set, between ST3 and ST3E.
• ABOVE-ST3E	Between ST3E and TNC. Valid setting only for Generation-2 SSM set.
• ABOVE-ST4	Between ST4 and ST3. Valid setting for Generation-1 and Generation-2 SSM Set.
• ABOVE-STU	Between STU and PRS. Valid setting for Generation-1 and Generation-2 SSM Set. This is default setting.
• ABOVE-TNC	Between TNC and ST2. Valid setting only for Generation-2 SSM set.
• BELOW-ST4	Below ST4 but still usable. Valid setting for Generation-1 and Generation-2 SSM Set.
• SAME-AS-DUS	Disable the RES message by equating it to DUS. Valid setting for Generation-1 and Generation-2 SSM Set.

<RVRTV>	Revertive mode. The value Y indicates that 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. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<RVTM>	Revertive time. A null value is equivalent to ALL. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.

11.31 ED-OCH

(Cisco ONS 15454) The Edit Optical Channel (ED-OCH) command edits the attributes (service parameters) and state of an OCH facility. Refer to the *Cisco ONS SONET TL1 Reference Guide* for specific card provisioning rules.

Usage Guidelines

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

Category

DWDM

Security

Provisioning

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>],
[MFS=<MFS>],[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,MFS=2152,CMDMDE=CMDMDE:IS,AINS;

Input Parameters

AID	Access identifier from the "25.8 CHANNEL" section on page 25-18.
RDIRN	Ring directionality of the optical line. The parameter type is RDIRN_MODE, which is the optical ring directionality.
• E-W	The direction of the signal is from east to west (clockwise).
• W-E	The direction of the signal is from west to east (counterclockwise).
EXPWLEN	Optical wavelength for this port. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexer cards, demultiplexer cards and optical add/drop multiplexing (OADM) cards. The parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77

• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34

• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35

• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62

• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<VOAATTN>	The value of calibrated attenuation for the variable optical attenuator (VOA). It is expressed in dBm. For the following cards, the range is 0.0 to +30.0: optical service channel, optical amplifier, dispersion compensation units, multiplexer, demultiplexer, and OADM. Not supported for TXP or MXP cards. VOAATIN is a 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, multiplexer, demultiplexer, and OADM. VOAPWR is a float.
<CALOPWR>	The value of the calibrated optical power expected for the line added to the calculated value, which equals the total expected output power. Expressed in dBm. Applicable only to the following cards: optical service channel, optical amplifier, dispersion compensation units, multiplexer, demultiplexer, and OADM. Defaults to 0 dBm. CALOPWR is a 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. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PORTNAME>	Port name. PORTNAME is a string.
<SFBER>	Signal failure threshold for the SONET payload. Can only be provisioned on the working port. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.

<SDBER>	Signal degrade threshold for the SONET payload. Can only be provisioned on the working port. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<COMM>	The generic communications channel (GCC) or data communications channel (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. On an MXP_2.5G_10G or TXP_MR_10G client port, only the DCC can be provisioned, if the termination mode is not transparent and the payload is SONET. On an MXP_2.5G_10G or TXP_MR_10G DWDM port, the DCC can be enabled only if the ITU-T G.709 is not enabled, if the payload is SONET, and the termination mode is not transparent. On an MXP_2.5G_10G or TXP_MR_10G DWDM port, the GCC can be enabled if there is no DCC and the ITU-T G.709 flag is enabled. On a TXP/MXP DWDM port, the DCC/GCC can be disabled only if no provisionable patchcord terminations are provisioned on the trunk port. The parameter type is COMM_TYPE, which is the 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 192 Kbps. For MXP_2.5G_10G and TXP_MR_10G cards, this applies only to the DWDM port. **Note** The 576 kbps option is not supported for this release. Parameter type is GCCRATE, which is the data rate of the GCC traffic.
• 192K	192 kbps
• 576K	576 kbps
<OSDBER>	OTN SDBER. Can only be provisioned on the working port. Defaults to 1E-7 Parameter type is SD_BER—the threshold for declaring signal degrade on a facility or path
• 1E-5	SDBER is 1E-5
• 1E-6	SDBER is 1E-6
• 1E-7	SDBER is 1E-7
• 1E-8	SDBER is 1E-8
• 1E-9	SDBER is 1E-9

<DWRAP>	The ITU-T G.709 digital wrapper. It is either on or off. The system default is ON. For MXP_2.5G_10G and TXP_MR_10G cards, this applies only to the DWDM port. To enable ITU-T G.709: • There should be no GCC on the DWDM port. • The payload (where the card is configured) should not be UNFRAMED. To disable ITU-T G.709: • There should be no GCC on the DWDM port. • The forward error correction (FEC) should be turned to off. • There should be no overhead circuit created on the DWDM port. • (MXP only) None of the client ports on the card should be part of a Y-cable protection group. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<FEC>	Forward error correction. It can be enabled only if the ITU-T 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 performance monitoring (PM) and thresholds apply if the FEC is turned ON. The parameter type is FEC_MODE, which specifies the type of forward error correction.
• ENH	Enhanced FEC is enabled.
• OFF	FEC is disabled.
• STD	Standard FEC is enabled.
<PAYLOADMAP>	The type of payload mapping. It can be enabled only if the ITU-T G.709 is turned ON and FEC is enabled. The 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. MACADDR is a 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. The parameter type is ON_OFF, which disables or enables 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. The parameter type is ON_OFF, which disables or enables 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). SOAK is an integer.
<OSPF>	Open Shortest Path First. The parameter type is EXT_RING, which indicates if the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<MFS>	Integer
<CMDMDE>	Command mode. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.32 ED-OCHCC

(Cisco ONS 15454) The Edit Optical Channel Client Connection (ED-OCHCC) command edits the OCH client connection.

Usage Guidelines

- The fields after CTAG (trailing colons) are optional.
- This command does not support multiple editing of OCH client connection provisioning.
- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. In order to obtain the current value, issue the RTRV-XX command.

Category

DWDM

Security

Provisioning

Input Format

ED-OCHCC:[<TID>]:<AID>:<CTAG>[:::CKTID=<CKTID>],
[CMDMDE=<CMDMDE>]:[<PST>[,<SST>]];

Input Example

ED-OCHCC:VA454-22:FAC-2-1-1:116:::CKTID=OCHCC,CMDMDE=FRCD:OOS,DSBLD;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null the CKTID field will not be displayed.
<CMDMDE>	The parameter type is command mode, which forces the system to execute a given command regardless of any standing conditions. NORM mode is the default behavior for all commands but you can specify FRCD to force the system to override a state in which the command would normally be denied.
• FRCD	Force the system to override a state in which the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that may make the command fail.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity. The default is IS.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ. The default is AINS.

• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.33 ED-OCHNC

(Cisco ONS 15454) The Edit Optical Channel Network Connection (ED-OCHNC) command edits the OCH network connection.

Usage Guidelines

- The fields after CTAG (trailing colons) are optional.
- This command does not support multiple editing of wavelength connection provisioning.
- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. In order to obtain the current value, issue the RTRV-XX command.

Category

DWDM

Security

Provisioning

Input Format

ED-OCHNC:[<TID>]:<SRC>,<DST>:<CTAG>:::[CKTID=<CKTID>],
[CMDMDE=<CMDMDE>]:[<PST>[,<SST>]];

Input Example

ED-OCHNC:VA454-22:CHANWL-1-3-TX-1530.33,
LINEWL-4-1-RX-1530.33:116:::CKTID=CIRCUIT,CMDMDE=FRCD:OOS,DSBLD;

Input Parameters

<SRC>	Source access identifier from the "25.8 CHANNEL" section on page 25-18. In 2-way wavelength connection sources both directions need to be indicated.
<DST>	Destination access identifier from the "25.18 LINEWL" section on page 25-38. In 2-way wavelength connection sources both directions need to be indicated.

<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null the CKTID field will not be displayed.
<CMDMDE>	The parameter type is command mode, which forces the system to execute a given command regardless of any standing conditions. NORM mode is the default behavior for all commands but you can specify FRCD to force the system to override a state in which the command would normally be denied.
• FRCD	Force the system to override a state in which the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that may make the command fail.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity. The default is IS.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ. The default is AINS.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.34 ED-OMS

(Cisco ONS 15454) The Edit Optical Multiplex Section (ED-OMS) command edits the attributes (service parameters) and state of an OMS facility.

Usage Guidelines None

Category DWDM

Security Provisioning

Input Format

ED-OMS:[<TID>]:<AID>:<CTAG>:::[RDIRN=<RDIRN>],[EXPBAND=<EXPBAND>], [VOAATTN=<VOAATTN>],[VOAPWR=<VOAPWR>],[CALOPWR=<CALOPWR>], [CHPOWER=<CHPOWER>],[NAME=<NAME>],[SOAK=<SOAK>], [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="OMS PORT", SOAK=8,CMDMDE=CMDMDE:IS,AINS;

Input Parameters

<AID>	Access identifier from the "25.4 BAND" section on page 25-16.
<RDIRN>	Ring directionality of the optical line. The parameter type is RDIRN_MODE, which is the optical ring directionality.
• E-W	The direction of the signal is from east to west (clockwise).
• W-E	The direction of the signal is from west to east (counterclockwise).
<EXPBAND>	The expected value of the optical band for this port. The parameter type is OPTICAL_BAND (optical band).
• 1530.33 to 1532.68	Band 1
• 1534.25 to 1536.61	Band 2
• 1538.19 to 1540.56	Band 3
• 1542.14 to 1544.53	Band 4
• 1546.12 to 1548.51	Band 5
• 1550.12 to 1552.52	Band 6
• 1554.13 to 1556.55	Band 7
• 1558.17 to 1560.61	Band 8
• USE-DEFAULT	This band is not yet configured/retrieved from unit.
<VOAATTN>	The value of calibrated attenuation for the VOA expressed in dBm. The range is 0.0 to +30.0. VOAATTN is a float.
<VOAPWR>	The value of calibrated output power that the VOA is going to set as a result of its attenuation. VOAPWR is a float.
<CALOPWR>	The value of the calibrated optical power expected for the line added to the calculated value which equals the total expected output power. Expressed in dBm. Defaults to 0 dBm. CALOPWR is a float.
<CHPOWER>	The value of per-channel optical power. Float expressed in dBm. The parameter type is REVERTIVE_TIME (revertive time)
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<NAME>	Port name. NAME is a string.
<SOAK>	SOAK is an integer. Defaults to 8.
<CMDMDE>	Command mode. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.

• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.35 ED-OSC

(Cisco ONS 15454) The Edit Optical Service Channel (ED-OSC) command edits the optical service channel (OSC) group attributes.

Usage Guidelines None

Category DWDM

Security Provisioning

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

<AID>	Access identifier from the "25.21 OSC" section on page 25-40.
<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-#". RINGID is an integer.
<NODEID>	The OSC node ID of the NE. NODEID ranges from 0 to 31. NODEID is an integer.

11.36 ED-OTS

(Cisco ONS 15454) The Edit Optical Transport Section (ED-OTS) command edits the attributes (service parameters) and state of an OTS facility.

Usage Guidelines

None

Category

DWDM

Security

Provisioning

Input Format

ED-OTS:[<TID>]:<AID>:<CTAG>:::[RDIRN=<RDIRN>],[VOAATTN=<VOAATTN>],[VOAPWR=<VOAPWR>],[OFFSET=<OFFSET>],[CALTILT=<CALTILT>],[OSRI=<OSRI>],[AMPLMODE=<AMPLMODE>],[CHPOWER=<CHPOWER>],[EXPGAIN=<EXPGAIN>],[NAME=<NAME>],[SOAK=<SOAK>],[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",SOAK=8,CMDMDE=CMDMDE:IS,AINS;

Input Parameters

<AID>	Access identifier from the "25.17 LINE" section on page 25-37.
<RDIRN>	Ring directionality of the optical line. The parameter type is RDIRN_MODE, which is the optical ring directionality.
• E-W	The direction of the signal is from east to west (clockwise).
• W-E	The direction of the signal is from west to east (counterclockwise).
<VOAATTN>	The value of calibrated attenuation for the VOA expressed in dBm. The range is 0.0 to +30.0. VOAATTN is a float.
<VOAPWR>	The value of calibrated output power that the VOA is going to set as a result of its attenuation. VOAPWR is a float.
<OFFSET>	The calibration value of the optical power added to the calculated reference value. Defaults to 0 dBm. OFFSET is a float.

<CALTILT>	(Optional) The amplifier calibration tilt offset to be added to the calculated reference value. Defaults to 0 dBm. CALTILT is a float.
<OSRI>	(Optional) Optical safety remote interlock (OSRI) is enabled or disabled. Present only on a port where the OSRI is supported. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<AMPLMODE>	The optical amplification control mode. The parameter type is AMPL_MODE, which defines the 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. CHPOWER is a float.
<EXPGAIN>	The gain expected value to be reached from an amplifier when the node is part of a DWDM access network. EXPGAIN is a float.
<NAME>	The name of the port. NAME is a string.
<SOAK>	SOAK is an integer. It defaults to 8.
<CMDMDE>	Command mode. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.37 ED-PID

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Password (ED-PID) command allows a user to change his or her own password.

Usage Guidelines

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

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

  The syntax of OLDPID is not checked. The NEWPID is required to follow Telcordia standards (for example, 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.

  You must use the ED-USER-SECU command to change the default password for the CISCO15 superuser.
- The ED-PID command cannot be used to change the empty password to a valid password.

Category

Security

Security

Retrieve

Input Format

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

Input Example

ED-PID:CISCO:UID:123::OLDPWD,NEWPWD;

Input Parameters

<UID>	User identifier. Up to 10 alphanumeric characters. UID is a string.
<OLDPID>	The user's old password. Up to 10 alphanumeric characters. Passwords are encrypted and will appear as asterisks (*). OLDPID is a string.
<NEWPID>	The user's new password. Up to 10 alphanumeric characters. Passwords are encrypted and will appear as asterisks (*). NEWPID is a string.

11.38 ED-POS

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Packet-Over-SONET (ED-POS) command edits the back-end port information for the Ethernet card when the back-end port is working in POS mode. The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. In order to obtain the current value, issue the RTRV-XX command to retrieve them. ED-POS cannot set ENCAP and PST/SST.

Usage Guidelines

This command is supported for the ONS 15454 CE-100T-8 and CE-1000-4 cards, the ONS 15310-CL ML-100T-8 and CE-100T-8 cards, and the ONS 15600 ASAP card.

Category

Ports

Security

Provisioning

Input Format

ED-POS:[<TID>]:<AID>:<CTAG>:::[ENCAP=<ENCAP>],[NAME=<NAME>],[CMDMDE=<CMDMDE>],[SOAK=<SOAK>]:[<PST>[,<SST>]];

Input Example

ED-POS:CISCO:VFAC-2-0:123:::ENCAP=HDLC,NAME=NAME,CMDMDE=CMDMDE,SOAK=32:IS,AINS;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<ENCAP>	Encapsulation. The parameter type is ENCAP, which is the frame encapsulation type.
• GFP_F	GFP frame mode
• GFP_T	GFP transparent mode
• HDLC	HDLC frame mode
• HDLC_LEX	HDLC LAN extension frame mode
• HDLC_X86	HDLC X.86 frame mode
<NAME>	Port name. NAME is a 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. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.

• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<SOAK>	OOS-AINS to IS transition soak time as measured in 15 minute intervals, so a value of 4 translates to a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.39 ED-PROTOCOL

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Protocol (ED-PROTOCOL) command is used to enable/disable a protocol/service that is supported in the NE. Valid protocols include shell/file system access (SHELL), EMS, TL1, and Simple Network Management Protocol (SNMP).

Usage Guidelines

- If the AID is TL1, the command will be denied because TL1 users are not allowed to change the setting for TL1 protocol.
- If the AID is SNMP, the SECURE PROTOCOLSTAT is not supported. SNMP can only be enabled or disabled. To enable SNMP, set PROTOCOLSTAT to UNSECURE.

Category

Security

Security

Superuser

Input Format

ED-PROTOCOL:[<TID>]:<PROTOCOLAID>:<CTAG>::<PROTOCOLSTAT>;

Input Example ED-PROTOCOL:CISCONODE:EMS:123::SECURE;

Input Parameters

<PROTOCOLAID>	The protocol/service to which the command pertains. The parameter type is PROTOCOLAID, which is the AID for the protocol/service.
• EMS	CTC/CTM protocol/service
• SHELL	Shell/file system access protocol
• SNMP	SNMP protocol/service
• TL1	TL1 protocol service
<PROTOCOLSTAT>	Identifies the status of the protocol/service. The parameter type is PROTOCOLSTAT, which is the status of the protocol.
• DISABLED	The protocol cannot be used.
• SECURE	The protocol is enabled and communication using the protocol are sure, for example, through Secure Shell Protocol (SSH). Not applicable for SNMP protocols.
• UNSECURE	The protocol is enabled but communication is not secure, for example, through Telnet.

11.40 ED-ROLL-<MOD_PATH>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Roll for STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, VT1, or VT2 (ED-ROLL-<MOD_PATH>) command forces a rolling operation. Force attempts to force a valid signal to complete the rolling operation.

Usage Guidelines See Table 27-1 on page 27-1 for supported modifiers by platform.

Note STS18C and STS36C are not supported for this command in this release.

Category Bridge and Roll

Security Provisioning

Input Format ED-ROLL-<MOD_PATH>:[<TID>]:<FROM>,<TO>:<CTAG>:::[CMDMDE=<CMDMDE>];

Input Example ED-ROLL-STS1:CISCO:STS-1-1-1,STS-2-1-1:1:::CMDMDE=FRCD;

Input Parameters

<FROM>	Source access identifier from the "25.11 CrossConnectId1" section on page 25-24. It is one of the termination points (legs) of the existing cross-connection. If the existing cross-connection is one-way, then this termination point (leg) should be the FROM-AID termination point. Otherwise, FROM is not significant. FROM and TO should be entered as they are entered in the ENT-CRS command. You can issue RTRV-CRS command, and use the response for FROM and TO parameters.
<TO>	Destination access identifier from the "25.11 CrossConnectId1" section on page 25-24. It is one of the termination points (legs) of the existing cross-connection. If the existing cross-connection is one-way, then this termination point (leg) should be the TO-AID termination point. Otherwise, the TO is not significant. FROM and TO should be entered as they are entered in the ENT-CRS command. You can issue RTRV-CRS command, and use the response for FROM and TO parameters.
<CMDMDE>	Command execution mode. Defaults to NORM. **Note** CMDMDE can only go from NORM to FRCD (cannot go from FRCD to NORM). CMDMDE cannot be set to NORM using this command. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.

11.41 ED-SLV-WDMANS

(Cisco ONS 15454) The Edit Span Loss Verification Wavelength Division Multiplexing Automatic Node Set-Up (ED-SLV-WMANS) command edits the expected span loss verification.

Usage Guidelines

None

Category

DWDM

Security

Maintenance

Input Format

ED-SLV-WDMANS:[<TID>]:<AID>:<CTAG>:::[HIGHSLVEXP=<HIGHSLVEXP>], [LOWSLVEXP=<LOWSLVEXP>];

Input Example ED-SLV-WDMANS:VA454-22:WDMANS-E:116:::HIGHSLVEXP=10.0,LOWSLVEXP=5.0;

Input Parameters

<AID>	Access identifier from the "25.32 WDMANS" section on page 25-50.
<HIGHSLVEXP>	The high range value of the expected span loss verification. HIGHSLVEXP is a float.
<LOWSLVEXP>	The low range value of the expected span loss verification. LOWSLVEXP is a float.

11.42 ED-SYNCN

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Synchronization (ED-SYNCN) command edits the synchronization reference list used to determine the sources for the NE's reference clock and the BITS output clock. For each clock, up to three synchronization sources might be specified (for example, PRIMARY, SECOND, THIRD).To view or edit the system timing mode, use the RTRV-NE-SYNCN or ED-NE-SYNCN commands.

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

Category Synchronization

Security Provisioning

Input Format ED-SYNCN:[<TID>]:<AID>:<CTAG>:::[PRI=<PRI>],[SEC=<SEC>],[THIRD=<THIRD>][:];

Input Example ED-SYNCN:BOYES:SYNC-NE:112:::PRI=INTERNAL,SEC=INTERNAL,THIRD=INTERNAL;

Input Parameters

<AID>	Access identifier from the "25.28 SYNC_REF" section on page 25-47.
<PRI>	Primary reference of the synchronization from the "25.27 SYN_SRC" section on page 25-47.
<SEC>	Secondary reference of the synchronization from the "25.27 SYN_SRC" section on page 25-47.
<THIRD>	Third reference of the synchronization from the"25.27 SYN_SRC" section on page 25-47.

11.43 ED-T1

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA) The Edit Digital Signal Facility (ED-T1) command edits the attributes related to a DS1/T1 port.

Usage Guidelines

- The T1 facilities on the ONS 15327 and ONS 15310-CL are on the XTC/15310-CL-CTX card.
- This command is not allowed if the card is a protect card.
- If sending this command to edit TACC and any other attribute(s), and the port having the cross-connection, the Parameters Not Compatible error message will be returned.
- Editing the TACC using an ED-xxx command is only allowed when there is no circuit/cross-connection on the port and the port/VT does not have a TAP or TACC number. Otherwise, an error message (for example, VT in Use) will be returned.
- TACC creation will be denied on protect ports/cards.
- AUTO-PROV is not supported.
- The AISONLPBK and RETIME options are applicable only to the ONS 15310-CL and the DS1/E1-56 card on the ONS 15454.
- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use the RTRV-XX commands to retrieve the current values.
- The parameters SYNCMAP, ADMSSM, VTMAP, and INHFELPBK are only supported on the DS1/E1-56 card on the ONS 15454.

Category

Ports

Security

Provisioning

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>],[MODE=<MODE>],[SYNCMAP=<SYNCMAP>],
[ADMSSM=<ADMSSM>],[VTMAP=<VTMAP>],[INHFELPBK=<INHFELPBK>],
[AISONLPBK=<AISONLPBK>],[CMDMDE=<CMDMDE>],
[AISVONAIS=<AISVONAIS>]:[<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="T1PORT",MODE=FDL,SYNCMAP=ASYNC,ADMSSM=STU,
VTMAP=GR253,INHFELPBK=N,AISONLPBK=AIS_ON_LPBK_ALL,CMDMDE=CMDMDE,
AISVONAIS=Y:IS,AINS;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<LINECDE>	Line code. The parameter type is LINE_CODE.
• AMI	Line code value is AMI.
• B8ZS	Line code value is B8ZS.
<FMT>	Digital signal frame format. The parameter type is FRAME_FORMAT, which is the 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. The parameter type is LINE_BUILDOUT.
• 0–131	Line build-out range is 0–131.
• 132–262	Line build-out range is 132–262.
• 263–393	Line build-out range is 263–393.
• 394–524	Line build-out range is 394–524.
• 525–655	Line build-out 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. TACC is an integer.
<TAPTYPE>	TAP type. Defaults to DUAL. The parameter type is TAPTYPE (test access point type).
• DUAL	Dual FAD
• SINGLE	Single FAD
<SOAK>	OOS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer.
<SFBER>	The port signal failure threshold. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	Port signal degrade threshold. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.

<SYNCMSG>	Synchronization status messaging is enabled or disabled on the T1 facility. **Note** For the ONS 15310-CL, SYNCMSG defaults to N. SYNCMSG is not supported on the ONS 15454 or ONS 15327. The parameter type is YES_NO, which indicates whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes
<SENDDUS>	The facility will send the DUS value as the SSM for that facility. **Note** For the ONS 15310-CL, SENDDUS is optional and defaults to N. SENDDUS is not supported on the ONS 15454 or ONS 15327. The parameter type is YES_NO, which indicates whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes
<RETIME>	Indicates if retiming is needed. **Note** For the ONS 15310-CL, RETIME is optional and defaults to N. RETIME is not supported on the ONS 15454 or ONS 15327. The parameter type is YES_NO, which indicates whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes
<NAME>	Name. NAME is a string.
<MODE>	Mode. Default value is FDL. The parameter type is DS1MODE, which is the DS1 path mode of the DS3XM-12 card.
• ATT	Indicates that the DS1 path of the DS3XM-12 is in AT&T 54016 mode.
• FDL	Indicates that the DS1 path of the DS3XM-12 is in FDL T1-403 mode.
<SYNCMAP>	The synchronous mapping for the DS1 facility. Defaults to ASYNC. Only supported on ONS 15454. The parameter type is SYNCMAP (synchronous mapping type).
• ASYNC	Asynchronous
• BYTE	Mapping in byte
• JBYTE	Mapping in jbyte

<ADMSSM>	The administrative synchronization status message. Only supported on the ONS 15454. Defaults to STU. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level.
• DUS	Do Not Use For Synchronization
• PRS	Primary Reference Source, Stratum 1 Traceable
• RES	Reserved For Network Synchronization Use
• SMC	SONET Minimum Clock Traceable
• ST2	Stratum 2 Traceable
• ST3	Stratum 3 Traceable
• ST3E	Stratum 3E Traceable
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<VTMAP>	The port to VT mapping type for that particular STS. Only supported on ONS 15454. Defaults to GR253. The parameter type is VTMAP (VT mapping).
• GR253	Mapping based on Telcordia GR-253.
• INDUSTRY	Mapping based on industry standard.
<INHFELPBK>	Indicates whether far-end loopbacks are inhibited on the facility. Only supported on the ONS 15454. Defaults to N. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<AISONLPBK>	Defaults to AIS_ON_LPBK_ALL. The parameter type is AIS_ON_LPBK, which indicates if AIS is sent on a loopback.
• AIS_ONLPBK_FACILITY	AIS is sent on facility loopbacks.
• AIS_ON_LPBK_ALL	AIS is sent on all loopbacks.
• AIS_ON_LPBK_OFF	AIS is not sent on loopbacks.
• AIS_ON_LPBK_TERMINAL	AIS is sent on terminal loopbacks.
<CMDMDE>	Command mode. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<AISVONAIS>	Defaults to N. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.

• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.44 ED-T3

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA) The Edit Digital Signal Facility (ED-T3) command edits the attributes related to a DS3/T3 port and the DS3i-N-12 card.

Usage Guidelines

- The T3 facilities on the ONS 15327 and ONS 15310-CL are on the XTC/15310-CL-CTX card.
- This command is not allowed if the card is a protect card.
- Neither FMT nor Line code are supported for T3/DS3 facility. They are supported on both the DS3XM and DS3E card. The unframed value of the framing format is only supported on the DS3E facility.
- If you send this command to edit TACC and any other attribute(s), and the port having the cross-connection or the port/VT has a TAP or TACC number, the Parameters Not Compatible error message is returned.
- Editing TACC using an ED-xxx command is only allowed when there is no circuit/cross-connection on the port and the port/VT does not have a TAP or TACC number. Otherwise, an error message (VT in Use) will be returned.
- TACC creation will be denied on the protect ports/cards.
- Automatic application of loopbacks originating from the far end can be initiated on the T3 ports of a DS3E, DS3NE, or DS3XM card.
- CTC can set the FMT attribute of a DS3(N)E line to AUTOPROVISION to set the framing based on the framing that is coming in. The result is the FMT field being blanked out for a few seconds or blanked out indefinitely for a preprovisioned DS3(N)E card in CTC. AUTOPROVISION is not considered a valid DS3 framing type. It is only used to trigger an autosense and subsequent autoprovisioning of a valid DS3 framing type (unframed, M13, C-BIT). TL1 does not have the AUTOPROVISION mode. TL1 maps/returns the AUTOPROVISION mode to the unframed framing type.

- For the DS3XM-12 card, the DS3/T3 configurable attributes (PM, TH, alarm, etc.) only apply on the ported ports (1 to 12) and the DS3-mapped (even) portless ports in xxx-xxx-T3 commands. If you attempt to provision or retrieve DS3/T3 attributes on the VT-mapped (odd) portless port in xxx-xxx-T3 commands, an error message is returned.
- For the DS3XM-12 card, if the administrative state is already set for a portless port, the state setting operation over its associated ported port is an invalid operation.
- The test set physical connection set up through ED-T3/DS1/STS1/VT1 of the DS3XM-12 card is only allowed on the physical front ports (PORTED ports, Ports 1 to 12), which are the monitoring ports.
  - The monitoring test access ports follow the common rules for the other cards. For example, ED-T3 on Port 2 (FAC-6-2) with a TACC number (8), the next port, Port 3 (FAC-6-3) is used as the monitoring point also. The RTRV-T3 on both Port 2 and Port 3 return the same TACC number (8) being used to monitor the cross-connection end (A-B). The last port (Port 12) is not allowed to set up a physical connection with the test set because there is no next available port to be the monitoring port.
  - The DISC-TACC and CHG-TACC commands follow the same requirements as in the previous bullet, but applied on the ported ports of the DS3XM-12 card.
  - The CONN-TACC command has monitored points that can be portless ports. This command is applied on both ported and portless ports of the DS3XM-12 card.
- If the entity has a TACC connection, the entity is not allowed to have ported or portless STS/VT cross-connection (or circuit) provisioning on the DS3XM-12 card.
- ED-T3 cannot be used to create TAPs on the DS3i-N-12 card on the SONET platform because the DS3I card only supports STS3C TAPs.
- You cannot use this command to change the default provisioning on Slots 3 and 15 for the DS3/EC1-48 card.
- The AISONLPBK parameter is only applicable to the ONS 15310-CL.
- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. Use the RTRV-XX command to retrieve current default values.

Category Ports

Security Provisioning

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>],[AISONLPBK=<AISONLPBK>],
[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="T3 PORT",
AISONLPBK=AIS_ON_LPBK_ALL,CMDMDE=CMDMDE:IS,AINS;
```

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<FMT>	Digital signal frame format. The unframed value of the framing format is only supported for the DS3E card. The parameter type is DS_LINE_TYPE, which is the 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. The parameter type is DS_LINE_CODE, which is the DS123 line code.
• B3ZS	Bipolar with three-zero substitution
<LBO>	Line build-out settings. LBO is an integer. The parameter type is E_LBO, which is the electrical signal line build-out.
• 0–225	Electrical signal line build-out range is 1–225.
• 226–450	Electrical signal line build-out range is 226–450.
<INHFELPBK>	(Optional) Far-end loopback inhibition attribute of the port. If it is Y, the automatic far-end loopbacks are inhibited. It is either on or off. The system default is N. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<TACC>	TAP number within a range of 0 to 999. Indicates whether the digroup being provisioned is to be used as a test access digroup. When TACC is 0 (zero), the TAP is deleted. Default is N. TACC is an integer.
<TAPTYPE>	TAP type. Defaults to DUAL. The parameter type is TAPTYPE, which is the test access point type.
• DUAL	Dual FAD
• SINGLE	Single FAD
<SOAK>	OOS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer.
<SFBER>	The port signal failure threshold. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	Port signal degrade threshold. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.

• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<NAME>	Name. NAME is a string.
<AISONLPBK>	The parameter type is AIS_ON_LPBK, which indicates whether. AIS is sent on a loopback. Defaults to AIS_ON_LPBK_ALL.
• AIS_ONLPBK_FACILITY	AIS is sent on facility loopbacks.
• AIS_ON_LPBK_ALL	AIS is sent on all loopbacks.
• AIS_ON_LPBK_OFF	AIS is not sent on loopbacks.
• AIS_ON_LPBK_TERMINAL	AIS is sent on terminal loopbacks.
<CMDMDE>	Command mode. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
PST	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
SST	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.45 ED-TRAPTABLE

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Trap Table (ED-TRAPTABLE) command edits a trap destination entry identified by a specific trap destination address.

Usage Guidelines None

Category System

Security Provisioning

Input Format ED-TRAPTABLE:[<TID>]:<AID>:<CTAG>:::COMMUNITY=<COMMUNITY>,[TRAPPORT=<TRAPPORT>],[TRAPVER=<TRAPVER>];

Input Example ED-TRAPTABLE::1.2.3.4:1:::COMMUNITY="PUBLIC",TRAPPORT=162,TRAPVER=SNMPV1;

Input Parameters

<AID>	Access identifier from the "25.16 IPADDR" section on page 25-36. IP address identifying the trap destination.
<COMMUNITY>	Community name associated to the trap destination. Maximum of 32 characters. COMMUNITY is a string.
<TRAPPORT>	User datagram protocol (UDP) port number associated with the trap destination. Default to 162. TRAPPORT is an integer.
<TRAPVER>	SNMP version number. Defaults to SNMPv1. The parameter type is SNMP_VERSION (SNMP version).
• SNMPV1	SNMP version 1 (default)
• SNMPV2	SNMP version 2

11.46 ED-TRC-OCH

(Cisco ONS 15454) The Edit Trace Optical Channel Facility (ED-TRC-OCH) command edits trace-related optical channel facilities. Refer to the *Cisco ONS SONET TL1 Reference Guide* for specific card provisioning rules.

Usage Guidelines None

Category DWDM

Security Provisioning

Input Format ED-TRC-OCH:[<TID>]:<SRC>:<CTAG>:::[EXPTRC=<EXPTRC>],[TRC=<TRC>],[TRCMODE=<TRCMODE>],[TRCLEVEL=<TRCLEVEL>],[TRCFORMAT=<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

<SRC>	Source access identifier from the "25.8 CHANNEL" section on page 25-18.
<EXPTRC>	Expected path trace content. Indicates the expected path trace message (J1) contents. EXPTRC is any 64-character ASCII string, including the terminating CR (carriage return) and LF (line feed). A null value is equivalent to ALL. EXPTRC is a string.
<TRC>	The path trace message to be transmitted. The trace byte continuously transmits a 64-byte, fixed-length, ASCII string, one byte at a time. A null value defaults to the NE transmitting 62 null characters (Hex 00) and CR and LF. A null value is equivalent to ALL.
<TRCMODE>	Trace mode. Defaults to the OFF mode. The parameter type is TRCMODE (trace mode).
• AUTO	Use the previously received path trace string as the expected string. Not applicable to MXP/TXP cards.
• AUTO-NO-AIS	Use the previously received path trace string as the expected string and do not turn on AIS and RDI if TIM-P is detected.
• MAN	Use the provisioned expected string as the expected string.
• MAN-NO-AIS	Use the provisioned expected string as the expected string and do not turn on AIS and RDI if TIM-P is detected.
• OFF	Turn off path trace capability. Nothing will be reported.
<TRCLEVEL>	The trace level to be managed. TRCLEVEL is a string.
<TRCFORMAT>	Trace message size. The parameter type is TRCFORMAT (trace format).
• 1-BYTE	1 byte trace message
• 16-BYTE	16 byte trace message
• 64-BYTE	64 byte trace message
• Y	Enable an attribute

11.47 ED-USER-SECU

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit User Security (ED-USER-SECU) command edits a user's privileges, password, or ID. Only a Superuser can perform this operation. Privilege levels are described in the ENT-USER-SECU command.

Usage Guidelines

- Passwords are masked for the following security commands: ACT-USER, ED-PID, ENT-USER-SECU, and ED-USER-SECU. Access to a TL1 session by any means will have the password masked. The CTC Request History and Message Log will also show the masked commands. When a password-masked command is reissued by double-clicking the command from CTC Request History, the password will still be masked in the CTC Request History and Message Log. The actual password that was previously issued will be sent to the NE. To use a former

command as a template only, single-click the command in CTC Request History. The command will be placed in the Command Request text box, where you can edit the appropriate fields prior to reissuing it.

- Although the CTC allows both a <UID> and a <PID> of up to 20 characters, the CTC-entered users (<UID>, <PID>) are not valid TL1 users. For example, if you issue an ACT-USER command using a CTC-entered <UID> that is greater than 10 characters long, TL1 will respond with DENY.
- For the ED-USER-SECU command:

  ED-USER-SECU:[TID]:<UID>:[CTAG]::[<NEWUID>],[<NEWPID>],,[<UAP>]:;

  - If the <NEWPID> is specified, the syntax is checked.
  - The syntax of <UID> is not checked.
  - Old users can change their password without changing their user ID, but the new password must meet the new requirements.
  - The <NEWPID> is required when changing the <UID>.
- In this release, when <NEWUID> is specified, <NEWPID> (and the <UAP>) become mandatory, but it is possible to change a <UID> without changing the password by providing the same password. You cannot keep your old password if the old password does not meet the new syntax requirements. For example:
  - <UID> = CISCO2345
    <PID>=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 ;
  - <NEWUID> = CISCO60
    <UID> = CISCO40 <PID>=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 */ ;
- The ED-USER-SECU command should be used to change the default password for the CISCO15 default Superuser.
- The ED-PID command cannot be used to change the empty password to a valid password.

Category Security

Security Superuser

Input Format ED-USER-SECU:[<TID>]:<UID>:<CTAG>::[<NEWUID>],[<NEWPID>],,[<UAP>][:];

Input Example ED-USER-SECU:PETALUMA:CISCO15:123::NEWUID,NEWPID,,MAINT;

Input Parameters

<UID>	User identifier. Minimum UID is 6 characters. Maximum UID is 10 characters. UID is a string.
<NEWUID>	User's new identifier. Minimum NEWUID is 6 characters. Maximum NEWUID is 10 characters. NEWUID is a string.
<NEWPID>	User's new password. Minimum NEWPID is 6 characters. Maximum NEWPID is 10 characters. NEWPID is a string.
<UAP>	User's access privilege. The parameter type is PRIVILEGE, which is the security level.
• MAINT	Maintenance security level. 60 minutes of idle time.
• PROV	Provisioning security level. 30 minutes of idle time.
• RTRV	Retrieve security level. Unlimited idle time.
• SUPER	Superuser security level. 15 minutes of idle time.

11.48 ED-VCG

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Edit Virtual Concatenated Group (ED-VCG) command edits the attributes of a VCG.

Usage Guidelines

None

Category

VCAT

Security

Provisioning

Input Format

ED-VCG:[<TID>]:<SRC>:<CTAG>:::[TXCOUNT=<TXCOUNT>],[NAME=<NAME>];

Input Example

ED-VCG:NODE1:FAC-1-1:1234:::TXCOUNT=7,NAME="VCG2";

Input Parameters

<SRC>	Source access identifier from the "25.15 FACILITY" section on page 25-33.
<TXCOUNT>	Number of members in the transmit (Tx) direction. For ML1000-2 and ML100T-12 cards, the only valid value is 2. For the FC_MR-4 card, the only valid value is 8. TXCOUNT is an integer.
<NAME>	Name of the VCAT group. Maximum length is 64 characters. NAME is a string.

11.49 ED-WDMANS

(Cisco ONS 15454) The Edit Wavelength Division Multiplexing Automatic Node Set Up (ED-WDMANS) command edits the optical node set-up application (AONS) attributes.

Usage Guidelines

None

Category

DWDM

Security

Maintenance

Input Format

ED-WDMANS:[<TID>]:<AID>:<CTAG>:::[POWER-IN=<POWERIN>],[POWER-OUT=<POWEROUT>],[POWER-EXP=<POWEREXP>],[NTWTYPE=<NTWTYPE>];

Input Example

ED-WDMANS:PENNGROVE:WDMANS-W:114:::POWERIN=10.0,POWEROUT=10.0,|POWEREXP=10.0,NTWTYPE=METRO-CORE;

Input Parameters

<AID>	Access identifier from the "25.32 WDMANS" section on page 25-50.
<POWERIN>	Input power for the OADM section or Mux/Demux for terminal nodes. POWERIN is a float.
<POWEROUT>	Output power for the OADM section or Mux/Demux for terminal nodes. POWEROUT is a float.
<POWEREXP>	Express power for the OADM section. POWEREXP is a float.
<NTWTYPE>	Network type where a DWDM node is installed. The parameter type is DWDM_RING_TYPE, which is the network type where the 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	The node does not have a standard DWDM configuration.

CHAPTER 12

ENT Commands

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 enter (ENT) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

12.1 ENT-<MOD1PAYLOAD>

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, EC1, ESCON, ETRCLO, GIGE, HDTV, ISC1, OC12, OC192, OC3, OC48, or T3 (ENT-<MOD1PAYLOAD> command creates a specified port.

Usage Guidelines

- When 1GFICON and 2GFICON payloads are provisioned, distance extension=B2B is the default and only valid setting. Setting distance extension (using the ED-nGFICON command) to any other setting will be denied with the error message "Provisioning Rules Failed."
- Support is limited to ports with pluggable port modules (PPMs).
- See Table 27-1 on page 27-1 for supported modifiers by platform.

Category Ports

Security Provisioning

Input Format ENT-<MOD1PAYLOAD>:[<TID>]:<AID>:<CTAG>[::::];

Input Example ENT-GIGE:TID:FAC-5-1:1;

Input Parameters		
	<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.

12.2 ENT-<MOD_RING>

(Cisco ONS 15454, ONS 15327, ONS 15600) The Enter Bidirectional Line Switched Ring (ENT-<MOD_RING>) command creates either a two-fiber or four-fiber BLSR.

Note The ONS 15327 and ONS 15600 do not support four-fiber bidirectional line switched rings (BLSRs).

Usage Guidelines

The command parameters that are used vary depending on whether a two-fiber or four-fiber BLSR is being created.

Here is an example of a command to create a 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;

Here is an example of a command to create a 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;

The following actions will produce error messages:

- If RINGID is different from the string presented in the AID format, an IIAC (RingId Does Not Match With AID) error message is returned.
- Sending this command to create a BLSR with an out-of-range node ID or ring ID will return an IIAC (Invalid NodeId) or (Invalid RingId) error message.
- Sending this command to create a four-fiber BLSR on OC12 cards, or a two-fiber BLSR on OC3 cards will return an IIAC (Input, Invalid Work/Prot Port) error message.
- Sending this command to create a BLSR on a network element (NE) that already has five BLSRs will return a SRQN (BLSR Creation Failed) error message because one NE is only allowed to have up to five BLSRs in this release.
- Sending this command to create a BLSR on a port with 1+1 protection will return a SRQN (BLSR Creation Failed) error message.
- If the system fails on getting IOR, an SROF (Get IOR Failed) error message is returned.
- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- If any facility requested in this command is in use, a SPLD (Facility is Busy) error message is returned.
- The SRQN (BLSR Creation Failed) error message is returned for an invalid creation query.
- Sending this command to provision the mode with an invalid BLSR mode will return an IIDT (Invalid BLSR Mode) error message.
- Sending this command to modify SRVRTV or SRVTM on the two-fiber BLSR will return an IDNV (Invalid Data for 2F-BLSR) error message.

- Sending this command to provision the node ID with invalid data will return an IIAC (Invalid NodeId) error message.
- Sending this command to provision the ring ID with invalid data will return an IIAC (Invalid RingId) error message.
- Sending this command with an invalid working AID will return an IIDT (Invalid BLSR Working Facility) error message.
- Sending this command with an invalid protection AID will return an IIDT (Invalid BLSR Protect Facility) error message.
- Changing the BLSR node ID with a duplicated ID will return a SROF (Cannot Set NodeId) error message.

Note <RINGID> defaults to the string of the AID format of BLSR-string.

Note Both <EASTPROT> and <WESTPROT> are optional, but required for 4-fiber BLSR creation.

Note The ALL AID is invalid for this command.

Category BLSR

Security Provisioning

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

<AID>	Access identifier from the "25.3 AidUnionId1" section on page 25-16. 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. RINGID is a string.
<NODEID>	The BLSR node ID of the NE. NODEID ranges from 0 to 31. NODEID is an integer.

<MODE>	Mode with which the command is to be implemented. Identifies the BLSR mode. The 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. The 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. The 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. The 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. The 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 "25.15 FACILITY" section on page 25-33.
<WESTWORK>	West working facility. AID from the "25.15 FACILITY" section on page 25-33.
<EASTPROT>	East protect facility. AID from the "25.15 FACILITY" section on page 25-33.
<WESTPROT>	West protect facility. AID from the "25.15 FACILITY" section on page 25-33.

12.3 ENT-BULKROLL-<OCN_TYPE>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter Bulk Roll for OC12, OC192, OC3, or OC48 (ENT-BULKROLL-<OCN_TYPE>) command enters information about rolling traffic from one end point to another without interrupting service. This command can be used for line level rolling and bulk rolling and cannot be used for single path level rolling.

Usage Guidelines None

Category Bridge and Roll

Security

Provisioning

Input Format

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

Input Example

ENT-BULKROLL-OC48:CISCO:FAC-5-1:123:::RTOSTART=STS-6-1-1,RFROMSTART=STS-5-1-1,RFROMEND=STS-5-1-4,RMODE=AUTO,CMDMDE=FRCD;

Input Parameters

<FROM>	One of the endpoints. Access identifier from the "25.15 FACILITY" section on page 25-33 for line level rolling and bulk rolling.
<RTOSTART>	The starting time slot in the destination roll port. Access identifier from the "25.15 FACILITY" section on page 25-33 (synchronous transport signal [STS] or Virtual Tributary [VT]). **Note** For bulk rolling only.
<RFROMSTART>	The starting time slot in the source roll port. Access identifier from the "25.15 FACILITY" section on page 25-33 (STS or VT). Defaults to STS-<FROMSLOT>-<FROMPORT>-1, where <FROMSLOT> and <FROMPORT> are the slot and port of the <FROM> AID. **Note** For bulk rolling only.
<RFROMEND>	The ending time slot in the source roll port. Access identifier from the "25.15 FACILITY" section on page 25-33 (STS and VT). Defaults to STS-<FROMSLOT>-<FROMPORT>-N, where <FROMSLOT> and <FROMPORT> are the slot and port of the <FROM> AID and N is the value of OCn (for example, with OC48, n=48). **Note** For bulk rolling only.
<RMODE>	Indicates the mode of the rolling operation. The parameter type is RMODE (roll mode).
• AUTO	Automatic. When a valid signal is available, the roll under AUTO mode will automatically delete the previous end-point.
• MAN	Manual. Enter the corresponding delete roll/bulkroll command to delete the previous end-point.

<CMDMDE>	Command execution mode. Defaults to NORM. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that could make the command fail.

12.4 ENT-CRS-<PATH>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter STS Cross-Connection for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VT1, or VT2 (ENT-CRS-<PATH>) command creates a synchronous transport signal (STS) cross-connection with a cross-connection type (CCT). Refer to the *Cisco ONS SONET TL1 Reference Guide* for specific ring provisioning procedures.

Usage Guidelines

See Table 27-1 on page 27-1 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.

The following guidelines also apply:

- The default cross-connection type is two-way.
- If a path is already in a connection, it cannot be in another connection even if the other connection is one-way and the new one will be one-way the other direction.
- This command does not support creating multiple STS cross-connections.
- The path protection cross STS connection can be created by using “&” in the AID fields of this command.
  - The following command is used to create a one-way selector or two-way selector and bridge with F1, F2 as from points and T1 as the to point:

    ENT-CRS-{STS_PATH}:[<TID>]:F1&F2,T1:<CTAG>::[<CCT>];
  - The following command is used to create a one-way bridge or two-way selector and bridge with F1 as the from point and T1, T2 as the to points:

    ENT-CRS-{STS_PATH}:[<TID>]:F1,T1&T2:<CTAG>::[<CCT>];
  - The following command is used to create a one-way subtending path protection connection or two-way subtending path protection connection with F1, F2 as the from points and T1, T2 as the to points:

    ENT-CRS-{STS_PATH}:[<TID>]:F1&F2,T1&T2:<CTAG>::[<CCT>];
  - The following command is used to create a two-way selector and bridge with F1,F2 (F1 is the working side, F2 is the protect side) as the from points and S1, S2 (S1 is the working side, S2 is the protect side) as the selector points:

ENT-CRS-{STS_PATH}:[<TID>]:F1&F2,S1&S2:<CTAG>::2WAY;

– The following command is used to create a path protection IDRI cross-connection:

ENT-CRS-{STS_PATH}:[<TID>]:A&B,C&D:<CTAG>::2WAYDC;

where:

A: Path on ring X to which traffic from ring Y is bridged

B: Path on ring X to which traffic from the same ring is bridged

C: Path on ring Y to which traffic from ring X is bridged

D: Path on ring Y to which traffic from the same ring is bridged

A, B, C, and D have a positional meaning. Connection type 2WAYDC is used for path protection IDRI cross-connections.

– The following command is used to create a path protection dual-ring interconnect (DRI) cross-connection:

ENT-CRS-{STS_PATH}:[<TID>]:A&B,C:<CTAG>::2WAYDC;

where:

A: Path on ring X to which traffic from ring Y is bridged

B: Path on ring X to which traffic from the same ring is bridged

C: Traffic to and from ring Y

A, B, C, and D have a positional meaning. Connection type 2WAYDC is used for path protection DRI cross-connections.

- All A&B AIDs in the TL1 cross-connection command are in the format of WorkingAID&ProtectAID.
- To establish a cross-connection on a two-fiber protection path or on a four-fiber protection channel, the protection channel access (PCA) connection type (1WAYPCA or 2WAYPCA) is required.
- If you send a PCA cross-connection type on the non-PCA AIDs, the IIAC error message is returned.
- If you send a non-PCA cross-connection type on the PCA AIDs, the IIAC error message is returned.
- The facility AID is only valid on slots holding a G1K-4 card.
- The virtual facility AID (VFAC) is only valid on slots holding an ML-Series card.
- Both DRITYPE and DRINODE optional fields support the BLSR-DRI feature. DRITYPE is applied only if the CCT is drop-and-continue (1WAYDC or 2WAYDC), and defaults to path protection for the DRI. DRINODE must be specified only if at least one end of the connection is on the BLSR, and defaults to NA.
- The DS3XM-12 card allows portless STS1/VT1.5 cross-connection provisioning on the DS3XM-12 PORTLESS ports (port number > = 12).
- CKTID is a string of ASCII characters. The maximum length of CKTID is 48. If the CKTID is EMPTY or NULL the field will not appear.
- STS18c and STS36c cross-connects are supported only on the FC_MR-4 card and optical cards.
- LO CCAT is not applicable for ML-100T-8 and CE-100T-8 cards.
- LO VCAT is not applicable for the ML-100T-8 card on the ONS 15310-CL.
- STS18C and STS36C cross-connects are not supported in the ONS 15310-MA

Category Cross Connections

Security Provisioning

Input Format ENT-CRS-<PATH>:[<TID>]:<SRC>,<DST>:<CTAG>::[<CCT>]:[DRITYPE=<DRITYPE>],[DRINODE=<DRINODE>],[CKTID=<CKTID>],[CMDMDE=<CMDMDE>]:[<PST>[,<SST>]];

Input Example ENT-CRS-STS3C:BODEGA:STS-5-1-1&STS-6-1-1,STS-12-1-1&STS-13-1-1:116::1WAYDC:DRITYPE=BLSR,DRINODE=PRI,CKTID=CKTID,CMDMDE=FRCD:IS,AINS;

Input Parameters

<SRC>	Source access identifier from the "25.1 ALL" section on page 25-1. Listable.
<DST>	Destination AID from the "25.1 ALL" section on page 25-1.
<CCT>	Type of connection. Used for specifying one or two-way connections. Default is 2-way. The parameter type is CCT, which is the type of cross-connect to be created.
• 1WAY	A unidirectional connection from a source tributary to a destination tributary.
• 1WAYDC	Path protection multicast drop with (1-way) continue.
• 1WAYEN	Path protection multicast end node (1-way continue).
• 1WAYMON	A bidirectional connection between the two tributaries. **Note** 1WAYMON is not supported with TL1. However, it is still supported from CTC. Using CTC, you can create 1WAYMON cross-connects that can be retrieved through TL1.
• 1WAYPCA	A unidirectional connection from a source tributary to a destination tributary on the protection path/fiber.
• 2WAY	A bidirectional connection between the two tributaries.
• 2WAYDC	A bidirectional drop and continue connection applicable only to path protection traditional and integrated dual ring interconnects.
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber.
• DIAG	Diagnostics cross-connect. Supports BERT (BLSR PCA diagnostics cross-connect).
<DRITYPE>	DRI connection type. Applied only if the CCT is a drop-and-continue connection type (1WAYDC or 2WAYDC). Defaults to path protection. The parameter type is DRITYPE (DRI type).
• BLSR	BLSR DRI type
• UPSR	Path protection DRI type
• UPSR-BLSR	Path protection-BLSR type

<DRINODE>	Dual ring interconnect node. The parameter type is DRINODE (DRI node).
• INT	Intermediate DRI node.
• NA	The node is not a DRI node.
• PRI	Primary DRI node.
• SEC	Secondary DRI node.
<CKTID>	Cross-connect ID. Defaults to blank or none. CKTID is a string.
<CMDMDE>	Command mode. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that could make the command fail.
<PST>	Primary state. Defaults to IS. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. Defaults to AINS. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

12.5 ENT-EQPT

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter Equipment (ENT-EQPT) command enters the card type and attributes for a given equipment slot in the network element (NE). It also automatically enters all facilities supported by the card, assigning default values to all facility and path attributes.

Usage Guidelines

The command supports optional parameters: RVTM (revertive time), RVRTV (revertive behavior), PROTID (unique protection ID), and PRTYPE (protection type) for configuring the card in an equipment protection group. PRTYPE can be 1:1 or 1:N. These parameters can only be entered for a working AID. The protect card must already be provisioned before creating the protection group.

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.

The protect AID should already be provisioned for either command because protection group parameters are not supported for the protect AID.

The ENT-EQPT command provisions 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.

The following is an example of provisioning a 1:1 protection group:

Step 1	ENT-EQPT::SLOT-1:12::DS3;	Provisions the protect card.
Step 2	ENT-EQPT::SLOT-2:12::DS3:PROTID=SLOT-1, RVRTV=Y,RVTM=8.0;	Provisions a card and adds it to the protection group.

The following is an example of provisioning a 1:N protection group:

Step 1	ENT-EQPT::SLOT-3:12::DS3N;	Provisions the protect card.
Step 2	ENT-EQPT::SLOT-1:12::DS3:PROTID=SLOT-3, RVTM=7.5,PRTYPE=1-N;	Provisions a card and adds it to protection group.

Note

- If you send this command to provision a DS3NE card on Slot 1, 2, 4, 5, 6, 12, 13, 14,1 6, or 17, the DS3E card type is presented.
- If you send this command to provision a DS3N card on Slot 1, 2, 4, 5, 6, 12, 13, 14,1 6, or 17, the DS3 card type is presented.
- If you send this command to provision a DS1N card on Slot 1, 2, 4, 5, 6, 12, 13, 14,1 6, or 17, the DS1 card type is presented.
- For the MRC-12 card, there are hardware limitations for which Small Form-Factor Pluggable (SFP) ports can be used.
- The OC192-XFP card must be installed in Slots 5 and 6 or 12 and 13 and requires an XC10G or XC-VXC-10G cross-connect card.

Error conditions for creating 1:1 or 1:N protection groups are:

- AID sent to a non-working slot; the working cards must be in even slots for 1:1 protection, and in the same bank and not in Slot 3 or Slot 15 for 1:N protection.
- An invalid AID was chosen for protection slot.
- The working AID is already in a protection group.
- The AID is a protect AID.
- The protect card has a circuit.
- The equipment type does not match the allowed AID.
- The slot is already provisioned.
- The protect slot is not provisioned.
- Multiple working AIDs were sent for 1:1 protection.
- The CARDMODE provisioning is allowed on the DS3XM-12 and ML-Series cards. Provisioning for the DS3XM-12 is based on the cross-connect type and DS3XM-12 location. The following error conditions apply:
  - The DS3XM-12 card in the lower speed input/output (I/O) slot with the XCVT/XC10G card only allows the DS3XM-12-STS12 CARDMODE. Other cases allow the CARDMODE to be DS3XM-12-STS48.
  - The NE defaults to the highest available backplane rate/mode for the DS3XM-12 card if you do not specify the CARDMODE in the ENT-EQPT command.

  - The ML100T-8 card will be provisioned to default type MAPPER mode.
- 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). The following error conditions apply:
  - For 1:N protection, the protect card must be allocated on either Slot 3 or Slot 15. For 1:1 protection, the protect card must be allocated on the odd slots.
  - The working DS3XM-12 cards on the opposite side of the shelf from the protection card (either Slot 3 or Slot 15) in a 1:N group can only have portless connections. The other working cards of the 1:N group on the same side of the shelf as the protection card do not have this limitation.

    For example, suppose that there is a DS3XM-12 card 1:N group on Slot 2, Slot 3, Slot 4, Slot 12, and Slot 16, where Slot 3 is the protect card. Slot 2, Slot 4, Slot 12, and Slot 16 are the working cards in the 1:N (1:5) protection group. According to the above limitation rule, the Slot 12 and Slot 16 cards have to have the portless provisioning only, while the Slot 2 and Slot 4 cards can be either portless or ported provisioning.
- 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 In Service (IS) state. If the cards are not physically plugged in, 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 IS state.
- RETIME provisioning is allowed only on the DS1/E1-56 card (ONS 15454).
- For the Cisco ONS 15310-MA, only 1:1 Protection groups are supported. The protection group is automatically created when both the working and protect cards are provisioned, therefore protection groups cannot be created using the ENT-EQPT or ED-EQPT commands on the Cisco ONS 15310-MA. A protection group can be deleted by deleting the protect card (DLT-EQPT). Trying to delete the working card will result in the Equipment In Use (SPLD) error.

Category

Equipment

Security

Provisioning

Input Format

ENT-EQPT:[<TID>]:<AID>:<CTAG>::[<EQPTTYPE>]:[PROTID=<PROTID>],
[PRTYPE=<PRTYPE>],[RVRTV=<RVRTV>],[RVTM=<RVTM>],
[CARDMODE=<CARDMODE>],[PEERID=<PEERID>],[REGENNAME=<REGENNAME>],
[CMDMDE=<CMDMDE>],[TRANSMODE=<TRANSMODE>],[RETIME=<RETIME>],
[SHELFROLE=<SHELFROLE>][:];

Input Example

ENT-EQPT:PETALUMA:SLOT-12:118::DS3XM-12:PROTID=SLOT-13,PRTYPE=1-1,RVRTV=Y,
RVTM=8.5,CARDMODE=DS3XM12-STS12,PEERID=SLOT-3,REGENNAME="REGEN GROUP",
CMDMDE=FRCD,TRANSMODE=FRCD,RETIME=Y,SHELFROLE=NC;

ENT-EQPT:PETALULMA:SHELF-1:116::SHELF:SHELFROLE=SC;

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31.
<EQPTTYPE>	The type of facility, link, or other addressable entity targeted by the message. The parameter type is EQUIPMENT_TYPE (equipment type).
• 10DME-C	10DME-C card
• 10DME-L	10DME-L card
• 32DMX	(ONS 15454) 32 channel demultiplexer
• 32DMX-L	(ONS 15454) 32 channel demultiplexer unit for L-band
• 32DMX-O	(ONS 15454) 32 channel unidirectional optical demultiplexer
• 32MUX-O	(ONS 15454) 32 channel unidirectional optical multiplexer
• 32WSS	(ONS 15454) 32 channel optical wavelength selective switch
• 32WSS-L	(ONS 15454) 32 channel wavelength switch selector unit for L-band
• 4MD-xx.x	(ONS 15454) Optical multiplexer/demultiplexer with 4 channels
• AD-1B-xx.x	(ONS 15454) Optical add/drop multiplexed (OADM) 1 band filter
• AD-1C-xx.x	(ONS 15454) Optical add/drop multiplexed (OADM) 1 channel filter
• AD-2C-xx.x	(ONS 15454) Optical add/drop multiplexed (OADM) 2 channel filter
• AD-4B-xx.x	(ONS 15454) Optical add/drop multiplexed (OADM) 4 band filter
• AD-4C-xx.x	(ONS 15454) Optical add/drop multiplexed (OADM) 4 channel filter
• AIC-I	(ONS 15454) AIC-I card
• ASAP-4	(ONS 15600) Any service any port carrier card with 4 PIM slots
• CE-1000-4	(ONS 15454) CE-1000-4 card
• CE-100T-8	(ONS 15454, ONS 15310-CL, ONS 15310-MA) Eight port 100T card
• CTX2500	(ONS 15310-MA) CTX2500 card
• DS1	(ONS 15454) DS1 card
• DS1-28-DS3-EC1-3	(ONS 15310-MA) DS1-28/DS3-EC1-3 card
• DS1-84-DS3-EC1-3	(ONS 15310-MA) DS1-84/DS3-3 card
• DS1-E1-56	(ONS 15454) DS1/E1-56 card
• DS1N	(ONS 15454) DS1N card
• DS3	(ONS 15454) DS3 card
• DS3-EC1-48	(ONS 15454) DS3/EC1-48 card
• DS3IN	(ONS 15454) DS3i-N-12 card
• DS3N	(ONS 15454) DS3N card
• DS3NE	(ONS 15454) DS3NE card

• DS3XM-6	(ONS 15454) DS3XM-6 card
• DS3XM-12	(ONS 15454) DS3XM-12 card
• E1000-2	(ONS 15454) E1000-2 card
• E1000-2-G	(ONS 15454) E1000-2-G card
• E100T	(ONS 15454) E100T card
• EC1	(ONS 15454) EC1 card
• FC-MR-4	(ONS 15454) FC_MR-4 card
• FILLER-CARD	Blank Filler card
• G1000-2	(ONS 15327) Two port G1000 card
• G1000-4	(ONS 15454) Four port G1000 card
• MIC	(ONS 15327) MIC A card
• MIC	(ONS 15327) MIC B card
• ML100T-8	(ONS 15310-CL, ONS 15310-MA) Mapper card
• ML1000-2	(ONS 15454) ML-Series two port gigabit Ethernet card
• ML100T-12	(ONS 15454) ML-Series 12 port FSTE card
• ML100X-8	(ONS 15454) Eight port 100T card with optical interface
• MMU	(ONS 15454) Multiring/mesh upgrade unit
• MRC-12	(ONS 15454) 12 port multirate optical card
• MS-ISC-100T	(ONS 15454) Multishelf Internal Switch Card
• MXP-2.5G-10E	(ONS 15454) 2.5-Gbps-10-Gbps Muxponder-100 GHz-Tunable xx.xx-xx.xx card
• MXP-2.5G-10E-L	(ONS 15454) 2.5-Gbps-10-Gbps Muxponder-100 GHz-Tunable xx.xx-xx.xx card for L-band
• MXP-2.5G-10E-C	(ONS 15454) 2.5-Gbps-10-Gbps Muxponder-100 GHz-Tunable xx.xx-xx.xx card for C-band
• MXP-2.5G-10G	(ONS 15454) 2.5-Gbps-10-Gbps muxponder-100 GHz-tunable xx.xx-xx.xx card
• MXP-MR-2.5G	(ONS 15454) 2.5-Gbps multirate muxponder-100 GHz-tunable 15xx.xx-15yy.yy card
• MXPP-2.5G-10G	(ONS 15454) 2.5-Gbps-10-Gbps muxponder-protected-100 GHz-tunable xx.xx-xx.xx card
• MXPP-MR-2.5G	(ONS 15454) 2.5-Gbps multirate muxponder-protected-100 GHz-tunable 15xx.xx-15yy.yy card
• OC3	(ONS 15454, ONS 15327) OC-3 card
• OC3-8	(ONS 15454) Eight port OC-3 card
• OC12	(ONS 15454, ONS 15327) OC-12 card
• OC12-4	(ONS 15454) Four port OC-12 card
• OC48	(ONS 15454, ONS 15327, ONS 15600) OC-48 card
• OC48-16	(ONS 15454) 16 port OC-48 card
• OC192	(ONS 15454, ONS 15600) OC-192 card
• OC192-4	(ONS 15454) Four port OC-192 card
• OC192-XFP	(ONS 15454) One port OC-192 XFP
• OPT-AMP-L	(ONS 15454) Optical preamplifier unit for L-Band

• OPT-BST	(ONS 15454) Optical booster amplifier
• OPT-BST-L	(ONS 15454) Optical booster unit for L-Band
• OPT-PRE	(ONS 15454) Optical preamplifier
• OSC-CSM	(ONS 15454) Optical service channel (OSC) with combiner/separator Module (SCM)
• OSCM	(ONS 15454) Optical service channel module
• PIM-1	(ONS 15600) One port pluggable interface module
• PIM-4	(ONS 15600) Four port pluggable interface module
• PPM-1	(ONS 15454, ONS 15600, ONS 15310-CL, ONS 15310-MA) Pluggable port module with one SFP port
• SHELF	Shelf entity
• SSXC	(ONS 15600) Cross-connect card
• TCC	(ONS 15454) TCC card
• TXP-MR-10E	(ONS 15454) 10-Gbps multirate transponder-100-GHz-tunable xx.xx-xx.xx card
• TXP-MR-10E-C	(ONS 15454) 10-Gbps multirate transponder-100-GHz-tunable xx.xx-xx.xx card for C-band
• TXP-MR-10E-L	(ONS 15454) 10-Gbps multirate transponder-100-GHz-tunable xx.xx-xx.xx card for L-band
• TXP-MR-10G	(ONS 15454) 10-Gbps multirate transponder-100-GHz-tunable xx.xx-xx.xx card
• TXP-MR-2.5G	(ONS 15454) 2.5-Gbps multirate transponder-100-GHz-tunable xx.xx-xx.xx card
• TXPP-MR-2.5G	(ONS 15454) 2.5-Gbps multirate transponder-protected-100-GHz-tunable xx.xx-xx.xx card
• UNKNOWN	Unknown equipment type
• UNPROVISIONED	Unprovisioned type
• XC10G	(ONS 15454) XC10G card
• XCVT	(ONS 15454) XCVT card
• XC-VXC-10G	(ONS 15454) XC-VXC-10G card
• XTC	(ONS 15327) XTC card
<PROTID>	Protecting card slot identifier of the protection group from the "25.22 PRSLOT" section on page 25-40. **Note** Not applicable to TXP_MR_10G and MXP_2.5G_10G cards.
<PRTYPE>	Protection group type. **Note** Not applicable to TXP_MR_10G and MXP_2.5G_10G cards The parameter type is PROTECTION_GROUP (protection group type).
• 1-1	1 for 1 protection
• 1-N	1 for 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 The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<RVTM>	Revertive time. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<CARDMODE>	Card mode. **Note** The card will reboot after the mode changes, so the mode change request will not go through unless all the ports on the card are in OOS mode. TL1 will not set a default CARD_MODE value at the management interface level if no PWL value is given. The parameter type is CARDMODE (card mode). Card mode is applicable to cards that have multiple capabilities, for example, the ML-Series card can operate in two distinct modes: Linear Mapper Mode and L2/L3 Mode.
• AMPL-BST	The optical amplifier is working as an optical booster
• AMPL-PRE	The optical amplifier is working as an optical pre-amplifier
• DS3XM12-STS12	The DS3XM-12 card in the STS12 backplane rate mode
• DS3XM12-STS48	The DS3XM-12 card in the STS48 backplane 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 field-programmable gate array (FPGA) using generic framing procedure (GFP) framing type
• ML-HDLC	ML-Series card in DOS FPGA using high-level data link control (HDLC) framing type
• MXPMR10DME-4GFC	4 Gbps Fibre Channel/FICON mode for the Cisco ONS 15454 10DME-C/10DME-L card supported on ports one and five

• MXPMR10DME-4GFC-FCGEISC	4 Gbps Fibre Channel/FICON supported on port one and Fibre Channel, GIGE and ISC modes for the Cisco ONS 15454 10DME-C/10DME-L card supported on ports five to eight
• MXPMR10DME-FCGEISC	Fibre Channel, GIGE and ISC modes for the Cisco ONS 15454 10DME-C/10DME-L card supported on all eight ports
• MXPMR10DME-FCGEISC-4GFC	Fibre Channel, GIGE and ISC modes for the Cisco ONS 15454 10DME-C/10DME-L card supported on ports one to four and 4 Gbps Fibre Channel/FICON supported on port five
• MXPMR25G-ESCON	ESCON mode for the Cisco ONS 15454 MXP_2.5G_10G card
• MXPMR25G-FCGE	Fibre channel or GIGE mode for the MXP_2.5G_10G card
• MXPMR25G-MIXED	Mixed Fibre Channel, GIGE and ESCON modes for the Cisco ONS 15454 MXP_2.5G_10G card
<PEERID>	The regeneration peer slot from the "25.14 EQPT" section on page 25-31.
<REGENNAME>	Name of a regeneration group. REGENNAME is a string.
<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. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that could make the command fail.
<TRANSMODE>	The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that could make the command fail.

<RETIME>	Indicates if retiming is needed. Applicable only to the DS1/E1-56 card (ONS 15454). The parameter type is YES_NO, which indicates whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes
<SHELFROLE>	The role of the shelf in the context of the node. When it is omitted it defaults to SC. The parameter is SHELF_ROLE.
• NC	The shelf behaves as a node controller.
• SC	The shelf behaves as a shelf controller.

12.6 ENT-FFP-<MOD2DWDMPAYLOAD>

(Cisco ONS 15454) The Enter Facility Protection Group for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, HDTV, ISC1, ISC3, or PASSTHRU (ENT-FFP-<MOD2DWDMPAYLOAD>) command creates Y-cable protection on client facilities. Refer to the *Cisco ONS SONET TL1 Reference Guide* for specific card provisioning rules

Usage Guidelines

None

Category

DWDM

Security

Provisioning

Input Format

ENT-FFP-<MOD2DWDMPAYLOAD>:[<TID>]:<SRC>,
<DST>:<CTAG>:::[PROTTYPE=<PROTTYPE>],[PROTID=<PROTID>],[RVRTV=<RVRTV>],
[RVTM=<RVTM>],[PSDIRN=<PSDIRN>][:];

Input Example

ENT-FFP-HDTV:CISCO:FAC-1-1-1,FAC-2-1-1:100:::PROTTYPE=Y-CABLE,
PROTID=DC-METRO-1,RVRTV=Y,RVTM=1.0,PSDIRN=BI;

Input Parameters

<SRC>	Source access identifier from the "25.15 FACILITY" section on page 25-33.
<DST>	Destination access identifier from the "25.15 FACILITY" section on page 25-33.
<PROTTYPE>	The type of facility protection. The parameter type is PROTTYPE (protection type for dense wavelength division multiplexing [DWDM] client facilities).

• Y-CABLE	Y-cable protection for the client ports on TXP_MR_10G, MXP_2.5G_10G, and TXP_MR_2.5G/TXPP_MR_2.5G cards.
<PROTID>	Protection group identifier. Defaults to the protect 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. The 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. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	Protection switch operation. Identifies the switching mode. Defaults to UNI. **Note** TXP_MR_10G and MXP_2.5G_10G cards do not support bidirectional switching. Parameter type is UNI_BI (unidirectional and bidirectional switch operations).
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching

12.7 ENT-FFP-<OCN_TYPE>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter Facility Protection Group for OC3, OC12, OC48, or OC192 (ENT-FFP-<OCN_TYPE>) command creates an optical 1+1 protection.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Note

- The protect AID must not be provisioned with traffic.
- The working AID can be provisioned with traffic.
- PROTID is a string and can have a maximum length of 32 characters.
- Optimized 1+1 protection and related attributes are only applicable to the ONS 15454.
- The following parameters are supported in Software Release 6.0 and later: OPOTYPE, VRGRDTM, DTGRDTM, and RCGRDTM.
- The following 1+1 protection group rules apply to the MRC-12 card:
  - A 1+1 protection group can only be created between MRC-12 cards. You cannot create a 1+1 protection group between an MRC-12 card and an OC-48 card, for example.

  - A 1+1 protection group can be created only using the same port number. For example, a protection group cannot be created between Port 1 of Slot 5 and Port 4 of Slot 12 (assuming that Slot 5 and Slot 12 both contain MRC-12 cards).
  - A 1+1 protection group cannot be created between ports on the same card. Protection groups cannot be created between Port 1 of Slot 5 and Port 4 of Slot 5 (assuming that Slot 5 contains a MRC-12 card).
  - Both the cards in the protection group must be placed in the same type of slot. Both MRC-12 cards must be in drop slots (Slots 1 to 4, 14 to 17) or both in trunk slots (Slots 5 to 6, 12 to 13). You cannot create a protection group between an MRC-12 card in a drop slot and another MRC-12 card in a trunk slot.
- The following 1+1 protection group rules apply to the OC192-XFP cards:
  - A 1+1 protection group can be created between two OC192-XFP cards in trunk slots (Slots 5 to 6, 12 to 13).
  - A 1+1 protection group can be created between a OC192-XFP card and an OC192LR/STM64LH card in trunk slots (Slots 5 to 6, 12 to 13).
- The PROTTYPE parameter is only applicable to optical DWDM cards.

Category

Protection

Security

Provisioning

Input Format

ENT-FFP-<OCN_TYPE>:[<TID>]:<WORK>,
<PROTECT>:<CTAG>:::[PROTTYPE=<PROTTYPE>],[PROTID=<PROTID>],
[RVRTV=<RVRTV>],[RVTM=<RVTM>],[PSDIRN=<PSDIRN>],[OPOTYPE=<OPOTYPE>],
[VRGRDTM=<VRGRDTM>],[DTGRDTM=<DTGRDTM>],[RCGRDTM=<RCGRDTM>][:];

Input Example

For ONS 15310-MA:

ENT-FFP-OC3:PETALUMA:OC3-3-1-1,OC3-3-2-1:1:::PROTTYPE=Y-CABLE,
PROTID=PROT_NAME,RVRTV=Y,RVTM=1.0,PSDIRN=BI,OPOTYPE=STANDARD,
VRGRDTM=0.5,DTGRDTM=1.0,RCGRDTM=1.0;

For ONS 15310-CL

ENT-FFP-OC3:PETALUMA:OC3-2-1-1,OC3-2-2-1:1:::PROTTYPE=Y-CABLE,
PROTID=PROT_NAME,RVRTV=Y,RVTM=1.0,PSDIRN=BI,OPOTYPE=STANDARD,
VRGRDTM=0.5,DTGRDTM=1.0,RCGRDTM=1.0;

Input Parameters

<WORK>	Working port from the "25.15 FACILITY" section on page 25-33.
<PROTECT>	Protection port from the "25.15 FACILITY" section on page 25-33.
<PROTTYPE>	Protection group type. Y-CABLE is the only applicable value (for optical DWDM cards only).

<PROTID>	Protection group identifier. Defaults to the protect port AID of the protection group. If the name has an embedded double quote character, that double quote character has to be escaped with a backslash \". The double quotes are special characters that delimit the protection group name and they must be balanced (paired). PROTID is a string that has a maximum length of 32 characters.
<RVRTV>	Revertive mode. The value Y indicates that 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. The 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. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	Protection switch operation. Identifies the switch mode. The parameter type is UNI_BI (unidirectional and bidirectional switch operations)
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching
<OPOTYPE>	One plus one protection type. Can be either standard or optimized 1+1 protection. The parameter type is ONE_PLUS_ONE (1+1 protection type).
• Optimized	Optimized 1+1. **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. The parameter type is VERIFICATION_GUARD_TIMER (optimized 1+1 verification guard timer).
• 0.5	500 ms
• 1.0	1 second
<DTGRDTM>	Detection guard timer. Only applicable to optimized 1+1. The parameter type is DETECTION_GUARD_TIMER (optimized 1+1 detection guard timer).
• 0.0	0 seconds
• 0.05	50 ms
• 0.1	100 ms
• 0.5	500 ms
• 1.0	1 second
• 2.0	2 second
• 3.0	3 seconds
• 4.0	4 seconds
• 5.0	5 seconds

<RCGRDTM>	Recovery guard timer. Only applicable to optimized 1+1. The parameter type is RECOVERY_GUARD_TIMER (optimized 1+1 detection guard timer).
• 0.0	0 seconds
• 0.05	50 ms
• 0.1	100 ms
• 0.5	500 ms
• 1.0	1 second
• 2.0	2 second
• 3.0	3 seconds
• 4.0	4 seconds
• 5.0	5 seconds
• 6.0	6 seconds
• 7.0	7 seconds
• 8.0	8 seconds
• 9.0	9 seconds
• 10.0	10 seconds

12.8 ENT-LNK

(ONS 15454) Enter Optical Link (ENT-LNK) 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.

Usage Guidelines

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. When this command is used to create an optical link between two optical channel ports, where the first port belongs to an OCH filter and the second port is an OCH trunk, the second port can be tuned to the same wavelength of the OCH filter if it has not been set yet.

Category

DWDM

Security

Provisioning

Input Format

ENT-LNK:[<TID>]:<FROM>,<TO>:<CTAG>::::[<PST>[,<SST>]];

Input Example

ENT-LNK:PENNGROVE:BAND-6-1-TX,BAND-13-1-RX:114::::LOCKED, AUTOMATICINSERVICE;

Input Parameters

<FROM>	Identifier at one end of the optical link from the "25.8 CHANNEL" section on page 25-18.
<TO>	Identifier at the other end of the optical link from the "25.8 CHANNEL" section on page 25-18.
<PST>	Primary state of the entity. The parameter type is PST (primary state). Indicates the current overall service condition of an entity.
• IS	In Service
• OOS	Out of Service
<SST>	Secondary state of the entity. The parameter type is SST (secondary state). Provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

12.9 ENT-LNKTERM

(Cisco ONS 15454, ONS 15327, ONS 15310-CL) The ENT-LNKTERM command creates a provisionable patchcord (PP) termination (virtual link) on a physical interface. A user-provisioned link is needed when the data communications channel/generic communications channel (DCC/GCC) is transparently carried over several physical links, and the physical link cannot be automatically discovered by Open Shortest Path First (OSPF) due to lack of control channel termination or when the link does not support SONET/SDH.

Usage Guidelines

The error message "Provisioning Rules Failed" is returned if the provisioning rules are not satisfied. The following rules must be satisfied while creating a provisionable patchcord termination on a physical interface:

- For a SONET port:
  - A Section DCC (SDCC) termination must be provisioned. If it is the protect facility in a 1+1 protection group, the corresponding working facility must have an SDCC termination provisioned.
  - If it is part of a BLSR, the SDCC must be provisioned on all of the working ports of the BLSR.
- For a TXP/MXP trunk port, either ITU-T G.709 must be enabled or the payload type must be non-SONET/SDH.
- For a TXP/MXP client port, a card must be operating in the transparent termination mode.
- Multi-Service Transport Platform (MSTP) OCH port

Note

- If the OC-N interface is a part of a 1+1 protection group, a separate PP termination can be provisioned on the other (working/protect) interface also.
- If the client interface is a part of a Y-cable protection group, a separate PP termination can be provisioned on the other (working/protect) interface also.
- If the MXP/TXP trunk interface is a part of a splitter protection group, a separate PP termination can be provisioned on the other (working/protect) interface also.
- If REMOTENODE is specified as an IP address (or a node name that can be resolved by the gateway network element [GNE]) that is different from the local node's IP address/name, this termination is intended to be a part of an internode provisionable patchcord.
- All endpoints of the provisionable patchcord need to be provisioned correctly (on the local and/or remote node) for it to show as UP in OSPF.
- Misconfigured or partially configured provisionable patchcords will not cause alarms or events to be generated at either end of the link.
- No two provisionable patchcord terminations on a node can be configured to have the same remote node PP termination information (for example, the combination of values for REMOTENODE and REMOTELNKTERMAID attributes for a PP termination must be unique on a single node).
- All provisionable patchcord terminations on one physical interface must have their remote terminations on a single remote node.
- The command does not accept multiple and ALL style AIDs.

Category

Provisionable Patchcords

Security

Provisioning

Input Format

ENT-LNKTERM:[<TID>]:<AID>:<CTAG>:::PORT=<PORT>,
[REMOTENODE=<REMOTENODE>],REMOTELNKTERMID=<REMOTELNKTERMID>;

Input Example

ENT-LNKTERM::LNKTERM-1:CTAG:::PORT=FAC-5-1,REMOTENODE=172.20.208.225,
REMOTELNKTERMID=20;

Input Parameters

<AID>	Access identifier from the "25.19 LNKTERM" section on page 25-39. Indicates a link (provisionable patchcord) termination on the local node.
<PORT>	The local port corresponding to this provisionable patchcord termination from the "25.8 CHANNEL" section on page 25-18.

<REMOTENODE>	The node where the other end of the provisionable patchcord resides. This can be an IP address or a valid TID. Defaults to the IP address of the local node/existing value. REMOTENODE is a string.
<REMOTELNKTERMID>	The corresponding provisionable patchcord termination on the remote node (as specified by the REMOTENODE parameter). Integer value within the range of 1 to 65535. Defaults to existing value.

12.10 ENT-OCHCC

(Cisco ONS 15454) The Enter Optical Channel Client Connection (ENT-OCHCC) command allocates an OCH client connection. This is the portion of the circuit that connects the end client ports using trail ports to an OCH network connection circuit. This allocates the portion of circuit between the OCH filter port to the TXP/MXP or ITU-T client port.

Usage Guidelines

- The client port FAC AID must be specified in order to allocate a client channel inside the node.
- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. In order to obtain the current value, issue the RTRV-XX command.

Category

DWDM

Security

Provisioning

Input Format

ENT-OCHCC:[<TID>]:<AID>:<CTAG>[:::CKTID=<CKTID>],
[CMDMDE=<CMDMDE>]:[<PST>][,<SST>];

Input Example

ENT-OCHCC:VA454-22:FAC-2-1-1:116:::CKTID=\"OCHCC-1\",CMDMDE=FRCD:OOS,DSBLD;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null the CKTID field will not be displayed.
<CMDMDE>	The parameter type is command mode, which forces the system to execute a given command regardless of any standing conditions. NORM mode is the default behavior for all commands but you can specify FRCD to force the system to override a state in which the command would normally be denied.

• FRCD	Force the system to override a state in which the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that may make the command fail.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity. The default is IS.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ. The default is AINS.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

12.11 ENT-OCHNC

(Cisco ONS 15454) The Enter Optical Channel Network Connection (ENT-OCHNC) command allocates an OCH network connection.

Usage Guidelines

- Two CHANWL end points must be specified in order to allocate a wavelength channel inside the node. According to the CHANWL specified, the channel allocated can be a passthrough
- The default values for all optional parameters are NE default values. These values might not be the current value for a parameter. In order to obtain the current value, issue the RTRV-XX command.

Category

DWDM

Security

Provisioning

Input Format

ENT-OCHNC:[<TID>]:<SRC>,<DST>:<CTAG>::[<WCT>]:[CKTID=<CKTID>], [CMDMDE=<CMDMDE>]:[<PST>[,<SST>]];

Input Example

ENT-OCHNC:VA454-22:LINEWL-1-3-TX-1530.33,
CHANWL-4-1-RX-1530.33:116::1WAY:CKTID=CIRCUIT,CMDMDE=FRCD:OOS,DSBLD;

Input Parameters

<SRC>	Source access identifier from the "25.8 CHANNEL" section on page 25-18. In 2-way wavelength connection sources both directions need to be indicated.
<DST>	Destination access identifier from the "25.18 LINEWL" section on page 25-38. In 2-way wavelength connection sources both directions need to be indicated.
<WCT>	Wavelength connection type. The parameter type is WCT. The default is 1WAY.
• 1WAY	A unidirectional wavelength connection for one specified ring direction.
• 2WAY	A bidirectional wavelength connection for both the ring directions.
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null the CKTID field will not be displayed.
<CMDMDE>	The parameter type is command mode, which forces the system to execute a given command regardless of any standing conditions. NORM mode is the default behavior for all commands but you can specify FRCD to force the system to override a state in which the command would normally be denied.
• FRCD	Force the system to override a state in which the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that may make the command fail.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity. The default is IS.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ. The default is AINS.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

12.12 ENT-OSC

(ONS 15454) The Enter Optical Service Channel (ENT-OSC) command creates the optical service channel (OSC) group of the NE.

Note RINGID defaults to the AID number.

Usage Guidelines None

Category DWDM

Security Provisioning

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

<AID>	Access identifier from the "25.21 OSC" section on page 25-40. 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-#". RINGID is an integer.
<NODEID>	OSC node ID of the NE. It ranges from 0 to 31. NODEID is an integer.
<EAST>	The east OC3 facility from the "25.15 FACILITY" section on page 25-33. EAST_OC3 is the AID facility. Only one OC3 for the east direction is supported in this release. This parameter can be omitted.
<WEST>	The west OC3 facility from the "25.15 FACILITY" section on page 25-33. EAST_OC3 is the AID facility. Only one OC3 for the west direction is supported in this release. This parameter can be omitted.

12.13 ENT-RMONTH-<MOD2_RMON>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA) The Enter Remote Monitoring Threshold for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, FSTE, G1000, GFPOS, GIGE, OCH, or POS (ENT-RMONTH-<MOD2_RMON>) command creates an entry in the remote monitoring (RMON) alarm table for the threshold of data statistics (for example, GIGE or FC) managed by the

RMON engine. After creating the RMON threshold (RMONTH) a threshold crossing alert (TCA) event will be generated and reported to the TL1 session when the threshold is crossed. More than one threshold can be created with different parameters for each data statistic type.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Category

Performance

Security

Provisioning

Input Format

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

Input Example

ENT-RMONTH-GIGE:CISCO:FAC-2-1:1234::ETHERSTATSOCTETS,,,,100:RISE=1000,FALL=100,SAMPLE=DELTA,STARTUP=RISING;

Input Parameters

<SRC>	Source access identifier from the "25.15 FACILITY" section on page 25-33. AID for the facility that manages the data statistics.
<MONTYPE>	Monitored type. Type of RMON monitored data statistics. The parameter type is ALL_MONTYPE (monitoring type list).
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• BBE-PM	OTN—Background Block Errors—Path Monitor Point
• BBE-SM	OTN—Background Block Errors—Section Monitor Point
• BBER-PM	OTN—Background Block Error Ratio—Path Monitor Point expressed as one tenth of a percentage
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)

• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including frame check sequence [FCS] octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds - A
• HP-ESB	High-Order Path Errored Seconds - B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High Order Path Negative Pointer Justification Count
• HP-NPJC-PGEN	High Order Path, Negative Pointer Justification Count

• HP-OI	Outage Intensity
• HP-PJCDIFF	High Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High Order Path Pointer Justification Count
• HP-PJCS-PGEN	High Order Path Pointer Justification Count Seconds
• HP-PPJC-PDET	High Order Path Positive Pointer Justification Count
• HP-PPJC-PGEN	High Order Path, Positive Pointer Justification Count
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload cyclic redundancy check (CRC) errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in microA
• LBCL-MAX	Maximum Laser Bias current in microA
• LBCL-MIN	Minimum Laser Bias current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B

• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order Positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OPR-AVG	Average Receive Power in tenths of a microW
• OPR-MAX	Maximum Receive Power in tenths of a microW
• OPR-MIN	Minimum Receive Power in tenths of a microW
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in tenths of a microW
• OPT-MAX	Maximum Transmit Power in tenths of a microW
• OPT-MIN	Minimum Transmit Power in tenths of a microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in tenths of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in tenths of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in tenths of a dBm
• PPJC-PDET	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 Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<INTVL>	The interval in seconds over which the data is sampled and compared with the rising and falling threshold. A valid value is any integer larger than or equal to 10 (seconds).
<RISE>	The rising threshold for the sampled statistic. A valid value is any integer.
<FALL>	The falling threshold. A valid value is any integer smaller than the rising threshold.
<SAMPLE>	The method of calculating the value to be compared to the thresholds. The parameter type is SAMPLE_TYPE, which describes how the data will be calculated during the sampling period.
• ABSOLUTE	Comparing directly
• DELTA	Comparing with the current value of the selected variable subtracted by the last sample
<STARTUP>	Dictates whether an event will generate if the first valid sample is greater than or equal to the rising threshold, less than or equal to the falling threshold, or both. The parameter type is STARTUP_TYPE, which indicates whether an event will be generated when the first valid sample is crossing the rising or falling threshold.

• FALLING	Generates the event when the sample is smaller than or equal to the falling threshold.
• RISING	Generates the event when the sample is greater than or equal to the rising threshold.
• RISING-OR-FALLING	Generates the event when the sample is crossing the rising threshold or the falling threshold.

12.14 ENT-ROLL-<MOD_PATH>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter Roll for STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, VC12, VC3, VT1, or VT2 (ENT-ROLL-<MOD_PATH>) command enters information about rolling of traffic from one end point to another without interrupting service. This command can be used to roll single paths (STS or VT).

Note STS18C and STS36C are not supported in this release.

Usage Guidelines None

Category Bridge and Roll

Security Provisioning

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

Input Example ENT-ROLL-STS1:CISCO:STS-1-1-1,STS-2-1-1:1:::RFROM=STS-2-1-1,RTO=STS-3-1-1, RMODE=MAN,FORCE=Y;

Input Parameters

<FROM>	Source access identifier from the "25.25 STS" section on page 25-41. It is one of the termination points (legs) of the existing cross-connection. If the existing cross-connection is one-way, then this termination point (leg) should be the FROM-AID termination point. Otherwise, FROM is not significant. FROM and TO should be entered as they are entered in the ENT-CRS command. You can issue the RTRV-CRS command, and use the response for FROM and TO parameters.
<TO>	Destination AID from the "25.25 STS" section on page 25-41. It is one of the termination points (legs) of the existing cross-connection. If the existing cross-connection is one-way, then this termination point (leg) should be the TO-AID termination point. Otherwise, the TO is not significant. FROM and TO should be entered as they are entered in the ENT-CRS command. You can issue the RTRV-CRS command, and use the response for FROM and TO parameters.
<RFROM>	The termination point of the existing cross-connect that is to be rolled. AID from the "25.25 STS" section on page 25-41.
<RTO>	The termination point that will become a leg of the new cross-connection. AID from the "25.25 STS" section on page 25-41.
<RMODE>	Indicates the mode of rolling operation. The parameter type is RMODE (roll mode)
• AUTO	Automatic. When a valid signal is available, the roll under AUTO mode will automatically delete the previous end-point.
• MAN	Manual. Enter the corresponding delete roll/bulkroll command to delete the previous end-point.
<FORCE>	Forces a valid signal on the path. FORCE can only go from Y to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.

12.15 ENT-ROUTE

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter Route (ENT-ROUTE) command creates static routes.

Usage Guidelines

There is no Domain Name Server (DNS) service available on the node. Only numeric IP addresses will be accepted.

Category

System

Security

Provisioning

Input Format ENT-ROUTE:[<TID>]::<CTAG>::<DESTIP>,<IPMASK>,<NXTHOP>,<COST>;

Input Example ENT-ROUTE:CISCO::123::10.64.72.57,255.255.255.0,10.64.10.12,200;

Input Parameters

<DESTIP>	Destination tip. DESTIP is a string.
<IPMASK>	IP mask. IPMASK is a string.
<NXTHOP>	Next hop. NXTHOP is a string.
<COST>	Unsigned integer. Valid range is from 1 to 32,797.

12.16 ENT-ROUTE-GRE

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter Route Generic Routing Encapsulation (ENT-ROUTE-GRE) command creates a GRE tunnel. This can be used to transport IP over Open Systems Interconnect (OSI) or OSI over IP.

Usage Guidelines None

Category System

Security Provisioning

Input Format ENT-ROUTE-GRE:[<TID>]::<CTAG>:::IPADDR=<IPADDR>,IPMASK=<IPMASK>, NSAP=<NSAP>,[COST=<COST>];

Input Example ENT-ROUTE-GRE:CISCO::123:::IPADDR=10.64.72.57,IPMASK=255.255.255.0, NSAP=39840F80FFFFFF0000DDDDAA000010CFB4910200,COST=110;

Input Parameters

<IPADDR>	IP address of the tunnel endpoint. IPADDR is a string.
<IPMASK>	Subnet mask for the tunnel endpoint. IPMASK is a string.
<NSAP>	Network service access point (NSAP) address for the tunnel endpoint. NSAP is a string.
<COST>	Routing cost associated with the tunnel. COST is an integer.

12.17 ENT-TADRMAP

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter Target Identifier Address Mapping (ENT-TADRMAP) command instructs a gateway NE to create an entry in the TADRMAP table which maps the target identifiers (TIDs) of the subtending NEs to their addresses. The operating systems (OSs) will address the subtending NEs using the TID in TL1 messages and a gateway NE will address these NEs by mapping the TID to an IP address or NSAP. The TADRMAP table, which resides in the gateway NE, correlates a TID and an address. The command requires that at least one IPADDR or NSAP be specified. The PORT and ENCODING parameters are only used with IP address mappings.

Usage Guidelines None

Category System

Security Provisioning

Input Format ENT-TADRMAP:[<TID>]::<CTAG>:::[TIDNAME=<TIDNAME>],[IPADDR=<IPADDR>],[PORT=<PORT>],[ENCODING=<ENCODING>],[NSAP=<NSAP>];

Input Example ENT-TADRMAP:TID::CTAG:::TIDNAME=ENENODENAME,IPADDR=192.168.100.52,PORT=3082,ENCODING=LV,NSAP=39840F80FFFFFF0000DDDDAA01001800;

Input Parameters

<TIDNAME>	TID of the new TID/address mapping. TIDNAME is a string.
<IPADDR>	(Optional) IP address. IPADDR is a string. **Note** If the NSAP parameter is not used, the IPADDR parameter is required.
<PORT>	Port for the TID/IP address mapping. Defaults to 3082. PORT is an integer.
<ENCODING>	TL1 encoding for the TID/IP address mapping. Defaults to LV. The parameter type is ENCODING (encoding).
• LV	Length encoding.
• RAW-CISCO	Cannot be specified. Used only for display with backward compatible Optical Networking System (ONS) NEs.
• RAW-STD	Noninteractive encoding.
<NSAP>	(Optional) NSAP address. NSAP is a string. **Note** If the IPADDR parameter is not used, the NSAP parameter is required.

12.18 ENT-TRAPTABLE

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter Trap Table (ENT-TRAPTABLE) command provisions a Simple Network Management Protocol (SNMP) trap destination and its associated community, User Datagram Protocol (UDP) port, and SNMP version. The maximum number of trap entries allowed is ten.

Usage Guidelines None

Category System

Security Provisioning

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

<AID>	IP address identifying the trap destination. Only a numeric IP address is allowed. Access identifier from the "25.16 IPADDR" section on page 25-36.
<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. TRAPPORT is an integer.
<TRAPVER>	SNMP version number. Defaults to SNMPv1. The parameter type is SNMP_VERSION (SNMP Version).
• SNMPV1	(Default) SNMP Version 1
• SNMPV2	SNMP Version 2

12.19 ENT-TUNNEL-FIREWALL

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter Tunnel Firewall (ENT-TUNNEL-FIREWALL) command creates a firewall tunnel.

Usage Guidelines None

Category System

Security Provisioning

Input Format ENT-TUNNEL-FIREWALL:[<TID>]::<CTAG>:::[SRCADDR=<SRCADDR>], [SRCMASK=<SRCMASK>],[DESTADDR=<DESTADDR>],[DESTMASK=<DESTMASK>];

Input Example ENT-TUNNEL-FIREWALL:TID::CTAG:::SRCADDR=192.168.100.52, SRCMASK=255.255.255.0,DESTADDR=192.168.101.14,DESTMASK=255.255.255.0;

Input Parameters

<SRCADDR>	Source IP address. SRCADDR is a string.
<SRCMASK>	Source mask. SRCMASK is a string.
<DESTADDR>	Destination IP address. DESTADDR is a string.
<DESTMASK>	Destination mask. DESTMASK is a string.

12.20 ENT-TUNNEL-PROXY

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter Tunnel Proxy (ENT-TUNNEL-PROXY) command creates a proxy tunnel.

Usage Guidelines None

Category System

Security Provisioning

Input Format ENT-TUNNEL-PROXY:[<TID>]::<CTAG>:::[SRCADDR=<SRCADDR>], [SRCMASK=<SRCMASK>],[DESTADDR=<DESTADDR>],[DESTMASK=<DESTMASK>];

Input Example ENT-TUNNEL-PROXY:TID::CTAG:::SRCADDR=192.168.100.52,SRCMASK=255.255.255.0, DESTADDR=192.168.101.14,DESTMASK=255.255.255.0;

Input Parameters

<SRCADDR>	Source IP address. SRCADDR is a string.
<SRCMASK>	Source mask. SRCMASK is a string.

<DESTADDR>	Destination IP address. DESTADDR is a string.
<DESTMASK>	Destination mask. DESTMASK is a string.

12.21 ENT-USER-SECU

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter User Security (ENT-USER-SECU) 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 a Retrieve user is unlimited.
2. Maintenance [MAINT]: Users with this security level can retrieve information from the node and perform limited maintenance operations such as card resets, Manual/Force/Lockout on cross-connects or in protection groups, and BLSR maintenance. The default idle time for a Maintenance user is 60 minutes.
3. Provisioning [PROV]: Users with this security level can perform all maintenance actions, and all provisioning actions except those restricted to Superusers. The default idle time for a Provisioning user is 30 minutes.
4. Superuser [SUPER]: Users with this security level can perform all provisioning user actions, plus creating and deleting user security profiles, setting basic system parameters such as time, date, node name, and IP address, and doing database backup and restoration. The default idle time for a Superuser is 15 minutes.

Usage Guidelines

- Passwords are masked for the following security commands: ACT-USER, ED-PID, ENT-USER-SECU, and ED-USER-SECU. Access to a TL1 session by any means will have the password masked. The Cisco Transport Controller (CTC) Request History and Message Log will also show the masked commands. When a password-masked command is reissued by double-clicking the command from CTC Request History, the password will still be masked in the CTC Request History and Message Log. The actual password that was previously issued will be sent to the NE. To use a former command as a template only, single-click the command in CTC Request History. The command will be placed in the Command Request text box, where you can edit the appropriate fields prior to reissuing it.
- The UID can be any combination of up to 10 alphanumeric characters.
- The PID is a string of up to 10 characters where at least 2 characters are nonalphabetic with at least one special character (+, %, or #).
- Although the CTC allows both a UID and a PID of up to 20 characters, the CTC-entered users (UID and PID) might not be valid TL1 users. For example, if you issue an ACT-USER command using a CTC-entered UID that is greater than 10 characters long, TL1 will respond with DENY (Can't Login) error message.
- The TL1 password security is enforced as follows:
  - The password (PID) cannot be the same as or contain the user ID (UID). For example, if the userid is CISCO25 the password cannot be CISCO25#.
  - The PID must have one nonalphabetic and one special (+, %, or #) character.
  - There is no PID toggling; for example, if the current password is CISCO25#, the new password cannot be CISCO25#.

Category Security

Security Superuser

Input Format ENT-USER-SECU:[<TID>]:<UID>:<CTAG>::<PID>,,<UAP>[:];

Input Example ENT-USER-SECU:PETALUMA:CISCO15:123::PSWD11#,,MAINT;

Input Parameters

<UID>	User identifier. The minimum UID size is 6 and the maximum size 10. UID is a string.
<PID>	User's password or private identifier. PID is a string.
<UAP>	User's access privilege. The parameter type is PRIVILEGE (security level).
• MAINT	Maintenance security level
• PROV	Provision security level
• RTRV	Retrieve security level
• SUPER	Superuser security level

12.22 ENT-VCG

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Enter Virtual Concatenated Group (ENT-VCG) command creates a VCG object. VCGs on ML-Series cards support two members. Supported subrates are STS1, STS3C, and STS12C. ML-Series VCG also supports SW-LCAS or NONE. VCG on the FC_MR-4 card supports eight members and the supported subrate is limited to STS3C. The FC_MR-4 card VCG has no LCAS support (NONE). VCG on the ML-100T-8 card supports up to three members at a subrate of STS1 and 64 members at a subrate of VT1.

On the ONS 15310-CL and ONS 15310-MA, the CE-100T-8 card supports a maximum of STS6 bandwidth; for example, two VCATs with three STS1 members or six VCATs with one STS1 member.

Usage Guidelines None

Category VCAT

Security Provisioning

Input Format ENT-VCG:[<TID>]:<SRC>:<CTAG>:::TYPE=<TYPE>,TXCOUNT=<TXCOUNT>,[CCT=<CCT>],[LCAS=<LCAS>],[BUFFERS=<BUFFERS>],[NAME=<NAME>];

Input Example

ENT-VCG:NODE1:FAC-1-1:1234:::TYPE=STS3C,TXCOUNT=8,CCT=2WAY,LCAS=LCAS, BUFFERS=DEFAULT,NAME="VCG1";

Input Parameters

<SRC>	Source access identifier from the "25.15 FACILITY" section on page 25-33. ML1000-2 and ML100T-12 cards use the VFAC AID. The FC_MR-4 card uses the FAC AID.
<TYPE>	The type of entity or member cross-connect being provisioned. Null indicates not applicable. TYPE can be a Common Language Equipment Identification (CLEI) code or another value. ML1000-2 and ML100T-12 cards support STS1, STS3c, and STS12c. The FC_MR-4 card supports STS3c only. The parameter type is MOD_PATH (STS/VT path modifier).
• STS1	STS1 path
• STS12C	STS12C path
• STS18C	STS18C path
• STS192	STS192C path
• STS24C	STS24C path
• STS36C	STS36C path
• STS3C	STS3C path
• STS48C	STS48C path
• STS6C	STS6C path
• STS9C	STS9C path
• VT1	VT1 path
• VT2	VT2 path
<TXCOUNT>	Number of members in the transmit (Tx) direction. For ML1000-2 and ML100T-12 cards, the only valid value is 2. For the FC_MR-4 card the only valid value is 8. TXCOUNT is an integer.
<CCT>	Type of connection; one-way or two-way. Cross-connect type for the VCG member cross-connects. Must be the same for all the member cross-connects of a VCG. The parameter type is CCT, which is the type of cross-connect to be created.
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	Path protection multicast drop with (1-way) continue
• 1WAYEN	Path protection multicast end node (1-way continue)
• 1WAYMON	A bidirectional connection between the two tributaries **Note** 1WAYMON is not supported with TL1. However, it is still supported from CTC. Using CTC, you can create 1WAYMON cross-connects that can be retrieved through TL1.
• 1WAYPCA	A unidirectional connection from a source tributary to a destination tributary on the protection path/fiber
• 2WAY	A bidirectional connection between the two tributaries
• 2WAYDC	A bidirectional drop-and-continue connection applicable only to traditional path protection configurations and integrated DRIs

• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber
• DIAG	Diagnostics cross-connect. Supports BERT (BLSR PCA diagnostics cross-connect).
<LCAS>	Link capacity adjustment scheme. **Note** If SW-LCAS is selected, then the far-end VCG must also be configured as SW-LCAS. The parameter type is LCAS, which is the link capacity adjustment scheme mode for the VCG created.
• LCAS	LCAS is enabled.
• NONE	No LCAS.
• SW-LCAS	Supports the temporary removal of a VCG member during member failure. Only supported by the ML1000-2 and ML100T-12 cards.
<BUFFERS>	Buffer type. The default value is DEFAULT. The FC_MR-4 and CE1000 cards support DEFAULT and EXPANDED buffers. Other data cards support DEFAULT buffers only. The parameter type is BUFFER_TYPE, which is the buffer type used in the VCAT circuit.
• DEFAULT	Default buffer value
• EXPANDED	Expanded buffer value
<NAME>	Name of the VCAT group. Defaults to null. Maximum length is 32 characters. NAME is a string.

CHAPTER 13

EX Commands

This chapter provides exercise (EX) commands for the Cisco ONS 15454, ONS 15327, and ONS 15600.

13.1 EX-SW-<OCN_BLSR>

(Cisco ONS 15454, ONS 15327, ONS 15600) The Exercise Protection Switch for OC12, OC48, or OC192 (EX-SW-<OCN_BLSR>) 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 success or failure of the exercise switching will be indicated by an automatic alarm.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

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, and 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)

Note

- If you send the EX-SW-<OCN_BLSR> command to both the east and the west sides/spans of a two-fiber or four-fiber ring within a short time period (less than 30 to 45 seconds) the system will only execute one (WEST) side EXER-RING query, and preempt the other (EAST) side query. There will be no event messages reported for the preempted side, and it will be in APS-CLEAR switching state.Examples of this are:
  - A single command with both side/span AIDs (in the list AID format) of the same two-fiber or four-fiber ring
  - Separate queries (through TL1 or Cisco Transport Controller [CTC], or TL1 and CTC) on both sides/spans of the same two-fiber or four-fiber ring
- DIRN is an optional parameter. A NULL value of this parameter defaults to BTH for a two-fiber or four-fiber BLSR protection group. DIRN follows these rules:
  - TRMT will always fail for any kind of protection group.

- 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 bidirectional line switched ring (BLSR) protection groups.

Category

BLSR

Security

Maintenance

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

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. Identifies the facility in the NE to which the switch request is directed.
<SWITCHTYPE>	Switch type. Must not be null. The parameter type is SWITCH_TYPE, which is the BLSR switch type. MANWKSWBK, MANWKSWPR, FRCDWKSWBK, FRCDWKSWPR, LOCKOUTOFPR, and LOCKOUTOFWK are retrieve-only values for RTRV-PROTNSW-OCn commands. They are not applicable for the OPR-PROTNSW-OCn commands. RING and SPAN are the only allowed values for BLSR protection.
• FRCDWKSWBK	Working unit is forced to switch back to working
• FRCDWKSWPR	Working unit is forced to switch to the protection unit
• LOCKOUTOFPR	Lock out of protection
• LOCKOUTOFWK	Lock out 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. The parameter type is DIRECTION (transmit and receive direction)
• BTH	Both transmit and receive directions
• RCV	Receive direction only
• TRMT	Transmit direction only

CHAPTER 14

INH Commands

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 inhibit (INH) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

14.1 INH-CONSOLE-PORT

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Inhibit Console Port (INH-CONSOLE-PORT) command is used to turn off the console port for the ML-Series cards.

Usage Guidelines None

Category Security

Security Superuser

Input Format INH-CONSOLE-PORT:[<TID>]:<AID>:<CTAG>;

Input Example INH-CONSOLE-PORT:CISCONODE:SLOT-2:123;

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31.

14.2 INH-MSG-ALL

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Inhibit Message All (INH-MSG-ALL) 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.

Usage Guidelines If this command is used twice in the same session, the SAIN (Already Inhibited) error message is reported.

Category System

Security Retrieve

Input Format INH-MSG-ALL:[<TID>]:[<AID>]:<CTAG>[::,,];

Input Example INH-MSG-ALL:PETALUMA:ALL:550;

Input Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1.

14.3 INH-MSG-DBCHG

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Inhibit Database Change Message (INH-MSG-DGCHG) command disables REPT DBCHG autonomous message.

Usage Guidelines None

Category Log

Security Retrieve

Input Format INH-MSG-DBCHG:[<TID>]::<CTAG>[::,,];

Input Example INH-MSG-DBCHG:CISCO::123;

Input Parameters None

14.4 INH-MSG-SECU

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Inhibit Message Security (INH-MSG-SECU) command inhibits the REPT EVT SECU and REPT ALM SECU autonomous messages.

Usage Guidelines None

Category Security

Security Superuser

Input Format INH-MSG-SECU:[<TID>]::<CTAG>[::,,];

Input Example INH-MSG-SECU:PETALUMA::123;

Input Parameters None

14.5 INH-PMREPT-ALL

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Inhibit Performance Report All (INH-PMREPT-ALL) command inhibits all scheduled performance monitoring (PM) reporting. Inhibiting 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.

Usage Guidelines None

Category Performance

Security Retrieve

Input Format INH-PMREPT-ALL:[<TID>]::<CTAG>;

Input Example INH-PMREPT-ALL:NE-NAME::123;

Input Parameters None

14.6 INH-SWDX-EQPT

(Cisco ONS 15454) The Inhibit Switch Duplex Equipment (INH-SWDX-EQPT) 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. Instead, use the ALW-SWTOPROTN, ALW-SWTOWKG, INH-SWTOPROTN, and INH-SWTOWKG commands.

Usage Guidelines

- This command applies to XCVT, XC10G, XC-VXC-10G equipment units only in this release.
- When sending this command to a TCC2/TCC2P card, an error message will occur because the network element (NE) treats the TCC2/TCC2P as a nonrevertive protection group without user control.

Category Equipment

Security Maintenance

Input Format INH-SWDX-EQPT:[<TID>]:<AID>:<CTAG>[::];

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

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31. XCVT/XC10G equipment AID (Slot 8 or Slot 10).

14.7 INH-SWTOPROTN-EQPT

(Cisco ONS 15454, ONS 15310-MA) The Inhibit Switch to Protection Equipment (INH-SWTOPROTN-EQPT) command inhibits automatic or manual switching of an equipment unit to protection. Use the ALW-SWTOPROTN-EQPT command to release the inhibit.

Usage Guidelines

INH-SWTOPROTN-EQPT is used for electrical cards that could participate in an electrical protection group (for example, 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.

The following actions will produce errors:

- This command only supports the BTH value of the DIRN parameter. A command with any other value is considered an incorrect use of the command and will return an IDNV (Input, Data Not Valid) error message.
- This command is not used for the common control (TCC2/TCC2P or XCVT/XC10G) cards. A command on a common control card will return an IIAC (Input, Invalid Access Identifier) error message. For common control card switching, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
- This command is not used for SONET (OC-N) cards. A command on a SONET card will return an IIAC (Input, Invalid Access Identifier) error message. For SONET card switching, use the OPR-PROTNSW and RLS-PROTNSW commands.
- Using this command on a card that is not in a protection group will return the SNVS (Status, Not in Valid State) error message.
- Using this command on a card that is already in the inhibit state will return the SAIN (Status, Already Inhibited) error message.
- 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 will return the SPLD (Status, Protection unit Locked) error message.
- 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 will return the SWLD (Status, Working unit Locked) error message.
- Sending the inhibit switch to protection command to an active protect card when the peer working card is failed or missing will return the SWFA (Status, Working unit Failed) error message.
- As long as none of the previous error conditions apply, sending this command to missing cards is allowed and will not generate any error response.

Category

Equipment

Security Maintenance

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

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

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31. 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. The parameter type is DIRECTION (transmit and receive directions).
• BTH	Both transmit and receive directions

14.8 INH-SWTOWKG-EQPT

(Cisco ONS 15454, ONS 15310-MA) The Inhibit Switch to Working Equipment (INH-SWTOWKG-EQPT) 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.

Usage Guidelines

INH-SWTOWKG-EQPT is used for electrical cards that could participate in an electrical protection group (for example, 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 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 the error conditions that follow). 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.

The following actions will return error messages:

- The command only supports the BTH value of the DIRN parameter. A command with any other value is considered an incorrect use of the command and will return An IDNV (Input, Data Not Valid) error message.

- This command is not used for the common control (TCC2/TCC2P or XCVT/XC10G) cards. A command on a common control card will return an IIAC (Input, Invalid Access Identifier) error message. For common control card switching, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
- This command is not used for SONET (OC-N) cards. A command on a SONET card will return an IIAC (Input, Invalid Access Identifier) error message. For SONET card switching, use the OPR-PROTNSW and RLS-PROTNSW commands.
- Using this command on a card that is not in a protection group will return the SNVS (Status, Not in Valid State) error message.
- Using this command on a card that is already in the inhibit state will return the SAIN (Status, Already Inhibited) error message.
- Sending this command to a working card when the protect card in the same protection group has already raised the condition of INHSWPR will return the SPLD (Status, Protection unit Locked) error message.
- 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 will return the SWLD (Status, Working unit Locked) error message.
- Sending the INH-SWTOWKG command to an active working card when the protect card has failed or is missing will return the SPFA (Status, Protection unit Failed) error message.
- Sending the INH-SWTOWKG command to an active working card when the protect card is already carrying traffic (this only occurs in a 1:N protection group with N greater than one) will return the SPAC (Status, Protection unit Active) error message.
- As long as none of the previous error conditions apply, sending this command to missing cards is allowed and will not generate any error response.

Category Equipment

Security Maintenance

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

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

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31. 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. The parameter type is DIRECTION (transmit and receive directions).
• BTH	Both transmit and receive directions

14.9 INH-USER-SECU

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Inhibit User Security (INH-USER-SECU) command disables (without deleting) a user account, so the user is denied access to the NE. The user is disabled until reenabled by the ALW-USER-SECU command.

Usage Guidelines

- This command does not forcibly log a user off. If the user is logged in, changes do not apply until after the user has logged off.
- The user is disabled until enabled using the corresponding ALW command.

Category

Security

Security

Superuser

Input Format

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

Input Example

INH-USER-SECU:PETALUMA::123::CISCO100;

Input Parameters

<UID>	User identifier. UID is a string.

CHAPTER 15

INIT Commands

This chapter provides initialize (INIT) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

15.1 INIT-REG-<MOD2>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) Initialize Register for 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, or VT2 (INIT-REG-<MOD2>) command initializes the performance monitoring (PM) registers.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Note

- The time period is always the current time period, and the previous time period counts are not cleared; therefore, neither MONDAT nor MONTM are supported in this command.
- Unless otherwise stated, DS1 cards are the only cards that support the RCV and TRMT directions.
- INIT-REG-<MOD2> can also be used to initialize the remote monitoring (RMON)-managed raw data.

Category

Performance

Security

Provisioning

Input Format

INIT-REG-<MOD2>:[<TID>]:<AID>:<CTAG>::<MONTYPE>,,[<LOCN>],[<DIRN>],[<TMPER>][,,];

Input Examples

INIT-REG-OC3:CISCO:FAC-1-1:1234::CVL,,NEND,BTH,15-MIN;

Input Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1. All of the STS, VT1, Facility, and DS1 AIDs are supported.
<MONTYPE>	Monitored type. The parameter type is ALL_MONTYPE (monitoring type list).
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• BBE-PM	OTN—Background Block Errors—Path Monitor Point
• BBE-SM	OTN—Background Block Errors—Section Monitor Point
• BBER-PM	OTN—Background Block Error Ratio—Path Monitor Point expressed as one tenth of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions

• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High Order Path Negative Pointer Justification Count
• HP-NPJC-PGEN	High Order Path, Negative Pointer Justification Count
• HP-OI	Outage Intensity
• HP-PJCDIFF	High Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High Order Path Pointer Justification Count
• HP-PJCS-PGEN	High Order Path Pointer Justification Count Seconds
• HP-PPJC-PDET	High Order Path Positive Pointer Justification Count
• HP-PPJC-PGEN	High Order Path, Positive Pointer Justification Count
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error

• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload cyclic redundancy check (CRC) errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in microA
• LBCL-MAX	Maximum Laser Bias current in microA
• LBCL-MIN	Minimum Laser Bias current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds—A
• LP-ESB	Low-Order Path Errored Seconds—B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order Positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OPR-AVG	Average Receive Power in tenths of a microW

• OPR-MAX	Maximum Receive Power in tenths of a microW
• OPR-MIN	Minimum Receive Power in tenths of a microW
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in tenths of a microW
• OPT-MAX	Maximum Transmit Power in tenths of a microW
• OPT-MIN	Minimum Transmit Power in tenths of a microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in tenths of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in tenths of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in tenths of a dBm
• PPJC-PDET	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/Alarm Indication Signal (AIS) Seconds—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point

• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<LOCN>	Location associated with a particular command in reference to the entity identified by the AID. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility
• NEND	Action occurs on the near end of the facility
<DIRN>	Direction relative to the entity identified by the AID. Defaults to ALL, which means that the command initializes all of the registers irrespective of the PM direction. The parameter type is DIRECTION (transmit and receive directions).
• 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. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24-hours. For SONET PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.

15.2 INIT-SYS

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Initialize System (INIT-SYS) command initializes the specified card and its associated subsystems.

Note In Cisco ONS 15600, the SLOT-ALL AID is allowed only for soft reset but not for hard reset.

Usage Guidelines

- The SLOT-ALL AID and the list AID are not allowed in this command.
- Only one level of reset is supported in this command for the ONS 15454.
- It is important that the standby TCC2/TCC2P should be up and running fully standby for a period of time before this command is sent on the active TCC2/TCC2P. During this time, the system is vulnerable to traffic outages caused by timing disruptions or other causes.
- The ONS 15310-CL supports the RESET parameters for the 15310-CL-CTX, CE-100T-8, and ML-100T-8 cards only.
- The ONS 15600 does not support soft resets on pluggable IO modules (PIMs).
- If a card is hard reset, it has to be in one of the following states: OOS-MA, MT; OOS-MA, DSBLD; OOS-AUMA, MT; OOS-AUMA, DSBLD.

Category

System

Security

Maintenance

Input Format

INIT-SYS:[<TID>]:<AID>:<CTAG>::<PH>[,<CMDMDE=CMDMDE>];

Input Examples

INIT-SYS:HOTWATER:SLOT-8:201::1,CMDMDE=FRCD;

Input Parameters

Parameter	Description	Cisco ONS 15454	Cisco ONS 15600	Cisco ONS 15310 MA
<AID>	Access identifier from the "25.14 EQPT" section on page 25-31.	Y	Y	Y
<PH>	The phase. 1=soft reset; 2=hard reset. PH is an integer. PH is a required parameter for the ONS 15600, ONS 15310-CL, and ONS 15310-MA. PH is supported on only the CE-100T-8 card on the ONS 15454.	Y	Y	Y

Parameter	Description	Cisco ONS 15454	Cisco ONS 15600	Cisco ONS 15310 MA
<CMDMDE>	(Optional) Command mode. Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in Unlocked-Enabled or Locked-Disabled, AutomaticInService service states. CMDMDE parameter is not supported on ONS 15310-CL.	N	Y	Y
• FRCD	Force the system to override a state in which the command would normally be denied.	Y	Y	Y
• NORM	Execute the command normally. Do not override any conditions that could make the command fail.	Y	Y	Y

CHAPTER 16

OPR Commands

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 operate (OPR) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

16.1 OPR-ACO-ALL

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Operate Alarm Cutoff All (OPR-ACO-ALL) command cuts off the office audible alarm indication without changing the local alarm indications.

Usage Guidelines

This command does not have any effect on future alarms at the network element (NE); it directs the NE to provide conditioning only on those alarms that are currently active.

The ACO retires the Central Office (CO) alarm audible indicators without clearing the indicators that show that the trouble still exists. There is no need for a RLS-ACO command.

Category

Environment

Security

Maintenance

Input Format

OPR-ACO-ALL:[<TID>]:[<AID>]:<CTAG>;

Input Example

OPR-ACO-ALL:CISCO:SHELF-2:123;

OPR-ACO-ALL:CISCO::123;

Input Parameters		
	<AID>	The node or shelf access identifier from the "25.24 SHELF" section on page 25-41. If omitted it addresses the node or first shelf of the node.

16.2 OPR-ALS

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Operate Automatic Laser Shutoff (OPR-ALS) 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.

Usage Guidelines None

Category Ports

Security Maintenance

Input Format OPR-ALS:[<TID>]:<AID>:<CTAG>[::::];

Input Example OPR-ALS:CISCO:FAC-1-1:100;

Input Parameters		
	<AID>	Access identifier from the "25.2 AidUnionId" section on page 25-11.

16.3 OPR-APC

(Cisco ONS 15454) The Operate Amplification Power Control (OPR-APC) command permits the APC application inside the NE to force regulation of the optical power to the entire dense wavelength division multiplexing (DWDM) ring.

Usage Guidelines None

Category DWDM

Security Maintenance

Input Format OPR-APC:[<TID>]::<CTAG>[::::];

Input Example OPR-APC:VA454-22::116;

Input Parameters None

16.4 OPR-EXT-CONT

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Operate External Control (OPR-EXT-CONT) command operates an external control and closes the external control contact. The control can be operated momentarily or continuously.

Usage Guidelines

- The duration has two values in this release:
  - MNTRY: Momentary duration
  - CONTS: Continuous duration
- In an automatic state, the contact could be opened or closed depending on the provisioned trigger.
- RLS-EXT-CONT changes the state to automatic. Therefore, issuing an OPR-EXT-CONT command when the control is manually open and then issuing a RLS-EXT-CONT will not revert the state back to Manual Open.
- A NULL value for the duration parameter defaults to MNTRY in this release.
- RLS-EXT-CONT is not allowed during the MNTRY duration. It is allowed for the CONTS duration. The length of the MNTRY duration is 2 seconds on the Cisco ONS 15454.
- RLS-EXT-CONT cannot change the state to automatic if the existing state is Manual Open.

Caution Do not turn on external controls that activate a potential danger, such as sprinklers or other controls connected to possibly hazardous systems or equipment.

Category Environment

Security Maintenance

Input Format OPR-EXT-CONT:[<TID>]:<AID>:<CTAG>::[<CONTTYPE>],[<DURATION>];

Input Example OPR-EXT-CONT:CISCO:ENV-OUT-2:123::AIRCOND,CONTS;

Input Parameters

<AID>	Access identifier from the "25.13 ENV" section on page 25-30. Must not be null.
<CONTTYPE>	Environmental control type. A null value is equivalent to ALL. The parameter type is CONTTYPE (the environmental control types).
• AIRCOND	Air conditioning
• AUDIBLE	Audible (ONS 15310-MA only)
• ENGINE	Engine
• FAN	Fan
• GEN	Generator
• HEAT	Heat
• LIGHT	Light
• MISC	Miscellaneous
• SPKLR	Sprinkler
<DURATION>	Duration. A null value is equivalent to ALL. The parameter type is Duration.
• CONTS	Continuous duration

16.5 OPR-LASER-OTS

(Cisco ONS 15454) The Operate Laser Optical Transport Section (OPR-LASER-OTS) command instructs a laser to switch on.

Usage Guidelines

None

Category

DWDM

Security

Maintenance

Input Format

OPR-LASER-OTS:[<TID>]:<AID>:<CTAG>;

Input Example

OPR-LASER-OTS::LINE-5-2-TX:3;

Input Parameters

<AID>	Access identifier of an optical facility supporting laser from the "25.17 LINE" section on page 25-37

16.6 OPR-LNK

(Cisco ONS 15454) The Operate Link (OPR-LNK) command operates the optical link (OLNK) application inside the NE to calculate all the automatic optical links between endpoints that can be univocally identified by the NE.

Usage Guidelines None

Category DWDM

Security Maintenance

Input Format OPR-LNK:[<TID>]::<CTAG>;

Input Example OPR-LNK:PENNGROVE::114;

Input Parameters None

16.7 OPR-LPBK-<MOD2>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Operate Loopback for 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, or VT2 (OPR-LPBK-MMOD2>) command operates a signal loopback on a traffic or a cross-connect card.

Usage Guidelines See Table 27-1 on page 27-1 for supported modifiers by platform.

The optional LPBKTYPE parameter defaults to FACILITY in this command if it is given to a port entity. It defaults to CRS if given to a synchronous transport signal (STS) entity.

Note

- The value CRS for the LPBKTYPE parameter is applicable only for the STS modifier. The FACILITY and TERMINAL values are applicable to the ports.
- The TERMINAL loopback type is not supported for the DS1 line of a DS3XM card.
- Loopbacks are only allowed to be set up if the port/interface/STS_PATH is in the OOS-MT or OOS-AINS state.
- Cross-connect loopbacks cannot be applied to the destination end of any 1WAY cross-connect.

- A cross-connect loopback can be applied only on one STS path of a cross-connect.
- FEAC loopbacks can be applied by using the LINE value for the 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.
- 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 the far-end loopback is applied.
- 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.
- A lockout of the protection command is required before putting the span of either a two-fiber or four-fiber bidirectional line switched ring (BLSR) line in loopback.
  - A span lockout of one side (for example, the east side) of the two-fiber BLSR is required before operating a facility (or terminal) line loopback on the same side (that is, the east side) of the ring.
  - A span lockout of one protection side (for example, the East Protection side) of the four-fiber BLSR is required before operating a facility (or terminal) line loopback on the same side working line (that is, the East Working side) of the ring.
- FEAC loopbacks on the DS1 interface of a DS3XM card can be applied only if a Virtual Tributary (VT) connection has been created on it. An attempt to operate or release FEAC loopbacks in the absence of a VT connection will lead to an error message response.
- The FEAC line is supported only with the FEND value of the LOCN parameter on DS1, T3 of the DS3XM-12 card.
- Only the following MOD2 fields are supported in this release: DS1 EC1, G1000, FSTE, OC12, OC192, OC3, OC48, OCH, T1, T3, STS1, STS12C, STS192C, STS24C, STS3C, STS36C, STS48C, STS6C, STS9C, E1, 1GFC, 2GFC, 4GFC, 10GFC, 1GFICON, 2GFICON, 4GFICON, GIGE, 10GIGE, ESCON, STS18C, DV6000, ETRCLO, ISCCOMPAT, ISC3PEER1G, ISC3PEER2R, PASSTHRU, ISC3PEER2G.

Category Troubleshooting and Test Access

Security Maintenance

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

<AID>	Access identifier from the "25.1 ALL" section on page 25-1. 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. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<LPBKTYPE>	Type of loopback signal. The parameter type is LPBK_TYPE, which indicates the type of loopback that is to be operated or released.
• CRS	Path level loopback that is established at the cross-connect matrix level (the XCVT/XC10G card). An STS-level cross-connect loopback causes a path alarm indication signal (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.
• 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.

16.8 OPR-PROTNSW-<MOD2DWDMPAYLOAD>

(Cisco ONS 15454) The Operate Protection Switch for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, HDTV, ISC1, ISC3, or PASSTHRU (OPR-PROTNSW-<MOD2DWDMPAYLOAD>) command initiates a Y-cable protection switch request. User switch requests initiated with this command remain active until they are released through the RLS-PROTNSW-<MOD2DWDMPAYLOAD> command or are overridden by a higher priority protection switch request.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

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, service will be switched from the working line to the protection line unless a request of equal or higher priority is in effect.
- Force Switch of Protection Line (to Working Line). If the AID identifies the protection line, service will be transferred from the protection line to the working line unless a request of equal or higher priority is in effect.

- Force Switch of Working Line (to Protection Line). If the AID identifies a working line, service will be transferred from the working line to the protection line unless a request of equal or higher priority is in effect. A lockout of protection and a signal fail of protection 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 in 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 in protection, then the working line will be switched back from protection line to its original working line.

If the command is used against preprovisioned cards, the SROF (Protection Switching Failed) error is returned.

Category DWDM

Security Maintenance

Input Format OPR-PROTNSW-<MOD2DWDMPAYLOAD>:[<TID>]:<SRC>:<CTAG>::<SC>[:];

Input Example OPR-PROTNSW-HDTV:CISCO:FAC-1-1-1:100::FRCD;

Input Parameters

<SRC>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<SC>	Switch command that is to be initiated on the paths. The parameter type is SW, which is the type of switch to be initiated.
• APS-CLEAR	APS-CLEAR switch state. It is a read-only switch state and is not allowed in the OPR-PROTNSW-xxx commands.
• CLEAR	CLEAR switch state. CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.

16.9 OPR-PROTNSW-<OCN_TYPE>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Operate Protection Switch for OC3, OC12, OC48, or OC192 (OPR-PROTNSW-<OCN_TYPE>) command initiates a SONET line protection switch request. User switch requests initiated with this command remain active until they are released via the RLS-PROTNSW-OCN command or are overridden by a higher priority protection switch request.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

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 in 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 in protection, then the working line will be switched back from protection line to its original working line.

The following actions will return error messages:

- This command 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. For common control card switching, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
- Sending this command to electrical cards will return an IIAC (Input, Invalid Access Identifier) error message. For electrical card switching, use the ALW-SWTOPROTN/SWTOWKG-EQPT and INH-SWTOPROTN/SWTOWKG-EQPT commands.
- Sending this command to query on a card that is not in a protection group will return the SNVS (Status, Not in Valid State) error message.
- Sending this command to a working card that is failed or missing will return the SROF (Protection Switching Failed) error message.
- Sending this command to a protect card that is failed or missing will return the SROF (Protection Switching Failed) error message.
- Protection for preprovisioned cards will not succeed.

- Sending this command to a card that is already in protection with a higher priority will return the SSRD (Status, Switch Request Denied) error message.
- Sending this command to an OCN line with a switching mode that is already in mode will return a SAMS (Already in the Maintenance State) error message.
- Sending this command with EXERCISE or APS_CLEAR switch operation will return an error SROF (Invalid Protection Switch Operation) because these operations are not valid according to Telcordia GR-833-CORE. The EX-SW-<OCN_BLSR> is the correct command to perform the EXERCISE switch over the BLSR line.
- Protection switch will be denied if signal degrade/signal fail (SD/SF) is already present on the switching path. If SD/SF is generated on the switching path after the switch is performed, the switch will be overwritten by the APS_CLEAR state. This does not apply for lockout of protection and forced switches that have higher priority than SD/SF.

Note

- To get the protection switching state (manual, lockout, forced), use the RTRV-COND-ALL or RTRV-ALM-ALL commands.
- If the far end of the same span has a higher protection switching state (for example, the near end is under Manual protection switching state and 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 Cisco Transport Controller (CTC) or TL1 interface. The RTRV-PROTNSW-OCN command is used to retrieve the current switching state of a SONET line.
- 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 to 45 seconds will cause the system to execute only one (WEST) side BLSR query and preempt the other (EAST) side query. There will be no event messages coming out for the preempted side whose switching state will be in APS-CLEAR state:
  - A single TL1 command with both side/span AIDs (in the list AID format) of the same two-fiber or four-fiber ring.
  - The separated (via TL1, or CTC, or TL1 and CTC user interfaces) queries on the both sides/spans of the same two-fiber or four-fiber ring.
- DIRN is an optional parameter. A NULL value defaults to BTH for a BLSR protection, BTH for a 1+1 bidirectional protection group, and RCV for a 1+1 unidirectional protection group.

  DIRN follows these rules: TRMT will always fail for any kind of protection groups. For two-fiber and four-fiber BLSR protection groups, both the RCV and TRMT directions will fail.
- DIRN is applicable for both 1+1 and BLSR protection groups. For example, OPR-PROTNSW can be performed on a BLSR span/ring as follows:

  OPR-PROTNSW-OC48::FAC-5-1:A::LOCKOUT,SPAN:BTH;
- A lockout of the protection command is required before putting the span of either a two-fiber or four-fiber BLSR line in loopback.
  - A span lockout of one side (for example, the east side) of the two-fiber BLSR is required before operating a facility (or terminal) line loopback on the same side (for example, the east side) of the ring.
  - A span lockout of one protection side (for example, the East Protection side) of the four-fiber BLSR is required before operating a facility (or terminal) line loopback on the same side Working line (for example, the East Working side) of the ring.
- A span lockout on the working unit is not supported in ONS 15454, ONS 15327, and ONS 15600.

Category Protection

Security Maintenance

Input Format OPR-PROTNSW-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>::<SC>,[<SWITCHTYPE>][:<DIRN>];

Input Example OPR-PROTNSW-OC48:CHICKALUMA:FAC-6-1:204::LOCKOUT,SPAN:BTH;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. Identifies the facility in the NE to which the switch request is directed.
<SC>	Switch command that is to be initiated on the paths. The parameter type is SW, which is the type of switch to be initiated.
• APS-CLEAR	APS-CLEAR switch state. It is a read-only switch state and is not allowed in the OPR-PROTNSW-xxx commands
• CLEAR	CLEAR switch state. The CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. The EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.
<SWITCHTYPE>	BLSR switch type. The parameter type is SWITCH_TYPE (switch type).
• RING	BLSR ring switch type
• SPAN	BLSR span switch type
<DIRN>	The direction relative to the entity defined in the AID field. The direction of the switching. DIRN defaults to RCV. The parameter type is DIRECTION (transmit and receive directions).
• BTH	Both transmit and receive directions
• RCV	Receive direction only
• TRMT	Transmit direction only

16.10 OPR-PROTNSW-<PATH>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Operate Protection Switch for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VT1, or VT2 (OPR-PROTNSW-<PATH>) 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.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Note

- This command applies to path protection configurations only.
- The VTAID should be working or protect AID only.
- If you send this command on the drop AID, a DENY (Invalid AID, should use working/protect AID) message will be returned.
- To get the protection switching state (manual, lockout, forced), use the RTRV-COND-ALL or RTRV-ALM-ALL commands.
- Telcordia GR-1400 does not allow the LOCKOUT_OF_WORKING on the UPSR WORKING path/AID. When sending this command on the UPSR WORKING path, a SROF (Invalid Protection Switch Operation) is returned.
- If sending this command with EXERCISE or APS_CLEAR switch operation, an SROF (Invalid Protection Switch Operation) error will be returned because these operations are not valid according to Telcordia GR-833-CORE.
- A 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

Input Format

OPR-PROTNSW-<PATH>:[<TID>]:<SRC>:<CTAG>::<SC>[:];

Input Example

OPR-PROTNSW-STS1:CISCO:STS-2-1-1:123::MAN;

Input Parameters

<SRC>	Source access identifier from the "25.10 CrossConnectId" section on page 25-20.

<SC>	The switch command that is to be initiated on the paths. The parameter type is SW, which is the type of switch to be initiated.
• APS-CLEAR	APS-CLEAR switch state. It is a read-only switch state and is not allowed in the OPR-PROTNSW-xxx commands.
• CLEAR	CLEAR switch state. The CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. The EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.

16.11 OPR-PROTNSW-OCH

(Cisco ONS 15454) The Operate Protection Switch Optical Channel (OPR-PROTNSW-OCH) command performs a protection switch on the trunk port of a card that has splitter protection.

Usage Guidelines

None

Category

DWDM

Security

Maintenance

Input Format

OPR-PROTNSW-OCH:[<TID>]:<AID>:<CTAG>::<SW>;

Input Example

OPR-PROTNSW-OCH:VA454-22:CHAN-2-2:100::FRCD;

Input Parameters

<AID>	Access identifier from the "25.8 CHANNEL" section on page 25-18. Indicates the trunk port.
<SW>	Switch operation. The parameter type is SW, which is the type of switch to be initiated.
• APS-CLEAR	APS-CLEAR switch state. It is a read-only switch state and is not allowed in the OPR-PROTNSW-xxx commands.
• CLEAR	CLEAR switch state. The CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. The EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.

• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.

16.12 OPR-SLV-WDMANS

(Cisco ONS 15454) The Operate Span Loss Verification Wavelength Division Multiplexing Automatic Node Set-Up (OPR-SLV-WDMANS) command performs the calculation of the expected span loss verification.

Usage Guidelines None

Category DWDM

Security Maintenance

Input Format OPR-SLV-WDMANS:[<TID>]:<AID>:<CTAG>;

Input Example OPR-SLV-WDMANS:VA454-22:WDMANS-E:116;

Input Parameters

<AID>	Access identifier from the "25.32 WDMANS" section on page 25-50

16.13 OPR-SYNCNSW

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Operate Synchronization Switch (OPR-SYNCNSW) command initiates a switch to the reference specified by the synchronization reference number if the reference supplied is valid and of the same quality.

Usage Guidelines For manual types of switches, the reference 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.

After the switch is effective, the MANSWTOPRI (Manual Switch to Primary or Secondary Reference...) minor alarm will be raised.

Category Synchronization

Security Maintenance

Input Format OPR-SYNCNSW:[<TID>]:[<AID>]:<CTAG>::<SWITCHTO>,[<SC>];

Input Example OPR-SYNCNSW:CISCO:SYNC-NE:3::PRI,MAN;

Input Parameters

<AID>	Access identifier from the "25.28 SYNC_REF" section on page 25-47 Defaults to SYNC-NE.
<SWITCHTO>	Access identifier from the "25.29 SYNCSW" section on page 25-48. Identifies the new synchronization reference that will be used.
<SC>	Switch command to be initiated on the paths. Only MAN and FRCD switches are allowed for this command. The parameter type is SW, which is the type of switch to be initiated.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• MAN	Requests a manual switch of the facility.

16.14 OPR-WDMANS

(Cisco ONS 15454) The Operate Wavelength Division Multiplexing Automatic Node Set-Up (OPR-WDMANS) command initiates the Automatic Optical Node Set Up (AONS) application inside the NE to force a recompute of the value to be assigned to all variable optical attenuators (VOAs) representing the optical path inside the node.

Usage Guidelines None

Category DWDM

Security Maintenance

Input Format OPR-WDMANS:[<TID>]::<CTAG>;

Input Example OPR-WDMANS:PENNGROVE::114;

Input Parameters None

CHAPTER 17

REPT Messages

This chapter provides report (REPT) messages for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

17.1 REPT ALM <MOD2ALM>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Report Alarm for 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, or WLEN (REPT ALM <MOD2ALM> message reports an alarm condition against a facility or a path.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Category

Fault

Security

Retrieve

Output Format

```
   SID DATE TIME
** ATAG REPT ALM <MOD2ALM>
   "<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],
   [<OCRTM>],,:[<DESC>],[<AIDDET>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM 1GFC
   "FAC-2-1:MJ,LOS,SA,08-01,14-25-59,,:\"LOSS OF SIGNAL\",OC12"
;
```

Output Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1.
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<CONDTYPE>	The condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 15600 shelf, whether or not the problem is reported (that is, whether it generates a trouble notification). Reported conditions include alarms, Not-Alarmed (NA) conditions, and Not-Reported (NR) conditions. See Chapter 26, "Conditions" for a list of conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date.
<OCRTM>	(Optional) Time.
<DESC>	(Optional) Condition description.
<AIDDET>	(Optional) AIDDET uses the same addressing rules as the AID, but specifies AID type and additional details about the entity being managed. The parameter type is EQPT_TYPE, which is the type of equipment provisioned in a slot.
• 32DMX-L	32 channels demultiplexer unit for L-band
• 32WSS-L	32 channels wavelength switch selector unit for L-band
• AD-1B	Optical Add/Drop Multiplexer (OADM) 1 Band Filter
• AD-1C	Optical Add/Drop Multiplexer (OADM) 1 Channel Filter
• AD-2C	Optical Add/Drop Multiplexer (OADM) 2 Channels Filter
• AD-4B	Optical Add/Drop Multiplexer (OADM) 4 Bands Filter
• AD-4C	Optical Add/Drop Multiplexer (OADM) 4 Channels Filter
• AICI	The AIC-I 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 CE-100T card on the ONS 15454 or ONS 15310-CL
• CE-1000-4	4-port GIGE mapper card on the ONS 15454
• CRFT-TMG	Craft Timing

• CTX2500	ONS 15310-MA cross-connect card
• CXC	ONS 15600 cross-connect card
• DCC	The data communications channel
• DMX-32	Optical Demultiplexer (DMX) 32 Channels
• DS1-14	A 14-port interface card supporting DS1 facilities
• DS1-28/DS3-EC1-3	ONS 15310-MA DS1 and DS3/EC1 card
• DS1-84/DS3-3	ONS 15310-MA DS1/DS3 card
• 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 1000BaseT Ethernet facilities
• E100T-12	A 12-port interface card supporting 100BaseT Ethernet facilities
• E100T-4	A 4-port interface card supporting 100BaseT Ethernet facilities (ONS 15327)
• 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)
• FMEC_DB	FMEC card
• FMEC_DB_DS1I	FMEC card
• FTA	The fan tray of the network element (NE)
• FTA1	The fan tray 1 of the NE
• FTA2	The fan tray 2 of the NE
• G1K-4	A 4-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 ML-100T card (ONS 15310-CL)
• MMU	Multiring mesh upgrade unit
• MS-ISC-100T	Fast Ethernet switch card used for internal shelf connection
• MUX-32	Optical Multiplexer (MUX) 32 Channels

• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder Card
• MXP-MR-10DME	10 Gbps datamux with enhanced FEC
• OC12	An interface card that supports one or more OC-12 (622 Mbps) optical facilities
• OC12-327	OC12 card (ONS 15327)
• OC12-4	A four-port OC12 card
• OC12-IR-1	An interface card that supports one intermediate-range OC-12 (622 Mbps) optical facilities
• OC12-LR-1	An interface card that supports one long-range OC-12 (622 Mbps) optical facilities
• OC12-SR-1	An interface card that supports one short-range OC-12 (622 Mbps) optical facilities
• OC192-4	4-port OC-192 card (ONS 15600)
• OC192-LR-1	An interface card that supports one or more OC-192 optical facilities
• OC192-XFP	OC192 XFP
• OC3	An interface card that supports multiple OC-3 (155 Mbps) optical facilities
• OC3-327	ONS 15327 OC3 card
• OC3-IR-4	An interface card that supports four intermediate-range OC-3 (155 Mbps) optical facilities
• OC3-SR-4	An interface card that supports four short-range OC-3 (155 Mbps) optical facilities
• OC3ATM-IR-6	An interface card that supports six intermediate-range OC-3 (155 Mbps) 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 (155 Mbps) POS optical facilities
• OC48	An interface card that supports one or more OC-48 optical facilities
• OC48-327	ONS 15327 OC-48 card
• OC48-AS-1	An interface card that supports one short-range OC-48 (10 Gbps) optical facilities that can be provisioned in any input/output (I/O) slot
• OC48-ELR-1	An interface card that supports one short-range OC-48 (2.5 Gbps) optical facility
• OC48-IR-1	An interface card that supports one intermediate-range OC-48 (10 Gbps) optical facility
• OC48-LR-1	An interface card that supports one long-range OC-48 (10 Gbps) optical facility
• OC48-SR-1	An interface card that supports one short-range OC-48 (10 Gbps) optical facilities
• OC-48_16	16-port OC48 card (ONS 15600)
• OPT-AMP-L	Optical preamplifier unit for L-Band
• OPT-BST	Optical booster amplifier

• OPT-BST-L	Optical booster unit for L-Band
• OPT-PRE	Optical preamplifier
• OSC-CSM	Optical Service Channel (OSC) with Combiner/Splitter Module (SCM)
• OSCM	Optical Service Channel (OSC) Module
• PIM-4	Pluggable interface module with 4 pluggable port module (PPM) slots
• PPM-1	Pluggable port module with 1-port Small Form-factor Pluggable (SFP) module
• SHELF	Shelf entity
• SSXC	Cross-connect card (ONS 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	Multirate 2.5G Unprotected
• TXPP-MR-2.5G	Multirate 2.5G Protected
• UNKNOWN	Unknown equipment type
• UNPROVISIONED	Unprovisioned equipment type
• XCVT	A Cross-Connect card
• XC10G	A Cross-Connect card
• XCVXL-10G	XCVXL 10 G card
• XCVXL-2.5G	XCVXL 2.5 G 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

17.2 REPT ALM BITS

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Report Alarm Building Integrated Timing Supply (REPT ALM BITS) message reports an alarm condition on a BITS facility.

Usage Guidelines None

Category Synchronization

Security Retrieve

Output Format

```
   SID DATE TIME
** ATAG REPT ALM BITS
   "<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],[<OCRTM>],,:[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM BITS
   "BITS-1:MJ,SYNC,SA,08-01,14-25-59,,:\"LOSS OF TIMING\""
;
```

Output Parameters

<AID>	Access identifier from the "25.6 BITS" section on page 25-17.
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<CONDTYPE>	The condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions.
<OCRDAT>	(Optional) Date.
<OCRTM>	(Optional) Time.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<DESC>	(Optional) Condition description.

17.3 REPT ALM COM

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Report Alarm Common (REPT ALM COM) message reports an alarm condition when an AID cannot be given. For example, a fan failure is reported using this message.

Usage Guidelines

None

Category Fault

Security Retrieve

Output Format

```
   SID DATE TIME
** ATAG REPT ALM COM
   "[<AID>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],[<OCRTM>],,:[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM COM
   "COM:MJ,FAN,NSA,08-01,14-25-59,,:\"FAN FAILURE\""
;
```

Output Parameters

<AID>	(Optional) Access identifier. Identifies the entity to which the command pertains. Indicates an alarm without AID. AID is a string.
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<CONDTYPE>	The condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 15600 shelf, whether or not the problem is reported (that is, whether it generates a trouble notification). Reported conditions include alarms, Not-Alarmed conditions (NA), and Not-Reported (NR) conditions. See Chapter 26, "Conditions" for a list of conditions.
<OCRDAT>	(Optional) Date.
<OCRTM>	(Optional) Time.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<DESC>	(Optional) Condition description.

17.4 REPT ALM ENV

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Report Alarm Environment (REPT ALM ENV) message reports a customer-defined condition on an environmental alarm input.

Usage Guidelines

None

Category

Environment

Security

Retrieve

Output Format

```
   SID DATE TIME
** ATAG REPT ALM ENV
   "<AID>:<NTFCNCDE>,<ALMTYPE>,[<OCRDAT>],[<OCRTM>],[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM ENV
   "ENV-IN-1:MJ,OPENDR,08-01,14-25-59,\"OPEN DOOR\""
;
```

Output Parameters

<AID>	Access identifier from the "25.13 ENV" section on page 25-30. Identifies an environmental input.
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is a two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<ALMTYPE>	Abbreviated code identifying the alarm. The parameter type is ENV_ALM, which is the environmental alarm types.
• AIRCOMPR	Air compressor failure
• AIRCOND	Air conditioning failure
• AIRDRYR	Air dryer failure
• BATDSCHRG	Battery discharging
• BATTERY	Battery failure

• CLFAN	Cooling fan failure
• CPMAJOR	Centralized power major failure
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail
• HATCH	CEV hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnect bypass
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage

• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure
<OCRDAT>	(Optional) Date.
<OCRTM>	(Optional) Time.
<DESC>	(Optional) Condition description.

17.5 REPT ALM EQPT

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Report Alarm Equipment (REPT ALM EQPT) message reports an alarm condition against an equipment unit or slot.

Usage Guidelines None

Category Equipment

Security Retrieve

Output Format

```
   SID DATE TIME
** ATAG REPT ALM EQPT
   "<AID>:<NTFCNCDE>,<CONDITION>,<SRVEFF>,
   [<OCRDAT>],[<OCRTM>],,:[<DESC>],[<AIDDET>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM EQPT
   "SLOT-7:MJ,CONTR,NSA,08-01,14-25-59,,:\"CONTROLLER FAILURE\",TCC"
;
```

Output Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31. Equipment AID SLOT-{1-17}.
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<CONDITION>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date.
<OCRTM>	(Optional) Time.
<DESC>	(Optional) Condition description.
<AIDDET>	(Optional) AIDDET uses the same addressing rules as the AID, but specifies AID type and additional details about the entity being managed. The parameter type is EQPT_TYPE, which is the type of equipment being provisioned into a slot.
• 32DMX-L	32 channels demultiplexer unit for L-band
• 32WSS-L	32 channels wavelength switch selector unit for L-band
• AD-1B	Optical Add/Drop Multiplexer (OADM) 1 Band Filter
• AD-1C	Optical Add/Drop Multiplexer (OADM) 1 Channel Filter
• AD-2C	Optical Add/Drop Multiplexer (OADM) 2 Channels Filter
• AD-4B	Optical Add/Drop Multiplexer (OADM) 4 Bands Filter
• AD-4C	Optical Add/Drop Multiplexer (OADM) 4 Channels Filter
• AICI	The AIC-I 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 CE-100T card on the ONS 15454 or ONS 15310-CL
• CE-1000-4	4-port GIGE mapper card on the ONS 15454

• CRFT-TMG	Craft Timing
• CTX2500	ONS 15310-MA cross-connect card
• CXC	ONS 15600 cross-connect card
• DCC	The data communications channel
• DMX-32	Optical Demultiplexer (DMX) 32 Channels
• DS1-14	A 14-port interface card supporting DS1 facilities
• DS1-28/DS3-EC1-3	ONS 15310-MA DS1 and DS3/EC1 card
• DS1-84/DS3-3	ONS 15310-MA DS1/DS3 card
• 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 1000BaseT Ethernet facilities
• E100T-12	A 12-port interface card supporting 100BaseT Ethernet facilities
• E100T-4	A 4-port interface card supporting 100BaseT Ethernet facilities (ONS 15327)
• 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)
• FMEC_DB	FMEC card
• FMEC_DB_DS1I	FMEC card
• FTA	The fan tray of the network element (NE)
• FTA1	The fan tray 1 of the NE
• FTA2	The fan tray 2 of the NE
• G1K-4	A 4-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 ML-100T card (ONS 15310-CL)
• MMU	Multiring mesh upgrade unit
• MS-ISC-100T	Fast Ethernet switch card used for internal shelf connection

• MUX-32	Optical Multiplexer (MUX) 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder Card
• MXP-MR-10DME	10 Gbps datamux with enhanced FEC
• OC12	An interface card that supports one or more OC-12 (622 Mbps) optical facilities
• OC12-327	OC12 card (ONS 15327)
• OC12-4	A four-port OC12 card
• OC12-IR-1	An interface card that supports one intermediate-range OC-12 (622 Mbps) optical facilities
• OC12-LR-1	An interface card that supports one long-range OC-12 (622 Mbps) optical facilities
• OC12-SR-1	An interface card that supports one short-range OC-12 (622 Mbps) optical facilities
• OC192-4	4-port OC-192 card (ONS 15600)
• OC192-LR-1	An interface card that supports one or more OC-192 optical facilities
• OC192-XFP	OC192 XFP
• OC3	An interface card that supports multiple OC-3 (155 Mbps) optical facilities
• OC3-327	ONS 15327 OC3 card
• OC3-IR-4	An interface card that supports four intermediate-range OC-3 (155 Mbps) optical facilities
• OC3-SR-4	An interface card that supports four short-range OC-3 (155 Mbps) optical facilities
• OC3ATM-IR-6	An interface card that supports six intermediate-range OC-3 (155 Mbps) 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 (155 Mbps) POS optical facilities
• OC48	An interface card that supports one or more OC-48 optical facilities
• OC48-327	ONS 15327 OC-48 card
• OC48-AS-1	An interface card that supports one short-range OC-48 (10 Gbps) optical facilities that can be provisioned in any input/output (I/O) slot
• OC48-ELR-1	An interface card that supports one short-range OC-48 (2.5 Gbps) optical facility
• OC48-IR-1	An interface card that supports one intermediate-range OC-48 (10 Gbps) optical facility
• OC48-LR-1	An interface card that supports one long-range OC-48 (10 Gbps) optical facility
• OC48-SR-1	An interface card that supports one short-range OC-48 (10 Gbps) optical facilities
• OC-48_16	16-port OC48 card (ONS 15600)
• OPT-AMP-L	Optical preamplifier unit for L-Band

• OPT-BST	Optical booster amplifier
• OPT-BST-L	Optical booster unit for L-Band
• OPT-PRE	Optical preamplifier
• OSC-CSM	Optical Service Channel (OSC) with Combiner/Splitter Module (SCM)
• OSCM	Optical Service Channel (OSC) Module
• PIM-4	Pluggable interface module with 4 pluggable port module (PPM) slots
• PPM-1	Pluggable port module with 1-port Small Form-factor Pluggable (SFP) module
• SHELF	Shelf entity
• SSXC	Cross-connect card (ONS 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	Multirate 2.5G Unprotected
• TXPP-MR-2.5G	Multirate 2.5G Protected
• UNKNOWN	Unknown equipment type
• UNPROVISIONED	Unprovisioned equipment type
• XCVT	A Cross-Connect card
• XC10G	A Cross-Connect card
• XCVXL-10G	XCVXL 10 G card
• XCVXL-2.5G	XCVXL 2.5 G 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

17.6 REPT ALM SECU

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Report Alarm Security (REPT ALM SECU) reports the occurrence of an alarmed security event against the NE.

Usage Guidelines

Based on TR-NWT-000835, the AID of the security alarm should be the connection identifier (CID) that is not currently supported.

The COM or user identifier (UID) is an acceptable substitute for the AID.

Note The INTRUSION-PSWD condition is the only condition that is reported as a standing condition instead of a transient condition. It defaults to NA and is reported by the REPT EVT SECU message. However, it can be reprovisioned to be reported at a higher severity. If the severity of this alarm is higher than NA, it is reported by the REPT ALM SECU message.

Category

Security

Security

Superuser

Output Format

```
   SID DATE TIME
** ATAG REPT ALM SECU
   "<AID>:<NOTIFCODE>,<SECUALMTYPE>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM SECU
   "COM:CR,INTRUSION-PSWD"
;
```

Output Parameters

<AID>	Access identifier. Identifies an entity with the condition. Defaults to COM. AID is a string.
<NOTIFCODE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is a two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<SECUALMTYPE>	Security alarm type. It is a subset of the CONDITION type. In this release, the only allowable type is INTRUSION-PSWD. The parameter type is SECUALMTYPE (security alarm type).
• INTRUSION-PSWD	Condition raised after an invalid password is used during login. This condition is raised only if the password is used a specific number of times.

17.7 REPT ALM SYNCN

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Report Alarm Synchronization (REPT ALM SYNCN) message reports an alarm condition against a synchronization reference.

Usage Guidelines

None

Category

Synchronization

Security

Retrieve

Output Format

```
   SID DATE TIME
** ATAG REPT ALM SYNCN
   "<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],[<OCRTM>],,:[<DESC>],
   [<EQPTTYPE>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM SYNCN
   "SYNC-NE:MJ,MAN,SA,08-01,14-25-59,,:\"MANUAL SWITCH\",TCC"
;
```

Output Parameters

<AID>	Access identifier from the "25.28 SYNC_REF" section on page 25-47. Identifies a synchronization reference with alarm condition.
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.

<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" or a list of conditions.
<SERVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date.
<OCRTM>	(Optional) Time.
<DESC>	(Optional) Condition description.
<EQPTTYPE>	Optional Parameter type is EQPT_TYPE—the type of equipment being provisioned into a slot
• 32DMX-L	32 channels demultiplexer unit for L-band
• 32WSS-L	32 channels wavelength switch selector unit for L-band
• AD-1B	Optical Add/Drop Multiplexer (OADM) 1 Band Filter
• AD-1C	Optical Add/Drop Multiplexer (OADM) 1 Channel Filter
• AD-2C	Optical Add/Drop Multiplexer (OADM) 2 Channels Filter
• AD-4B	Optical Add/Drop Multiplexer (OADM) 4 Bands Filter
• AD-4C	Optical Add/Drop Multiplexer (OADM) 4 Channels Filter
• AICI	The AIC-I 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 CE-100T card on the ONS 15454 or ONS 15310-CL
• CE-1000-4	4-port GIGE mapper card on the ONS 15454
• CRFT-TMG	Craft Timing
• CTX2500	ONS 15310-MA cross-connect card
• CXC	ONS 15600 cross-connect card
• DCC	The data communications channel
• DMX-32	Optical Demultiplexer (DMX) 32 Channels
• DS1-14	A 14-port interface card supporting DS1 facilities
• DS1-28/DS3-EC1-3	ONS 15310-MA DS1 and DS3/EC1 card
• DS1-84/DS3-3	ONS 15310-MA DS1/DS3 card
• 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 1000BaseT Ethernet facilities
• E100T-12	A 12-port interface card supporting 100BaseT Ethernet facilities
• E100T-4	A 4-port interface card supporting 100BaseT Ethernet facilities (ONS 15327)
• 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)
• FMEC_DB	FMEC card
• FMEC_DB_DS1I	FMEC card
• FTA	The fan tray of the network element (NE)
• FTA1	The fan tray 1 of the NE
• FTA2	The fan tray 2 of the NE
• G1K-4	A 4-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 ML-100T card (ONS 15310-CL)
• MMU	Multiring mesh upgrade unit
• MS-ISC-100T	Fast Ethernet switch card used for internal shelf connection
• MUX-32	Optical Multiplexer (MUX) 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder Card
• MXP-MR-10DME	10 Gbps datamux with enhanced FEC
• OC12	An interface card that supports one or more OC-12 (622 Mbps) optical facilities
• OC12-327	OC12 card (ONS 15327)
• OC12-4	A four-port OC12 card
• OC12-IR-1	An interface card that supports one intermediate-range OC-12 (622 Mbps) optical facilities
• OC12-LR-1	An interface card that supports one long-range OC-12 (622 Mbps) optical facilities

• OC12-SR-1	An interface card that supports one short-range OC-12 (622 Mbps) optical facilities
• OC192-4	4-port OC-192 card (ONS 15600)
• OC192-LR-1	An interface card that supports one or more OC-192 optical facilities
• OC192-XFP	OC192 XFP
• OC3	An interface card that supports multiple OC-3 (155 Mbps) optical facilities
• OC3-327	ONS 15327 OC3 card
• OC3-IR-4	An interface card that supports four intermediate-range OC-3 (155 Mbps) optical facilities
• OC3-SR-4	An interface card that supports four short-range OC-3 (155 Mbps) optical facilities
• OC3ATM-IR-6	An interface card that supports six intermediate-range OC-3 (155 Mbps) 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 (155 Mbps) POS optical facilities
• OC48	An interface card that supports one or more OC-48 optical facilities
• OC48-327	ONS 15327 OC-48 card
• OC48-AS-1	An interface card that supports one short-range OC-48 (10 Gbps) optical facilities that can be provisioned in any input/output (I/O) slot
• OC48-ELR-1	An interface card that supports one short-range OC-48 (2.5 Gbps) optical facility
• OC48-IR-1	An interface card that supports one intermediate-range OC-48 (10 Gbps) optical facility
• OC48-LR-1	An interface card that supports one long-range OC-48 (10 Gbps) optical facility
• OC48-SR-1	An interface card that supports one short-range OC-48 (10 Gbps) optical facilities
• OC-48_16	16-port OC48 card (ONS 15600)
• OPT-AMP-L	Optical preamplifier unit for L-Band
• OPT-BST	Optical booster amplifier
• OPT-BST-L	Optical booster unit for L-Band
• OPT-PRE	Optical preamplifier
• OSC-CSM	Optical Service Channel (OSC) with Combiner/Splitter Module (SCM)
• OSCM	Optical Service Channel (OSC) Module
• PIM-4	Pluggable interface module with 4 pluggable port module (PPM) slots
• PPM-1	Pluggable port module with 1-port Small Form-factor Pluggable (SFP) module
• SHELF	Shelf entity

• SSXC	Cross-connect card (ONS 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	Multirate 2.5G Unprotected
• TXPP-MR-2.5G	Multirate 2.5G Protected
• UNKNOWN	Unknown equipment type
• UNPROVISIONED	Unprovisioned equipment type
• XCVT	A Cross-Connect card
• XC10G	A Cross-Connect card
• XCVXL-10G	XCVXL 10 G card
• XCVXL-2.5G	XCVXL 2.5 G 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

17.8 REPT DBCHG

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Report Database Change (REPT DBCHG) message reports any changes on the NE that result from:

- TL1 provisioning commands or their graphical user interface (GUI) equivalents containing the verbs ALW, DLT, ED, ENT, INH, INIT, OPR, RLS, SET, and SW (for example, DLT-EQPT, ENT-CRS-STS1)
- External event such as a board insertion

Usage Guidelines

- When the secondary state is changed from AINS state to any other state, no REPT DBCHG messages are generated.
- REPT DBCHG is turned off by default. To turn REPT DBCHG on, you must issue the ALW-MSG-DBCHG command.
- REPT DBCHG messages are generated every time a roll is performed. A cross-connect delete and add REPT DBCHG message will not be sent every time a roll is performed; instead a REPT DBCHG message on the roll will be sent.

Category

Log

Security

Retrieve

Output Format

SID DATE TIME
A ATAG REPT DBCHG
"TIME=<TIME>,DATE=<DATE>,[SOURCE=<SOURCE>],[USERID=<USERID>],
DBCHGSEQ=<DBCHGSEQ>:<COMMAND>:[<AID>]:::[<PSTPSTQ>,],<SST>"
;

Output Example

TID-000 1998-06-20 14:30:00
A 100 REPT DBCHG
"TIME=14-35-46,DATE=99-07-28,SOURCE=123,USERID=CISCO15,DBCHGSEQ=456:
ENT-CRS-VT1:VT1-4-1-2-6-4:::PST-PSTQ,SST"
;

Output Parameters

<TIME>	The time of the message triggered by the NE.
<DATE>	The date of the message triggered by the NE.
<SOURCE>	(Optional) An input-command CTAG if present. SOURCE is a string. Maximum length of 20 characters.
<USERID>	(Optional) The user name or user identifier. USERID is a string. Maximum length of 20 characters.
<DBCHGSEQ>	Identifier or range of identifiers to be retrieved. It is a sequential number of the DBCHGSEQ message. DBCHGSEQ is an integer.
<COMMAND>	The input command or substitute. Maximum length of 20 characters. COMMAND is a string.
<AID>	Access identifier. Maximum length of 64 characters.Excess characters will be truncated. AID is a string.
<PSTPSTQ>	Admin state in the PST-PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ).
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatched Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

17.9 REPT EVT <MOD2ALM>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Report Event for 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, or WLEN (REPT EVT <MOD2ALM>) message reports the occurrence of a nonalarmed event. In Software Release 5.0 and later, REPT EVT <MOD2ALM> can report the remote monitoring (RMON)-managed threshold crossing alarm.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Category

Fault

Security

Retrieve

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 TO PROTECTION\",
   OC48"
;
```

Output Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 15600 node, whether or not the problem is reported (that is, whether it generates a trouble notification). Reported conditions include alarms, Not-Alarmed conditions (NA), and Not-Reported (NR) conditions. See Chapter 26, "Conditions" for a list of conditions.
<CONDEFF>	The effect of the event on the condition of the NE. The parameter type is COND_EFF, which is the state of the condition upon the affected unit.
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition

<LOCN>	Location associated with a particular command in reference to the entity identified by the AID. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<MONVAL>	(Optional) Monitored value. Value to which the register identified by MONTYPE will be initialized or the measured value of a monitored parameter. The value is in the form of numeric counts or rates. MONVAL is a float.
<THLEV>	(Optional) Threshold level. THLEV is a float.
<TMPER>	(Optional) Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24-hours. For SONET performance monitoring (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 PM parameters.
<DESC>	(Optional) Condition description.
<AIDDET>	(Optional) AIDDET uses the same addressing rules as the AID, but specifies AID type and additional details about the entity being managed. The parameter type is EQPT_TYPE, which is the type of equipment being provisioned into a slot.
• 32DMX-L	32 channels demultiplexer unit for L-band
• 32WSS-L	32 channels wavelength switch selector unit for L-band
• AD-1B	Optical Add/Drop Multiplexer (OADM) 1 Band Filter
• AD-1C	Optical Add/Drop Multiplexer (OADM) 1 Channel Filter
• AD-2C	Optical Add/Drop Multiplexer (OADM) 2 Channels Filter
• AD-4B	Optical Add/Drop Multiplexer (OADM) 4 Bands Filter
• AD-4C	Optical Add/Drop Multiplexer (OADM) 4 Channels Filter
• AICI	The AIC-I 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 CE-100T card on the ONS 15454 or ONS 15310-CL
• CE-1000-4	4-port GIGE mapper card on the ONS 15454
• CRFT-TMG	Craft Timing
• CTX2500	ONS 15310-MA cross-connect card
• CXC	ONS 15600 cross-connect card
• DCC	The data communications channel
• DMX-32	Optical Demultiplexer (DMX) 32 Channels
• DS1-14	A 14-port interface card supporting DS1 facilities
• DS1-28/DS3-EC1-3	ONS 15310-MA DS1 and DS3/EC1 card
• DS1-84/DS3-3	ONS 15310-MA DS1/DS3 card
• 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 1000BaseT Ethernet facilities
• E100T-12	A 12-port interface card supporting 100BaseT Ethernet facilities
• E100T-4	A 4-port interface card supporting 100BaseT Ethernet facilities (ONS 15327)
• 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)
• FMEC_DB	FMEC card
• FMEC_DB_DS1I	FMEC card
• FTA	The fan tray of the network element (NE)
• FTA1	The fan tray 1 of the NE
• FTA2	The fan tray 2 of the NE
• G1K-4	A 4-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 ML-100T card (ONS 15310-CL)

• MMU	Multiring mesh upgrade unit
• MS-ISC-100T	Fast Ethernet switch card used for internal shelf connection
• MUX-32	Optical Multiplexer (MUX) 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder Card
• MXP-MR-10DME	10 Gbps datamux with enhanced FEC
• OC12	An interface card that supports one or more OC-12 (622 Mbps) optical facilities
• OC12-327	OC12 card (ONS 15327)
• OC12-4	A four-port OC12 card
• OC12-IR-1	An interface card that supports one intermediate-range OC-12 (622 Mbps) optical facilities
• OC12-LR-1	An interface card that supports one long-range OC-12 (622 Mbps) optical facilities
• OC12-SR-1	An interface card that supports one short-range OC-12 (622 Mbps) optical facilities
• OC192-4	4-port OC-192 card (ONS 15600)
• OC192-LR-1	An interface card that supports one or more OC-192 optical facilities
• OC192-XFP	OC192 XFP
• OC3	An interface card that supports multiple OC-3 (155 Mbps) optical facilities
• OC3-327	ONS 15327 OC3 card
• OC3-IR-4	An interface card that supports four intermediate-range OC-3 (155 Mbps) optical facilities
• OC3-SR-4	An interface card that supports four short-range OC-3 (155 Mbps) optical facilities
• OC3ATM-IR-6	An interface card that supports six intermediate-range OC-3 (155 Mbps) 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 (155 Mbps) POS optical facilities
• OC48	An interface card that supports one or more OC-48 optical facilities
• OC48-327	ONS 15327 OC-48 card
• OC48-AS-1	An interface card that supports one short-range OC-48 (10 Gbps) optical facilities that can be provisioned in any input/output (I/O) slot
• OC48-ELR-1	An interface card that supports one short-range OC-48 (2.5 Gbps) optical facility
• OC48-IR-1	An interface card that supports one intermediate-range OC-48 (10 Gbps) optical facility
• OC48-LR-1	An interface card that supports one long-range OC-48 (10 Gbps) optical facility
• OC48-SR-1	An interface card that supports one short-range OC-48 (10 Gbps) optical facilities

• OC-48_16	16-port OC48 card (ONS 15600)
• OPT-AMP-L	Optical preamplifier unit for L-Band
• OPT-BST	Optical booster amplifier
• OPT-BST-L	Optical booster unit for L-Band
• OPT-PRE	Optical preamplifier
• OSC-CSM	Optical Service Channel (OSC) with Combiner/Splitter Module (SCM)
• OSCM	Optical Service Channel (OSC) Module
• PIM-4	Pluggable interface module with 4 pluggable port module (PPM) slots
• PPM-1	Pluggable port module with 1-port Small Form-factor Pluggable (SFP) module
• SHELF	Shelf entity
• SSXC	Cross-connect card (ONS 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	Multirate 2.5G Unprotected
• TXPP-MR-2.5G	Multirate 2.5G Protected
• UNKNOWN	Unknown equipment type
• UNPROVISIONED	Unprovisioned equipment type
• XCVT	A Cross-Connect card
• XC10G	A Cross-Connect card
• XCVXL-10G	XCVXL 10 G card
• XCVXL-2.5G	XCVXL 2.5 G 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

17.10 REPT EVT BITS

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Report Event Building Integrated Timing Supply (REPT EVT BITS) message reports a non-alarmed event against a BITS facility.

Usage Guidelines None

Category Synchronization

Security Retrieve

Output Format

```
   SID DATE TIME
** ATAG REPT EVT BITS
   "<AID>:<CONDTYPE>,[<CONDEFF>],,,,,,,:[<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

<AID>	Access identifier from the "25.6 BITS" section on page 25-17.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 15600 node, whether or not the problem is reported (that is, whether it generates a trouble notification). Reported conditions include alarms, Not-Alarmed conditions (NA), and Not-Reported (NR) conditions. See Chapter 26, "Conditions" for a list of conditions.
<CONDEFF>	The effect of the event on the condition of the NE. The parameter type is COND_EFF, which is the state of the condition upon the affected unit.
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
<DESC>	(Optional) Condition description.

17.11 REPT EVT COM

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Report Event Common (REPT EVT COM) message reports a nonalarmed event against an NE when there is no AID associated with it.

Usage Guidelines None

Category Fault

Security Retrieve

Output Format

```
   SID DATE TIME
A ATAG REPT EVT COM
  “[<AID>]:<CONDTYPE>,[<CONDEFF>],,,,,,,:[<DESC>]”
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
A 100.100 REPT EVT COM
  “COM:CLDRESTART,TC,,,,,,,:\“COLD RESTART\”,”
;
```

Output Parameters

<AID>	(Optional) Access identifier. Identifies the entity to which the command pertains. AID is a string.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, “Conditions” for a list of conditions.
<CONDEFF>	The effect of the event on the condition of the NE. The parameter type is COND_EFF, which is the state of the condition upon the affected unit.
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
<DESC>	(Optional) Condition description.

17.12 REPT EVT ENV

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Report Event Environment (REPT EVT ENV) message reports the occurrence of a nonalarmed event against an environment alarm input.

Usage Guidelines

None

Category

Environment

Security

Retrieve

Output Format

```
   SID DATE TIME
A ATAG REPT EVT ENV
   "<AID>:<ALMTYPE>,[<CONDEFF>],,,,,,,:[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
A 100.100 REPT EVT ENV
   "ENV-IN-2:OPENDR,TC,,,,,,,:\"OPEN DOOR\""
;
```

Output Parameters

<AID>	Access identifier from the "25.13 ENV" section on page 25-30. Identifies an environmental input.
<ALMTYPE>	Abbreviated code identifying the alarm. The parameter type is ENV_ALM (environmental alarm types).
• AIRCOMPR	Air compressor failure
• AIRCOND	Air conditioning failure
• AIRDRYR	Air dryer failure
• BATDSCHRG	Battery discharging
• BATTERY	Battery failure
• CLFAN	Cooling fan failure
• CPMAJOR	Centralized power major failure
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail
• HATCH	CEV hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnect bypass

• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure
<CONDEFF>	The effect of the event on the condition of the NE. The parameter type is COND_EFF, which is the state of the condition upon the affected unit.
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
<DESC>	(Optional) Condition description.

17.13 REPT EVT EQPT

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Report Event Equipment (REPT EVT EQPT) message reports the occurrence of a nonalarmed event against an equipment unit or slot.

Usage Guidelines

None

Category

Equipment

Security

Retrieve

Output Format

```
   SID DATE TIME
A ATAG REPT EVT EQPT
   "<AID>:<CONDTYPE>,[<CONDEFF>],,,,,,,:[<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

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31. Equipment AID SLOT-{1-17}.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions
<CONDEFF>	The effect of the event on the condition of the NE. The parameter type is COND_EFF, which is the state of the condition upon the affected unit.
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
<DESC>	(Optional) Condition description.

<AIDDET>	(Optional) AIDDET uses the same addressing rules as the AID, but specifies AID type and additional details about the entity being managed. The parameter type is EQPT_TYPE, which is the type of equipment being provisioned into a slot.
• 32DMX-L	32 channels demultiplexer unit for L-band
• 32WSS-L	32 channels wavelength switch selector unit for L-band
• AD-1B	Optical Add/Drop Multiplexer (OADM) 1 Band Filter
• AD-1C	Optical Add/Drop Multiplexer (OADM) 1 Channel Filter
• AD-2C	Optical Add/Drop Multiplexer (OADM) 2 Channels Filter
• AD-4B	Optical Add/Drop Multiplexer (OADM) 4 Bands Filter
• AD-4C	Optical Add/Drop Multiplexer (OADM) 4 Channels Filter
• AICI	The AIC-I 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 CE-100T card on the ONS 15454 or ONS 15310-CL
• CE-1000-4	4-port GIGE mapper card on the ONS 15454
• CRFT-TMG	Craft Timing
• CTX2500	ONS 15310-MA cross-connect card
• CXC	ONS 15600 cross-connect card
• DCC	The data communications channel
• DMX-32	Optical Demultiplexer (DMX) 32 Channels
• DS1-14	A 14-port interface card supporting DS1 facilities
• DS1-28/DS3-EC1-3	ONS 15310-MA DS1 and DS3/EC1 card
• DS1-84/DS3-3	ONS 15310-MA DS1/DS3 card
• 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 1000BaseT Ethernet facilities
• E100T-12	A 12-port interface card supporting 100BaseT Ethernet facilities
• E100T-4	A 4-port interface card supporting 100BaseT Ethernet facilities (ONS 15327)

• 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)
• FMEC_DB	FMEC card
• FMEC_DB_DS1I	FMEC card
• FTA	The fan tray of the network element (NE)
• FTA1	The fan tray 1 of the NE
• FTA2	The fan tray 2 of the NE
• G1K-4	A 4-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 ML-100T card (ONS 15310-CL)
• MMU	Multiring mesh upgrade unit
• MS-ISC-100T	Fast Ethernet switch card used for internal shelf connection
• MUX-32	Optical Multiplexer (MUX) 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder Card
• MXP-MR-10DME	10 Gbps datamux with enhanced FEC
• OC12	An interface card that supports one or more OC-12 (622 Mbps) optical facilities
• OC12-327	OC12 card (ONS 15327)
• OC12-4	A four-port OC12 card
• OC12-IR-1	An interface card that supports one intermediate-range OC-12 (622 Mbps) optical facilities
• OC12-LR-1	An interface card that supports one long-range OC-12 (622 Mbps) optical facilities
• OC12-SR-1	An interface card that supports one short-range OC-12 (622 Mbps) optical facilities
• OC192-4	4-port OC-192 card (ONS 15600)
• OC192-LR-1	An interface card that supports one or more OC-192 optical facilities
• OC192-XFP	OC192 XFP
• OC3	An interface card that supports multiple OC-3 (155 Mbps) optical facilities
• OC3-327	ONS 15327 OC3 card
• OC3-IR-4	An interface card that supports four intermediate-range OC-3 (155 Mbps) optical facilities
• OC3-SR-4	An interface card that supports four short-range OC-3 (155 Mbps) optical facilities
• OC3ATM-IR-6	An interface card that supports six intermediate-range OC-3 (155 Mbps) 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 (155 Mbps) POS optical facilities
• OC48	An interface card that supports one or more OC-48 optical facilities
• OC48-327	ONS 15327 OC-48 card
• OC48-AS-1	An interface card that supports one short-range OC-48 (10 Gbps) optical facilities that can be provisioned in any input/output (I/O) slot
• OC48-ELR-1	An interface card that supports one short-range OC-48 (2.5 Gbps) optical facility
• OC48-IR-1	An interface card that supports one intermediate-range OC-48 (10 Gbps) optical facility
• OC48-LR-1	An interface card that supports one long-range OC-48 (10 Gbps) optical facility
• OC48-SR-1	An interface card that supports one short-range OC-48 (10 Gbps) optical facilities
• OC-48_16	16-port OC48 card (ONS 15600)
• OPT-AMP-L	Optical preamplifier unit for L-Band
• OPT-BST	Optical booster amplifier
• OPT-BST-L	Optical booster unit for L-Band
• OPT-PRE	Optical preamplifier
• OSC-CSM	Optical Service Channel (OSC) with Combiner/Splitter Module (SCM)
• OSCM	Optical Service Channel (OSC) Module
• PIM-4	Pluggable interface module with 4 pluggable port module (PPM) slots
• PPM-1	Pluggable port module with 1-port Small Form-factor Pluggable (SFP) module
• SHELF	Shelf entity
• SSXC	Cross-connect card (ONS 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	Multirate 2.5G Unprotected
• TXPP-MR-2.5G	Multirate 2.5G Protected
• UNKNOWN	Unknown equipment type
• UNPROVISIONED	Unprovisioned equipment type
• XCVT	A Cross-Connect card
• XC10G	A Cross-Connect card
• XCVXL-10G	XCVXL 10 G card
• XCVXL-2.5G	XCVXL 2.5 G 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

17.14 REPT EVT FXFR

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA) The Report Event Software Download (REPT EVT FXFR) message reports the FTP software download status of the start, completion, and completed percentage.

Usage Guidelines

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

Category

File Transfer

Security

Retrieve

Output Format

```
   SID DATE TIME
A ATAG REPT EVT FXFR
   "<FILENAME>,<FXFR_STATUS>,[<FXFR_RSLT>],[<BYTES_XFRD>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
A 100.100 REPT EVT FXFR
   "NEW.PKG,COMPLD,SUCCESS,21215147"
;
```

Output Parameters

<FILENAME>	When a package is being transferred between the FTP server and the controller cards, the filename field will contain the string ACTIVE. Following this transfer, if there is a second common-control card on the NE, the file will be copied over to the second card during which time REPT EVT FXFR messages will be generated with a filename of STANDBY. FILENAME is a string.
<FXFR_STATUS>	The status of the file transfer. The parameter type is TX_STATUS, which is the status of the file transfer.
• COMPLD	The file transmission is completed.
• IP	The file transmission is in progress.
• START	The file transmission is started.

<FXFR_RSLT>	(Optional) The result of the file transfer. The parameter type is TX_RSLT, which is the result of the file transfer.
• FAILURE	A failed result
• SUCCESS	A successful result
<BYTES_XFRD>	(Optional) The percentage of bytes transferred. BYTES_XFRED is a string.

17.15 REPT EVT IOSCFG

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Report Event Internet Operating System Configuration File (REPT EVT IPSCFG) message reports the status of copying the Cisco IOS configuration file when the COPY-IOSCFG command is issued.

Usage Guidelines

- You can identify if this message is caused by a Cisco IOS configuration file downloading, uploading, or merging by looking at the SRC and DEST fields in the message. See the "8.1 COPY-IOSCFG" section on page 8-1 for more details.
- There is no success/failure in the message to indicate the success or failure of the merge process when merging the startup Cisco IOS config file to the running config file.

Category

File Transfer

Security

Retrieve

Output Format

```
   SID DATE TIME
A  ATAG REPT EVT IOSCFG
   "<AID>:<SRC>,<DEST>,<STATUS>,[<RESULT>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
A 100.100 REPT EVT IOSCFG
   "SLOT-1:STARTUP,IOS-CONFIG-FILE-IN-NETWORK,COMPLD,SUCCESS"
;
```

Output Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31. Slot AID for the equipment.
<SRC>	Source access identifier. Specifies where the Cisco IOS configuration file is copied from. SRC is a string.
<DEST>	Destination. Specifies where the Cisco IOS configuration file is copied to. DEST is a string.

<STATUS>	The status of COPY-IOSCFG. The parameter type is TX_STATUS, which is the status of the file transfer.
• COMPLD	The file transmission is completed.
• IP	The file transmission is in progress.
• START	The file transmission is started.
<RESULT>	(Optional) The result of the file transfer. The parameter type is TX_RSLT, which is the result of the file transfer.
• FAILURE	A failed result
• SUCCESS	A successful result

17.16 REPT EVT SECU

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Report Event Security (REPT EVT SECU) message reports the occurrence of a nonalarmed security event against the NE.

Usage Guidelines

- Based on TR-NWT-000835 in TR-NWT-000835 and the AID of the security alarm should be the CID, which is not supported in this release. The COM or UID is an acceptable substitute for the AID here. CIDs will be supported in a future release.
- For the rule of single failure, single message/alarm, the security alarm will not be reported as REPT ALM COM, because it is reported as REPT ALM SECU.
- Because the NE sends this security message as a transient message, to make all TL1 autonomous messages consistent, the TL1 agent reports the security message into REPT EVT SECU.
- This message is inhibited by default. A Superuser will have to issue the ALW-MSG-SECU to see this message.

Category

Security

Security

Superuser

Output Format

```
   SID DATE TIME
A  ATAG REPT EVT SECU
   "<AID>:<DNFIELD>,[<CONDEFF>],,,,,,,:<SECURITY>:<DNFIELD1>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
A  100.100 REPT EVT SECU
   "COM:LOGIN-FAILURE-PSWD,TC,,,,,,,:\"SECURITY:
   INVALID LOGIN - PASSWORD - SEE AUDIT LOG\""
;
```

Output Parameters

<AID>	Access identifier. Identifies an entity with the condition. Defaults to COM. AID is a string.
<DNFIELD>	String
<CONDEFF>	The effect of the event on the condition of the NE. The parameter type is COND_EFF, which is the state of the condition upon the affected unit.
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
<SECURITY>	String
<DNFIELD1>	String

17.17 REPT EVT SESSION

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Report Event Session (REPT EVT SESSION) message reports a nonalarmed event related to establishing a session with the NE.

Usage Guidelines

The WARN field might contain different information depending on the type of session-related event.

- If the password aging feature has not been enabled (or the feature is enabled but the password is not close to expiring):

  /*USER <UID> LOGGED IN <IP/SERIAL PORT*/

- If the forced password feature is enforced and the user is logging in for the first time (or the password has expired):

  /*PLEASE CHANGE PASSWORD BEFORE CONTINUING*/

- If a session is terminated for any reason (except a user timeout), the reason for the session termination is indicated in the WARN field.

Category

Security

Security

Retrieve

Output Format

```
   SID DATE TIME
A  ATAG REPT EVT SESSION
  “<AID>:<EXP>,<PCN>”
  “<WARN>”
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
A  100.100 REPT EVT SESSION
   "TCCP:YES,5-DAY"
   "/* USER TERRI LOGGED IN TO TCCP */"
;
```

Output Parameters

<AID>	Access identifier. Identifies the NE with which a session is established. AID is a string.
<EXP>	Indicates whether the password is alive (for example, no password updating is required at the moment), expired, or is about to expire. The parameter type is YES_NO, which indicates whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes
<PCN>	The number of days still remaining before the existing password expires. PCN appears only if EXP=YES and one of the following conditions has been met: • The warning period has not been exhausted. • The user is a new user establishing a session for the first time and the forced password change policy has been activated. PCN is a string.
<WARN>	Free format text containing additional information about the security event. WARN is a string.

17.18 REPT EVT SYNCN

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Report Event Synchronization (REPT EVT SYNCN) message reports the occurrence of a nonalarmed event against a synchronization entity.

Usage Guidelines

None

Category

Synchronization

Security

Retrieve

Output Format

```
   SID DATE TIME
A  ATAG REPT EVT SYNCN
   "<AID>:<CONDTYPE>,[<CONDEFF>],,,,,,,:[<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

<AID>	Access identifier from the "25.28 SYNC_REF" section on page 25-47. Identifies a synchronization reference with alarm condition.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions.
<CONDEFF>	The effect of the event on the condition of the NE. The parameter type is COND_EFF, which is the state of the condition upon the affected unit.
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
<DESC>	(Optional) Condition description.
<AIDDET>	(Optional) AIDDET uses the same addressing rules as the AID, but specifies AID type and additional details about the entity being managed. The parameter type is EQPT_TYPE, which is the type of equipment being provisioned into a slot.
• 32DMX-L	32 channels demultiplexer unit for L-band
• 32WSS-L	32 channels wavelength switch selector unit for L-band
• AD-1B	Optical Add/Drop Multiplexer (OADM) 1 Band Filter
• AD-1C	Optical Add/Drop Multiplexer (OADM) 1 Channel Filter
• AD-2C	Optical Add/Drop Multiplexer (OADM) 2 Channels Filter
• AD-4B	Optical Add/Drop Multiplexer (OADM) 4 Bands Filter
• AD-4C	Optical Add/Drop Multiplexer (OADM) 4 Channels Filter
• AICI	The AIC-I 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 CE-100T card on the ONS 15454 or ONS 15310-CL
• CE-1000-4	4-port GIGE mapper card on the ONS 15454
• CRFT-TMG	Craft Timing
• CTX2500	ONS 15310-MA cross-connect card
• CXC	ONS 15600 cross-connect card
• DCC	The data communications channel

• DMX-32	Optical Demultiplexer (DMX) 32 Channels
• DS1-14	A 14-port interface card supporting DS1 facilities
• DS1-28/DS3-EC1-3	ONS 15310-MA DS1 and DS3/EC1 card
• DS1-84/DS3-3	ONS 15310-MA DS1/DS3 card
• 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 1000BaseT Ethernet facilities
• E100T-12	A 12-port interface card supporting 100BaseT Ethernet facilities
• E100T-4	A 4-port interface card supporting 100BaseT Ethernet facilities (ONS 15327)
• 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)
• FMEC_DB	FMEC card
• FMEC_DB_DS1I	FMEC card
• FTA	The fan tray of the network element (NE)
• FTA1	The fan tray 1 of the NE
• FTA2	The fan tray 2 of the NE
• G1K-4	A 4-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 ML-100T card (ONS 15310-CL)
• MMU	Multiring mesh upgrade unit
• MS-ISC-100T	Fast Ethernet switch card used for internal shelf connection
• MUX-32	Optical Multiplexer (MUX) 32 Channels
• MXP-2.5G-10G	10G (4 * 2.5G) Muxponder Card
• MXP-MR-10DME	10 Gbps datamux with enhanced FEC

• OC12	An interface card that supports one or more OC-12 (622 Mbps) optical facilities
• OC12-327	OC12 card (ONS 15327)
• OC12-4	A four-port OC12 card
• OC12-IR-1	An interface card that supports one intermediate-range OC-12 (622 Mbps) optical facilities
• OC12-LR-1	An interface card that supports one long-range OC-12 (622 Mbps) optical facilities
• OC12-SR-1	An interface card that supports one short-range OC-12 (622 Mbps) optical facilities
• OC192-4	4-port OC-192 card (ONS 15600)
• OC192-LR-1	An interface card that supports one or more OC-192 optical facilities
• OC192-XFP	OC192 XFP
• OC3	An interface card that supports multiple OC-3 (155 Mbps) optical facilities
• OC3-327	ONS 15327 OC3 card
• OC3-IR-4	An interface card that supports four intermediate-range OC-3 (155 Mbps) optical facilities
• OC3-SR-4	An interface card that supports four short-range OC-3 (155 Mbps) optical facilities
• OC3ATM-IR-6	An interface card that supports six intermediate-range OC-3 (155 Mbps) 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 (155 Mbps) POS optical facilities
• OC48	An interface card that supports one or more OC-48 optical facilities
• OC48-327	ONS 15327 OC-48 card
• OC48-AS-1	An interface card that supports one short-range OC-48 (10 Gbps) optical facilities that can be provisioned in any input/output (I/O) slot
• OC48-ELR-1	An interface card that supports one short-range OC-48 (2.5 Gbps) optical facility
• OC48-IR-1	An interface card that supports one intermediate-range OC-48 (10 Gbps) optical facility
• OC48-LR-1	An interface card that supports one long-range OC-48 (10 Gbps) optical facility
• OC48-SR-1	An interface card that supports one short-range OC-48 (10 Gbps) optical facilities
• OC-48_16	16-port OC48 card (ONS 15600)
• OPT-AMP-L	Optical preamplifier unit for L-Band
• OPT-BST	Optical booster amplifier
• OPT-BST-L	Optical booster unit for L-Band
• OPT-PRE	Optical preamplifier

• OSC-CSM	Optical Service Channel (OSC) with Combiner/Splitter Module (SCM)
• OSCM	Optical Service Channel (OSC) Module
• PIM-4	Pluggable interface module with 4 pluggable port module (PPM) slots
• PPM-1	Pluggable port module with 1-port Small Form-factor Pluggable (SFP) module
• SHELF	Shelf entity
• SSXC	Cross-connect card (ONS 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	Multirate 2.5G Unprotected
• TXPP-MR-2.5G	Multirate 2.5G Protected
• UNKNOWN	Unknown equipment type
• UNPROVISIONED	Unprovisioned equipment type
• XCVT	A Cross-Connect card
• XC10G	A Cross-Connect card
• XCVXL-10G	XCVXL 10 G card
• XCVXL-2.5G	XCVXL 2.5 G 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

17.19 REPT PM <MOD2>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Report Performance Monitoring for 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, or VT2 (REPT PM <MOD2>) message reports autonomous monitoring statistics as a result of the schedule created by SCHED-PMREPT.

Usage Guidelines See Table 27-1 on page 27-1 for supported modifiers by platform.

Category Performance

Security Retrieve

Output Format

```
   SID DATE TIME
A  ATAG REPT PM <MOD2>
   "<AID>:<MONTYPE>,<MONVAL>,<VLDTY>,<LOCN>,<DIRN>,<TMPER>,<MONDAT>,
   <MONTM>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
A  100  REPT PM 10GFC
   "FAC-3-1:CVL,10,PRTL,NEND,BTH,15-MIN,05-25,14-46"
;
```

Output Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1.
<MONTYPE>	Monitored type. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• BBE-PM	OTN—Background Block Errors—Path Monitor Point
• BBE-SM	OTN—Background Block Errors—Section Monitor Point
• BBER-PM	OTN—Background Block Error Ratio—Path Monitor Point expressed as one tenth of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A—Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B—Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor point expressed as one tenth of a percentage

• ESR-SM	Errored Seconds Ratio—Section monitor point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including frame check sequence [FCS] octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High-Order Path Negative Pointer Justification Count
• HP-NPJC-PGEN	High-Order Path, Negative Pointer Justification Count
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio

• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload cyclic redundancy check (CRC) errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in microA
• LBCL-MAX	Maximum Laser Bias current in microA
• LBCL-MIN	Minimum Laser Bias current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds—A
• LP-ESB	Low-Order Path Errored Seconds—B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored

• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OPR-AVG	Average Receive Power in tenths of a microW
• OPR-MAX	Maximum Receive Power in tenths of a microW
• OPR-MIN	Minimum Receive Power in tenths of a microW
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in tenths of a microW
• OPT-MAX	Maximum Transmit Power in tenths of a microW
• OPT-MIN	Minimum Transmit Power in tenths of a microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	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/Alarm Indication Signal (SEF/AIS) Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path

• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	Forward Error Correction (FEC)—Uncorrectable Words
• VPC	Valid Packet Count
<MONVAL>	The value to which the register identified by MONTYPE is to be initialized to or the measured value of a monitored parameter. The value is in the form of numeric counts or rates. MONVAL is a string.
<VLDTY>	Indicates whether the information for the specified time period was accumulated over the entire time period or a portion of that time period. Validity indicator for the reported PM data. The parameter type is VALIDITY, which is the response validity.
• COMPL	Complete response
• PRTL	Partial response
<LOCN>	Location associated with a particular command in reference to the entity identified by the AID. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	Direction relative to the entity identified by the AID. Direction of PM relative to the entity identified by the AID. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
• TRMT	Transmit direction only
<TMPER>	Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24 hours. For SONET PM data only one day of history data is available. For RMON managed PM data seven days of history data are available.

• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.
<MONDAT>	The beginning date of the PM or storage register period specified in TMPER. The format is MM-DD. MONDAT is a string.
<MONTM>	The beginning time of day of the PM or storage register period specified in TMPER. The format is HH-MM. MONTM is a string.

17.20 REPT SW

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Report Switch (REPT SW) message reports the autonomous switching of a unit in a duplex equipment pair to the standby state and its mate unit to the active state. An automatic report for the occurrence or clearance of an alarm or event that triggers the switch might be associated with the message.

Usage Guidelines None

Category Protection

Security Retrieve

Output Format

```
   SID DATE TIME
A  ATAG REPT SW
   “<ACTID>,<STDBYID>”
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
A  100.100 REPT SW
   “SLOT-8,SLOT-10”
;
```

Output Parameters

<ACTID>	Identifies the equipment unit from the "25.14 EQPT" section on page 25-31 that was placed in the active state. Parameter grouping cannot be used with this parameter.
<STDBYID>	Identifies the equipment unit from the "25.14 EQPT" section on page 25-31 that was placed in the standby state. Parameter grouping cannot be used with this parameter.

CHAPTER 18

RLS Commands

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 release (RLS) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

18.1 RLS-EXT-CONT

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Release External Control (RLS-EXT-CONT) command releases a forced contact state and returns the control of the contact to an AUTOMATIC control state. In AUTOMATIC control state, the contact can be opened or closed depending on triggers that might be provisioned in the network element (NE). Therefore, issuing a RLS might not produce any contact state change.

Usage Guidelines

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.

Note

- The duration is not supported; it defaults to CONTS.
- In an automatic state, the contact could be opened or closed depending on the provisioned trigger. Therefore, issuing an OPR-EXT-CONT command followed by an RLS-EXT-CONT command might not produce any contact state change.
- The RLS-EXT-CONT is not allowed during the MNTRY duration. The command is allowed for the CONTS duration. The length of MNTRY duration is set to be 2 seconds.
- RLS-EXT-CONT cannot change the contact state to Automatic if the existing state is Manual Open.

Category Environment

Security Maintenance

Input Format RLS-EXT-CONT:[<TID>]:<AID>:<CTAG>[::,];

Input Example RLS-EXT-CONT:CISCO:ENV-OUT-2:123;

Input Parameters

<AID>	Access identifier from the "25.13 ENV" section on page 25-30. Identifies the external control being released.

18.2 RLS-LASER-OTS

(Cisco ONS 15454) The Release Laser Optical Transport Section (RLS-LASER-OTS) command instructs a laser to be switched off.

Usage Guidelines None

Category DWDM

Security Maintenance

Input Format RLS-LASER-OTS:[<TID>]:<AID>:<CTAG>;

Input Example RLS-LASER-OTS::LINE-5-2-TX:3;

Input Parameters

<AID>	Access identifier from the "25.17 LINE" section on page 25-37. Identifies the external control being released.

18.3 RLS-LPBK-<MOD2>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Release Loopback for 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, and VT2 (RLS-LPBK-<MOD2>) command releases a signal loopback on a multiservice or a cross-connect card.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Note

- 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.
- The optional LPBKTYPE field defaults to the current existing loopback type.
- The TERMINAL loopback type is supported on the DS1 path of DS3XM cards.
- FEAC loopbacks can be released by specifying LINE as the loopback type and FEND as the location.
- FEAC loopbacks on the DS1 interface of a DS3XM card can be applied only if a Virtual Tributary (VT) connection has been created on it. An attempt to operate or release FEAC loopbacks in the absence of a VT connection will result in an error message.
- Only the following MOD2 fields are supported in this release: DS1 EC1, G1000, FSTE, OC12, OC192, OC3, OC48, OCH, T1, T3, STS1, STS12C, STS192C, STS24C, STS3C, STS36C, STS48C, STS6C, STS9C, E1, 1GFC, 2GFC, 4GFC, 10GFC, 1GFICON, 2GFICON, 4GFICON, GIGE, 10GIGE, ESCON, STS18C, DV6000, ETRCLO, ISCCOMPAT, ISC3PEER1G, ISC3PEER2R, PASSTHRU, ISC3PEER2G.

Category

Troubleshooting and Test Access

Security

Maintenance

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

<SRC>	Source access identifier from the "25.1 ALL" section on page 25-1. 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. The parameter type is LOCATION, which is the location where the action is to take place.

• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<LPBKTYPE>	Type of loopback signal. The parameter type is LPBK_TYPE, which indicates the type of loopback that is to be operated or released.
• CRS	Path level loopback which is established at the cross-connect matrix level (the XCVT/XC10G card). A synchronous transport signal (STS)-level cross-connect loopback causes a path alarm indication signal (AIS-P) to be sent in 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.
• 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.

18.4 RLS-PROTNSW-<MOD2DWDMPAYLOAD>

(Cisco ONS 15454) The Release Protection Switch for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, HDTV, ISC1, ISC3, or PASSTHRU (RLS-PROTNSW-<MOD2DWDMPAYLOAD>) command releases a Y-cable protection switch on client facilities.

Usage Guidelines

None

Category

DWDM

Security

Maintenance

Input Format

RLS-PROTNSW-<MOD2DWDMPAYLOAD>:[<TID>]:<SRC>:<CTAG>[::];

Input Example

RLS-PROTNSW-HDTV:CISCO:FAC-1-1-1:100;

Input Parameters

<SRC>	Source access identifier from the "25.15 FACILITY" section on page 25-33.

18.5 RLS-PROTNSW-<OCN_TYPE>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Release Protection Switch for OC3, OC12, OC48, or OC192 (RLS-PROTNSW-<OCN_TYPE>) command releases a SONET line protection switch request.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

The release of a protection switch request is applicable only to the OPR-PROTNSW protection switch commands, which are the user-initiated switch protection commands.

The following actions will return error messages:

- This command is not used for the common control (TCC2/TCC2P or XCVT/XC10G) cards. Sending a command on a common control card will return an IIAC (Input, Invalid Access Identifier) error message. To query the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
- Sending this command to electrical cards will return an IIAC (Input, Invalid Access Identifier) error message. For electrical card switching, use the ALW-SWTOPROTN/SWTOWKG-EQPT and INH-SWTOPROTN/SWTOWKG-EQPT commands.
- Sending this command to query on a card that is not in a protection group will return the SNVS (Status, Not in Valid State) error message.
- Sending this command to a working card that is failed or missing will return the SWFA (Status, Working unit Failed) error message.
- Sending this command to a protect card that is failed or missing will return the SPFA (Status, Protection unit Failed) error message.
- Sending this command to a card that is not in protection will return the SNPR (Status, Not in Protection State) error message.
- Sending this command to an OC-N line that is already in clear mode will return a SAMS (Already in Clear Maintenance State) error message.

Note

- To get the protection switching state (manual, lockout, forced), use the RTRV-COND-ALL or RTRV-ALM-ALL command.
- DIRN is an optional parameter. A NULL value defaults to BTH for a bidirectional line switched ring (BLSR), BTH for a 1+1 bidirectional protection group, and RCV for 1+1 unidirectional protection group.

  DIRN follows these rules: TRMT will always fail for any kind of protection groups. For two-fiber and four-fiber BLSR protection groups, both the RCV and TRMT directions will fail.
- DIRN is applicable for both 1+1 and BLSR protection groups. OPR-PROTNSW applies to a BLSR span/ring as shown by the following command, which instructs the NE to release a line protection switch request between a working line and a protection line:

  RLS-PROTNSW-OC48::FAC-5-1:A::BTH;

Category

Protection

Security Maintenance

Input Format RLS-PROTNSW-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[::<DIRECTION>];

Input Example RLS-PROTNSW-OC48:PETALUMA:FAC-6-1:209::BTH;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. Identifies the facility in the NE to which the switch request is directed.
<DIRECTION>	Direction. Defaults to RCV. The parameter type is DIRECTION (transmit and receive direction)
• BTH	Both transmit and receive directions
• RCV	Receive direction only
• TRMT	Transmit direction only

18.6 RLS-PROTNSW-<PATH>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Release Protection Switch for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VT1, or VT2 (RLS-PROTNSW-<PATH>) 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.

Usage Guidelines See Table 27-1 on page 27-1 for supported modifiers by platform.

Note

- This command applies to path protection configuration only.
- The VTAID should be the working or protect AID only.
- If sending this command on the drop AID, a DENY (Invalid AID, should use working/protect AID) message will be returned.
- To get the protection switching state (manual, lockout, forced), use the RTRV-COND-ALL or RTRV-ALM-ALL command.

Category Protection

Security Maintenance

Input Format RLS-PROTNSW-<PATH>:[<TID>]:<SRC>:<CTAG>[::];

Input Example RLS-PROTNSW-STS1:CISCO:STS-2-1-1:123;

Input Parameters

MSRC>	Source access identifier from the "25.10 CrossConnectId" section on page 25-20.

18.7 RLS-PROTNSW-OCH

(Cisco ONS 15454) The Release Protection Switch Optical Channel (RLS-PROTNSW-OCH) command releases the protection switch on a TXPP_MR_2.5G card.

Usage Guidelines None

Category DWDM

Security Maintenance

Input Format RLS-PROTNSW-OCH:[<TID>]:<AID>:<CTAG>;

Input Example RLS-PROTNSW-OCH:VA454-22:CHAN-2-2:1;

Input Parameters

<AID>	Access identifier from the "25.8 CHANNEL" section on page 25-18.

18.8 RLS-SYNCNSW

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Release Synchronization Switch (RLS-SYNCNSW) command releases the previous synchronization reference provided by the OPR-SYNCNSW command.

Usage Guidelines In a nonrevertive system, the use of the RLS-SYNCNSW command might not be appropriate. All the switching between synchronization references should be initiated with the OPR-SYNCNSW command.

When a switch is released, the MANSWTOPRI (Manual Switch to Primary Reference or Secondary...) or FRDCSWTOPRI (Forced Switch to Primary Reference or Secondary...) minor alarm will be cleared.

Category Synchronization

Security Maintenance

Input Format RLS-SYNCNSW:[<TID>]:[<AID>]:<CTAG>;

Input Example RLS-SYNCNSW:CISCO:SYNC-NE:3;

Input Parameters

<AID>	Access identifier from the "25.28 SYNC_REF" section on page 25-47 Defaults to SYNC-NE.

CHAPTER 19

RMV Commands

This chapter provides remove (RMV) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

19.1 RMV-<MOD2>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The 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, or VT2 (RMV-<MOD2>) command removes a facility from service.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Category

Ports

Security

Maintenance

Input Format

RMV-<MOD2>:[<TID>]:<AID>:<CTAG>[::];

Input Example

RMV-EC1:CISCO:FAC-1-1:1;

Input Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1

19.2 RMV-EQPT

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Remove Equipment (RMV-EQPT) command removes equipment from the In Service (IS) state and places it into the Maintenance (MT) state.

Usage Guidelines This command is only applicable to equipment that is in transition from the IS state to the MT state.

Category Equipment

Security Maintenance

Input Format RMV-EQPT:[<TID>]:<AID>:<CTAG>[::];

Input Example RMV-EQPT:CISCO:SLOT-1:1;

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31.

CHAPTER 20

RST Commands

This chapter provides restore (RST) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

20.1 RST-<MOD2>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The 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, or VT2 (RST-<MOD2>) command provisions a facility in service.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Note This command can only be executed when the port is in the Out of Service and Maintenance (OOS,MT) state.

Category

Ports

Security

Maintenance

Input Format

RST-<MOD2>:[<TID>]:<AID>:<CTAG>::::[<PST>[,<SST>]];

Input Example

RST-EC1:CISCO:FAC-1-1:1::::IS,AINS;

Input Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1.
<PST>	Primary state. Defaults to IS. The parameter type is PST, which indicates the current overall service condition of an entity.

• IS	In service
• OOS	Out of service
<SST>	Secondary state. Defaults to AINS. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

20.2 RST-EQPT

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Restore Equipment (RST-EQPT) command provisions equipment into the In Service (IS) state from the Maintenance (MT) state.

Usage Guidelines

This command is only applicable to equipment that is in transition from the MT state to the IS state.

Category

Equipment

Security

Maintenance

Input Format

RST-EQPT:[<TID>]:<AID>:<CTAG>[::];

Input Example

RST-EQPT:CISCO:SLOT-1:1;

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31.

CHAPTER 21

RTRV Commands

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 retrieve (RTRV) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

21.1 RTRV-<MOD1FCPAYLOAD>

(Cisco ONS 15454) The Retrieve 1GFC or 2GFC (RTRV-<MOD1FCPAYLOAD>) command retrieves the attributes related with the Fibre Channel port.

Usage Guidelines See Table 27-1 on page 27-1 for supported modifiers by platform.

Category Ports

Security Retrieve

Input Format RTRV-<MOD1FCPAYLOAD>:[<TID>]:<AID>:<CTAG>[::::];

Input Example RTRV-1GFC:CISCO:FAC-6-1:888;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. Must not be null.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:,,[<ROLE>],[<STATUS>]:LINKRATE=<LINKRATE>,LINKSTATE=<LINKSTATE>,
   [LINKRCVRY=<LINKRCVRY>],[DISTEXTN=<DISTEXTN>],
   [LINKCREDITS=<LINKCREDITS>],[MFS=<MFS>],[ENCAP=<ENCAP>],[NAME=<NAME>],
   [SOAK=<SOAK>],[SOAKLEFT=<SOAKLEFT>],[FREQ=<FREQ>],[LOSSB=<LOSSB>]:
   <PST_PSTQ>,[<SST>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-1-1:,,WORK,ACT:LINKRATE=1GFC,LINKSTATE=UP,LINKRCVRY=Y,
   DISTEXTN=NONE,LINKCREDITS=0,MFS=2148,ENCAP=GFP-T,
   NAME=\"FC PORT\",SOAK=32,SOAKLEFT=\"12-25\",FREQ=1550,
   LOSSB=LR-1:OOS-MA,MT"
;
```

Output Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<ROLE>	(Optional) The port role in Y-cable protection (WORK or PROT). The parameter type is SIDE, which is the role the unit is playing in the protection group
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	(Optional) A port status in Y-cable protection (ACT or STBY). The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<LINKRATE>	The actual rate running on the Fibre Channel port. It can differ from the payload type provisioned. The parameter type is LINKRATE, which is the link rate on a Fibre Channel port.
• 1GFC	The rate is 1 G Fibre Channel.
• 1GFICON	The rate is 1 G FICON.
• 2GFC	The rate is 2 G Fibre Channel.
• 2GFICON	The rate is 2 G FICON.
• UNKNOWN	The rate is unknown.
• UNPLUGGED	The Small Form-factor Pluggable (SFP) is not plugged into the Fibre Channel port, so the link rate cannot be detected.
<LINKSTATE>	Link state. The parameter type is DIRN, which specifies the discriminating level for the requested monitored parameter.
• DN	Monitored parameter with values equal to or greater than the level of LEV will be reported.

• UP	Monitored parameter with values equal or less than the value of LEV will be reported.
<LINKRCVRY>	Link recovery. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<DISTEXTN>	(Optional) Distance extension. The parameter type is DISTANCE_EXTENSION (distance extension).
• B2B	Buffer to buffer flow control
• NONE	No distance extension
<LINKCREDITS>	(Optional) Number of link credits. LINKCREDITS is an integer.
<MFS>	(Optional) Maximum frame size. MFS is an integer.
<ENCAP>	(Optional) Frame encapsulation type. The parameter type is ENCAP (frame encapsulation type).
• GFP_F	Generic framing procedure (GFP) frame mode
• GFP_T	GFP transparent mode
• HDLC	High-level data link control (HDLC) frame mode
• HDLC_LEX	HDLC LAN extension frame mode
• HDLC_X86	HDLC X.86 frame mode
<NAME>	(Optional) Identifies the port name. NAME is a string.
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer.
<SOAKLEFT>	(Optional) Time remaining for the transition from OOS-AINS to IS measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. Rules for <SOAKLEFT> are as follows: • When the port is in OOS, OOS_MT or IS state, the parameter will not appear. • When the port is in OOS_AINS state but the countdown has not started due to a fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in OOS_AINS state and the countdown has started, the value will be shown in HH-MM format.
<FREQ>	(Optional) Parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73

• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52

• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83

• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88

• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	(Optional) Parameter type is REACH (reach values).
• AUTOPROV	Autoprovisioning

• CX	Reach CX
• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• VX	Reach VX
• ZX	Reach ZX
<PST_PSTQ>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ).
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SST>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.2 RTRV-<MOD1FICONPAYLOAD>

(Cisco ONS 15454) The Retrieve 1GFICON or 2GFICON (RTRV-<MOD1FICONPAYLOAD>) command returns Fibre Channel-specific settings for ports that have been configured to carry FICON traffic using the ENT-FICON command.

Usage Guidelines

The MXPP_MR_2.5G card only supports the GFP-T frame type.

See Table 27-1 on page 27-1 for supported modifiers by platform.

Category

Ports

Security

Retrieve

Input Format

RTRV-<MOD1FICONPAYLOAD>:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-1GFICON:CISCO:FAC-1-1:123;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. Must not be null.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:,,[<ROLE>],[<STATUS>]:[LINKRATE=<LINKRATE>],[LINKSTATE=<LINKSTATE>],
   [LINKRCVRY=<LINKRCVRY>],[DISTEXTN=<DISTEXTN>],
   [LINKCREDITS=<LINKCREDITS>],[MFS=<MFS>],[ENCAP=<ENCAP>],[NAME=<NAME>],
   [SOAK=<SOAK>],[SOAKLEFT=<SOAKLEFT>],[FREQ=<FREQ>],[LOSSB=<LOSSB>]:
   <PST_PSTQ>,<SST>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-1-1:,,WORK,ACT:LINKRATE=1GFICON,LINKSTATE=UP,LINKRCVRY=Y,
   DISTEXTN=NONE,LINKCREDITS=0,MFS=2148,ENCAP=GFP-T,NAME=\"FC PORT\",
   SOAK=32,SOAKLEFT=\"12-25\",FREQ=1550,LOSSB=LR-1:OOS-MA,MT"
;
```

Output Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<ROLE>	(Optional) The port role in Y-cable protection (WORK or PROT). The parameter type is SIDE, which is the role that the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	(Optional) A port status in Y-cable protection (ACT or STBY). The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<LINKRATE>	The actual rate running on the Fibre Channel port. It can differ from the payload type provisioned. The parameter type is LINKRATE, which is the link rate on a Fibre Channel port.
• 1GFC	The rate is 1 G Fibre Channel.
• 1GFICON	The rate is 1 G FICON.
• 2GFC	The rate is 2 G Fibre Channel.
• 2GFICON	The rate is 2 G FICON.
• UNKNOWN	The rate is unknown.
• UNPLUGGED	The SFP is not plugged into the Fibre Channel port so the link rate cannot be detected.
<LINKSTATE>	Link state. The parameter type is DIRN, which specifies the discriminating level for the requested monitored parameter.
• DN	Monitored parameter with values equal to or greater than the level of LEV will be reported.
• UP	Monitored parameter with values equal or less than the value of LEV will be reported.
<LINKRCVRY>	Link recovery. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<DISTEXTN>	(Optional) Distance extension. The parameter type is DISTANCE_EXTENSION (distance extension).
• B2B	Buffer to buffer flow control
• NONE	No distance extension
<LINKCREDITS>	(Optional) Number of link credits. LINKCREDITS is an integer.
<MFS>	(Optional) Maximum frame size. MFS is an integer.
<ENCAP>	(Optional) Frame encapsulation type. The parameter type is ENCAP (frame encapsulation type).
• GFP_F	GFP frame mode
• GFP_T	GFP transparent mode
• HDLC	HDLC frame mode

• HDLC_LEX	HDLC LAN extension frame mode
• HDLC_X86	HDLC X.86 frame mode
<NAME>	(Optional) Identifies the port name. NAME is a string.
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer.
<SOAKLEFT>	(Optional) Time remaining for the transition from OOS-AINS to IS measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. Rules for <SOAKLEFT> are as follows: • When the port is in OOS, OOS_MT, or IS state, the parameter will not appear. • When the port is in OOS_AINS state but the countdown has not started due to a fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in OOS_AINS state and the countdown has started, the value will be shown in HH-MM format.
<FREQ>	(Optional) Parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537

• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52

• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44

• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22

• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	(Optional) Parameter type is REACH (reach values).
• AUTOPROV	Autoprovisioning
• CX	Reach CX
• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR

• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• VX	Reach VX
• ZX	Reach ZX
<PST_PSTQ>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ).
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SST>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.3 RTRV-<MOD2DWDMPAYLOAD>

(Cisco ONS 15454) The Retrieve 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, HDTV, ISC1, ISC3, or PASSTHRU (RTRV-<MOD2DWDMPAYLOAD>) command retrieves the configuration parameter of a dense wavelength division multiplexing (DWDM) client.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Category

DWDM

Security

Retrieve

Input Format

RTRV-<MOD2DWDMPAYLOAD>:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-HDTV:MILAN:FAC-1-1:100;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. Must not be null.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AIDUNIONID>,<AIDTYPE>:,,[<ROLE>],[<STATUS>]:[NAME=<NAME>],[LBCL=<LBCL>],
[OPT=<OPT>],[OPR=<OPR>],[FREQ=<FREQ>],[LOSSB=<LOSSB>]:<PSTPSTQ>,[<SST>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"FAC-1-1-1,HDTV:,,WORK,ACT:NAME=\"NY PORT\",LBCL=10.0,OPT=10.0,OPR=10.0,
FREQ=1550,LOSSB=LR-1:OOS-AU,AINS"
;

Output Parameters

<AIDUNIONID>	Access identifier from the "25.2 AidUnionId" section on page 25-11
<AIDTYPE>	A type of access identifier. The parameter type is MOD2DWDMPAYLOAD, which contains the payload types applicable to DWDM ports.
• 10GFC	10-Gigabit Fibre Channel payload
• 10GIGE	10-Gigabit Ethernet
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity (FICON) payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit FICON payload
• D1VIDEO	D1Video payload
• DV6000	DV6000 payload
• ETRCLO	ETR_CLO payload
• GIGE	Gigabit Ethernet payload
• HDTV	High definition television (HDTV) payload
• ISC1	ISC1 payload
• ISC3	ISC3 payload
• PASSTHRU	Any pass-through (2R) payload
<ROLE>	(Optional) The port role in Y-cable protection (WORK or PROT). The parameter type is SIDE, which is the role the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.

<STATUS>	(Optional) A port status in Y-cable protection (ACT or STBY). The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<NAME>	(Optional) Identifies the port name. NAME is a string.
<LBCL>	(Optional) Displays the current value of the laser current. LBCL is a float.
<OPT>	(Optional) Displays the current value of the transmitted optical power. OPT is a float.
<OPR>	(Optional) Displays the current value of the received optical power. OPR is a float.
<FREQ>	(Optional) Parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19

• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73

• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69

• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49

• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	(Optional) Parameter type is REACH (reach values).
• AUTOPROV	Autoprovisioning
• CX	Reach CX
• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T

• VX	Reach VX
• ZX	Reach ZX
<PST_PSTQ>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ).
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SST>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.4 RTRV-<MOD_RING>

(Cisco ONS 15454, ONS 15327, ONS 15600) The Retrieve Bidirectional Line Switched Ring (RTRV-<MOD_RING>) command retrieves the bidirectional line switched ring (BLSR) information of the NE. A two-fiber or four-fiber BLSR can be retrieved.

Note Cisco ONS 15600 and ONS 15327 do not support four-fiber BLSR.

Usage Guidelines

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"

- The following actions will return error messages:
  - If the system fails on getting IOR, a SROF (Get IOR Failed) error message is returned.
  - If the AID is invalid, an IIAC (Invalid AID) error message is returned.
  - If the BLSR does not exist, a SRQN (BLSR Does Not Exist) error message is returned.

- Only ALL, NULL, BLSR-ALL, or BLSR-RINGID is allowed for this command.
- A NULL AID defaults to the AID ALL.
- The list AID format is supported.

Category

BLSR

Security

Retrieve

Input Format

RTRV-<MOD_RING>:[<TID>]:[<AID>]:<CTAG>[::::];

Input Example

RTRV-BLSR:PETALUMA:ALL:123;

Input Parameters

<AID>	Access identifier from the "25.3 AidUnionId1" section on page 25-16. Identifies the BLSR of the NE. Only ALL, null, or a list of BLSR-# is 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

<AID>	(Optional) Access identifier from the "25.3 AidUnionId1" section on page 25-16. Identifies the BLSR of the NE.
<RINGID>	(Optional) The BLSR ID of the NE. String of up to six characters. Valid characters are A-Z and 0-9.
<NODEID>	(Optional) The BLSR node ID of the NE. NODEID is a string and ranges from 0 to 31.
<MODE>	(Optional) Mode with which the command is to be implemented. Identifies the BLSR mode; either two-fiber or four-fiber. The 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. The 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. The parameter type is 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. The 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. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<EASTWORK>	East working facility. AID from the "25.15 FACILITY" section on page 25-33.
<WESTWORK>	West working facility. AID from the "25.15 FACILITY" section on page 25-33.
<EASTPROT>	East protecting facility. AID from the "25.15 FACILITY" section on page 25-33.
<WESTPROT>	West protecting facility. AID from the "25.15 FACILITY" section on page 25-33.

21.5 RTRV-<OCN_TYPE>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve OC3, OC12, OC48, or OC192 command retrieves the attributes (for example, service parameters) and the state of an OC-N facility.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Both RINGID and BLSRTYPE identify the OC-N port connected with a BLSR. These attributes are only presented for the OC-12, OC-48, and OC-192 ports within a BLSR connection. The RTRV-<MOD_RING> command with the AID BLSR-RINGID can provide more information about a BLSR.

Note This command does not show the WVLEN attribute if the OC-N port has a zero value.

UNI-C DCC provisioning notes:

- 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).
- UNI-C DCC termination cannot be deleted by the regular DCC deprovisioning command.
- 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.
- Deprovisioning UNI-C IF/IB IPCC will free up DCC termination automatically.
- The parameters ALSMODE, ALSRCINT, and ALSRCPW are only applicable for OC3-8, OC19,2 and OC48ELR cards.
- SSMRCV will display the quality of the individual port.
- SSM selectable (ADMSSM) and synchronization messaging for output (SYNCMSGOUT) are not applicable to the ONS 15600.
- J0 Support (EXPTRC, TRC, TRCMODE and TRCFORMAT parameters) are supported by DWDM cards with an OC-n payload, the MRC-12 card, and the OC192-XFP card. J0 is not supported by OC3-8, OC-12, OC-48, OC-192, and other SONET optical cards.

Category

Ports

Security

Retrieve

Input Format

RTRV-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-OC48:PENNGROVE:FAC-6-1:236;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. 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>],
[SOAK=<SOAK>],[SOAKLEFT=<SOAKLEFT>],[SSMRCV=<SSMRCV>],[OSPF=<OSPF>],
[LDCC=<LDCC>],[NAME=<NAME>],[LBCL=<LBCL>],[OPT=<OPT>],[OPR=<OPR>],
[EXPTRC=<EXPTRC>],[TRC=<TRC>],[TRCMODE=<TRCMODE>],
[TRCFORMAT=<TRCFORMAT>],[ADMSSM=<ADMSSM>],
[SENDDUSFF=<SENDDUSFF>],[AISONLPBK=<AISONLPBK>],

[FREQ=<FREQ>],[LOSSB=<LOSSB>],[FOREIGNFEND=<FOREIGNFEND>],
[FOREIGNIPADDRESS=<FOREIGNIPADDRESS>],:<PSTPSTQ>,[<SSTQ>]”
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
“FAC-6-1:,,WORK,ACT:DCC=Y,AREA=10.92.63.1,TMGREF=N,SYNCMSG=N,SENDDUS=N,
PJMON=48,SFBER=1E-4,SDBER=1E-6,MODE=SONET,WVLEN=1310.00,RINGID=43,
BLSRTYPE=WESTWORK,MUX=E2,UNIC=Y,
SOAKLEFT=\"12-25\",SSMRCV=STU,OSPF=Y,LDCC=Y,NAME=\"OCN PORT\",LBCL=10.0,
OPT=10.0,OPR=10.0,EXPTRC=\"AAA\",TRC=\"AAA\",TRCMODE=MAN,
TRCFORMAT=16-BYTE,ADMSSM=PRS,SENDDUSFF=N,AISONLPBK=AIS_ON_LPBK_ALL,
FREQ=1550,LOSSB=LR-1,FOREIGNFEND=Y,
FOREIGNIPADDRESS=10.92.63.44,:OOS-AU,AINS”
;

Output Parameters

<AID>	Access identifier from the “25.15 FACILITY” section on page 25-33.
<ROLE>	(Optional) An OC-N port role. The parameter type is SIDE, which is the role the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	(Optional) An OC-N port status. The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<DCC>	(Optional) Indicates whether or not the Section data communications channel (DCC) is to be used. The parameter type is EXT_RING, which indicates whether the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<AREA>	(Optional) Area ID. Shows up only if the DCC is enabled. AREA is a string.
<TMGREF>	(Optional) The termination to be used, whether primary or secondary. Identifies if an OC-N port has a timing reference. Defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<SYNCMSG>	Synchronization status message. The parameter type is EXT_RING, which indicates whether the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.

• Y	The ring does support the extended K1/K2/K3 protocol.
<SENDDUS>	(Optional) The facility will send the DUS (Do not use for Synchronization) value in 0x0f bits pattern as the synchronization status message for that facility. Defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<PJMON>	(Optional) Identifies an OC-N port PJMON. PJMON is an integer. It defaults to 0 (zero). Set a valid STS number of the optical port. **Note** The PJMON number displayed in TL1 interface does not correspond to the PJVC4MON number in CTC, but instead corresponds to the STS number of the optical port.
<SFBER>	(Optional) An OC-N port signal failure threshold. Defaults to 1E-4. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	(Optional) An OC-N port signal degrade threshold. Defaults 1E-7. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<MODE>	(Optional) OC-N port mode. Defaults to SONET. The parameter type is OPTICAL_MODE, which is the facility's optical mode.
• SDH	SDH/ETSI optical mode using European/International format
• SONET	SONET/ANSI optical mode using the American format
<WVLEN>	(Optional) An OC-N port wavelength in nanometers. For example, WVLEN=1310.00 means it operates at 1310 nm in the DWDM application. WVLEN is a float.
<RINGID>	(Optional) The BLSR RINGID with which the port is connected. RINGID ranges from 0 to 9999. RINGID is an integer.
<BLSRTYPE>	(Optional) The BLSR type with which the port is connected. The parameter type is BLSR_TYPE, which is the BLSR type of an OC-N port.
• EASTPROT	The OC-N port is an east protecting port.
• EASTWORK	The OC-N port is an east working port.
• WESTPROT	The OC-N port is an west protecting port.
• WESTWORK	The OC-N port is an west working port.
<MUX>	(Optional) BLSR extension byte. The parameter type is MUX_TYPE, which is the BLSR extension byte.
• E2	E2 byte (orderwire)

• F1	F1 byte (user)
• K3	K3 byte
• Z2	Z2 byte
<UNIC>	(Optional) Indicates if the port connects to the UCP. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer.
<SOAKLEFT>	(Optional) Time remaining for the transition from OOS-AINS to IS measured in 1-minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. Rules for <SOAKLEFT> are as follows: • When the port is in OOS, OOS_MT, or IS state, the parameter will not appear. • When the port is in OOS_AINS but the countdown has not started due to a fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in OOS_AINS state and the countdown has started, the value will be shown in HH-MM format.
<SSMRCV>	(Optional) Displays the quality of the individual port. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not Use For Synchronization
• PRS	Primary Reference Source, Stratum 1 Traceable
• RES	Reserved For Network Synchronization Use
• SMC	SONET Minimum Clock Traceable
• ST2	Stratum 2 Traceable
• ST3	Stratum 3 Traceable
• ST3E	Stratum 3E Traceable
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<OSPF>	(Optional) The Open Shortest Path First protocol. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<LDCC>	(Optional) The Line DCC connection on the port. The parameter type is EXT_RING, which indicates if the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<NAME>	(Optional) Name. NAME is a string.

<LBCL>	(Optional) Displays the current value of the laser current. LBCL is a float.
<OPT>	(Optional) Displays the current value of the transmitted optical power. OPT is only displayed for DWDM cards. OPT is a float.
<OPR>	(Optional) Received optical power. OPR is a float.
<EXPTRC>	(Optional) Expected path trace content. EXPTRC is a string.
<TRC>	(Optional) Path trace message to be transmitted. TRC is a string.
<TRCMODE>	(Optional) Path trace mode. Applicable only to STS-level Paths in SONET. Defaults to the OFF mode. The parameter type is TRCMODE (trace mode).
• AUTO	Use the previously received path trace string as the expected string. Not applicable to MXP/TXP cards.
• AUTO-NO-AIS	Use the previously received path trace string as the expected string and do not turn on alarm indication signal (AIS) and remote defect indication (RDI) if TIM-P is detected.
• MAN	Use the provisioned expected string as the expected string.
• MAN-NO-AIS	Use the provisioned expected string as the expected string and do not turn on AIS and RDI if TIM-P is detected.
• OFF	Turn off path trace capability. Nothing will be reported.
<TRCFORMAT>	(Optional) Trace message size. The parameter type is TRCFORMAT (trace format).
• 1-BYTE	1-byte trace message
• 16-BYTE	16-byte trace message
• 64-BYTE	64-byte trace message
• Y	Enable an attribute.
<ADMSSM>	(Optional) SSM selectable value. Only displayed when SSM is disabled. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not Use For Synchronization
• PRS	Primary Reference Source, Stratum 1 Traceable
• RES	Reserved For Network Synchronization Use
• SMC	SONET Minimum Clock Traceable
• ST2	Stratum 2 Traceable
• ST3	Stratum 3 Traceable
• ST3E	Stratum 3E Traceable
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)

<SENDDUSFF>	(Optional) Indicates that the facility will send the DUS value in 0xff bits pattern as the synchronization status message for that facility. Defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<AISONLPBK>	(Optional) AIS on loopback. The parameter type is AIS_ON_LPBK, which indicates whether AIS is sent on a loopback.
• AIS_ONLPBK_FACILITY	AIS is sent on facility loopbacks.
• AIS_ON_LPBK_ALL	AIS is sent on all loopbacks.
• AIS_ON_LPBK_OFF	AIS is not sent on loopbacks.
• AIS_ON_LPBK_TERMINAL	AIS is sent on terminal loopbacks.
<FREQ>	(Optional) Parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19

• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73

• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69

• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49

• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	(Optional) Parameter type is REACH (reach values).
• AUTOPROV	Autoprovisioning
• CX	Reach CX
• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T

• VX	Reach VX
• ZX	Reach ZX
<FOREIGNFEND>	(Optional) Indicates whether the far-end NE on the DCC is a foreign NE. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<FOREIGNIPADDRESS>	(Optional) The IP address of the far-end NE on the DCC. Used only if FOREIGNFEND is Y. FOREIGNIPADDRESS is a string.
<PST_PSTQ>	Administrative state in the PST_PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ).
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.6 RTRV-<PATH>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VT1, or VT2 (RTRV-<PATH>) command retrieves the attributes associated with an STS/VT path.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Supported AIDs are: ALL, SLOT-N (N=1,2,...,ALL), and STS/VT-specific AIDs.

The SFBER, SDBER, RVRTV, RVTM, SWPDIP, HOLDOFFTIMER, and UPSRPTHSTATE parameters only apply to path protection configurations.

The path trace message is a 64 character string including the terminating CR (carriage return) and LF (line feed) that is transported in the J1 byte of the SONET STS Path overhead.

The EXPTRC indicates that the contents of the expected incoming path trace are provisioned by the user in the ED-STS_PATH command. The TRC indicates the contents of the outgoing path trace message. The INCTRC indicates the contents of the incoming path trace message.

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

When the expected string is queried under the OFF path trace mode, the expected string is a copy of the provisioned string or NULL. When an expected string is queried under the MANUAL path trace mode, the expected string is a copy of the user entered string. When an expected string is queried under the AUTO path trace mode, the expected string is a copy of the acquired received string or NULL if the string has not been acquired.

When the incoming string is queried under the OFF path trace mode, the incoming string is NULL. When an incoming string is queried under the MANUAL or AUTO path trace mode, the incoming string is a copy of the received string or NULL if the string has not been received.

J1 (EXPTRC) is implemented on the DS1/DS1N, DS3E/DS3NE, DS3XM, EC1, DS3/EC1-48, OC3, OC48AS, OC192, MRC-12, and OC192-XFP cards.

TRC and INCTRC are supported on DS1N, DS3NE, DS3/EC1-48, and DS3XM cards.

The following actions will result in error messages:

- If you send this command while BLSRPTHTYPE=PCA, whether there is a BLSR switch or not, the protection channel access (PCA) path J1/C2 data will be returned (if there is PCA circuit on the AID).
- Sending this command with an STS AID that does not have circuits and where no BLSR is switched on the STS will return an error message.

Note

- An optional input parameter, BLSRPTHTYPE, is introduced into this command to provide more options to retrieve the J1/C2 of a particular BLSR path. This field is valid only if the queried AID port has BLSR. The BLSRPTHTYPE defaults to the “non-pca” path type if the BLSR is switched, or defaults to all BLSR path types if there is no BLSR switching.
- An optional output parameter, BLSRPTHSTATE, is introduced into this command output. Each J1/C2 output data of this command will include the BLSR path state information.
- After BLSR switching, the J1/IPPM/C2 data can be retrieved over the protection path. J1 trace string, trace mode, or threshold is not allowed on the protection path.
- HOLDOFFTIMER is not specific to a path. Instead, it is applicable to the path protection selector.
- VT1.5 J2 path trace provisioning is supported on the DS3XM-12 card and the ONS 15454 CE-100T-8 card VT1.5 path using the ED-VT1, RTRV-VT1, and RTRV-PTHTRC-VT1 commands. The ONS 15310-CL CE-100T-8 card supports J2 path trace.
- 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.
- For the selector path on a BLSR, the SWPDIP path attribute is not editable and is always in the ON state.
- SFBER and SDBER are applied for the ONS 15310-CL and the ONS 15454 when the ONS 15454 has an XC-VXC-10G card.
- On the ONS 15310-MA, J2 path trace is supported on DS1 ports only. J2 path trace is not supported on ONS 15310-MA OCn ports and EC1 ports.

Category Paths

Security Retrieve

Input Format RTRV-<PATH>:[<TID>]:<AID>:<CTAG>[:::BLSRPTHTYPE=<BLSRPTHTYPE>][:];

Input Example RTRV-STS3C:FERNDALE:STS-2-1-4:238:::BLSRPTHTYPE=NON-PCA;

Input Parameters

<AID>	Access identifier from the "25.11 CrossConnectId1" section on page 25-24. Must not be null.
<BLSRPTHTYPE>	The BLSR path type only if the port is on the BLSR. No value or a null value defaults to NON-PCA. Applicable only to STS-level paths in SONET. The parameter type is BLSR_PTH_TYPE, which is the BLSR path type only if the port is on the BLSR.
• NON-PCA	The AID is on the working path, or the cross-connection card protection path.
• PCA	The AID is on the BLSR PCA path.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>::[LEVEL=<LEVEL>],[SFBER=<SFBER>],[SDBER=<SDBER>],[RVRTV=<RVRTV>],
   [RVTM=<RVTM>],[SWPDIP=<SWPDIP>],[HOLDOFFTIMER=<HOLDOFFTIMER>],
   [EXPTRC=<EXPTRC>],[TRC=<TRC>],[INCTRC=<INCTRC>],[TRCMODE=<TRCMODE>],
   [TRCFORMAT =<TRCFORMAT>],[TACC=<TACC>],[TAPTYPE=<TAPTYPE>],
   [UPSRPTHSTATE=<UPSRPTHSTATE>],[C2=<C2>],
   [BLSRPTHSTATE=<BLSRPTHSTATE>]:<PST_PSTQ>,[<SSTQ>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "STS-2-1-4::LEVEL=STS1,SFBER=1E-3,SDBER=1E-5,RVRTV=Y,RVTM=1.0,SWPDIP=Y,
   HOLDOFFTIMER=2000,EXPTRC="EXPTRCSTRING",TRC="TRCSTRING",
   INCTRC="INCTRCSTRING",TRCMODE=AUTO,TRCFORMAT=64-BYTE,TACC=8,
   TAPTYPE=DUAL,UPSRPTHSTATE=ACT,C2=0X04,
   BLSRPTHSTATE=PROTPTHACT:OOS-AU,AINS"
;
```

Output Parameters

<AID>	Access identifier from the "25.11 CrossConnectId1" section on page 25-24.
<LEVEL>	(Optional) The rate of the cross-connect. Indicates the rate of the cross-connected channel. Applicable only to the STS path in SONET. The parameter type is PATH, which is the modifier for path commands.
• STS1	Synchronous transport signal/module level 1 (51.84 Mbps)
• STS3C	Synchronous transport signal/module level 3 concatenated (155.52 Mbps)
• STS6C	Synchronous transport signal/module level 6 (311.04 Mbps)
• STS9C	Synchronous transport signal/module level 9 concatenated (466.56 Mbps)
• STS12C	Synchronous transport signal/module level 12 concatenated (622.08 Mbps)
• STS18C	Synchronous transport signal/module level 18 concatenated (933.12 Mbps)
• STS24C	Synchronous transport signal/module level 24 concatenated (1244.16 Mbps)
• STS36C	Synchronous transport signal/module level 36 concatenated (1866.24 Mbps)
• STS48C	Synchronous transport signal/module level 48 concatenated (2488.32 Mbps)
• STS192C	Synchronous transport signal/module level 192 concatenated (9953.28 Mbps)
<SFBER>	(Optional) An STS path signal failure threshold that only applies to path protection. Applicable only to STS-level paths in SONET. Defaults to 1E-4. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	(Optional) An STS path signal degrade threshold that only applies to path protection. Applicable only to STS-level paths in SONET. Defaults 1E-6. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.

<RVRTV>	Revertive mode. Only applies to path protection. The value Y indicates that 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. The 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. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<SWPDIP>	(Optional) Switch on PDI-P. Applicable only to STS-level paths in SONET. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<HOLDOFFTIMER>	(Optional) Hold off timer. HOLDOFFTIMER is an integer.
<EXPTRC>	(Optional) Expected path trace content. Indicates the expected path trace message (J1) contents. EXPTRC is any 64-character ASCII string, including the terminating CR (carriage return) and LF (line feed). Applicable to STS-level paths in SONET. Defaults to NULL when a path protection path is created. Supported on the CE-100T-8 card (ONS 15310-CL) provisioned in mapper mode. EXPTRC is a string.
<TRC>	(Optional) The path trace message to be transmitted. The trace byte (J1) continuously transmits a 64-byte, fixed length ASCII string, one byte at a time. A null value defaults to the NE transmitting 62 null characters (hex 00) and CR and LF. A null value defaults to the NE transmitting null characters (Hex 00). Applicable to STS-level paths in SONET. Applicable to VT-level paths for the DS3XM-12 card on the ONS 15454. Supported on the CE-100T-8 card (ONS 15310-CL) provisioned in mapper mode. TRC is a string.
<INCTRC>	(Optional) The incoming path trace message contents. INCTRC is any combination of 64 characters. Applicable only to STS-level paths in SONET (STSn). Defaults to null when a path protection is created. Supported on the CE-100T-8 card (ONS 15310-CL) provisioned in mapper mode. INCTRC is a string.
<TRCMODE>	(Optional) Path trace mode. Applicable only to STS-level paths in SONET (STSn). Defaults to OFF when a path protection path is created. Supported on the CE-100T-8 card (ONS 15310-CL) provisioned in mapper mode. The parameter type is TRCMODE (trace mode).
• AUTO	Use the previously received path trace string as the expected string (not applicable to MXP_2.5G_10G and TXP_MR_10G cards).
• AUTO-NO-AIS	Use the previously received path trace string as the expected string and do not turn on AIS and RDI if TIM-P detected.
• MAN	Use the provisioned expected string as the expected string.

• MAN-NO-AIS	Use the provisioned expected string as the expected string and do not turn on AIS and RDI if TIM-P detected.
• OFF	Turn off path trace capability. Nothing will be reported.
<TRCFORMAT>	(Optional) Trace message size. The parameter type is TRCFORMAT (trace format).
• 1-BYTE	1-byte trace message
• 16-BYTE	16-byte trace message
• 64-BYTE	64-byte trace message
• Y	Enable an attribute.
<TACC>	(Optional) Test access. Indicates whether the digroup being provisioned is to be used as a test access digroup. Defaults to N. Not applicable to the ONS 15310-CL.
<TAPTYPE>	(Optional) TAP type. Not applicable to the ONS 15310-CL. The parameter type is TAPTYPE, which is the test access point type
• DUAL	Dual FAD
• SINGLE	Single FAD
<UPSRPTHSTATE>	(Optional) Indicates whether a given AID is the working or standby path of a path protection cross-connect. The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<C2>	(Optional) The C2 byte hex code. Applicable only to STS-level paths in SONET (STSn). The parameter type is C2_BYTE, which is the C2 byte hex code.
• 0X00	Unequipped
• 0X01	Equipped Non-Specific payload
• 0X02	VT-Structured STS-1 synchronous payload envelope (SPE)
• 0X03	Locked VT Mode
• 0X04	Asynchronous Mapping for DS3
• 0X12	Asynchronous Mapping for DS4NA
• 0X13	Mapping for ATM
• 0X14	Mapping for DQDB
• 0X15	Asynchronous Mapping for FDDI
• 0X16	HDLC-Over-SONET Mapping
• 0XE1	VT-structured STS-1 SPE with 1VTx payload defect
• 0XE2	VT-structured STS-1 SPE with 2VTx payload defects
• 0XE3	VT-structured STS-1 SPE with 3VTx payload defects
• 0XE4	VT-structured STS-1 SPE with 4VTx payload defects
• 0XE5	VT-structured STS-1 SPE with 5VTx payload defects
• 0XE6	VT-structured STS-1 SPE with 6VTx payload defects
• 0XE7	VT-structured STS-1 SPE with 7VTx payload defects
• 0XE8	VT-structured STS-1 SPE with 8VTx payload defects

• 0XE9	VT-structured STS-1 SPE with 9VTx payload defects
• 0XEA	VT-structured STS-1 SPE with 10VTx payload defects
• 0XEB	VT-structured STS-1 SPE with 11VTx payload defects
• 0XEC	VT-structured STS-1 SPE with 12VTx payload defects
• 0XED	VT-structured STS-1 SPE with 13VTx payload defects
• 0XEE	VT-structured STS-1 SPE with 14VTx payload defects
• 0XEF	VT-structured STS-1 SPE with 15VTx payload defects
• 0XF0	VT-structured STS-1 SPE with 16VTx payload defects
• 0XF1	VT-structured STS-1 SPE with 17VTx payload defects
• 0XF2	VT-structured STS-1 SPE with 18VTx payload defects
• 0XF3	VT-structured STS-1 SPE with 19VTx payload defects
• 0XF4	VT-structured STS-1 SPE with 20VTx payload defects
• 0XF5	VT-structured STS-1 SPE with 21VTx payload defects
• 0XF6	VT-structured STS-1 SPE with 22VTx payload defects
• 0XF7	VT-structured STS-1 SPE with 23VTx payload defects
• 0XF8	VT-structured STS-1 SPE with 24VTx payload defects
• 0XF9	VT-structured STS-1 SPE with 25VTx payload defects
• 0XFA	VT-structured STS-1 SPE with 26VTx payload defects
• 0XFB	VT-structured STS-1 SPE with 27VTx payload defects
• 0XFC	VT-structured STS-1 SPE with 28VTx payload defects
• 0XFE	O.181 Test Signal (TSS1 to TSS3) Mapping
• 0XFF	Reserved, however, C2 is 0XFF if an AIS-L is being generated by an optical card or cross-connect downstream.
<BLSRPTHSTATE>	(Optional) The BLSR path state only if the port is on the BLSR. Applicable only to STS-level paths in SONET (STSn). The parameter type is BLSR_PTH_STATE, which is the BLSR path state only if the port is on the BLSR.
• PCAPTHACT	Indicates the BLSR is not switched and its PCA path is in the active state.
• PCAPTHSTB	Indicates the BLSR is switched and its PCA path is in the standby state.
• PROTPTHACT	Indicates the BLSR is switched and its protection path is in the active state.
• WKGPTHACT	Indicates the BLSR is not switched and its working path is in the active state.
• WKGPTHSTB	Indicates the BLSR is switched and its working path is in the standby state.
<PST_PSTQ>	Administrative state in the PST_PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ).
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management

<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.7 RTRV-10GIGE

(Cisco ONS 15454) The Retrieve 10GIGE (RTRV-10GIGE) command retrieves the 10 Gbps-specific parameters for a port that has been configured to support the Gigabit Ethernet payload with the ENT-10GIGE command.

Usage Guidelines

None

Category

Ports

Security

Retrieve

Input Format

RTRV-10GIGE:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-10GIGE:TID:FAC-1-1:100;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. Must not be null.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:,,[<ROLE>],[<STATUS>]:[NAME=<NAME>],[MACADDR=<MACADDR>],
   [LBCL=<LBCL>],[OPT=<OPT>],[OPR=<OPR>],[FREQ=<FREQ>],
   [LOSSB=<LOSSB>]:<PSTPSTQ>,[<SST>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-6-1:,,WORK,ACT:NAME=\"NY PORT\",MACADDR=00-0E-AA-BB-CC-FF,LBCL=10.0,
   OPT=10.0,OPR=10.0,FREQ=1550,LOSSB=SX:OOS-AU,AINS"
;
```

Output Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<ROLE>	(Optional) The port role in Y-cable protection (WORK or PROT). The parameter type is SIDE, which is the role the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	(Optional) A port status in Y-cable protection (ACT or STBY). The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<NAME>	(Optional) Port name. NAME is a string.
<MACADDR>	(Optional) The MAC address for the 10-Gigabit Ethernet payload. MACADDR is a string.
<LBCL>	(Optional) Displays the current value of the laser current. LBCL is a float.
<OPT>	(Optional) Displays the current value of the transmitted optical power. OPT is a float.
<OPR>	(Optional) Displays the current value of the received optical power. OPR is a float.
<FREQ>	(Optional) Parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68

• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51

• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89

• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99

• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	(Optional) The parameter type is REACH (reach values).
• AUTOPROV	Autoprovisioning
• CX	Reach CX
• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1

• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• VX	Reach VX
• ZX	Reach ZX
<PST_PSTQ>	Administrative state in the PST_PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ).
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.8 RTRV-ALM-<MOD2ALM>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Alarm for 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, or WLEN (RTRV-ALRM-<MOD2ALM>) command retrieves and sends the current status of alarm conditions. The alarm condition or severity to be retrieved can be specified by using the input parameters as a filter.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Note VT1-n-n-n replaces PS_VT1-n-n-n for the VT1 alarm AID.

Note The AIDTYPE shows STS1 for STS alarms.

Category

Fault

Security

Retrieve

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

<AID>	Access identifier from the "25.2 AidUnionId" section on page 25-11. Must not be null.
<NTFCNCDE>	Two-letter notification code. A null value is equivalent to ALL. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<CONDTYPE>	Condition type for an alarm or a reported event. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions.

<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service. A null value is equivalent to ALL.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.

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

<AID>	Access identifier from the "25.1 ALL" section on page 25-1.
<AIDTYPE>	(Optional) Type of access identifier. The parameter type is MOD2ALM (alarm type).
• 1GFC	1 Gigabit Fibre Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 1GISC3	1 Gbps ISC3 compatible
• 2GFC	2 Gigabit Fibre Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• 4GFC	4 Gbps Fibre Channel
• 4GFICON	4 Gbps fiber connection
• CLNT	Client facility for MXP/TXP cards
• DS1	DS1 alarm
• DS3I	DS3I 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
• ISC3PEER1G	ISC3PEER1G payload
• ISC3PEER2G	ISC3PEER2G payload
• ISC3PEER2R	ISC3PEER2R payload
• ISCCOMPAT	ISCCOMPAT payload

• 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. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, “Conditions” for a list of conditions.

<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date when the specific event or violation occurred.
<OCRTM>	(Optional) Time when the specific event or violation occurred.

21.9 RTRV-ALM-ALL

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Alarm All (RTRV-ALM-ALL) command retrieves and sends the current status of all active alarm conditions. The alarm condition or severity to be retrieved is specified using the input parameters as a filter.

Usage Guidelines

According to Telcordia GR-833, the RTRV-ALM-ALL command only reports EQPT, COM, 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

Input Format

RTRV-ALM-ALL:[<TID>]:[<AID>]:<CTAG>::[<NTFCNCDE>],[<CONDITION>],[<SRVEFF>][,,,];

Input Example

RTRV-ALM-ALL:COTATI:ALL:229::MN,PWRRESTART,NSA;

Input Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1. A null value is equivalent to ALL. AID is a string.
<NTFCNCDE>	Two-letter notification code. A null value is equivalent to ALL. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• 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. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service. A null value is equivalent to ALL.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.

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

<AID>	(Optional) Access identifier from the "25.1 ALL" section on page 25-1.
<AIDTYPE>	(Optional) Type of facility, link, or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.
• 1GFC	1 Gigabit Fibre Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fibre Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• 4GFC	4 Gbps Fibre Channel
• 4GFICON	4 Gbps fiber connection
• BITS	Building integrated timing supply (BITS) alarm
• CLNT	Client facility for multiplexer (MXP) and transponder (TXP) cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3i-N-12 alarm
• E100	E100 alarm

• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	GIG Ethernet port alarm
• ISC3PEER1G	ISC3PEER1G alarm
• ISC3PEER2G	ISC3PEER2G alarm
• ISC3PEER2R	ISC3PEER2R alarm
• ISCCOMPAT	ISCCOMPAT 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	Packet over SONET (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. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<DESC>	(Optional) A condition description. DESC is a string.
<AIDDET>	(Optional) AIDDET uses the same addressing rules as the AID, but specifies AID type and additional details about the entity being managed. The supplementary equipment identification.

21.10 RTRV-ALM-BITS

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Alarm Building Integrated Timing Supply (RTRV-ALM-BITS) command retrieves and sends the current status of alarm conditions associated with the BITS facility. The alarm condition or severity retrieved is specified using the input parameters as a filter.

Usage Guidelines None

Category Synchronization

Security Retrieve

Input Format RTRV-ALM-BITS:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>][,,,];

Input Example

RTRV-ALM-BITS:ELVERANO:BITS-1:228::CR,LOS,SA;

Input Parameters

<AID>	Access identifier from the "25.6 BITS" section on page 25-17. Must not be null.
<NTFCNCDE>	Two-letter notification code. A null value is equivalent to ALL. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<CONDTYPE>	The condition type for an alarm or reported event. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service. A null value is equivalent to ALL.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.

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

<AID>	(Optional) Access identifier from the "25.6 BITS" section on page 25-17.
<AIDTYPE>	(Optional) Type of facility, link, or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.
• 1GFC	1 Gigabit Fibre Channel alarm

• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fibre Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• 4GFC	4 Gbps Fibre Channel
• 4GFICON	4 Gbps fiber connection
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3i-N-12 alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	GIG Ethernet port alarm
• ISC3PEER1G	ISC3PEER1G alarm
• ISC3PEER2G	ISC3PEER2G alarm
• ISC3PEER2R	ISC3PEER2R alarm
• ISCCOMPAT	ISCCOMPAT 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. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<DESC>	(Optional) A condition description. DESC is a string.

21.11 RTRV-ALM-ENV

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Alarm Environment (RTRV-ALM-ENV) command retrieves the environmental alarms.

Usage Guidelines None

Category Environment

Security Retrieve

Input Format

RTRV-ALM-ENV:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<ALMTYPE>];

Input Example

RTRV-ALM-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR;

Input Parameters

<AID>	Access identifier from the "25.13 ENV" section on page 25-30. 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. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<ALMTYPE>	The alarm type for the environmental alarm. A null value is equivalent to ALL. The parameter type is ENV_ALM, which is the environmental alarm types.
• AIRCOMPR	Air compressor failure
• AIRCOND	Air conditioning failure
• AIRDRYR	Air dryer failure
• BATDSCHRG	Battery discharging
• BATTERY	Battery failure
• CLFAN	Cooling fan failure
• CPMAJOR	Centralized power major failure
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail
• HATCH	CEV hatch fail

• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnected bypass
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:<NTFCNCDE>,<ALMTYPE>,[<OCRDAT>],[<OCRTM>],[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "ENV-IN-1:MJ,OPENDR,08-01,14-25-59,\"OPEN DOOR\""
;
```

Output Parameters

<AID>	Access identifier from the "25.13 ENV" section on page 25-30.
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions.
<ALMTYPE>	The alarm type for the environmental alarm. A null value is equivalent to ALL. The parameter type is ENV_ALM, which is the environmental alarm types.
• AIRCOMPR	Air compressor failure
• AIRCOND	Air conditioning failure
• AIRDRYR	Air dryer failure
• BATDSCHRG	Battery discharging
• BATTERY	Battery failure
• CLFAN	Cooling fan failure
• CPMAJOR	Centralized power major failure
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure

• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail
• HATCH	CEV hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnected bypass
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored

• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure
OCRDAT	(Optional) Date.
OCRTM	(Optional) Time.
DESC	(Optional) A condition description. DESC is a string.

21.12 RTRV-ALM-EQPT

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Alarm Equipment (RTRV-ALM-EQPT) command retrieves and sends the current status of alarm conditions associated with the equipment units. The alarm condition or severity to be retrieved is specified using the input parameters as a filter.

Usage Guidelines

None

Category

Equipment

Security

Retrieve

Input Format

RTRV-ALM-EQPT:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>][,,,];

Input Example

RTRV-ALM-EQPT:TWOROCK:SLOT-7:227::MJ,HITEMP,NSA;

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31. Must not be null.
<NTFCNCDE>	Two-letter notification code. A null value is equivalent to ALL. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.

<CONDTYPE>	The condition type for an alarm or a reported event. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service. A null value is equivalent to ALL.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.

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
   "SLOT-7,EQPT:MJ,HITEMP,NSA,08-01,14-25-59,,:\"HI TEMPERATURE\","
;
```

Output Parameters

<AID>	(Optional) Access identifier from the "25.14 EQPT" section on page 25-31.
<AIDTYPE>	(Optional) Type of facility, link, or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.
• 1GFC	1 Gigabit Fibre Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fibre Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• 4GFC	4 Gbps Fibre Channel
• 4GFICON	4 Gbps fiber connection
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• E100	E100 alarm
• E1000	E1000 alarm

• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	GIG Ethernet port alarm
• ISC3PEER1G	ISC3PEER1G alarm
• ISC3PEER2G	ISC3PEER2G alarm
• ISC3PEER2R	ISC3PEER2R alarm
• ISCCOMPAT	ISCCOMPAT 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. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.

• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date.
<OCRTM>	(Optional) Time.
<DESC>	(Optional) A condition description. DESC is a string.

21.13 RTRV-ALM-SYNCN

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Alarm Synchronization (RTRV-ALM-SYNCN) command retrieves and sends the current status of alarm conditions associated with a synchronization facility. The alarm condition or severity to be retrieved can be specified by using the input parameters as a filter.

Usage Guidelines

None

Category

Synchronization

Security

Retrieve

Input Format

RTRV-ALM-SYNCN:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>][,,,];

Input Example

RTRV-ALM-SYNCN:FULTON:SYNC-NE:226::CR,FAILTOSW,SA;

Input Parameters

<AID>	Access identifier from the "25.28 SYNC_REF" section on page 25-47. Must not be null.
<NTFCNCDE>	Two-letter notification code. A null value is equivalent to ALL. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<CONDTYPE>	The condition type for an alarm or a reported event. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service. A null value is equivalent to ALL.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.

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
   "SYNC-NE,SYNCN:CR,FAILTOSW,SA,08-01,
   14-25-59,,:\"FAILURE TO SWITCH TO PROTECTION\","
;
```

Output Parameters

<AID>	Access identifier from the "25.26 SYN" section on page 25-46.
<AIDTYPE>	(Optional) Type of facility, link or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.
• 1GFC	1 Gigabit Fibre Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fibre Channel alarm

• 2GFICON	2 Gigabit FICON alarm
• 4GFC	4 Gbps Fibre Channel
• 4GFICON	4 Gbps fiber connection
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	GIG Ethernet port alarm
• ISC3PEER1G	ISC3PEER1G alarm
• ISC3PEER2G	ISC3PEER2G alarm
• ISC3PEER2R	ISC3PEER2R alarm
• ISCCOMPAT	ISCCOMPAT 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. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions.
<SRVEFF>	The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date.
<OCRTM>	(Optional) Time.
<DESC>	(Optional) A condition description. DESC is a string.

21.14 RTRV-ALMTH-<MOD2>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA) The Retrieve Alarm Threshold for 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, or VT2 (RTRV-ALMTH-<MOD2>) command retrieves the alarm threshold values. The only applicable MOD2 values are OC3, OC12, OC48, OC192, OCH, OMS, and OTS.

Usage Guidelines None

Category Fault

Security Retrieve

Input Format RTRV-ALMTH-<MOD2>:[<TID>]:<AID>:<CTAG>::[<CONDTYPE>][,,::];

Input Example RTRV-ALMTH-{MOD2}::CHAN-2-2:1::OPT-HIGH;

Input Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1. Must not be null.
<CONDTYPE>	Alarm threshold. A null value is equivalent to ALL. The parameter type is ALM_THR, which is the alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, 4MD-xx.x, 32MUX-O, 32DMX-O, AD-1C-xx.x, AD-2C-xx.x, AD-4C-xx.x, AD-1B-xx.x, and AD-4B-xx.x cards.
• 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 microA as one tenth of a percent. High Warning Threshold, Low Warning Threshold. Measured value (0.0 percent, 100.0 percent).
• OPR-HIGH	Receive power in one tenth of a microW. Measured value (–0.0 dBm, +30.0 dBm).
• OPR-LOW	Receive power in one tenth of a microW. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-HIGH	Transmit power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm).
• OPT-LOW	Transmit power in one tenth of a microW. Measured value (–0.0 dBm, +30.0 dBm).
• OPWR-HDEG	Optical Power—High Degrade Threshold
• OPWR-HFAIL	Optical Power—High Failure Threshold
• OPWR-LDEG	Optical Power—Low Degrade Threshold
• OPWR-LFAIL	Optical Power—Low Failure Threshold
• 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

<AID>	Access identifier from the "25.1 ALL" section on page 25-1.
<MOD>	AID type. The parameter type is MOD2, which is the line/path modifier.
• 10GFC	10 Gigabit Fibre Channel
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit Fibre Channel
• 1GFICON	1 Gigabit FICON
• 1GISC3	1 Gbps ISC3 compatible
• 2GFC	2 Gigabit Fibre Channel
• 2GFICON	2 Gigabit FICON
• 2GISC3	2 Gbps ISC3 compatible
• 4GFC	4 Gbps Fibre Channel
• 4GFICON	4 Gbps fiber connection
• D1VIDEO	D1 video
• DS1	DS1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETR_CLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over packet over SONET. Virtual Ports partitioned using GFP's multiplexing capability.
• GIGE	GIG Ethernet
• HDTV	HDTV
• ISC3PEER1G	ISC3PEER1G
• ISC3PEER2G	ISC3PEER2G

• ISC3PEER2R	ISC3PEER2R
• ISCCOMPAT	ISCCOMPAT
• OC3	OC-3 facility
• OC12	OC-12 facility
• OC48	OC-48 facility
• OC192	OC-192 facility
• OCH	Optical Channel
• OCHCC	OCH channel connection
• OCHNC	OCH network connection
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS port
• STS1	STS1 path
• STS3C	STS3c path
• STS6C	STS6c path
• STS9C	STS9c path
• STS18C	STS18c path
• STS12C	STS12c path
• STS24C	STS24c path
• STS36C	STS36c path
• STS48C	STS48c path
• STS192C	STS192c path
• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 path
• VT2	VT2 path
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is ALM_THR, which is the alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, 4MD-xx.x, 32MUX-O, 32DMX-O, AD-1C-xx.x, AD-2C-xx.x, AD-4C-xx.x, AD-1B-xx.x, and AD-4B-xx.x cards.
• BATV-EHIGH	Battery Voltage—Extremely High
• BATV-ELOW	Battery Voltage—Extremely Low
• BATV-HIGH	Battery Voltage—High
• BATV-LOW	Battery Voltage—Low
• GAIN-HDEG	Gain not reached—High Degrade Threshold
• GAIN-HFAIL	Gain not reached—High Failure Threshold
• GAIN-LDEG	Gain not reached—Low Degrade Threshold
• GAIN-LFAIL	Gain not reached—Low Failure Threshold
• LBCL-HIGH	Laser Bias current in microA as one tenth of a percent. High Warning Threshold, Low Warning Threshold. Measured value (0.0 percent, 100.0 percent).

• OPR-HIGH	Receive power in one tenth of a microW. Measured value (–0.0 dBm, +30.0 dBm).
• OPR-LOW	Receive power in one tenth of a microW. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-HIGH	Transmit power in one tenth of a microW. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-LOW	Transmit power in one tenth of a microW. Measured value (–0.0 dBm, +30.0 dBm).
• OPWR-HDEG	Optical Power—High Degrade Threshold
• OPWR-HFAIL	Optical Power—High Failure Threshold
• OPWR-LDEG	Optical Power—Low Degrade Threshold
• OPWR-LFAIL	Optical Power—Low Failure Threshold
• VOA-HDEG	VOA Attenuation—High Degrade Threshold
• VOA-HFAIL	VOA Attenuation—High Failure Threshold
• VOA-LDEG	VOA Attenuation—Low Degrade Threshold
• VOA-LFAIL	VOA Attenuation—Low Failure Threshold
<THLEVEL>	Threshold level. THLEVEL is a float.

21.15 RTRV-ALMTH-EQPT

(Cisco ONS 15454) The Retrieve Alarm Threshold Equipment (RTRV-ALMTH-EQPT) command retrieves the alarm thresholds for the power level monitoring on an NE.

Usage Guidelines None

Category Equipment

Security Retrieve

Input Format RTRV-ALMTH-EQPT:[<TID>]:[<AID>]:<CTAG>::[<CONDTYPE>][,,::];

Input Example RTRV-ALMTH-EQPT:::1::BATV-HIGH;

RTRV-ALMTH-EQPT::SHELF-2:1::BATV-HIGH;

Input Parameters

<AID>	The node or shelf access identifier from the "25.24 SHELF" section on page 25-41. If omitted it addresses the node or first shelf of the node. Must not be null
<CONDTYPE>	Must not be null. The parameter type is ALM_THR, which is the alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, 4MD-xx.x, 32MUX-O, 32DMX-O, AD-1C-xx.x, AD-2C-xx.x, AD-4C-xx.x, AD-1B-xx.x, and AD-4B-xx.x cards.
• BATV-EHIGH	Battery Voltage—Extremely High
• BATV-ELOW	Battery Voltage—Extremely Low
• BATV-HIGH	Battery Voltage—High
• BATV-LOW	Battery Voltage—Low
• GAIN-HDEG	Gain not reached—High Degrade Threshold
• GAIN-HFAIL	Gain not reached—High Failure Threshold
• GAIN-LDEG	Gain not reached—Low Degrade Threshold
• GAIN-LFAIL	Gain not reached—Low Failure Threshold
• LBCL-HIGH	Laser Bias current in microA as one tenth of a percent. High Warning Threshold, Low Warning Threshold Measured value (0.0 percent, 100.0 percent)
• OPR-HIGH	Receive power in one tenth of a microW. Measured value (–0.0 dBm, +30.0 dBm).
• OPR-LOW	Receive power in one tenth of a microW. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-HIGH	Transmit power in one tenth of a microW. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-LOW	Transmit power in one tenth of a microW. Measured value (–0.0 dBm, +30.0 dBm).
• OPWR-HDEG	Optical Power—High Degrade Threshold
• OPWR-HFAIL	Optical Power—High Failure Threshold
• OPWR-LDEG	Optical Power—Low Degrade Threshold
• OPWR-LFAIL	Optical Power—Low Failure Threshold
• VOA-HDEG	VOA Attenuation—High Degrade Threshold
• VOA-HFAIL	VOA Attenuation—High Failure Threshold
• VOA-LDEG	VOA Attenuation—Low Degrade Threshold
• VOA-LFAIL	VOA Attenuation—Low Failure Threshold

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "[<AID>],<MOD2B>:<CONDTYPE>,,,<DNFIELD>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "SHELF-1,EQPT:BATV-HIGH,,,-52.0,"
;
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   ",EQPT:BATV-HIGH,,,-52.0,""
;
```

Output Parameters

<AID>	The node or shelf access identifier from the "25.24 SHELF" section on page 25-41. If omitted it addresses the node or first shelf of the node. Must not be null
<MOD2B>	Alarm type. The parameter type is MOD2B, which is the alarm type.
• 1GFC	1 Gigabit Fibre Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fibre Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	GIG Ethernet port alarm
• ISC3PEER1G	ISC3PEER1G alarm
• ISC3PEER2G	ISC3PEER2G alarm
• ISC3PEER2R	ISC3PEER2R alarm
• ISCCOMPAT	ISCCOMPAT 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)
<CONDTYPE>	Parameter type is ALM_THR, which is the alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, 4MD-xx.x, 32MUX-O, 32DMX-O, AD-1C-xx.x, AD-2C-xx.x, AD-4C-xx.x, AD-1B-xx.x, and AD-4B-xx.x cards.
• BATV-EHIGH	Battery Voltage—Extremely High
• BATV-ELOW	Battery Voltage—Extremely Low
• BATV-HIGH	Battery Voltage—High
• BATV-LOW	Battery Voltage—Low
• GAIN-HDEG	Gain not reached—High Degrade Threshold
• GAIN-HFAIL	Gain not reached—High Failure Threshold
• GAIN-LDEG	Gain not reached—Low Degrade Threshold
• GAIN-LFAIL	Gain not reached—Low Failure Threshold
• LBCL-HIGH	Laser Bias current in microA as one tenth of a percent. High Warning Threshold, Low Warning Threshold. Measured value (0.0 percent, 100.0 percent).
• OPR-HIGH	Receive power in one tenth of a microW. Measured value (–0.0 dBm, +30.0 dBm).
• OPR-LOW	Receive power in one tenth of a microW. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-HIGH	Transmit power in one tenth of a microW. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-LOW	Transmit power in one tenth of a microW. Measured value (–0.0 dBm, +30.0 dBm).
• OPWR-HDEG	Optical Power—High Degrade Threshold

• OPWR-HFAIL	Optical Power—High Failure Threshold
• OPWR-LDEG	Optical Power—Low Degrade Threshold
• OPWR-LFAIL	Optical Power—Low Failure Threshold
• VOA-HDEG	VOA Attenuation—High Degrade Threshold
• VOA-HFAIL	VOA Attenuation—High Failure Threshold
• VOA-LDEG	VOA Attenuation—Low Degrade Threshold
• VOA-LFAIL	VOA Attenuation—Low Failure Threshold
<DNFIELD>	DNFIELD is a float.

21.16 RTRV-ALS

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Retrieve Automatic Laser Shutoff (RTRV-ALS) command retrieves the ALS attributes of an OC-N facility and all the facilities that support the ALS feature. This command is used to retrieve the ALS parameter of the OC48 and OC192 ports on the MXP_2.5G_10E, TXP_MR_10E, TXP_MR_2.5G, TXPP_MR_2.5G, MXP_2.5G_10G, and TXP_MR_10G cards.

Usage Guidelines

None

Category

Ports

Security

Retrieve

Input Format

RTRV-ALS:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-ALS:PENNGROVE:FAC-1-1:1

Input Parameters

<AID>	Access identifier from the "25.2 AidUnionId" section on page 25-11. 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

<AID>	Access identifier from the "25.2 AidUnionId" section on page 25-11.
<AIDTYPE>	Type of access identifier.The parameter type is MOD2, which is the line/path modifier.
• 10GFC	10 Gigabit Fibre Channel
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit Fibre Channel
• 1GFICON	1 Gigabit FICON
• 1GISC3	1 Gbps ISC3 compatible
• 2GFC	2 Gigabit Fibre Channel
• 2GFICON	2 Gigabit FICON
• 2GISC3	2 Gbps ISC3 compatible
• 4GFC	4 Gbps Fibre Channel
• 4GFICON	4 Gbps fiber connection
• D1VIDEO	D1 video
• DS1	DS1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETR_CLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over packet over SONET. Virtual Ports partitioned using GFP's multiplexing capability.
• GIGE	GIG Ethernet
• HDTV	HDTV
• ISC3PEER1G	ISC3PEER1G
• ISC3PEER2G	ISC3PEER2G
• ISC3PEER2R	ISC3PEER2R
• ISCCOMPAT	ISCCOMPAT
• OC3	OC-3 facility
• OC12	OC-12 facility
• OC48	OC-48 facility
• OC192	OC-192 facility
• OCH	Optical Channel
• OCHCC	OCH channel connection

• OCHNC	OCH network connection
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS port
• STS1	STS1 path
• STS3C	STS3c path
• STS6C	STS6c path
• STS9C	STS9c path
• STS18C	STS18c path
• STS12C	STS12c path
• STS24C	STS24c path
• STS36C	STS36c path
• STS48C	STS48c path
• STS192C	STS192c path
• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 path
• VT2	VT2 path
<ALSMODE>	ALS is enabled or disabled. The parameter type is ALS_MODE, which is the working mode for automatic laser shutdown.
• AUTO	Automatic
• DISABLED	Disabled
• MAN	Manual
• MAN-RESTART	Manual restart for test
<ALSRCINT>	(Optional) ALS interval. The range is 60 to 300 seconds. ALSRCINT is an integer.
<ALSRCPW>	(Optional) ALS recovery pulse width. The range is 2.0 to 100.00 seconds, in increments of 100 ms. ALSRCPW is a float.
<LSRSTAT>	(Optional) Status of the laser. The parameter type is LASER_STATUS (laser status).
• APR	Laser is switched on but is working automatic power reduction.
• OFF	Laser is switched off.
• ON	Laser is switched on.

21.17 RTRV-APC

(Cisco ONS 15454) The Operate Amplification Power Control (RTRV-APC) command retrieves the APC application attributes.

Usage Guidelines None

Category DWDM

Security Maintenance

Input Format RTRV-APC:[<TID>]::<CTAG>;

Input Example RTRV-APC:PENNGROVE::114;

Input Parameters None that require description

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "::[APCENABLE=<APCENABLE>],[APCSTATE=<APCSTATE>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "::APCENABLE=Y,APCSTATE=WORKING"
;
```

Output Parameters

<APCENABLE>	(Optional) Enable or disable the APC application. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<APCSTATE>	(Optional) Indicates the status of the APC application. The parameter type is APC_STATE (APC status).
• DISABLE	The APC is disabled by the user and is not working.
• FORCED-DISABLE	The APC has been internally disabled by the node and is not working.
• WORKING	The APC is enabled by the user and is working.

21.18 RTRV-ATTR-CONT

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Attribute Control (RTRV-ATTR-CONT) command retrieves and sends the attributes associated with an external control. These attributes are used when an external control is operated or released. To set these attributes, use the SET-ATTR-CONT command.

Usage Guidelines None

Category Environment

Security Retrieve

Input Format RTRV-ATTR-CONT:[<TID>]:<AID>:<CTAG>[::<CONTTYPE>];

Input Example RTRV-ATTR-CONT:CISCO:ENV-OUT-2:123::AIRCOND;

Input Parameters

<AID>	Access identifier from the "25.13 ENV" section on page 25-30. 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. The parameter type is CONTTYPE, which is the environmental control type.
• AIRCOND	Air conditioning
• AUDIBLE	Audible (ONS 15310-MA only)
• ENGINE	Engine
• FAN	Fan
• GEN	Generator
• HEAT	Heat
• LIGHT	Light
• MISC	Miscellaneous
• SPKLR	Sprinkler

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:[<CONTTYPE>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "ENV-OUT-2:AIRCOND"
;
```

Output Parameters

AID	Access identifier from the "25.13 ENV" section on page 25-30. 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. The parameter type is CONTTYPE, which is the environmental control type.
• AIRCOND	Air conditioning
• AUDIBLE	Audible (ONS 15310-MA only)
• ENGINE	Engine
• FAN	Fan
• GEN	Generator
• HEAT	Heat
• LIGHT	Light
• MISC	Miscellaneous
• SPKLR	Sprinkler

21.19 RTRV-ATTR-ENV

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Attribute Environment (RTRV-ATTR-ENV) command retrieves the attributes associated with an environmental alarm.

Usage Guidelines

None

Category

Environment

Security

Retrieve

Input Format

RTRV-ATTR-ENV:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<ALMTYPE>];

Input Example

RTRV-ATTR-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR;

Input Parameters

<AID>	Access identifier from the "25.13 ENV" section on page 25-30. Must not be null.
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.

• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<ALMTYPE>	The alarm type for the environmental alarm. A null value is equivalent to ALL. The parameter type is ENV_ALM, which is the environmental alarm type.
• AIRCOMPR	Air compressor failure
• AIRCOND	Air conditioning failure
• AIRDRYR	Air dryer failure
• BATDSCHRG	Battery discharging
• BATTERY	Battery failure
• CLFAN	Cooling fan failure
• CPMAJOR	Centralized power major failure
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail
• HATCH	CEV hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnect bypass
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature

• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:[<NTFCNCDE>],[<ALMTYPE>],[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "ENV-IN-1:MJ,OPENDR,\"OPEN DOOR\""
;
```

Output Parameters

<AID>	Access identifier from the "25.13 ENV" section on page 25-30. Must not be null.
<NTFCNCDE>	(Optional) Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.

• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<ALMTYPE>	(Optional) The alarm type for the environmental alarm. The parameter type is ENV_ALM, which is the environmental alarm type.
• AIRCOMPR	Air compressor failure
• AIRCOND	Air conditioning failure
• AIRDRYR	Air dryer failure
• BATDSCHRG	Battery discharging
• BATTERY	Battery failure
• CLFAN	Cooling fan failure
• CPMAJOR	Centralized power major failure
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail or gas monitor fail
• HATCH	CEV hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnect bypass
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature

• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure
<DESC>	(Optional) Alarm description. DESC is a string.

21.20 RTRV-AUDIT-LOG

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Audit Log (RTRV-AUDIT-LOG) command retrieves the contents of the audit log stored in the NE. Audit records contain information for user operations such as login, logout, change of provisioning parameters and other changes a user might make when connected to the NE. Audit records do not store operations related to parameter retrieval.

Usage Guidelines None

Category Log

Security Superuser

Input Format RTRV-AUDIT-LOG:[<TID>]::<CTAG>;

Input Example RTRV-AUDIT-LOG:::1;

Input Parameters None that require description

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   " <ENTRYNUM>,<OCRDAT>,<OCRTM>,<TASKID>,<TXSTATUS>,<DESCRIPTION>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   " 17172,2004-10-05,09-52-44, TPROVMGR,COMPLD,
   \17172,2004-10-05,09-52-44, TPROVMGR,COMPLD,\"DESCRIPTION\""
;
```

Output Parameters

<ENTRYNUM>	Entry number. ENTRYNUM is an integer.
<OCRDAT>	Date of the task.
<OCRTM>	Time of the task.
<TASKID>	Task ID. TASKID is a string.
<TXSTATUS>	Parameter type is TX_STATUS, which indicates the status of the transferred file.
• COMPLD	The file transmission is completed.
• IP	The file transmission is in process.
• START	The file transmission is started.
<DESCRIPTION>	Description of event. Description format varies depending on the event and can include parameters used during the event. DESCRIPTION is a string.

21.21 RTRV-BFDLPM-<MOD2>

(Cisco ONS 15454) The Retrieve BFDL Performance Monitoring (DS1, T1) command retrieves the BFDL (enhanced 24-hour ES, UAS, BES, CSS, and LOFC) performance monitoring parameters and applies to the DS3XM-12 card DS1 under BFDL mode. This command returns the current 15-minute and current 24-hour BFDL performance monitoring (PM) parameters and the 96 15-minute history requested type PM parameters.

Usage Guidelines

For example, the following input:

RTRV-BFDLPM-DS1::DS1-14-1-1:1:::REQTYPE=ENH-24HR-ES;

Will retrieve the following output:

DS1-14-1-1:ES,30,CURR-15MIN-INV DS1-14-1-1:UAS,40,CURR-15MIN-INV
DS1-14-1-1:BES,50,CURR-15MIN-INV DS1-14-1-1:SES,60,CURR-15MIN-INV
DS1-14-1-1:CSS,70,CURR-15MIN-INV DS1-14-1-1:LOFC,80,CURR-15MIN-INV
DS1-14-1-1:ES,30,CURR-24HR-INV DS1-14-1-1:UAS,40,CURR-24HR-INV
DS1-14-1-1:BES,50,CURR-24HR-INV DS1-14-1-1:SES,60,CURR-24HR-INV
DS1-14-1-1:CSS,70,CURR-24HR-INV DS1-14-1-1:LOFC,80,CURR-24HR-INV
DS1-14-1-1:ES,30,1-15MIN-INV DS1-14-1-1:ES,40,2-15MIN-INV
DS1-14-1-1:ES,50,3-15MIN-INV
DS1-14-1-1:ES,80,96-15MIN-INV

Sending this command with a REQTYPE of ENH-24HR-CSS-AND-LOFC will retrieve 96 15-minute PM parameters for both CSS and LOFC. The command is applied on the DS3XM-12 DS1 under BFDL mode, ESF frame format, C-BIT IS port with an IS VT circuit configuration.

Category

Performance

Security

Retrieve

Input Format

RTRV-BFDLPM-<MOD2>:[<TID>]:<AID>:<CTAG>:::REQTYPE=<REQTYPE>;

Input Example

RTRV-BFDLPM-DS1:TID:DS1-14-1-1:123:::REQTYPE=ENH-24HR-ES;

Input Parameters

<AID>	Access identifier from the "25.12 DS1" section on page 25-30. Must not be null.
<REQTYPE>	Indicates requested BFDL PM type. Must not be null. The parameter type is REQTYPE, which is the requested PM type.
• ENH-24HR-BES	The enhanced 24-hour BES performance data
• ENH-24HR-CSS-AND-LOFC	The enhanced 24-hour CSS-AND-LOFC performance data
• ENH-24HR-ES	The enhanced 24-hour ES performance data
• ENH-24HR-SES	The enhanced 24-hour SES performance data
• ENH-24HR-UAS	The enhanced 24-hour UAS performance data

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:<MONTYPE>,<MONVAL>,<BUCKET>"
;

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "DS1-14-1-1:ES,55,CURR-15MIN-INV"
;
```

Output Parameters

<AID>	Access identifier from the "25.12 DS1" section on page 25-30.
<MONTYPE>	Monitored type which includes: BES, CSS, ES, LOFC, SES, UAS. MONTYPE is a string.
<MONVAL>	The value to which the register identified by MONTYPE is to be initialized to or the measured value of a monitored parameter. The value is in the form of numeric counts or rates. MONVAL is a string.
<BUCKET>	The BIN of each BFDL PM. BUCKET is a string.

21.22 RTRV-BITS

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Building Integrated Timing Supply (RTRV-BITS) command retrieves the BITS configuration command. For BITS facility, 64 K and 6 MHz are only applicable to the ONS 15454. SSM selectable (ADMSSM) is not applicable to the ONS 15600.

Usage Guidelines

None

Category

Synchronization

Security

Retrieve

Input Format

RTRV-BITS:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-BITS:SONOMA:BITS-1:782;

Input Parameters

<AID>	Access identifier from the "25.6 BITS" section on page 25-17. 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

<AID>	Access identifier from the "25.6 BITS" section on page 25-17
<LINECDE>	(Optional) Line code. The parameter type is LINE_CODE.
• AMI	Line code value is AMI.
• B8ZS	Line code value is B8ZS (binary eight-zero substitution).
<FMT>	(Optional) Digital signal frame format. The parameter type is FRAME_FORMAT, which is the frame format for a T1 port.
• D4	Frame format is D4.
• ESF	Frame format is ESF.
• UNFRAMED	Frame format is unframed.
<LBO>	(Optional) Line buildout settings. BITS line buildout. Default value is 0 to 133. LBP is an integer. The parameter type is BITS_LineBuildOut, which is the BITS line buildout.
• 0–133	BITS line buildout range is 0–133.
• 134–266	BITS line buildout range is 134–266.
• 267–399	BITS line buildout range is 267–399.
• 400–533	BITS line buildout range is 400–533.
• 534–655	BITS line buildout range is 534–655.
<SYNCMSG>	Indicates if the BITS facility supports synchronization status message. Default is Y. The parameter type is EXT_RING, which indicates if the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<AISTHRSHLD>	(Optional) Alarm indication signal threshold. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not Use For Synchronization
• PRS	Primary Reference Source, Stratum 1 Traceable
• RES	Reserved For Network Synchronization Use
• SMC	SONET Minimum Clock Traceable
• ST2	Stratum 2 Traceable
• ST3	Stratum 3 Traceable
• ST3E	Stratum 3E Traceable
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)

<SABIT>	(Optional) When the frame format selection is E1, SABIT is the BIT used to receive and transmit the SSM. The parameter type is SABITS (SA BITS).
• BYTE-4	SABIT is BYTE-4.
• BYTE-5	SABIT is BYTE-5.
• BYTE-6	SABIT is BYTE-6.
• BYTE-7	SABIT is BYTE-7.
• BYTE-8	SABIT is BYTE-8.
<IMPEDANCE>	(Optional) When the frame format selection is E1, IMPEDANCE is the terminal impedance of the BITS-IN port. The parameter type is IMPEDANCE, which is the terminal impedance of the BITS-IN port
• 120-OHM	Impedance of 120 ohms
• 75-OHM	Impedance of 75 ohms
<BITSFAC>	(Optional) BITS facility settings. The parameter type is BITS_FAC, which is the BITS facility rate. 64 K and 6 MHz are only applicable to the ONS 15454.
• 2 M	2 MHz rate
• 64 K	64 K rate
• 6 M	6 MHz rate
• E1	E1 rate
• T1	T1 rate
<ADMSSM>	(Optional) SSM selectable. Only applicable to BITS-IN when SSM is disabled. **Note** Not applicable for the ONS 15600. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not Use For Synchronization
• PRS	Primary Reference Source, Stratum 1 Traceable
• RES	Reserved For Network Synchronization Use
• SMC	SONET Minimum Clock Traceable
• ST2	Stratum 2 Traceable
• ST3	Stratum 3 Traceable
• ST3E	Stratum 3E Traceable
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<PST>	(Optional) Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In Service
• OOS	Out of Service

21.23 RTRV-BULKROLL-<OCN_TYPE>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Bulkroll for OC12, OC192, OC3, or OC48 (RTRV-BULKROLL-<OCN_TYPE>) command retrieves roll data parameters on a line.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Category

Bridge and Roll

Security

Provisioning

Input Format

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

Input Example

RTRV-BULKROLL-OC12:CISCO:FAC-3-1:1;

Input Parameters

<SRC>	Source AID from the "25.15 FACILITY" section on page 25-33. Must not be null.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<FROM>:RFROM=<RFROM>,RTO=<RTO>,[RMODE=<RMODE>],VLDSIG=<VLDSIG>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "STS-3-1-1:RFROM=STS-3-1-1,RTO=STS-5-1-1,RMODE=AUTO,VLDSIG=Y"
;
```

Output Parameters

<FROM>	One of the end points. Access identifier from the "25.15 FACILITY" section on page 25-33 for line level rolling and bulk rolling.
<RFROM>	The termination point of the existing cross-connect that is to be rolled. The AID is from the "25.11 CrossConnectId1" section on page 25-24 (except VCM and FACILITY).
<RTO>	The termination point that will become a leg of the new cross-connection. The AID is from the "25.11 CrossConnectId1" section on page 25-24 (except VCM and FACILITY).

<RMODE>	(Optional) The rolling mode of operation. The parameter type is RMODE, which specifies the roll mode.
• AUTO	Automatic. When a valid signal is available, the roll under AUTO mode will automatically delete the previous end-point.
• MAN	Manual. Enter the corresponding delete roll/bulkroll command to delete the previous end-point.
• MAN	Manual
• MAN-RESTART	Manual Restart for Test
<VLDSIG>	(Optional) The rolling mode of operation. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.

21.24 RTRV-CMD-SECU

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Command Security (RTRV-CMD-SECU) command retrieves the current command security level of the command specified in the AID field.

Usage Guidelines

None

Category

Security

Security

Superuser

Input Format

RTRV-CMD-SECU:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-CMD-SECU::INIT-REG:1;

Input Parameters

<AID>	Access identifier string. Identifies the entity in the NE to which the command pertains. It is the command verb along with verb modifier(s), as it currently exists. It can be a single command or a block of commands, where the block might include all commands. Only INIT-REG will be supported. String. 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:PROV"
;
```

Output Parameters

<AID>	(Optional) Access identifier. It can be a single command or a block of commands, where the block can include all commands. Only INIT-REG is supported. AID is a string.
<CAP>	Command access privilege. The parameter type is PRIVILEGE, which is the security level.
• PROV	Provisioning security level
• SUPER	Superuser security level

21.25 RTRV-COND-<MOD2ALM>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Condition for 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, or WLEN (RTRV-COND-<MOD2ALM>) command retrieves the current standing condition and state associated with an entity.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Category

Fault

Security

Retrieve

Input Format

RTRV-COND-<MOD2ALM>:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>][,,,];

Input Example

RTRV-COND-T3:TID:FAC-2-1:229::LOS;

Input Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1. Must not be null.
<TYPEREQ>	The type of condition to be retrieved. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" 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

<AID>	Access identifier from the "25.1 ALL" section on page 25-1
<AIDTYPE>	(Optional) Type of access identifier. Specifies the type of facility, link or other addressable entity targeted by the message. The parameter type is MOD2ALM, which is the alarm type.
• 1GFC	1 Gigabit Fibre Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 1GISC3	1 Gbps ISC3 compatible
• 2GFC	2 Gigabit Fibre Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• 4GFC	4 Gbps Fibre Channel
• 4GFICON	4 Gbps fiber connection
• CLNT	Client facility for MXP/TXP cards
• DS1	DS1 alarm
• DS3I	DS3I 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
• ISC3PEER1G	ISC3PEER1G payload
• ISC3PEER2G	ISC3PEER2G payload
• ISC3PEER2R	ISC3PEER2R payload
• ISCCOMPAT	ISCCOMPAT payload
• 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>	(Optional) Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.

<TYPEREP>	The condition itself. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions.
<SRVEFF>	(Optional) The effect on service caused by the standing alarm or condition The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date when the specific event or violation occurred.
<OCRTM>	(Optional) Time when the specific event or violation occurred.
<DESC>	(Optional) Condition description. DESC is a string.

21.26 RTRV-COND-ALL

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Condition All (RTRV-CON-ALL) command retrieves the current standing condition for all entities.

Usage Guidelines

According to Telcordia GR-833, the RTRV-COND-ALL command only reports EQPT, COM, and rr (T1, T3, OCn, EC1, STSn, VT1, DS1, E100, E1000, G1000, ML-Series, TXP and MXP) alarms.

This command does not return all conditions that are returned by other, more specific RTRV-COND commands; RTRV-COND-ALL returns a subset of these conditions. Telcordia GR-253-CORE, Section 6.2.1.8.4 states a retrieval that returns ALL conditions from a node (RTRV-COND-ALL) must omit any conditions that are "same root cause" as other raised conditions. The section also states any retrieval of a subset of the conditions from a node, regardless of how the subsetting occurs, should not omit these "same root cause" conditions.

RTRV-COND-STS1, for example, includes "same root cause" conditions in the set it returns and RTRV-COND-ALL does not.

To retrieve all the NE conditions, issue all of the following commands:

RTRV-COND-ALL
RTRV-COND-ENV
RTRV-COND-BITS
RTRV-COND-SYNCN

Category

Fault

Security

Retrieve

Input Format

RTRV-COND-ALL:[<TID>]:[<AID>]:<CTAG>::[<TYPEREQ>][,,,];

Input Example

RTRV-COND-ALL:TID:ALL:229::LOS;

Input Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1. String. A null value is equivalent to ALL.
<TYPEREQ>	The type of condition to be retrieved. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" 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

<AID>	Access identifier from the "25.1 ALL" section on page 25-1 that has an alarm condition.
<AIDTYPE>	(Optional) Type of access identifier. Specifies the type of facility, link or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.
• 1GFC	1 Gigabit Fibre Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fibre Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• 4GFC	4 Gbps Fibre Channel
• 4GFICON	4 Gbps fiber connection
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm

• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	GIG Ethernet port alarm
• ISC3PEER1G	ISC3PEER1G alarm
• ISC3PEER2G	ISC3PEER2G alarm
• ISC3PEER2R	ISC3PEER2R alarm
• ISCCOMPAT	ISCCOMPAT 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>	(Optional) Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.

• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<TYPEREP>	The type of condition to be retrieved. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions.
<SRVEFF>	(Optional) The effect on service caused by the standing alarm or condition The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date when the specific event or violation occurred.
<OCRTM>	(Optional) Time when the specific event or violation occurred.
<DESC>	(Optional) Condition description. DESC is a string.

21.27 RTRV-COND-BITS

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Condition Building Integrated Timing Supply (RTRV-COND-BITS) command retrieves the standing conditions on BITS.

Usage Guidelines

None

Category

Synchronization

Security

Retrieve

Input Format

RTRV-COND-BITS:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>][,,,];

Input Example

RTRV-COND-BITS:TID:BITS-1:229::LOS;

Input Parameters

<AID>	Access identifier from the "25.6 BITS" section on page 25-17. Must not be null.

<TYPEREQ>	The type of condition to be retrieved. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" 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

AID	Access identifier from the "25.6 BITS" section on page 25-17 that has an alarm condition.
AIDTYPE	(Optional) Type of access identifier. Specifies the type of facility, link or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.
• 1GFC	1 Gigabit Fibre Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fibre Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• 4GFC	4 Gbps Fibre Channel
• 4GFICON	4 Gbps fiber connection
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS2I alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm

• GIGE	GIG Ethernet port alarm
• ISC3PEER1G	ISC3PEER1G alarm
• ISC3PEER2G	ISC3PEER2G alarm
• ISC3PEER2R	ISC3PEER2R alarm
• ISCCOMPAT	ISCCOMPAT 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>	(Optional) Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.

<TYPEREP>	The type of condition to be retrieved. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions.
<SRVEFF>	(Optional) The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date when the specific event or violation occurred.
<OCRTM>	(Optional) Time when the specific event or violation occurred.
<DESC>	(Optional) Condition description. DESC is a string.

21.28 RTRV-COND-ENV

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Environmental Condition (RTRV-COND-ENV) command retrieves the environmental conditions.

Usage Guidelines None

Category Environment

Security Retrieve

Input Format RTRV-COND-ENV:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<ALMTYPE>][,,,];

Input Example RTRV-COND-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR;

Input Parameters

<AID>	Access identifier from the "25.13 ENV" section on page 25-30. 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. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<ALMTYPE>	The alarm type for the environmental alarm. A null value is equivalent to ALL. The parameter type is ENV_ALM, which is the environmental alarm type.
• AIRCOMPR	Air compressor failure
• AIRCOND	Air conditioning failure
• AIRDRYR	Air dryer failure
• BATDSCHRG	Battery discharging
• BATTERY	Battery failure
• CLFAN	Cooling fan failure
• CPMAJOR	Centralized power major failure
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail
• HATCH	CEV hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion

• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnect bypass
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:<NTFCNCDE>,<ALMTYPE>,[<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

<AID>	Access identifier from the "25.13 ENV" section on page 25-30.
<NTFCNCDE>	(Optional) Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<ALMTYPE>	The alarm type for the environmental alarm. The parameter type is ENV_ALM, which is the environmental alarm type.
• AIRCOMPR	Air compressor failure
• AIRCOND	Air conditioning failure
• AIRDRYR	Air dryer failure
• BATDSCHRG	Battery discharging
• BATTERY	Battery failure
• CLFAN	Cooling fan failure
• CPMAJOR	Centralized power major failure
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail
• HATCH	CEV hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion

• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnect bypass
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure
<OCRDAT>	(Optional) Date when the specific event or violation occurred.
<OCRTM>	(Optional) Time when the specific event or violation occurred.
<DESC>	(Optional) Condition description. DESC is a string.

21.29 RTRV-COND-EQPT

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Condition Equipment (RTRV-COND-EQPT) command retrieves the equipment conditions.

Usage Guidelines

None

Category

Equipment

Security

Retrieve

Input Format

RTRV-COND-EQPT:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>][,,,];

Input Example

RTRV-COND-EQPT:TID:SLOT-1:229::LOS;

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31 that has an alarm condition. Must not be null.
<TYPEREQ>	The type of condition to be retrieved. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" 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

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31 that has an alarm condition.
<AIDTYPE>	(Optional) Type of facility, link or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.
• 1GFC	1 Gigabit Fibre Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fibre Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• 4GFC	4 Gbps Fibre Channel
• 4GFICON	4 Gbps fiber connection
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	GIG Ethernet port alarm
• ISC3PEER1G	ISC3PEER1G alarm
• ISC3PEER2G	ISC3PEER2G alarm
• ISC3PEER2R	ISC3PEER2R alarm
• ISCCOMPAT	ISCCOMPAT 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>	(Optional) Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<TYPEREP>	The type of condition to be retrieved. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions.
<SRVEFF>	(Optional) The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date when the specific event or violation occurred.
<OCRTM>	(Optional) Time when the specific event or violation occurred.
<DESC>	(Optional) Condition description. DESC is a string.

21.30 RTRV-COND-SYNCN

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Condition Synchronization (RTRV-COND-SYNCN) command retrieves the synchronization condition.

Usage Guidelines None

Category Synchronization

Security Retrieve

Input Format RTRV-COND-SYNCN:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>][,,,];

Input Example RTRV-COND-SYNCN:TID:SYNC-NE:229::LOS;

Input Parameters

<AID>	Access identifier from the "25.28 SYNC_REF" section on page 25-47 that has an alarm condition. Must not be null.
<TYPEREQ>	The type of condition to be retrieved. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" 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

<AID>	Access identifier from the "25.26 SYN" section on page 25-46 that has an alarm condition.
<AIDTYPE>	(Optional) Type of facility, link or other addressable entity targeted by the message. The value is always SYNCN. The parameter type is MOD2B, which is the alarm type.
• 1GFC	1 Gigabit Fibre Channel alarm
• 1GFICON	1 Gigabit FICON alarm

• 2GFC	2 Gigabit Fibre Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• 4GFC	4 Gbps Fibre Channel
• 4GFICON	4 Gbps fiber connection
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	GIG Ethernet port alarm
• ISC3PEER1G	ISC3PEER1G alarm
• ISC3PEER2G	ISC3PEER2G alarm
• ISC3PEER2R	ISC3PEER2R alarm
• ISCCOMPAT	ISCCOMPAT 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>	(Optional) Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<TYPEREP>	The type of condition to be retrieved. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions.
<SRVEFF>	(Optional) The effect on service caused by the standing alarm or condition. The parameter type is SERV_EFF, which is the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date when the specific event or violation occurred.
<OCRTM>	(Optional) Time when the specific event or violation occurred.
<DESC>	(Optional) Condition description. DESC is a string.

21.31 RTRV-CONSOLE-PORT

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Retrieve Console Port (RTRV-CONSOLE-PORT) command retrieves the status of the console port from the ML-Series cards.

Usage Guidelines None

Category Security

Security Retrieve

Input Format RTRV-CONSOLE-PORT:[<TID>]:<AID>:<CTAG>;

Input Example RTRV-CONSOLE-PORT:CISCONODE:SLOT-2:123;

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31. Must not be null.

Output Format

SID DATE TIME
M CTAG COMPLD
"<EQPT>:[PORT=<PORT>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"SLOT-2:PORT=ENABLED"
;

Output Parameters

<EQPT>	Identifies the slot number for the data card. EQPT is a string.
<PORT>	(Optional) Status of the console port on the data card. The parameter type is PORTSTAT, which is the status of the console port on the card.
• DISABLED	The port is disabled.
• ENABLED	The port is enabled.

21.32 RTRV-CRS

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Cross-Connect (RTRV-CRS) command retrieves all the cross-connections based on the required PATH types.

Usage Guidelines

- A NULL AID defaults to ALL (NE).
- A NULL PATH defaults to all the existing cross-connections.
- The LEVEL in the output field is an optional field, and is used to indicate the bandwidth of the PATH cross-connection.

- Both the DRITYPE and the 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 dual-ring interconnect (DRI). DRINODE must be specified only if at least one end of the connection is on the BLSR, and defaults to NA.
- The DS3XM-12 card allows portless STS1/VT1.5 cross-connection provisioning on the portless ports.
- CKTID is a string of ASCII characters. The maximum length of CKTID is 48. If the CKTID is EMPTY or NULL it will not appear.

Category

Cross Connections

Security

Retrieve

Input Format

RTRV-CRS:[<TID>]:[<AID>]:<CTAG>:::[CRSTYPE=<CRSTYPE>][:];

Input Example

RTRV-CRS:CISCO:ALL:123:::CRSTYPE=STS;

Input Parameters

<AID>	Access identifier from the "25.11 CrossConnectId1" section on page 25-24 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. The parameter type is PATH, which is the modifier for path commands.
• STS1	Synchronous transport signal/module level 1 (51.84 Mbps)
• STS3C	Synchronous transport signal/module level 3 concatenated (155.52 Mbps)
• STS6C	Synchronous transport signal/module level 6 (311.04 Mbps)
• STS9C	Synchronous transport signal/module level 9 concatenated (466.56 Mbps)
• STS12C	Synchronous transport signal/module level 12 concatenated (622.08 Mbps)
• STS18C	Synchronous transport signal/module level 18 concatenated (933.12 Mbps)
• STS24C	Synchronous transport signal/module level 24 concatenated (1244.16 Mbps)
• STS36C	Synchronous transport signal/module level 36 concatenated (1866.24 Mbps)
• STS48C	Synchronous transport signal/module level 48 concatenated (2488.32 Mbps)

• STS192C	Synchronous transport signal/module level 192 concatenated (9953.28 Mbps)
• 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

<SRC>	Source access identifier from the "25.10 CrossConnectId" section on page 25-20. Indicates the source AID(s) of the cross-connection. SRC is listable.
<DST>	Destination AID of the cross-connection from the "25.10 CrossConnectId" section on page 25-20. DST is listable.
<CCT>	Type of connection. Used for specifying one or two-way connections. The parameter type is CCT, which is the type of cross-connect to be created.
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	Path protection multicast drop with (1-way) continue
• 1WAYEN	Path protection multicast end node (1-way continue)
• 1WAYMON	A bidirectional connection between the two tributaries **Note** In ONS 15454 Software Release 3.0 and later and ONS 15327 Software R3.3 and later, 1WAYMON is not supported with TL1. However, it is still supported from Cisco Transport Controller (CTC). Using CTC, you can create 1WAYMON cross-connects that can be retrieved with TL1.
• 1WAYPCA	A unidirectional connection from a source tributary to a destination tributary on the protection path/fiber
• 2WAY	A bidirectional connection between the two tributaries
• 2WAYDC	A bidirectional drop and continue connection applicable only to path protection traditional and integrated DRIs
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber
• DIAG	Diagnostics cross-connect. Supports BERT (BLSR PCA diagnostics cross-connect).

<CRSTYPE>	The cross-connection type. The parameter type is CRS_TYPE, which is the cross-connection type.
• STS	Indicates all the STS cross-connections
• STS1	STS1 cross-connect
• STS3C	STS3c cross-connect
• STS6C	STS6c cross-connect
• STS9C	STS9c cross-connect
• STS12C	STS12c cross-connect
• STS18C	STS18c cross-connect
• STS24C	STS24c cross-connect
• STS36C	STS36c cross-connect
• STS48C	STS48c cross-connect
• STS192C	STS192c cross-connect
• VT	Indicates all the VT1 cross-connections
• VT1	VT1 cross-connect
• VT2	VT2 cross-connect
<DRITYPE>	(Optional) The DRI connection type. It is applied only if the cross-connection is a drop-and-continue connection type (1WAYDC or 2WAYDC), and defaults to path protection for the DRI configuration. The parameter type is DRITYPE (DRI type).
• BLRS	BLSR DRI type
• UPSR	Path protection DRI type
• UPSR-BLSR	Path protection-BLSR hand-off DRI type
<SYNCSW>	(Optional) Synchronization switch AID from the "25.29 SYNCSW" section on page 25-48.
<CKTID>	(Optional) Circuit identification parameter that contains a common language ID or other alias of the circuit being provisioned. It cannot contain blank spaces. CKTID is a string.
<PST_PSTQ>	Primary state and primary state qualifier separated by a colon. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ).
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) One or more secondary states separated by "&", in alphabetical order. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance

• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.33 RTRV-CRS-<PATH>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Cross-Connect for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VT1, or VT2 (RTRV-CRS-<PATH>) command retrieves any connections associated with the entered AID(s) or AID range. The information on both ends is returned along with the type of connection.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Note

- The UPSR STS cross-connection can be retrieved by using "&" in the AID fields of this command.
  - To retrieve a 1-way selector or 2-way selector and bridge cross-connection with:

    from points: F1, F2

    to points: T1

    the output will be:

    1-way

    "F1&F2,T1:CCT,STS3C"

    2-way

    If retrieved on point F1 or F2, the output format is the same as the 1-way output.

    If retrieved on point T1, the output will be:

    "T1,F1&F2:CCT,STS3C"
  - To retrieve a 1-way bridge or 2-way selector and bridge cross-connection with:

    from point: F1

    to points: T1, T2

    the output will be:

    1-way

    "F1,T1&T2:CCT,STS3C"

    2-way

    "T1&T2,F1:CCT,STS3C"
  - To retrieve a 1-way subtending path protection connection or 2-way subtending path protection cross-connection with:

    from point: F1, F2

    to points: T1, T2

    the output will be:

1-way:

"F1&F2,T1&T2:CCT,STS3C"

2-way:

If retrieved on point F1 or F2, the output format is the same as the 1-way output.

If retrieved on point T1 or T2, the output will be:

"T1&T2,F1&F2:CCT,STS3C"

- To retrieve a 2-way selector and bridge cross-connection with:

  ENT-CRS-<PATH>::F1&F2,S1&S2:<CTAG>::2WAY;

  from points: F1, F2 (F1 is the working side, F2 is the protect side)

  selector: S1, S2 (S1 is the working side, S2 is the protect side)

  the output will be:

  If retrieved on point F1 or F2, the output will be:

  "F1&F2,S1&S2:CCT,STS3C"

  If retrieved on selector S1 or S2, the output will be:

  "S1&S2,F1&F2:CCT,STS3C"

- To retrieve a UPSR IDRI cross-connect with:

  from points: F1, F2

  to points: T1, T2

  the output will be:

  "F1&F2,T1&T2:CCT,STS3C"

- To retrieve a UPSR DRI cross-connect with:

  from points: F1, F2

  to points: T1

  the output will be:

  "F1&F2,T1:CCT,STS3C"

- All A&B AIDs in the TL1 cross-connection command are in the format of WorkingAID&ProtectAID.
- STS_PATH does not include STS for the RTRV-CRS command because STS is not a standard designator as defined by Telcordia GR-833 A-2.
- Both the 1WAYPCA and 2WAYPCA is used to specify a PCA cross-connection.
- The facility AID is only valid on slots with a G1K-4 card.
- The virtual facility AID (VFAC) is only valid on slots holding the ML-Series card.
- Both DRITYPE and DRINODE optional fields are available to support BLSR-DRI. DRITYPE is applied only if the cross-connect is a drop-and-continue connection (1WAYDC or 2WAYDC), and defaults to path protection for the DRI. DRINODE must be specified only if at least one end of the connection is on the BLSR, and defaults to NA.
- The DS3XM-12 card allows portless STS1/VT1.5 cross-connection provisioning on the PORTLESS ports.

Category Cross Connections

Security Retrieve

Input Format RTRV-CRS-<PATH>:[<TID>]:<SRC>:<CTAG>[::::];

Input Example RTRV-CRS-STS3C:KENWOOD:STS-6-1-1:223;

Input Parameters

<SRC>	Source access identifier from the "25.11 CrossConnectId1" section on page 25-24. 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

<SRC>	Source access identifier from the "25.10 CrossConnectId" section on page 25-20. Indicates the source AID(s) of the cross-connection. SRC is listable.
<DST>	Destination AID of the cross-connection from the "25.10 CrossConnectId" section on page 25-20. DST is listable.
<CCT>	Type of connection. Used for specifying one or two-way connections. The parameter type is CCT, which is the type of cross-connect to be created.
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	Path protection multicast drop with (1-way) continue
• 1WAYEN	Path protection multicast end node (1-way continue)
• 1WAYMON	A bidirectional connection between the two tributaries **Note** With ONS 15454 Software R3.0 and later and ONS 15327 Software R3.3 and later, 1WAYMON is not supported with TL1. However, it is still supported from CTC. Using CTC, you can create 1WAYMON cross-connects and can be retrieved by TL1.

• 1WAYPCA	A unidirectional connection from a source tributary to a destination tributary on the protection path/fiber
• 2WAY	A bidirectional connection between the two tributaries
• 2WAYDC	A bidirectional drop and continue connection applicable only to path protection traditional and integrated dual-ring interconnects
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber
• DIAG	Diagnostics cross-connect. Supports BERT (BLSR PCA diagnostics cross-connect)
<MOD>	The connection path bandwidth. The parameter type is MOD2, which is the line/path modifier.
• 10GFC	10 Gigabit Fibre Channel
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit Fibre Channel
• 1GFICON	1 Gigabit FICON
• 2GFC	2 Gigabit Fibre Channel
• 2GFICON	2 Gigabit FICON
• D1VIDEO	D1 Video
• DS1	DS1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETR_CLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over packet over SONET. Virtual ports partitioned using GFP's multiplexing capability.
• GIGE	GIG Ethernet
• HDTV	HDTV
• ISC3PEER1G	ISC3PEER1G
• ISC3PEER2G	ISC3PEER2G
• ISC3PEER2R	ISC3PEER2R
• ISCCOMPAT	ISCCOMPAT
• 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
• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 path
• VT2	VT2 path
<DRITYPE>	(Optional) The DRI connection type. It is applied only if the cross-connection is a drop-and-continue connection type (1WAYDC or 2WAYDC), and defaults to path protection for the DRI configuration. The parameter type is DRITYPE (DRI type).
• BLRS	BLSR DRI type
• UPSR	Path protection DRI type
• UPSR-BLSR	UPSR-BLSR hand-off DRI type
<SYNCSW>	(Optional) Synchronization switch AID from the "25.29 SYNCSW" section on page 25-48.
<CKTID>	(Optional) A string of ASCII characters. Maximum length is 48. CKTID is a string.
<PST_PSTQ>	Primary state and primary state qualifier separated by a colon. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ).
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) One or more secondary states separated by "&", in alphabetical order. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.34 RTRV-DFLT-SECU

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Default Security (RTRV-DFLT-SECU) command retrieves the system-wide default values associated with several security parameters.

Usage Guidelines None

Category Security

Security Superuser

Input Format RTRV-DFLT-SECU:[<TID>]:<AID>:<CTAG>;

Input Example RTRV-DFLT-SECU:CISCO:ALL:123;

Input Parameters

<AID>	Access identifier. ALL is the only acceptable value. AID is a string. 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=<PRIVLVL>],[PDIF=<PDIF>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "TCC2:PAGE=40,PCND=5,MXINV=5,DURAL=30,TMOUT=0,UOUT=60,PFRCD=NO,
   POLD=5,PINT=20,LOGIN=MULTIPLE,PRIVLVL=RTRV,PDIF=1"
;
```

Output Parameters

<NE>	The node name of the NE where the system values are to be retrieved.
<PAGE>	Password aging interval. It is the number of days before a user is prompted to change his or her password. 0 indicates the policy is turned off and is the default. If PAGE is turned on for all privilege levels and is not specified for each privilege level, it defaults to 45 days. PAGE ranges from 20 to 90 days. PAGE is an integer.

<PCND>	Number of days a password can be used before a new one is mandatory (for example, the warning period). Default is 5 days. PCND ranges from 2 to 20 days. PCND is an integer.
<MXINV>	Maximum number of consecutive and invalid session set up attempts allowed to occur before an intrusion attempt is suspected (for example, “Failed Logins Before Lockout” from CTC). 0 indicates the policy is turned off. Default is 5. MXINV ranges from 0 to 10. MXINV is an integer.
<DURAL>	Time interval (in seconds) during which a user ID is locked out when an intrusion attempt is suspected (for example, the “Lockout Duration”). If the user is locked out until unlocked by a Superuser, DURAL=INFINITE. Default is 30 seconds. DURAL ranges from 0 to 600 seconds. DURAL is 0 for RTRV users, 60 minutes for MAINT users, 30 minutes for PROV users, and 15 minutes for SUPER users. DURAL is a string.
<TMOUT>	Interval (in minutes) after which a session is terminated if no messages are exchanged between the user and the NE. 0 indicates that the session will not timeout. TMOUT is an integer.
<UOUT>	UID aging interval, expressed in days. If a userid has not been used in UOUT days, the user will be forced to change his/her password (or logout) at the next login. No other command is allowed until the password has been changed. 0 indicates the policy is turned off and is the default. UOUT ranges from 1 to 99 days. UOUT is an integer.
<PFRCD>	Indicates a password change is required when a new user establishes a session to the NE for the first time (for example, “Require password change on 1st login”). Default is NO. The parameter type is YES_NO, which indicates whether the user’s password is about to expire, the user is logged into the NE or the user is locked out of the NE.
• NO	No
• YES	Yes
<POLD>	Number of prior passwords that cannot be reused (for example, “Prevent reusing last X passwords”). Default is 1. POLD ranges from 0 to 10. POLD is an integer.
<PINT>	Number of days that must pass before a password can be changed. If PINT is 0, the policy is turned off. Default is off. PINT ranges from 20 to 95 days. PINT is an integer.
<LOGIN>	Number of times a user can log into an NE. LOGIN is either SINGLE or MULTIPLE. If LOGIN is SINGLE, a user can only log into an NE one time with any given userid, regardless of the method of login (for example, CTC, TL1, etc.). Default is MULTIPLE. The parameter type is USER_LOGINS, which is the number of times a user can log into the same NE with the same user ID.
• MULTIPLE	A user can log into the same NE many times.
• SINGLE	A user can log into the NE only once (includes both CTC and TL1 sessions).
<PRIVLVL>	Parameter type is PRIVILEGE, which is the security level.

• MAINT	Maintenance security level. Unlimited idle time.
• PROV	Provision security level. 60 minutes of idle time.
• RTRV	Retrieve security level. 30 minutes of idle time.
• SUPER	Superuser security level. 15 minutes of idle time.
<PDIF>	(Optional) Indicates how many characters must differ between old and new passwords. Default minimum character difference is 1. Ranges from 0 to 5 characters. PDIF is an integer.

21.35 RTRV-DS1

(Cisco ONS 15454) The Retrieve DS1 (RTRV-DS1) command retrieves the test access attributes on a DS1 layer of a DS3XM card.

Usage Guidelines

- Both the MODE and the FMT fields of this command are applied for the DS3XM-12 card only.
- If the DS1 mode of the DS3XM-12 is ATT, the DS1 path can retrieve AT&T/54016 FEND PM counts up to 96 15-minute intervals; if the DS1 mode of the DS3XM-12 is FDL, the DS1 path can retrieve FDL/T1-403 FEND PM counts up to 32 15-minute intervals in RTRV-PM-DS1.
- For the DS3XM-12 card, the DS1 frame format NE default is AUTO_PROV_FMT for the first 30 seconds to determine the real format. After 30 seconds, the DS1 frame format is the detected frame. If the frame format is not determined, it will be in the UNFRAMED format.
- For the preprovisioning DS3XM-12 card, its DS1 frame format defaults to UNFRAMED.
- For the DS3XM-12 card, the DS1-configurable attributes (PM, TH, alarm, etc.) only apply to the ported ports (1 to 12) and the VT-mapped (odd) portless ports in xxx-xxx-DS1 commands. Provisioning or retrieving DS1 attributes on the DS3-mapped (even) portless ports in xxx-xxx-DS1 commands is not allowed.

Category

Ports

Security

Retrieve

Input Format

RTRV-DS1:[<TID>]:<SRC>:<CTAG>[::::];

Input Example

RTRV-DS1:PETALUMA:DS1-2-1-6-12:123;

Input Parameters

<SRC>	The DS1 path access identifier of the DS3XM card from the "25.12 DS1" section on page 25-30. Must not be null.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<DS1AID>::[TACC=<TACC>],[TAPTYPE=<TAPTYPE>],[AISONLPBK=<AISONLPBK>],
   [MODE=<MODE>],[FMT=<FMT>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "DS1-2-1-12::TACC=8,TAPTYPE=SINGLE,AISONLPBK=OFF,MODE=FDL,FMT=ESF"
;
```

Output Parameters

<DS1AID>	(Optional) DS1 access identifier from the "25.12 DS1" section on page 25-30.
<TACC>	(Optional) Indicates whether the digroup being provisioned is to be used as a test access digroup. Default is N. TACC is an integer.
<TAPTYPE>	(Optional) TAP type. The parameter type is TAPTYPE, which is the test access point type.
• DUAL	Dual FAD
• SINGLE	Single FAD
<AISONLPBK>	(Optional) AIS on loopback. The parameter type is AIS_ON_LPBK, which indicates if an AIS is sent on a loopback.
• AIS_ONLPBK_FACILITY	AIS is sent on facility loopbacks.
• AIS_ON_LPBK_ALL	AIS is sent on all loopbacks.
• AIS_ON_LPBK_OFF	AIS is not sent on loopbacks.
• AIS_ON_LPBK_TERMINAL	AIS is sent on terminal loopbacks.
<MODE>	(Optional) Mode. The parameter type is DS1MODE, which is the DS1 path mode of the DS3XM-12 card
• ATT	Indicates the DS1 path of the DS3XM-12 is in AT&T 54016 mode.
• FDL	Indicates the DS1 path of the DS3XM-12 is in FDL T1-403 mode.
<FMT>	(Optional) Digital signal frame format. The parameter type is FRAME_FORMAT, which is the frame format for a T1 port.
• D4	Frame format is D4.
• ESF	Frame format is ESF.
• UNFRAMED	Frame format is unframed.

21.36 RTRV-EC1

(Cisco ONS 15454, ONS 15310-MA) The Retrieve Electrical Carrier (RTRV-EC1) command retrieves the facility status of an EC1 card.

Usage Guidelines

None

Category Ports

Security Retrieve

Input Format

```
RTRV-EC1:[<TID>]:<AID>:<CTAG>[::::];
```

Input Example

```
RTRV-EC1:CISCO:FAC-1-1:1234;
```

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. Must not be null.

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>],
   [EXPTRC=<EXPTRC>],[TRC=<TRC>],[TRCMODE=<TRCMODE>],
   [TRCFORMAT=<TRCFORMAT>],[AISONLPBK=<AISONLPBK>]:<PSTPSTQ>,[<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\",EXPTRC="AAA",TRC="AAA",TRCMODE=MAN,
   TRCFORMAT=16-BYTE,AISONLPBK=AIS_ON_LPBK_ALL:IS-NR,AINS"
;
```

Output Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<PJMON>	(Optional) A SONET pointer monitor attribute of an EC1 port. PJMON is an integer.
<LBO>	(Optional) Line buildout settings. LBO is an integer. The parameter type is E_LBO, which is the electrical signal line buildout.
• 0–225	Electrical signal line buildout range is 0–225.
• 226–450	Electrical signal line buildout range is 226–450.
<RXEQUAL>	(Optional) Parameter type is EXT_RING, which indicates if the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<SOAK>	IS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer.

<SOAKLEFT>	(Optional) Time remaining for the transition from OOS-AINS to IS measured in 1-minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. Rules for SOAKLEFT are as follows: • When the port is in OOS, OOS_MT, or IS state, the parameter will not appear. • When the port is in IS-AINS but the countdown has not started due to fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in IS_AINS state and the countdown has started, the value will be shown in HH-MM format.
<SFBER>	(Optional) Signal failure threshold. The default value is 1E-4. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	(Optional) Signal degrade threshold. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<NAME>	(Optional) NAME is a string.
<EXPTRC>	(Optional) EXPTRC is a string.
<TRC>	(Optional) TRC is a string.
<TRCMODE>	(Optional) Trace mode. The parameter type is TRCMODE.
• AUTO	Use the previously received path trace string as the expected string. Not applicable to MXP/TXP cards.
• AUTO-NO-AIS	Use the previously received path trace string as the expected string and do not turn on AIS and RDI if TIM-P is detected.
• MAN	Use the provisioned expected string as the expected string.
• MAN-NO-AIS	Use the provisioned expected string as the expected string and do not turn on AIS and RDI if TIM-P is detected.
• OFF	Turn off path trace capability. Nothing will be reported.
<TRCFORMAT>	(Optional) Trace message size. The parameter type is TRCFORMAT (trace format).
• 1-BYTE	1-byte trace message
• 16-BYTE	16-byte trace message
• 64-BYTE	64-byte trace message

• Y	Enable an attribute.
<AISONLPBK>	(Optional) AIS on loopback. The parameter type is AIS_ON_LPBK, which indicates if an AIS is sent on a loopback.
• AIS_ONLPBK_FACILITY	AIS is sent on facility loopbacks.
• AIS_ON_LPBK_ALL	AIS is sent on all loopbacks.
• AIS_ON_LPBK_OFF	AIS is not sent on loopbacks.
• AIS_ON_LPBK_TERMINAL	AIS is sent on terminal loopbacks.
<PST_PSTQ>	Administrative state in the PST_PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ).
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.37 RTRV-EQPT

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Equipment (RTRV-EQPT) command retrieves the data parameters and state parameters associated with an equipment unit.

The RTRV-EQPT command also retrieves shelf parameters.

Usage Guidelines

This command returns the PRTYPE, PROTID, RVTM, and RVRTV parameters for a card inside of a protection group according to the following scenarios:

- A working AID/card within a 1:1 protection group will return PRTYPE, PROTID, RVTM, and RVRTV.
- A protection/AID card within a 1:1 protection group will return PRTYPE, RVTM, and RVRTV.
- A working AID/card within a 1:N protection group will return PRTYPE, PROTID, RVTM, and RVRTV=Y.
- A protection AID/card of a 1:1 protection group will return PRTYPE, RVTM, and RVRTV=Y.

- An unprotected AID/card will return the AID type, equip (equip/unequip), status (act/standby), and state (IS/OOS) values.
- Preprovisioned cards (without being plugged in) will display OOS,AINS for PST and SST. After the card is plugged in and has gone through its initialization sequence, the card automatically goes to IS state (PST).
- The CARDMODE parameter is displayed for ML-Series and FC_MR-4 cards.
- The RETIME and TRANSMODE parameters are only displayed for the DS1/E1-56 card.

Error conditions:

- The equipment is not provisioned.

Category

Equipment

Security

Retrieve

Input Format

RTRV-EQPT:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-EQPT:MIRABEL:SLOT-12:230;

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31. 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>,][TRANSMODE=<TRANSMODE>],
   [RETIME=<RETIME>],[SHELFROLE=<SHELFROLE>]:[<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",
   TRANSMODE=SONET,RETIME=Y,SHELFROLE=NC:OOS-AU,AINS&UEQ"
;
```

Output Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31.
<AIDTYPE>	The type of facility, link, or other addressable entity targeted by the message. The parameter type is EQUIPMENT_TYPE (equipment type).
• 10DME-C	(ONS 15454) 10DME-C card
• 10DME-L	(ONS 15454) 10DME-L card
• 32DMX	(ONS 15454) 32 channel demultiplexer
• 32DMX-L	(ONS 15454) 32 channel demultiplexer unit for L-band
• 32DMX-O	(ONS 15454) 32 channel unidirectional optical demultiplexer
• 32MUX-O	(ONS 15454) 32 channel unidirectional optical multiplexer
• 32WSS	(ONS 15454) 32 channel optical wavelength selective switch
• 32WSS-L	(ONS 15454) 32 channel wavelength switch selector unit for L-band
• 4MD-xx.x	(ONS 15454) Optical multiplexer/demultiplexer with 4 channels
• AD-1B-xx.x	(ONS 15454) Optical add/drop multiplexed (OADM) 1 band filter
• AD-1C-xx.x	(ONS 15454) Optical add/drop multiplexed (OADM) 1 channel filter
• AD-2C-xx.x	(ONS 15454) Optical add/drop multiplexed (OADM) 2 channel filter
• AD-4B-xx.x	(ONS 15454) Optical add/drop multiplexed (OADM) 4 band filter
• AD-4C-xx.x	(ONS 15454) Optical add/drop multiplexed (OADM) 4 channel filter
• AIC-I	(ONS 15454) AIC-I card
• ASAP	(ONS 15600) Any service any port carrier card with 4 PIM slots
• CE-1000-4	(ONS 15454) CE-1000-4 card
• CE-100T-8	(ONS 15454, ONS 15310-CL, ONS 15310-MA) Eight port 100T card
• CTX2500	(ONS 15310-MA) CTX2500 card
• DS1	(ONS 15454) DS1 card
• DS1-28/DS3-EC1-3	(ONS 15310-MA) DS1-28/DS3-EC1-3 card
• DS1-84/DS3-EC1-3	(ONS 15310-MA) DS1-84/DS3-3 card
• DS1/E1-56	(ONS 15454) DS1/E1-56 card
• DS1N	(ONS 15454) DS1N card
• DS3	(ONS 15454) DS3 card
• DS3/EC1-48	(ONS 15454) DS3/EC1-48 card
• DS3i-N-12	(ONS 15454) DS3i-N-12 card
• DS3N	(ONS 15454) DS3N card
• DS3NE	(ONS 15454) DS3NE card
• DS3XM-6	(ONS 15454) DS3XM-6 card
• DS3XM-12	(ONS 15454) DS3XM-12 card
• E1000-2	(ONS 15454) E1000-2 card
• E1000-2-G	(ONS 15454) E1000-2-G card
• E100T	(ONS 15454) E100T card

• EC1	(ONS 15454) EC1 card
• FC_MR-4	(ONS 15454) FC_MR-4 card
• FILLER-CARD	Blank Filler card
• G1000-2	(ONS 15327) Two port G1000 card
• G1K-4	(ONS 15454) Four port G1000 card
• MIC A	(ONS 15327) MIC A card
• MIC B	(ONS 15327) MIC B card
• ML100T-8	(ONS 15310-CL, ONS 15310-MA) Mapper card
• ML1000-2	(ONS 15454) ML-Series two port gigabit Ethernet card
• ML100T-12	(ONS 15454) ML-Series 12 port FSTE card
• ML100X-8	(ONS 15454) Eight port 100T card with optical interface
• MMU	(ONS 15454) Multiring/mesh upgrade unit
• MRC-12	(ONS 15454) 12 port multirate optical card
• MXP_2.5G_10E	(ONS 15454) 2.5-Gbps-10-Gbps Muxponder-100 GHz-Tunable xx.xx-xx.xx card
• MXP_2.5G_10E_L	(ONS 15454) 2.5-Gbps-10-Gbps Muxponder-100 GHz-Tunable xx.xx-xx.xx card for L-band
• MXP_2.5G_10E_C	(ONS 15454) 2.5-Gbps-10-Gbps Muxponder-100 GHz-Tunable xx.xx-xx.xx card for C-band
• MXP_2.5G_10G	(ONS 15454) 2.5-Gbps-10-Gbps muxponder-100 GHz-tunable xx.xx-xx.xx card
• MXP_MR_2.5G	(ONS 15454) 2.5-Gbps multirate muxponder-100 GHz-tunable 15xx.xx-15yy.yy card
• MXPP_2.5G_10G	(ONS 15454) 2.5-Gbps-10-Gbps muxponder-protected-100 GHz-tunable xx.xx-xx.xx card
• MXPP_MR_2.5G	(ONS 15454) 2.5-Gbps multirate muxponder-protected-100 GHz-tunable 15xx.xx-15yy.yy card
• OC3	(ONS 15454, ONS 15327) OC-3 card
• OC3-8	(ONS 15454) Eight port OC-3 card
• OC12	(ONS 15454, ONS 15327) OC-12 card
• OC12-4	(ONS 15454) Four port OC-12 card
• OC48	(ONS 15454, ONS 15327, ONS 15600) OC-48 card
• OC48-16	(ONS 15454) 16 port OC-48 card
• OC192	(ONS 15454, ONS 15600) OC-192 card
• OC192-4	(ONS 15454) Four port OC-192 card
• OC192-XFP	(ONS 15454) One port OC-192 XFP
• OPT-AMP-L	(ONS 15454) Optical preamplifier unit for L-Band
• OPT-BST	(ONS 15454) Optical booster amplifier
• OPT-BST-L	(ONS 15454) Optical booster unit for L-Band
• OPT-PRE	(ONS 15454) Optical preamplifier
• OSC-CSM	(ONS 15454) Optical service channel (OSC) with combiner/separator Module (SCM)
• OSCM	(ONS 15454) Optical service channel module

• PIM-1	(ONS 15600) One port pluggable interface module
• PIM-4	(ONS 15600) Four port pluggable interface module
• PPM-1	(ONS 15454, ONS 15600, ONS 15310-CL, ONS 15310-MA) Pluggable port module with one SFP port
• SHELF	Shelf entity
• SSXC	(ONS 15600) Cross-connect card
• TCC	(ONS 15454) TCC card
• TXP_MR_10E	(ONS 15454) 10-Gbps multirate transponder-100-GHz-tunable xx.xx-xx.xx card
• TXP_MR_10E_C	(ONS 15454) 10-Gbps multirate transponder-100-GHz-tunable xx.xx-xx.xx card for C-band
• TXP_MR_10E-L	(ONS 15454) 10-Gbps multirate transponder-100-GHz-tunable xx.xx-xx.xx card for L-band
• TXP_MR_10G	(ONS 15454) 10-Gbps multirate transponder-100-GHz-tunable xx.xx-xx.xx card
• TXP_MR_2.5G	(ONS 15454) 2.5-Gbps multirate transponder-100-GHz-tunable xx.xx-xx.xx card
• TXPP_MR_2.5G	(ONS 15454) 2.5-Gbps multirate transponder-protected-100-GHz-tunable xx.xx-xx.xx card
• UNKNOWN	Unknown equipment type
• UNPROVISIONED	Unprovisioned type
• XC10G	(ONS 15454) XC10G card
• XCVT	(ONS 15454) XCVT card
• XC-VXC-10G	(ONS 15454) XC-VXC-10G card
• XTC	(ONS 15327) XTC card
<EQUIP>	Indicates if the equipment is physically present. The parameter type is EQUIP, which is the presence of a plug-in unit.
• EQUIP	The unit is equipped—present.
• UNEQUIP	The unit is unequipped—absent.
<ROLE>	(Optional) Indicates if the card is a working unit or the protecting unit. The parameter type is SIDE, which is the role the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	(Optional) Indicates a status. SONET card status is shown on its card level. The parameter type is STATUS.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit on the shelf.
<PROTID>	(Optional) Protecting identifier AID from the "25.22 PRSLOT" section on page 25-40.
<PRTYPE>	(Optional) Protection type. The parameter type is PROTECTION_GROUP, which is the protection group type.
• 1-1	1 to 1 protection

• 1-N	1 to N protection
<RVRTV>	(Optional) 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. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<RVTM>	(Optional) Revertive time. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<CARDNAME>	(Optional) The card name of the card, PIM, or PPM equipment. CARDNAME is a string.
<IOSCFG>	(Optional) Displays the information about the startup Cisco IOS configuration 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: • Where the configuration file is from (TL1, CTC, CTM, CLI, TCC) • The host (IP address), directory, and file name, if the configuration file is downloaded from the network • When the startup configuration file was created (by copying from the network, for example). This field only applies to ML-Series cards. IOSCFG is a string.
<CARDMODE>	(Optional) Card mode. The parameter type is CARDMODE, which is the card mode. Card mode is applicable to cards that have multiple capabilities, for example, the ML-Series card can operate in two distinct modes: Linear Mapper Mode and L2/L3 Mode.
• AMPL-BST	The optical amplifier is working as an optical booster
• AMPL-PRE	The optical amplifier is working as an optical pre-amplifier
• DS3XM12-STS12	The DS3XM-12 card in the STS12 backplane rate mode
• DS3XM12-STS48	The DS3XM-12 card in the STS48 backplane 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 field-programmable gate array (FPGA) using generic framing procedure (GFP) framing type
• ML-HDLC	ML-Series card in DOS FPGA using high-level data link control (HDLC) framing type

• MXPMR10DME-4GFC	4 Gbps Fibre Channel/FICON mode for the Cisco ONS 15454 10DME-C/10DME-L card supported on ports one and five
• MXPMR10DME-4GFC-FCGEISC	4 Gbps Fibre Channel/FICON supported on port one and Fibre Channel, GIGE and ISC modes for the Cisco ONS 15454 10DME-C/10DME-L card supported on ports five to eight
• MXPMR10DME-FCGEISC	Fibre Channel, GIGE and ISC modes for the Cisco ONS 15454 10DME-C/10DME-L card supported on all eight ports
• MXPMR10DME-FCGEISC-4GFC	Fibre Channel, GIGE and ISC modes for the Cisco ONS 15454 10DME-C/10DME-L card supported on ports one to four and 4 Gbps Fibre Channel/FICON supported on port five
• MXPMR25G-ESCON	ESCON mode for the Cisco ONS 15454 MXP_2.5G_10G card
• MXPMR25G-FCGE	Fibre channel or GIGE mode for the MXP_2.5G_10G card
• MXPMR25G-MIXED	Mixed Fibre Channel, GIGE and ESCON modes for the Cisco ONS 15454 MXP_2.5G_10G card
<PEERID>	(Optional) The regeneration group peer slot identifier from the "25.14 EQPT" section on page 25-31.
<REGENNAME>	(Optional) Name of a regeneration group. REGENNAME is a string.
<TRANSMODE>	(Optional) Transport mode. Applicable only to the DS1/E1-56 card on ONS 15454. Defaults to SONET. The parameter type is TRANSMODE (transition mode).
• AU3	AU3 mode
• AU4	AU4 mode
• SONET	SONET mode
<RETIME>	(Optional) Indicates the retime function for all the ports on this card. Applicable only to the DS1/E1-56 card on the ONS 15454. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<SHELFROLE>	The role of the shelf in the context of the node. When it is omitted it defaults to SC. The parameter is SHELF_ROLE.
• NC	The shelf behaves as a node controller.
• SC	The shelf behaves as a shelf controller.
<PST_PSTQ>	Administrative state in the PST_PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ).
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	Secondary state of the entity. Listable. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback

• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.38 RTRV-ESCON

(Cisco ONS 15454) The Retrieve Enterprise System Connection (RTRV-ESCON) command retrieves the Fibre Channel-specific settings for ports that have been configured to carry ESCON traffic using the ENT-ESCON command.

Usage Guidelines

None

Category

Ports

Security

Retrieve

Input Format

RTRV-ESCON:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-ESCON::CISCO:FAC-1-1:123;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. Must not be null.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:,,[<ROLE>],[<STATUS>]:[ENCAP=<ENCAP>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-1-1:,,WORK,ACT:ENCAP=GFP-T"
;
```

Output Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<ROLE>	(Optional) The port role in Y-cable protection (WORK or PROT). The parameter type is SIDE, which is the role the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	(Optional) A port status in Y-cable protection (ACT or STBY). The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<ENCAP>	(Optional) Encapsulation frame type. The parameter type is ENCAP, which is the frame encapsulation type.
• GFP_F	GFP Frame Mode
• GFP_T	GFP Transparent Mode
• HDLC	HDLC Frame Mode
• HDLC_LEX	HDLC LAN Extension Frame Mode
• HDLC_X86	HDLC X.86 Frame Mode

21.39 RTRV-EXT-CONT

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve External Control (RTRV-EXT-CONT) command retrieves the control state of an external control. The command can be used to audit the result of an OPR-EXT-CONT or a RLS-EXT-CONT command.

Usage Guidelines

- If the CONTTYPE is null, the existing CONTTYPE on this AID will be returned.
- The duration is not supported. It defaults to CONTS.

Category

Environment

Security

Retrieve

Input Format

RTRV-EXT-CONT:[<TID>]:<AID>:<CTAG>[::<CONTTYPE>];

Input Example

RTRV-EXT-CONT:CISCO:ENV-OUT-2:123::AIRCOND;

Input Parameters

<AID>	Access identifier from the "25.13 ENV" section on page 25-30. 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. The parameter type is CONTTYPE, which is the environmental control type.
• AIRCOND	Air conditioning
• AUDIBLE	Audible (ONS 15310-MA only)
• ENGINE	Engine
• FAN	Fan
• GEN	Generator
• HEAT	Heat
• LIGHT	Light
• MISC	Miscellaneous
• SPKLR	Sprinkler

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:[<CONTTYPE>],<DUR>,[<CONTSTATE>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "ENV-OUT-2:AIRCOND,CONTS,OPEN"
;
```

Output Parameters

<AID>	Access identifier from the "25.13 ENV" section on page 25-30. Identifies the external control for which the control state is being retrieved.
<CONTTYPE>	(Optional) Environmental control type. The parameter type is CONTTYPE, which is the environmental control type.
• AIRCOND	Air conditioning
• AUDIBLE	Audible (ONS 15310-MA only)
• ENGINE	Engine
• FAN	Fan
• GEN	Generator
• HEAT	Heat
• LIGHT	Light
• MISC	Miscellaneous
• SPKLR	Sprinkler
<DUR>	Duration of operation. The duration for which the external control can be operated. The parameter type is Duration.
• CONTS	Continuous duration

<CONTSTATE>	(Optional) Control state of the external control. The parameter type is CONT_MODE, which is the current state of the environmental control.
• NA	Not applicable (for example, duration is MNTRY).
• OPER	The environmental control state is CLOSE.
• RLS	The environmental control state is OPEN.

21.40 RTRV-FAC

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Facility (RTRV-FAC) command retrieves the payload type of the facility. It can also dump all the facilities on a given card and is applicable to all cards.

Note You must retrieve card information only from the working card and not from the protect card.

Usage Guidelines None

Category Ports

Security Retrieve

Input Format

```
RTRV-FAC:[<TID>]:<SRC>:<CTAG>[::::];
```

Input Example

```
RTRV-FAC:CISCO:FAC-2-9:2223;
```

Input Parameters

<SRC>	Source access identifier from the "25.15 FACILITY" section on page 25-33. 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

<SRC>	Source access identifier from the "25.15 FACILITY" section on page 25-33.
<PAYLOAD>	(Optional) Payload type of the facility. The parameter type is PAYLOAD, which identifies payload type.
• 10GFC	10 Gigabit Ethernet Fibre Channel mode
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit Fibre Channel mode
• 1GFICON	1 Gigabit FICON mode
• 2GFC	2 Gigabit Fibre Channel mode
• 2GFICON	2 Gigabit FICON mode
• DS3	DS3 mode
• DS3XM	DS3XM payload mode for DS3XM card
• 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
<PST_PSTQ>	Administrative state in the PST-PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ).
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state. SSTQ is a string.

21.41 RTRV-FFP

(Cisco ONS 15454) The Retrieve Facility Protection Group (RTRV-FFP) command retrieves all optical 1+1 protection groups.

Usage Guidelines

None

Category Protection

Security Retrieve

Input Format

```
RTRV-FFP:[<TID>]:<AID>:<CTAG>[::::];
```

Input Example

```
RTRV-FFP:HERNDON:FAC-1-1:1;
```

Input Parameters

AID	Optical facility access identifier from the "25.15 FACILITY" section on page 25-33. Must not be null.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<WORK>,<PROTECT>:<LEVEL>:[PROTID=<PROTID>],[RVRTV=<RVRTV>],
   [RVTM=<RVTM>],[PSDIRN=<PSDIRN>],[VRGRDTM=<VRGRDTM>],
   [DTGRDTM=<DTGRDTM>],[RCGRDTM=<RCGRDTM>],[OPOTYPE=<OPOTYPE>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-2-1,FAC-1-1:OC48:PROTID="PROT_NAME",RVRTV=Y,RVTM=1.0,PSDIRN=BI,
   VRGRDTM=0.5,DTGRDTM=1.0,RCGRDTM=1.0,OPOTYPE=OPTIMIZED"
;
```

Output Parameters

<WORK>	The working port access identifier from the "25.15 FACILITY" section on page 25-33.
<PROTECT>	The protected port access identifier from the "25.15 FACILITY" section on page 25-33.
<PROTTYPE>	(Optional) Protection group type. PROTTYPE is a string.
<LEVEL>	Optical rate the protection group was defined against. The parameter type is OCN_TYPE, which is the modifier used to differentiate various levels of OC-N.
• OC12	Optical Carrier level 12 (622 Mbps)
• OC192	Optical Carrier level 192 (10 Gbps)
• OC3	Optical Carrier level 3 (155 Mbps)
• OC48	Optical Carrier level 48 (2.4 Gbps)
<PROTID>	(Optional) Protection group name. PROTID is a string.

<RVRTV>	(Optional) Revertive mode. The value Y indicates that 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. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<RVTM>	(Optional) Revertive time. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	(Optional) Protection switch operation. Direction of reversion. The parameter type is UNI_BI, which is the unidirectional and bidirectional switch operations.
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching
<VRGRDTM>	(Optional) Verification guard timer. Only applies to optimized 1+1. The parameter type is VERIFICATION_GUARD_TIMER, which is the optimized 1+1 verification guard timer.
• 0.5	500 ms
• 1.0	1 second
<DTGRDTM>	(Optional) Detection guard timer. Only applies to optimized 1+1. The parameter type is DETECTION_GUARD_TIMER, which is the optimized 1+1 detection guard timer.
• 0.0	0 seconds
• 0.05	50 ms
• 0.1	100 ms
• 0.5	500 ms
• 1.0	1 second
• 2.0	2 seconds
• 3.0	3 seconds
• 4.0	4 seconds
• 5.0	5 seconds
<RCGRDTM>	(Optional) Recovery guard timer. Only applies to optimized 1+1. The parameter type is RECOVERY_GUARD_TIMER, which is the optimized 1+1 recovery guard timer.
• 0.0	0 seconds
• 0.05	50 ms
• 0.1	100 ms
• 0.5	500 ms
• 1.0	1 second
• 2.0	2 seconds
• 3.0	3 seconds
• 4.0	4 seconds

• 5.0	5 seconds
• 6.0	6 seconds
• 7.0	7 seconds
• 8.0	8 seconds
• 9.0	9 seconds
• 10.0	10 seconds
<OPOTYPE>	(Optional) 1+1 protection type. The parameter type is ONE_PLUS_ONE, which is the 1+1 protection type.
• OPTIMIZED	Optimized 1+1
• STANDARD	Standard 1+1

21.42 RTRV-FFP-<MOD2DWDMPAYLOAD>

(Cisco ONS 15454) The Retrieve Facility Protection Group for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, HDTV, ISC1, ISC3, or PASSTHRU (RTRV-FP-<MOD2DWDMPAYLOAD>) command retrieves Y-cable protection on client facilities.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-FFP-<MOD2DWDMPAYLOAD>:[<TID>]:<SRC>:<CTAG>[::::];

Input Example

RTRV-FFP-HDTV:CISCO:FAC-1-1-1:100;

Input Parameters

<SRC>	Source access identifier from the "25.15 FACILITY" section on page 25-33. 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

<AIDUNIONID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<AIDUNIONID1>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<PROTTYPE>	(Optional) The type of facility protection. The parameter type is PROTTYPE, which is the protection type for DWDM client facilities.
• Y-CABLE	Y-cable protection for the client ports on TXP_MR_10G, MXP_2.5G_10G, TXP_MR_2.5G, and TXPP_MR_2.5G cards.
<PROTID>	(Optional) Y-cable protection group identifier. PROTID is a string.
<RVRTV>	(Optional) Revertive mode. The value Y indicates that 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. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<RVTM>	(Optional) Revertive time. Defaults to 5.0 minutes. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	(Optional) Protection switch operation. Identifies the switching mode. Defaults to UNI. The parameter type is UNI_BI, which is the unidirectional and bidirectional switch operations.
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching

21.43 RTRV-FFP-<OCN_TYPE>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Facility Protection Group for OC3, OC12, OC48, or OC192 (RTRV-FFP-<OCN_TYPE>) command retrieves the optical facility protection information.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Note Optimized 1+1 and related attributes only apply to the ONS 15454.

Note ONS 15310-CL does not support OC48 and OC192.

Category Protection

Security Retrieve

Input Format RTRV-FFP-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[::::];

Input Example RTRV-FFP-OC3:PETALUMA:OC3-1-1:1;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. Must not be null.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<WORK>,<PROTECT>::[PROTTYPE=<PROTTYPE>],[PROTID=<PROTID>],
   [RVRTV=<RVRTV>],[RVTM=<RVTM>],[PSDIRN=<PSDIRN>],[VRGRDTM=<VRGRDTM>],
   [DTGRDTM=<DTGRDTM>],[RCGRDTM=<RCGRDTM>],[OPOTYPE=<OPOTYPE>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-2-1,FAC-1-1::PROTTYPE=Y-CABLE,PROTID="PROT_NAME",RVRTV=Y,RVTM=1.0,
   PSDIRN=BI,VRGRDTM=0.5,DTGRDTM=1.0,RCGRDTM=1.0,OPOTYPE=OPTIMIZED"
;
```

Output Parameters

<WORK>	Access identifier from the "25.15 FACILITY" section on page 25-33. Identifies the working port.
<PROTECT>	Access identifier from the "25.15 FACILITY" section on page 25-33. Identifies the protection port.
<PROTTYPE>	(Optional) Protection group type. Applicable only to DWDM cards. The parameter type is PROTTYPE, which is the protection type for DWDM client facilities.
• Y-CABLE	Y-cable protection for the client ports on TXP_MR_10G, MXP_2.5G_10G, TXP_MR_2.5G, and TXPP_MR_2.5G cards.
<PROTID>	(Optional) Free-form text string name given to the 1+1 protection group. PROTID is a string.

<RVRTV>	(Optional) Revertive mode. The value Y indicates that 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. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<RVTM>	(Optional) Revertive time. Defaults to 5.0 minutes. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	(Optional) Protection switch operation. Identifies the switching mode. Defaults to UNI. The parameter type is TRANS_MODE, which is the G1000 transponder mode.
• BI	Bidirectional
• NONE	Not in transponder mode
• UNI	Unidirectional
<VRGRDTM>	(Optional) Verification guard timer. Only applies to optimized 1+1. The parameter type is VERIFICATION_GUARD_TIMER, which is the optimized 1+1 verification guard timer.
• 0.5	500 ms
• 1.0	1 second
<DTGRDTM>	(Optional) Detection guard timer. Only applies to optimized 1+1. The parameter type is DETECTION_GUARD_TIMER, which is the optimized 1+1 detection guard timer.
• 0.0	0 seconds
• 0.05	50 ms
• 0.1	100 ms
• 0.5	500 ms
• 1.0	1 second
• 2.0	2 seconds
• 3.0	3 seconds
• 4.0	4 seconds
• 5.0	5 seconds
<RCGRDTM>	(Optional) Recovery guard timer. Only applies to optimized 1+1. The parameter type is RECOVERY_GUARD_TIMER, which is the optimized 1+1 recovery guard timer.
• 0.0	0 seconds
• 0.05	50 ms
• 0.1	100 ms
• 0.5	500 ms
• 1.0	1 second
• 2.0	2 seconds
• 3.0	3 seconds

• 4.0	4 seconds
• 5.0	5 seconds
• 6.0	6 seconds
• 7.0	7 seconds
• 8.0	8 seconds
• 9.0	9 seconds
• 10.0	10 seconds
<OPOTYPE>	(Optional) 1+1 protection type. The parameter type is ONE_PLUS_ONE, which is the 1+1 protection type.
• OPTIMIZED	Optimized 1+1
• STANDARD	Standard 1+1

21.44 RTRV-FFP-OCH

(Cisco ONS 15454) The Retrieve Facility Protection Group Optical Channel (RTRV-FFP-OCH) command retrieves the protection group information for the TXP_MR_2.5G and TXPP_MR_2.5G card trunk port.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-FFP-OCH:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-FFP-OCH:VA454-22:CHAN-2-2:100;

Input Parameters

<AID>	Access identifier from the "25.8 CHANNEL" section on page 25-18. 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

<WORK>	The working port access identifier from the "25.8 CHANNEL" section on page 25-18.
<PROTECT>	The protected port access identifier from the "25.8 CHANNEL" section on page 25-18.
<PROTTYPE>	(Optional) Protection group type. PROTTYPE is a string.
<PROTID>	(Optional) Protection group name. PROTID is a string.
<RVRTV>	(Optional) Revertive mode. The value Y indicates that 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. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<RVTM>	(Optional) Revertive time. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	(Optional) Protection switch operation. Direction of reversion. The parameter type is UNI_BI, which is the unidirectional and bidirectional switch operations.
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching

21.45 RTRV-FSTE

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Retrieve Fast Ethernet (RTRV-FSTE) command retrieves the front-end port information of a Fast Ethernet (10/100 Mbps) card. MTU is not displayed for the ML-100T-8 and CE-100T-8 cards. RTRV-POS will display the MTU that is common for both front-end and back-end ports.

Usage Guidelines

None

Category

Ports

Security

Retrieve

Input Format

RTRV-FSTE:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-FSTE:TID:FAC-1-1:CTAG;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. 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>],[OPTICS=<OPTICS>],[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,OPTICS=1000-BASE-LX,NAME=\"FSTEPORT\",SOAK=32,
   SOAKLEFT=\"12-25\":OOS-AU,AINS"
;
```

Output Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<ADMINSTATE>	(Optional) Administration type. The parameter type is UP_DOWN (up or down).
• DOWN	Down
• UP	Up
<LINKSTATE>	(Optional) Link protocol. The parameter type is UP_DOWN (up or down).
• DOWN	Down
• UP	Up
<MTU>	(Optional) Maximum transmission unit. MTU is an integer.
<FLOWCTRL>	(Optional) Flow control. The parameter type is FLOW, which is the type of flow control that has been negotiated for an Ethernet port.
• ASYMMETRIC	Asymmetric flow control
• ASYMMETRIC_LOCAL	Asymmetric local flow control
• NONE	No flow control
• PASSTHRU	Passthrough flow control

• SYMMETRIC	Symmetric flow control
<DUPLEX>	(Optional) Duplex mode. The parameter type is ETHER_DUPLEX, which is the duplex mode.
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode
<SPEED>	(Optional) Speed. The parameter type is ETHER_SPEED, which is the Ethernet speed.
• 100_MBPS	100 Mbps
• 10_GBPS	10 Gbps
• 10_MBPS	10 Mbps
• 1_GBPS	1 Gbps
• AUTO	Auto
<FLOW	(Optional) Flow. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<EXPDUPLEX>	(Optional) Ethernet duplex mode. The parameter type is ETHER_DUPLEX, which is the duplex mode.
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode
<EXPSPEED>	(Optional) Ethernet speed. The parameter type is ETHER_SPEED, which is the Ethernet speed.
• 100_MBPS	100 Mbps
• 10_GBPS	10 Gbps
• 10_MBPS	10 Mbps
• 1_GBPS	1 Gbps
• AUTO	Auto
<VLANCOS>	(Optional) Priority queing threshold based on VLAN class of service of incoming Ethernet packets. VLANCOS is an integer.
<IPTOS>	(Optional) Priority queing threshold based on IP type of service of incoming Ethernet packets. IPTOS is an integer.
<OPTICS>	(Optional) GBIC type. The parameter type is OPTICS, which is the type of Gigabit Ethernet optics being used.
• 1000_BASE_CX	1000 Base CX
• 1000_BASE_LX	1000 Base LX
• 1000_BASE_SX	1000 Base SX
• 1000_BASE_ZX	1000 Base ZX
• 100_BASE_FX	100 Base FX
• 100_BASE_LX	100 Base LX
• CWDM_1470	Coarse wavelength division multiplexing (CWDM) 1470
• CWDM_1490	CWDM 1490

• CWDM_1510	CWDM 1510
• CWDM_1530	CWDM 1530
• CWDM_1550	CWDM 1550
• CWDM_1570	CWDM 1570
• CWDM_1590	CWDM 1590
• CWDM_1610	CWDM 1610
• ITU_100G_1530_33	ITU-100G 1530.33
• ITU_100G_1531_12	ITU-100G 1531.12
• ITU_100G_1531_90	ITU-100G 1531.90
• ITU_100G_1532_68	ITU-100G 1532.68
• ITU_100G_1534_25	ITU-100G 1534.25
• ITU_100G_1535_04	ITU-100G 1535.04
• ITU_100G_1535_82	ITU-100G 1535.82
• ITU_100G_1536_61	ITU-100G 1536.61
• ITU_100G_1538_19	ITU-100G 1538.19
• ITU_100G_1538_98	ITU-100G 1538.98
• ITU_100G_1539_77	ITU-100G 1539.77
• ITU_100G_1540_56	ITU-100G 1540.56
• ITU_100G_1542_14	ITU-100G 1542.14
• ITU_100G_1542_94	ITU-100G 1542.94
• ITU_100G_1543_73	ITU-100G 1543.73
• ITU_100G_1544_53	ITU-100G 1544.53
• ITU_100G_1546_12	ITU-100G 1546.12
• ITU_100G_1546_92	ITU-100G 1546.92
• ITU_100G_1547_72	ITU-100G 1547.72
• ITU_100G_1548_51	ITU-100G 1548.51
• ITU_100G_1550_12	ITU-100G 1550.12
• ITU_100G_1550_92	ITU-100G 1550.92
• ITU_100G_1551_72	ITU-100G 1551.72
• ITU_100G_1552_52	ITU-100G 1552.52
• ITU_100G_1554_13	ITU-100G 1554.13
• ITU_100G_1554_94	ITU-100G 1554.94
• ITU_100G_1555_75	ITU-100G 1555.75
• ITU_100G_1556_55	ITU-100G 156.55
• ITU_100G_1558_17	ITU-100G 1558.17
• ITU_100G_1558_98	ITU-100G 1558.98
• ITU_100G_1559_79	ITU-100G 1559.79
• ITU_100G_1560_61	ITU-100G 1560.61
• UNKNOWN	Unknown
<NAME>	(Optional) Name. NAME is a string.
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer.

<SOAKLEFT>	(Optional) Time remaining for the transition from OOS-AINS to IS measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. Rules for <SOAKLEFT> are as follows: • When the port is in OOS, OOS_MT or IS state, the parameter will not appear. • When the port is in OOS_AINS state but the countdown has not started due to a fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in OOS_AINS state and the countdown has started, the value will be shown in HH-MM format.
<PST_PSTQ>	Administrative state in the PST-PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ).
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.46 RTRV-G1000

(Cisco ONS 15454) The Retrieve G1000 Facility (RTRV-G1000) command retrieves the G1000 facilities configuration.

Usage Guidelines None

Category Ports

Security Retrieve

Input Format

RTRV-G1000:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-G1000:TID:FAC-1-1:CTAG;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. 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

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<MFS>	Maximum frame size. The parameter type is MFS_TYPE, which is the maximum frame size used by an Ethernet card.
• 1548	Normal frame size
• JUMBO	Jumbo frame size
<FLOW>	Flow control. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<LAN>	(Optional) Local-area network. The parameter type is FLOW, which is the type of flow control that has been negotiated for an Ethernet port.
• ASYMMETRIC	Asymmetric flow control
• ASYMMETRIC_LOCAL	Asymmetric local flow control
• NONE	No flow control
• PASSTHRU	Passthrough flow control
• SYMMETRIC	Symmetric flow control
<OPTICS>	(Optional) GBIC type. The parameter type is OPTICS, which is the type of Gigabit Ethernet optics being used.

• 1000_BASE_CX	1000 Base CX
• 1000_BASE_LX	1000 Base LX
• 1000_BASE_SX	1000 Base SX
• 1000_BASE_ZX	1000 Base ZX
• CWDM_1470	CWDM 1470
• CWDM_1490	CWDM 1490
• CWDM_1510	CWDM 1510
• CWDM_1530	CWDM 1530
• CWDM_1550	CWDM 1550
• CWDM_1570	CWDM 1570
• CWDM_1590	CWDM 1590
• CWDM_1610	CWDM 1610
• ITU_100G_1530_33	ITU-100G 1530.33
• ITU_100G_1531_12	ITU-100G 1531.12
• ITU_100G_1531_90	ITU-100G 1531.90
• ITU_100G_1532_68	ITU-100G 1532.68
• ITU_100G_1534_25	ITU-100G 1534.25
• ITU_100G_1535_04	ITU-100G 1535.04
• ITU_100G_1535_82	ITU-100G 1535.82
• ITU_100G_1536_61	ITU-100G 1536.61
• ITU_100G_1538_19	ITU-100G 1538.19
• ITU_100G_1538_98	ITU-100G 1538.98
• ITU_100G_1539_77	ITU-100G 1539.77
• ITU_100G_1540_56	ITU-100G 1540.56
• ITU_100G_1542_14	ITU-100G 1542.14
• ITU_100G_1542_94	ITU-100G 1542.94
• ITU_100G_1543_73	ITU-100G 1543.73
• ITU_100G_1544_53	ITU-100G 1544.53
• ITU_100G_1546_12	ITU-100G 1546.12
• ITU_100G_1546_92	ITU-100G 1546.92
• ITU_100G_1547_72	ITU-100G 1547.72
• ITU_100G_1548_51	ITU-100G 1548.51
• ITU_100G_1550_12	ITU-100G 1550.12
• ITU_100G_1550_92	ITU-100G 1550.92
• ITU_100G_1551_72	ITU-100G 1551.72
• ITU_100G_1552_52	ITU-100G 1552.52
• ITU_100G_1554_13	ITU-100G 1554.13
• ITU_100G_1554_94	ITU-100G 1554.94
• ITU_100G_1555_75	ITU-100G 1555.75
• ITU_100G_1556_55	ITU-100G 156.55
• ITU_100G_1558_17	ITU-100G 1558.17

• ITU_100G_1558_98	ITU-100G 1558.98
• ITU_100G_1559_79	ITU-100G 1559.79
• ITU_100G_1560_61	ITU-100G 1560.61
• UNKNOWN	Unknown Optical Type
• UNPLUGGED	Unplugged
<TRANS>	(Optional) Transponder mode. The parameter type is TRANS_MODE, which is the G1000 transponder mode.
• BI	Bidirectional
• NONE	Not in transponder mode
• UNI	Unidirectional
<TPORT>	(Optional) Transponding port access identifier from the "25.15 FACILITY" section on page 25-33.
<LOWMRK>	(Optional) Low watermark value. LOWMRK is an integer.
<HIWMRK>	(Optional) High watermark value. HIWMRK is an integer.
<AUTONEG>	(Optional) Automatic negotiation. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<ENCAP>	(Optional) Frame encapsulation type. The parameter type is ENCAP, which is the frame encapsulation type.
• GFP_F	GFP frame mode
• GFP_T	GFP transparent mode
• HDLC	HDLC frame mode
• HDLC_LEX	HDLC LAN extension frame mode
• HDLC_X86	HDLC X.86 frame mode
<NAME>	(Optional) Name. NAME is a string.
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer.
<SOAKLEFT>	(Optional) Time remaining for the transition from OOS-AINS to IS measured in 1-minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. Rules for SOAKLEFT are as follows: • When the port is in OOS, OOS_MT or IS state, the parameter will not appear. • When the port is in OOS_AINS state but the countdown has not started due to a fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in OOS_AINS state and the countdown has started, the value will be shown in HH-MM format.
<PSTPSTQ>	Administrative state in the PST-PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ).
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous

• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.47 RTRV-GFP

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Generic Framing Protocol (RTRV-GFP) command retrieves GFP information for the ONS 15454 CE-100T-8 and CE-1000-4 cards, the ONS 15454 FC_MR-4 card, and the ONS 15310-CL CE-100T-8 card.

Usage Guidelines

None

Category

Ports

Security

Retrieve

Input Format

RTRV-GFP:[<TID>]:<SRC>:<CTAG>;

Input Example

RTRV-GFP:CISCO:FAC-1-1:123;

Input Parameters

<SRC>	Source access identifier from the "25.15 FACILITY" section on page 25-33. 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 by the Cisco IOS CLI and not by the TL1 interface. FAC AID is used for 15454 FC_MR-4

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>::[FCS=<FCS>],[AUTOTHGFPBUF=<AUTOTHGFPBUF>],
   [GFPBUF=<GFPBUF>],[FILTER=<FILTER>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-1-1::FCS=FCS-32,AUTOTHGFPBUF=Y,GFPBUF=16,FILTER=EGRESS"
;
```

Output Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<FCS>	(Optional) Payload frame check sequence. The parameter type is FCS, which is the frame check sequence.
• FCS-16	Frame check sequencing using 16 bits
• FCS-32	Frame check sequencing using 32 bits
• NONE	No frame check sequence
<AUTOTHGFPBUF>	(Optional) Flag used to indicate whether PDI-P should be generated on the outgoing VT-structured STSs. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<GFPBUF>	(Optional) GFPBUF is an integer.
<FILTER>	(Optional) Parameter type is GFP_FILTER, which is the filter.
• EGRESS	Activate filter on egress port.
• NONE	Turn off filter.

21.48 RTRV-GIGE

(Cisco ONS 15454, ONS 15600) The Retrieve Gigabit Ethernet (RTRV-GIGE) command retrieves the front-end port information for a 1 Gigabit Ethernet card.

Usage Guidelines

None

Category

Ports

Security

Retrieve

Input Format

RTRV-GIGE:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-GIGE:TID:FAC-1-1:CTAG;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. Must not be null.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:,,<ROLE>,<STATUS>:[ADMINSTATE=<ADMINSTATE>],
[LINKSTATE=<LINKSTATE>],[MTU=<MTU>],[ENCAP=<ENCAP>],
[FLOWCTRL=<FLOWCTRL>],[AUTONEG=<AUTONEG>],[HIWMRK=<HIWMRK>],
[LOWMRK=<LOWMRK>],[OPTICS=<OPTICS>],[DUPLEX=<DUPLEX>],
[SPEED=<SPEED>],[NAME=<NAME>],[FREQ=<FREQ>],[LOSSB=<LOSSB>],
[SOAK=<SOAK>],[SOAKLEFT=<SOAKLEFT>]:<PST>,<SST>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"FAC-1-1:,,WORK,ACT:ADMINSTATE=DOWN,LINKSTATE=DOWN,MTU=1548,
ENCAP=GFP-F,FLOWCTRL=SYMMETRIC,AUTONEG=Y,HIWMRK=485,LOWMRK=25,
OPTICS=1000_BASE_SX,DUPLEX=AUTO,SPEED=AUTO,NAME=`"GIGEPORT\",
FREQ=1550,LOSSB=SX,SOAK=32, SOAKLEFT=\"12-22\":IS,AINS"
;

Output Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<ROLE>	Identifies the port role in a Y-cable protection scheme. The parameter type is SIDE, which is the role the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	Identifies a port status in a Y-cable protection scheme. The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<ADMINSTATE>	(Optional) Administration type. The parameter type is UP_DOWN (up or down).
• DOWN	Down
• UP	Up

<LINKSTATE>	(Optional) Link protocol. The parameter type is UP_DOWN (up or down).
• DOWN	Down
• UP	Up
<MTU>	(Optional) Maximum transmission unit. MTU is an integer.
<ENCAP>	(Optional) Encapsulation frame type. The parameter type is ENCAP, which is the frame encapsulation type.
• GFP_F	GFP Frame Mode
• GFP_T	GFP Transparent Mode
• HDLC	HDLC Frame Mode
• HDLC_LEX	HDLC LAN Extension Frame Mode
• HDLC_X86	HDLC X.86 Frame Mode
<FLOWCTRL>	(Optional) Flow control. The parameter type is FLOW, which is the type of flow control that has been negotiated for an Ethernet port.
• ASYMMETRIC	Asymmetric flow control
• ASYMMETRIC_LOCAL	Asymmetric local flow control
• NONE	No flow control
• PASSTHRU	Passthrough flow control
• SYMMETRIC	Symmetric flow control
<AUTONEG>	(Optional) Automatic negotiation. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<LOWMRK>	(Optional) Low watermark value. LOWMRK is an integer.
<HIWMRK>	(Optional) High watermark value. HIWMRK is an integer.
<OPTICS>	(Optional) Optics type. The parameter type is OPTICS, which is the type of Gigabit Ethernet optics being used.
• 1000_BASE_CX	1000 Base CX
• 1000_BASE_LX	1000 Base LX
• 1000_BASE_SX	1000 Base SX
• 1000_BASE_ZX	1000 Base ZX
• CWDM_1470	CWDM 1470
• CWDM_1490	CWDM 1490
• CWDM_1510	CWDM 1510
• CWDM_1530	CWDM 1530
• CWDM_1550	CWDM 1550
• CWDM_1570	CWDM 1570
• CWDM_1590	CWDM 1590
• CWDM_1610	CWDM 1610
• ITU_100G_1530_33	ITU-100G 1530.33
• ITU_100G_1531_12	ITU-100G 1531.12
• ITU_100G_1531_90	ITU-100G 1531.90

• ITU_100G_1532_68	ITU-100G 1532.68
• ITU_100G_1534_25	ITU-100G 1534.25
• ITU_100G_1535_04	ITU-100G 1535.04
• ITU_100G_1535_82	ITU-100G 1535.82
• ITU_100G_1536_61	ITU-100G 1536.61
• ITU_100G_1538_19	ITU-100G 1538.19
• ITU_100G_1538_98	ITU-100G 1538.98
• ITU_100G_1539_77	ITU-100G 1539.77
• ITU_100G_1540_56	ITU-100G 1540.56
• ITU_100G_1542_14	ITU-100G 1542.14
• ITU_100G_1542_94	ITU-100G 1542.94
• ITU_100G_1543_73	ITU-100G 1543.73
• ITU_100G_1544_53	ITU-100G 1544.53
• ITU_100G_1546_12	ITU-100G 1546.12
• ITU_100G_1546_92	ITU-100G 1546.92
• ITU_100G_1547_72	ITU-100G 1547.72
• ITU_100G_1548_51	ITU-100G 1548.51
• ITU_100G_1550_12	ITU-100G 1550.12
• ITU_100G_1550_92	ITU-100G 1550.92
• ITU_100G_1551_72	ITU-100G 1551.72
• ITU_100G_1552_52	ITU-100G 1552.52
• ITU_100G_1554_13	ITU-100G 1554.13
• ITU_100G_1554_94	ITU-100G 1554.94
• ITU_100G_1555_75	ITU-100G 1555.75
• ITU_100G_1556_55	ITU-100G 156.55
• ITU_100G_1558_17	ITU-100G 1558.17
• ITU_100G_1558_98	ITU-100G 1558.98
• ITU_100G_1559_79	ITU-100G 1559.79
• ITU_100G_1560_61	ITU-100G 1560.61
• UNKNOWN	Unknown Optical Type
• UNPLUGGED	Unplugged
<DUPLEX>	(Optional) Duplex mode. The parameter type is ETHER_DUPLEX, which is the duplex mode.
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode
<SPEED>	(Optional) Speed. The parameter type is ALS_MODE, which is the automatic laser shutdown mode.
• AUTO	Automatic
• DISABLED	Disabled
• MAN	Manual
• MAN-RESTART	Manual restart for test

<NAME>	(Optional) Name. NAME is a string.
<FREQ>	(Optional) Parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35

• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17

• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27

• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03

• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<LOSSB>	(Optional) Parameter type is REACH (reach values).
• AUTOPROV	Autoprovisioning
• CX	Reach CX
• DX	Reach DX
• HX	Reach HX
• I1	Reach I1
• IR-1	Reach IR-1
• IR-2	Reach IR-2
• L1	Reach L1
• L2	Reach L2
• L3	Reach L3
• LR-1	Reach LR-1
• LR-2	Reach LR-2
• LR-3	Reach LR-3
• LX	Reach LX
• S1	Reach S1
• S2	Reach S2
• SR	Reach SR
• SR-1	Reach SR-1
• SX	Reach SX
• T	Reach T
• VX	Reach VX
• ZX	Reach ZX
<SOAK>	(Optional) IS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer.

<SOAKLEFT>	(Optional) OOS-AINS to IS transition soak time as measured in one minute intervals. The format is HH-MM, where HH ranges from 00 to 48, and MM ranges from 00 to 59. The rules for SOAKLEFT are as follows: • When the port is in OOS, OOS-MT to IS state, the parameter will not be displayed. • When the port is in IS-AINS state, but the countdown has not stated due to faulty signal, the value will be SOAKLEFT=\"NOT-STARTED\". • When the port is in IS-AINS state and the countdown has started, the value will be shown in HH-MM format.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In Service
• OOS	Out of Service
<SST>	Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.49 RTRV-HDLC

(Cisco ONS 15600) The Retrieve High-Level Data Link Control (RTRV-HDLC) command retrieves HDLC-related attributes.

Usage Guidelines None

Category Ports

Security Retrieve

Input Format RTRV-HDLC:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-HDLC:TID:VFAC-SLOT-PORT:CTAG;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. 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

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. The ONS 15600 ASAP card uses the VFAC AID.
<FCS>	(Optional) Payload frame check sequence. The parameter type is FCS, which is the frame check sequence.
• FCS-16	Frame check sequencing using 16 bits
• FCS-32	Frame check sequencing using 32 bits
• NONE	No frame check sequence

21.50 RTRV-HDR

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Header (RTRV-HDR) command retrieves the header of a TL1 response message. It is used by TL1 clients to determine if the link to the NE is still active and if the NE is responding to commands.

Usage Guidelines

None

Category

System

Security

Retrieve

Input Format

RTRV-HDR:[<TID>]::<CTAG>;

Input Example RTRV-HDR:SONOMA::232;

Input Parameters None that require description

21.51 RTRV-INV

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Inventory (RTRV-INV) command retrieves a list of the equipment inventory. For each unit in the system, the list identifies the unit's firmware numbers and Common Language Equipment Identifier (CLEI) codes, and the system's product ID and version ID. This command also retrieves the inventory information from pluggable modules using the AID PPM-SLOT-PORT format.

For multishelf, the inventory parameters are retrieved by using RTRV-INV and the BP AID. Because there is more that one shelf, the SHELFID is specified in BP AID.

Usage Guidelines None

Category System

Security Retrieve

Input Format RTRV-INV:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-INV:OCCIDENTAL:SLOT-15:301;

RTRV-INV:OCCIDENTAL:BP-ALL:116;

RTRV-INV:OCCIDENTAL:BP-1:116;

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31 or ALL. Must not be null.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,<AIDTYPE>::[PN=<PN>],[HWREV=<HWREV>],[FWREV=<FWREV>],[SN=<SN>],
   [CLEI=<CLEI>],[TWL1=<TWL>],[PLUGINVENDORID=<PLUGINVENDORID>],
   [PLUGINPN=<PLUGINPN>],[PLUGINHWREV=<PLUGINHWREV>],
   [PLUGINFWREV=<PLUGINFWREV>],[PLUGINSN=<PLUGINSN>],
   [ILOSSREF=<ILOSSREF>],[PID=<PID>],[VID=<VID>],[FPGA=<FPGA>],
   [VENDORID=<VENDORID>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "SLOT-15,OC3-IR-4::PN=87-31-00002,HWREV=004K,FWREV=76-99-00009-004A,
   SN=013510,CLEI=NOCLEI,TWL1=1546.12,PLUGINVENDORID=012345,PLUGINPN=ABCDE,
   PLUGINHWREV=ABCDE,PLUGINFWREV=01-02-03,PLUGINSN=01234,ILOSSREF=1.0,
   PID=CISCO_ONS15454,VID=V01,FPGA=F451,VENDORID=NAME"
;
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "BP-1,BP::PN=87-31-00002,HWREV=004K,FWREV=76-99-00009-004A,SN=013510,
   CLEI=NOCLEI"
;
```

Output Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31
<AIDTYPE>	Specifies the type of (AID) facility, link or other addressable entity targeted by the message. AIDTYPE is a string.
<PN>	(Optional) Hardware part number. PN is a string.
<HWREV>	(Optional) Hardware revision. HWREV is a string.
<FWREV>	(Optional) Firmware revision. FWREV is a string.
<SN>	(Optional) Serial number. SN is a string.
<CLEI>	(Optional) Common language equipment identifier code for the equipment. CLEI is a string.
<TWL1>	(Optional) Tunable wavelength 1. The parameter type is OPTICAL_WLEN (optical wavelength). Possible values are the same as those for the TWL4 parameter (see below).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25

• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500

• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54

• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26

• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<PLUGINVENDORID>	(Optional) Plugin vendor ID. Integer.
<PLUGINPN>	(Optional) Third-party plug-in module HW part number. Applicable only to optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexer and demultiplexer cards, and OADM cards. PLUGINPN is a string.
<PLUGINHWREV>	(Optional) Third-party plug-in module hardware revision. Applicable only to optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexer and demultiplexer cards, and OADM cards. PLUGINHWREV is a string.
<PLUGINFWREV>	(Optional) Third-party plug-in module firmware. Applicable only to optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexer and demultiplexer cards, and OADM cards. PLUGINFWREV is a string.

<PLUGINSN>	(Optional) Third-party plug-in module serial number. Applicable only to optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexer and demultiplexer cards, and OADM cards. PLUGINSW is a string.
<ILOSSREF>	(Optional) The insertion loss reference calculated by the unit as worst insertion loss of all the unit. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
<PID>	(Optional) Product ID of the module. PID is a string.
<VID>	(Optional) Vendor ID. VID is a string.
<FPGA>	(Optional) FPGA version. FPGA is a string.
<VENDORID>	(Optional) Vendor ID. VENDORID is a string.

21.52 RTRV-LNK

(Cisco ONS 15454) The Retrieve Link (RTRV-LNK) command retrieves all the (optical) links created in the NE. The end information is returned along with the type of (optical) link.

Usage Guidelines None

Category DWDM

Security Retrieve

Input Format RTRV-LNK:[<TID>]::<CTAG>;

Input Example RTRV-LNK:PENNGROVE::114;

Input Parameters None that require 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

<FROM>	Access identifier from the "25.1 ALL" section on page 25-1. Identifies an entity at one end of the optical link.
<TO>	Access identifier from the "25.1 ALL" section on page 25-1. Identifies an entity at the other end of the optical link.
<OLNKT>	(Optional) Optical link type. The parameter type is OPTICAL_LINK_TYPE, which is the type of optical link between two optical facilities.
• ADD-DROP	Link between two points that results in an add/drop connection from a drop point to an add point
• HITLESS	Link between two OMS points that results in a hitless connection from a drop point to an add point of a consecutive band/channel filter
• OTS	Link between two OTS points
<CTYPE>	(Optional) The type of cross-connection. Indicates if the optical link is provisioned by the user or automatically created by the NE. The parameter type is CREATION_TYPE, which is the optical link creation type.
• AUTO	Automatically created by the NE
• PROV	Provisioned by the user
<RDIRN>	(Optional) Ring directionality of the optical line. The parameter type is RDIRN_MODE, which is the optical ring directionality.
• E-W	The direction of the signal is from east to west (clockwise).
• W-E	The direction of the signal is from west to east (counterclockwise).
<BAND>	(Optional) The optical band (group of four contiguous wavelengths) for this optical link. BAND is present only when there is a link between two OMS entities. The parameter type is OPTICAL_BAND.
• 1530.33 to 1532.68	Band 1
• 1534.25 to 1536.61	Band 2
• 1538.19 to 1540.56	Band 3
• 1542.14 to 1544.53	Band 4
• 1546.12 to 1548.51	Band 5
• 1550.12 to 1552.52	Band 6
• 1554.13 to 1556.55	Band 7
• 1558.17 to 1560.61	Band 8
• USE-DEFAULT	This band is not yet configured/retrieved from unit
<WLEN>	(Optional) Optical wavelength for this optical link. WLEN is present only when there is a link between two OCH entities. The parameter type is OPTICAL_WLEN (optical wavelength).

• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94

• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98

• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11

• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88

• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<PST_PSTQ>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ).
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SST>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.53 RTRV-LNK-<MOD20>

(Cisco ONS 15454) The Retrieve Optical Link for OCH, OMS, or OTS (RTRV-LNK-<MOD20>) command retrieves any optical link associated with the entered AIDs or AID range. The end information is returned along with the type of optical link.

Usage Guidelines None

Category DWDM

Security Retrieve

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

<AID>	Access identifier from the "25.4 BAND" section on page 25-16. 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. The parameter type is OPTICAL_LINK_TYPE, which is the type of optical link between two optical facilities.
• ADD-DROP	Link between two points that results in an add/drop connection from a drop point to an add point
• HITLESS	Link between two OMS points that results in a hitless connection from a drop point to an add point of a consecutive band/channel filter
• 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. The parameter type is CREATION_TYPE, which is the optical link creation type.
• AUTO	Automatically created by the NE
• PROV	Provisioned by the user
<RDIRN>	Ring directionality of the optical line. A null value is equivalent to ALL. The parameter type is RDIRN_MODE, which is the optical ring directionality.
• E-W	The direction of the signal is from east to west (clockwise).
• W-E	The direction of the signal is from west to east (counterclockwise).

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

<FROM>	Access identifier from the "25.4 BAND" section on page 25-16. Identifies an entity at one end of the optical link.
<TO>	Access identifier from the "25.4 BAND" section on page 25-16. Identifies an entity at the other end of the optical link.
<OPTICALLINKTYPE>	(Optional) Optical link type. The parameter type is OPTICAL_LINK_TYPE, which is the type of optical link between two optical facilities.
• ADD-DROP	Link between two points that results in an add/drop connection from a drop point to an add point
• HITLESS	Link between two OMS points that results in a hitless connection from a drop point to an add point of a consecutive band/channel filter
• OTS	Link between two OTS points
<CREATIONTYPE>	(Optional) Indicates whether the optical link is provisioned by the user or automatically created by the NE. The parameter type is CREATION_TYPE, which is the optical link creation type.
• AUTO	Automatically created by the NE
• PROV	Provisioned by the user
<RDIRN>	(Optional) Ring directionality of the optical line. The parameter type is RDIRN_MODE, which is the optical ring directionality.
• E-W	The direction of the signal is from east to west (clockwise).
• W-E	The direction of the signal is from west to east (counterclockwise).
<BAND>	(Optional) The optical band (group of four contiguous wavelengths) for this optical link. BAND is present only when there is a link between two OMS entities. The parameter type is OPTICAL_BAND.
• 1530.33 to 1532.68	Band 1
• 1534.25 to 1536.61	Band 2
• 1538.19 to 1540.56	Band 3
• 1542.14 to 1544.53	Band 4
• 1546.12 to 1548.51	Band 5
• 1550.12 to 1552.52	Band 6
• 1554.13 to 1556.55	Band 7
• 1558.17 to 1560.61	Band 8
• USE-DEFAULT	This band is not yet configured/retrieved from unit.
<WLEN>	(Optional) Optical wavelength for this optical link. WLEN is present only when there is a link between two OCH entities. The parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530

• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72

• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83

• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04

• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1

<PST_PSTQ>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ).
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SST>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.54 RTRV-LNKTERM

(Cisco ONS 15454, ONS 15327, ONS 15310-CL) The Retrieve Provisionable Patchcord Termination (RTRV-LNKTERM) command retrieves information about one or more provisionable patchcord (PP) terminations.

Usage Guidelines

- All the terminations can be retrieved using ALL or LNKTERM-ALL as the AID.
- If the PP termination does not exist, an error message will be returned.

Category

Provisionable Patchcords

Security

Retrieve

Input Format

RTRV-LNKTERM:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-LNKTERM::LNKTERM-2:CTAG;

Input Parameters

<AID>	Access identifier from the "25.19 LNKTERM" section on page 25-39. 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

<AID>	Access identifier from the "25.19 LNKTERM" section on page 25-39. Must not be null.
<PORT>	Access identifier from the "25.2 AidUnionId" section on page 25-11.
<REMOTENODE>	(Optional) Remote node. REMOTENODE is a string.
<REMOTELNKTERMID>	(Optional) Remote link term ID. REMOTELNKTERMID is a string.

21.55 RTRV-LOG

Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Log (RTRV-LOG) command retrieves the alarm log of the NE.

Usage Guidelines

The only option reported for LOGNM is ALARM.

Category

Log

Security

Retrieve

Input Format

RTRV-LOG:[<TID>]::<CTAG>::<LOGNM>;

Input Example

RTRV-LOG:CERENT::123::ALARM;

Input Parameters

<LOGNM>	Log to be retrieved. The log name is ALARM. String. 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

<AID>	Access identifier from the "25.1 ALL" section on page 25-1.
<ALMNUMBER>	Alarm number of the log. ALMNUMBER is an integer.
<CURRENT>	Current severity. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<PREVIOUS>	(Optional) Previous severity. The parameter type is COND_EFF, which is the state of the condition upon the affected unit.
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
<CONDITION>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, or ONS 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 Chapter 26, "Conditions" for a list of conditions.
<OCRTIME>	(Optional) Time when alarm was triggered.
<OCRDATE>	(Optional) Date when the specific event or violation occurred. Date when alarm was triggered.
<ALMDESCR>	Alarm description. ALMDESCR is a string.

21.56 RTRV-MAP-NETWORK

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Map Network (RTRV-MAP-NETWORK) command retrieves all the NE attributes which are accessible from the GNE (gateway NE). The NE attributes include the node IP address (IPADDR), node name (TID), and the product type of the NE (PRODUCT).

Usage Guidelines The product type field in the response will appear as "unknown" for nodes that are not running the same version of software.

Category System

Security Retrieve

Input Format RTRV-MAP-NETWORK:[<TID>]::<CTAG>;

Input Example RTRV-MAP-NETWORK:CISCO::123;

Input Parameters None that require description

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<IPADDR>,<NODENAME>,<PRODUCT>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "172.20.222.225,TID-000,15454"
;
```

Output Parameters

<IPADDR>	Node IP address. IPADDR is a string.
<NODENAME>	Node name (TID). NODENAME is a string.
<PRODUCT>	Product type of the NE. The parameter type is PRODUCT_TYPE, which is the product (NE) type.
• ONS15310CL	ONS 15310-CL
• ONS15310MA	ONS 15310-MA
• ONS15327	ONS 15327

• ONS15454	ONS 15454
• ONS15454SDH	ONS 15454 SDH
• ONS15455	ONS 15454 SDH
• ONS15600	ONS 15600
• UNKNOWN	Unknown product type

21.57 RTRV-NE-APC

(Cisco ONS 15454) The Retrieve Network Amplification Power Control (RTRV-NE-APC) command retrieves the APC application ports involved in node set-up regulation.

Usage Guidelines

None

Category

System

Security

Maintenance

Input Format

RTRV-NE-APC:[<TID>]:[<AID>]:<CTAG>;

Input Example

RTRV-NE-APC:PENNGROVE:CHAN-16-1-RX:114;

Input Parameters

<AID>	Access identifier from the "25.8 CHANNEL" section on page 25-18. A null value is equivalent to ALL.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,<MOD>::[MODIFDAT=<MODIFDAT>],[MODIFTM=<MODIFTM>],
   [CHECKDAT=<CHECKDAT>],[CHECKTM=<CHECKTM>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "CHAN-16-1-RX,OCH::MODIFDAT=04-11-02,MODIFTM=12-35-00,
   CHECKDAT=04-11-02,CHECKTM=12-55-00"
;
```

Output Parameters

<AID>	Access identifier from the "25.8 CHANNEL" section on page 25-18.
<MOD>	AID type. The parameter type is MOD2O, which is the facility types for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B cards.
• OCH	Optical channel
• OMS	Optical multiplexer section
• OTS	Optical trace section
<MODIFDAT>	(Optional) The last date when the APC application modified this port. The format of MODIFDAT is MM-DD, where MM (month of year) ranges from 1 to 12 and DD (day of month) ranges from 1 to 31. MODIFDAT is a date.
<MODIFTM>	(Optional) The last time when the APC application modified this port. The format of MODIFTM is HH-MM, where HH (hour of day) ranges from 0 to 23 and MM (minute of hour) ranges from 0 to 59. MODIFTM is a time.
<CHECKDAT>	(Optional) The last date when the APC application controlled and validated this port. The format of CHECKDAT is MM-DD, where MM (month of year) ranges from 1 to 12 and DD (day of month) ranges from 1 to 31. CHECKDAT is a date.
<CHECKTM>	(Optional) The last time when the APC application controlled and validated this port. The format of CHECKTM is HH-MM, where HH (hour of day) ranges from 0 to 23 and MM (minute of hour) ranges from 0 to 59. CHECKTM is a time.

21.58 RTRV-NE-GEN

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Network Element General (RTRV-NE-GEN) command retrieves the general NE attributes.

Usage Guidelines

ETHIPADDR and ETHIPMASK are disabled in this command. ETHIPADDR and ETHIPMASK are used to show the Ethernet interface address and mask. Both default to the nodes' IP address and masks.

Category

System

Security

Retrieve

Input Format

RTRV-NE-GEN:[<TID>]::<CTAG>;

Input Example

RTRV-NE-GEN:CISCO::123;

Input Parameters

None that require description

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "[IPADDR=<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>],[SUPPRESSIP=<SUPPRESSIP>],
   [MODE=<MODE>]"
;
```

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=NORMAL,
   SUPPRESSIP=YES,MODE=SINGLESHELF"
;
```

Output Parameters

<IPADDR>	(Optional) Node IP address. IPADDR is a string.
<IPMASK>	(Optional) Node IP mask. IPMASK is a string.
<DEFRTR>	(Optional) Node default router. DEFRTR is a string.
<IIOPPORT>	(Optional) Node IIOP port. IIOPPORT is an integer.
<NTP>	(Optional) Node NTP timing source address. NTP is a string.
<ETHIPADDR>	Not supported in this release.
<ETHIPMASK>	Not supported in this release.
<NAME>	(Optional) Name. NAME is a string.
<SWVER>	(Optional) Software version. SWVER is a string.
<LOAD>	(Optional) Load. LOAD is a string.
<PROTSWVER>	(Optional) Protect software version. PROTSWVER is a string.
<PROTLOAD>	(Optional) Protect load. PROTLOAD is a string.
<DEFDESC>	(Optional) Provides a default description for the NE. DEFDESC is a string.
<PLATFORM>	(Optional) Platform. PLATFORM is a string.
<SECUMODE>	(Optional) Security mode of the NE. The parameter type is NE_SECURE_MODE, which is the security mode of the NE.
• REPEATER	The front port and backplane are sharing the same IP network.
• SECURE	The front port and backplane are independent and in different IP subnetworks.

<SUPPRESSIP>	(Optional) Parameter type is YES_NO, which is whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes
<MODE>	(Optional) Indicates the AID mode to access shelf identifier objects. Defaults to SINGLESHELF. This field is always set to MULTISHELF in the case of DWDM nodes with more than one shelf managed. Parameter type is SHELF_MODE which is the NE mode.
• MULTISHELF	The NE has more than one shelf configured.
• MULTISHELFETH	The NE has more than one shelf configured and the shelves are connected by an external Ethernet switch.
• SINGLESHELF	The NE contains only one shelf and it is not considered the shelf identifier for command requests/response and autonomous reports.

21.59 RTRV-NE-IPMAP

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Network Element Internet Protocol Map (RTRV-NE-IPMAP) command retrieves the IP address and node name of the NEs that have a DCC connection with this NE.

Usage Guidelines

This command only reports the discovered DCC link. If there is no discovered DCC link on the port (or the node), the command will return COMPLD without IPMAP information.

Category

Network

Security

Retrieve

Input Format

RTRV-NE-IPMAP:[<TID>]:[<AID>]:<CTAG>;

Input Example

RTRV-NE-IPMAP:CISCO:FAC-12-1:123;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. The port of an NE carrying the DCC connection. A null value defaults to the whole NE. A null value is equivalent to ALL.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:<IPADDR>,<NODENAME>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-12-1:172.20.208.225,NODENAME2"
;
```

Output Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. Port of an NE carrying the DCC connection.
<IPADDR>	Node IP address. IPADDR is a string.
<NODENAME>	Network element name. NODENAME is a string.

21.60 RTRV-NE-PATH

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA) The Retrieve Network Element Path (RTRV-NE-PATH) command retrieves the path-level attributes on an NE.

Usage Guidelines

None

Category

System

Security

Retrieve

Input Format

RTRV-NE-PATH:[<TID>]::<CTAG>[::::];

Input Example

RTRV-NE-PATH:::CTAG;

Input Parameters

None that require description

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "[PDIP=<PDIP>],[XCMODE=<XCMODE>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "PDIP=Y,XCMODE=MIXED"
;
```

Output Parameters

<PDIP>	(Optional) Flag used to indicate whether PDI-P should be generated on the outgoing VT-structured STSs. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<XCMODE>	(Optional) Cross-connect mode. The parameter type is XCMODE, which is applicable only to a node with cross-connect cards that support cross-connect mode change.
• MIXED	Both VT1 and VT2 cross-connects can be provisioned on the node.
• VT1	Only VT1 cross-connects can be provisioned on the node.
• VT2	Only VT2 cross-connects can be provisioned on the node.

21.61 RTRV-NE-SYNCN

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Network Element Synchronization (RTRV-NE-SYNCN) command retrieves the synchronization attributes of the NE.

Usage Guidelines

- Although mixed mode timing is supported in this release, it is not recommended. Refer to the *Cisco ONS SONET TL1 Reference Guide* for more information.
- The timing modes are:
  - External mode: The node derives its timing from the BITS inputs.
  - Line mode: The node derives its timing from the SONET line(s).
  - Mixed mode: The node derives its timing from the BITS input or SONET lines.

Category

Synchronization

Security

Retrieve

Input Format

RTRV-NE-SYNCN:[<TID>]:[<AID>]:<CTAG>[::::];

Input Example

RTRV-NE-SYNCN:CISCO:SHELF-2:123;

RTRV-NE-SYNCN:CISCO::123;

Input Parameters

<AID>	The node or shelf access identifier from the "25.24 SHELF" section on page 25-41. If omitted it addresses the node or first shelf of the node. Must not be null

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "[<AID>]::[TMMD=<TMMD>],[SSMGEN=<SSMGEN>],[QRES=<QRES>],
   [RVRTV=<RVRTV>],[RVTM=<RVTM>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "SHELF-1::TMMD=LINE,SSMGEN=GEN1,QRES=ABOVE-PRS,RVRTV=Y,RVTM=8.0"
;
   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

<AID>	The node or shelf access identifier from the "25.24 SHELF" section on page 25-41. If omitted it addresses the node or first shelf of the node. Must not be null
<TMMD>	(Optional) Timing mode. The parameter type is TIMING_MODE, which is the timing mode for the current node.
• EXTERNAL	The node derives its clock from the BITS input.
• LINE	The node derives its clock from the SONET lines.
• MIXED	The node derives its clock from the mixed timing mode.
<SSMGEN>	(Optional) Synchronization status message generator. The parameter type is SYNC_GENERATION, which is the synchronization status message set generation.
• GEN1	First generation SSM set
• GEN2	Second generation SSM set
<QRES>	(Optional) Quality of the RES. The parameter type is SYNC_QUALITY_LEVEL, which is the network synchronization quality level.
• ABOVE-G811	Better than G811
• ABOVE-STU_SDH	Between STU_SDH and G811 (default setting)
• ABOVE-G812T	Between G812T and STU_SDH
• ABOVE-G812L	Between G812L and G812T
• ABOVE-SETS	Between SETS and G812L
• BELOW-SETS	Below SETS but still usable
• SAME-AS-DUS_SDH	Disable the RES message by equating to DUS_SDH

<RVRTV>	(Optional) 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. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<RVTM>	(Optional) Revertive time. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.

21.62 RTRV-NE-WDMANS

(Cisco ONS 15454) The Retrieve Network Element Wavelength Division Multiplexing Automatic Node Setup (RTRV-NE-WDMANS) command retrieves the optical node setup (WDMANS) application ports involved in node setup regulation.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-NE-WDMANS:[<TID>]:[<AID>]:<CTAG>;

Input Example

RTRV-NE-WDMANS:PENNGROVE:ALL:114;

Input Parameters

<AID>	The access identifier from the "25.1 ALL" section on page 25-1. A null value is equivalent to ALL.

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

<AID>	Access identifier from the "25.1 ALL" section on page 25-1. AID is port regulated.
<AIDTYPE>	Specifies the type of facility, link, or other addressable entity targeted by the message. A type of access identifier. The parameter type is MOD2, which is the line/path modifier.
• 10GFC	10 Gigabit Fibre Channel
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit Fibre Channel
• 1GFICON	1 Gigabit FICON
• 1GISC3	1 Gbps ISC3 compatible
• 2GFC	2 Gigabit Fibre Channel
• 2GFICON	2 Gigabit FICON
• 2GISC3	2 Gbps ISC3 compatible
• 4GFC	4 Gbps Fibre Channel
• 4GFICON	4 Gbps fiber connection
• D1VIDEO	D1 video
• DS1	DS1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETR_CLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over packet over SONET. Virtual Ports partitioned using GFP's multiplexing capability.
• GIGE	GIG Ethernet
• HDTV	HDTV
• ISC3PEER1G	ISC3PEER1G
• ISC3PEER2G	ISC3PEER2G
• ISC3PEER2R	ISC3PEER2R
• ISCCOMPAT	ISCCOMPAT
• OC3	OC-3 facility
• OC12	OC-12 facility
• OC48	OC-48 facility
• OC192	OC-192 facility
• OCH	Optical Channel

• OCHCC	OCH channel connection
• OCHNC	OCH network connection
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS port
• STS1	STS1 path
• STS3C	STS3c path
• STS6C	STS6c path
• STS9C	STS9c path
• STS18C	STS18c path
• STS12C	STS12c path
• STS24C	STS24c path
• STS36C	STS36c path
• STS48C	STS48c path
• STS192C	STS192c path
• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 path
• VT2	VT2 path
<REGULATED>	(Optional) The status of the port after a node setup regulation. The parameter type is REGULATED_PORT_TYPE, which is the optical configuration types for NEs.
• FAILED	WDM-ANS encountered a failure while regulating this port.
• 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>	(Optional) The regulated parameter inside of the specified port. The parameter type is REGULATED_PARAM_NAME, which is the name of the parameter regulated by the WDMANS application.
• AMPLMODE	WDM-ANS has regulated the amplifier control mode parameter.
• CHPOWER	WDM-ANS has regulated the amplifier per the channel power parameter.
• GAIN	WDM-ANS has regulated the amplifier gain parameter.
• OPWR-LFAIL	WDM-ANS has regulated the OPWR-LFAIL threshold parameter.
• REFTILT	WDM-ANS has regulated the amplifier tilt reference parameter.
• VOAREFATTN	WDM-ANS has regulated the variable optical attenuator (VOA) attenuation reference parameter.
• VOAREFPWR	WDM-ANS has regulated the VOA power reference parameter.

21.63 RTRV-NETYPE

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Network Element Type (RTRV-NETYPE) command retrieves the NE's equipment-related information.

Usage Guidelines None

Category System

Security Retrieve

Input Format RTRV-NETYPE:[<TID>]::<CTAG>;

Input Example RTRV-NETYPE:GAUR1::1;

Input Parameters None that require description

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<VENDOR>,<MODEL>,<NETYPE>,<SW_ISSUE>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "CISCO,ONS15454,ADM&MSPP&MSTP,5.00.00"
;
```

Output Parameters

<VENDOR>	NE equipment vendor name. VENDOR is a string.
<MODEL>	NE equipment model. The parameter type is PRODUCT_TYPE, which is the product (NE) type.
• ONS15310CL	ONS 15310-CL
• ONS15310MA	ONS 15310-MA
• ONS15327	ONS 15327
• ONS15454	ONS 15454
• ONS15454SDH	ONS 15454 SDH
• ONS15455	ONS 15454 SDH
• ONS15600	ONS 15600

• UNKNOWN	Unknown product type
<NETYPE>	NE equipment type. Abbreviation of NE type can be used. The grouping sign “&” can be used to indicate multifunction NE type, for example, ADM&MSPP means Add-Drop Multiplexers and Multiservice Provisioning Platform. Listable. The parameter type is NETYPE, which is the NE equipment type.
• ADM	Add-Drop Multiplexers
• DCS	Digital Cross-Connect System
• MSPP	Multiservice Provisioning Platform
• MSSP	Multiservice Switching Platform
• MSTP	Multiservice Transport Platform
<SW_ISSUE>	The software release issue of the NE. SW_ISSUE is a string.

21.64 RTRV-OCH

(Cisco ONS 15454) The Retrieve Optical Channel (RTRV-OCH) command retrieves the attributes (service parameters) and state of an OCH facility.

Usage Guidelines

Refer to the *Cisco ONS SONET TL1 Reference Guide* for specific card provisioning rules.

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

Category

DWDM

Security

Retrieve

Input Format

RTRV-OCH:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-OCH:PENNGROVE:CHAN-6-2:236;

Input Parameters

<AID>	Access identifier from the “25.8 CHANNEL” section on page 25-18. 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

<AID>	Access identifier from the "25.8 CHANNEL" section on page 25-18.
<ROLE>	(Optional) Identifies an OCH port role. The parameter type is SIDE, which is the role the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	(Optional) The port status. The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<RDIRN>	(Optional) Ring directionality of the optical channel. The parameter type is RDIRN_MODE, which is the optical ring directionality.
• E-W	The direction of the signal is from east to west (clockwise).
• W-E	The direction of the signal is from west to east (counterclockwise).
<OPTICALPORTTYPE>	(Optional) The optical port type. Only applicable to the 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. The parameter type is OPTICAL_PORT_TYPE, which 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>	(Optional) The optical power measured at this port. It can be the input or output power according to port type. Only applicable to the 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. POWER is a string.
<EXPWLEN>	(Optional) Optical wavelength for this port. Applicable only to the 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. EXPWLEN is a string. The parameter type is OPTICAL_WLEN (optical wavelength). Refer to the ACTWLEN parameter values.
<ACTWLEN>	(Optional) The manufacturing optical wavelength for this port. Applicable only to the 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. The parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90
• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64

• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72
• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12

• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06
• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95

• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15
• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68

• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<ILOSS>	(Optional) Insertion loss expressed in dBm. ILOSS applies to output ports only on the 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. ILOSS is a string.
<VOAMODE>	(Optional) The working control mode of the VOA. Applies only to the 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. The parameter type is VOA_CNTR_MODE, which defines the VOA control mode.
• ATTN	VOA has a fixed attenuation.
• POWER	VOA controls the attenuation to obtain a fixed output power.
<VOAATTN>	(Optional) The transit power attenuation for the VOA expressed in dBm. The range is –24.0 to +2.0 dBm for the MXP_2.5G_10G and TXP_MR_10G cards. VOAATTN is a string.

<VOAPWR>	(Optional) The value of calibrated output power that the VOA is going to set as a result of its attenuation. Applicable only to the 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. VOAPWR is a float and a string.
<VOAREFATTN>	(Optional) The value of reference attenuation for the VOA. Applicable only to the 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. VOAREFATTN is a float and a string.
<VOAREFPWR>	(Optional) The value of reference output power that the VOA is going to set as a result of its attenuation. Applicable only to the 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. VOAREFPWR is a float and a string.
<REFOPWR>	(Optional) The value of the calculated optical power expected for the output line added to the calibration value, which equals the total expected output power. Applicable only to the 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. REFOPWR is a float and a string.
<CALOPWR>	(Optional) The value of the calibrated optical power expected for the output added to the calculated value which equals the total expected output power. Expressed in dBm. Defaults to 0 dBm. Applicable only to the 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. CALOPWR is a float and a string.
<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. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PORTNAME>	(Optional) Port name. PORTNAME is a string.
<SFBER>	(Optional) Signal failure threshold for the SONET payload. Can only be provisioned on the working port. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	(Optional) Signal degrade threshold for the SONET payload. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.

<COMM>	(Optional) 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. For an MXP_2.5G_10G or TXP_MR_10G client port, only the DCC can be provisioned if the termination mode is not transparent and the payload is SONET. On an MXP_2.5G_10G or TXP_MR_10G DWDM port, the DCC can be enabled only if the ITU-T G.709 is not enabled and if the payload is SONET and the termination mode is not transparent. On an MXP_2.5G_10G or TXP_MR_10G DWDM port, the GCC can be enabled if there is no DCC and the ITU-T G.709 flag is enabled. The parameter type is COMM_TYPE, which is the 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>	(Optional) The data rate of the GCC traffic. The default is 192 kbps. For MXP_2.5G_10G and TXP_MR_10G cards, this applies only to the DWDM port. The 576K option is not supported in this release. The parameter type is GCCRATE, which is the data rate of the GCC traffic.
• 192K	192 kbps
• 576K	576 kbps
<DWRAP>	(Optional) The ITU-T G.709 digital wrapper. It is either on or off. The system default is ON. For MXP_2.5G_10G and TXP_MR_10G cards, this applies only to the DWDM port. To enable ITU-T G.709: • There should be no GCC on the DWDM port. • The payload (where the card is configured) should not be UNFRAMED. To disable ITU-T G.709: • There should be no GCC on the DWDM port. • The FEC should be off. • No overhead circuit should be created on the DWDM port. • None of the client ports on the card should be part of a Y-cable protection group (muxponder only). The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<FEC>	(Optional) Forward error correction. It can be enabled only if the ITU-T 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. The parameter type is FEC_MODE, which specifies the type of forward error correction.
• ENH	Enhanced FEC is enabled.

• OFF	FEC is disabled.
• STD	Standard FEC is enabled.
<PAYLOADMAP>	(Optional) The type of payload mapping. It can be enabled only if the ITU-T G.709 is turned ON and FEC is enabled. The parameter type is PAYLOAD_MAPPING, which is the payload mapping mode.
• ASYNCH	Asynchronous mapping mode
• ODU	ODU multiplex structure mode
• SYNCH	Synchronous mapping mode
<OSFBER>	(Optional) The signal failure threshold at the OTN level. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<OSDBER>	(Optional) The signal degrade threshold at the OTN level. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<MACADDR>	(Optional) MAC address for the 10 Gigabit Ethernet payload. MACADDR is a string.
<SYNCMSG>	(Optional) The facility be enabled to provide the synchronization clock. This does not apply to the TXP_MR_10G card. This applies to an MXP_2.5G_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. The 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 TXP_MR_10G card. This applies to an MXP_2.5G_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. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.

• Y	Enable an attribute.
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer.
<SOAKLEFT>	(Optional) 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.
<OSPF>	(Optional) Open Shortest Path First. The parameter type is EXT_RING, which indicates if the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<LBCL>	(Optional) Displays the current value of the laser current. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<OPT>	(Optional) Displays the current value of the transmitted optical power. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<OPR>	(Optional) Displays the current value of the received optical power. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PST_PSTQ>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ).
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.65 RTRV-OCHCC

(Cisco ONS 15454) The Retrieve Optical Channel Client Connection (RTRV-OCHCC) command retrieves the OCH client connection provisioning information.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-OCHCC:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-OCHCC:VA454-22:FAC-2-1-1:116;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[PAYLOAD=<PAYLOAD>],[CTKID=<CTKID>]:<PSTPSTQ>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"FAC-2-1-1::PAYLOAD=OC192,CTKID=\"OCHCC\":IS-NR"
;

Output Parameters

<AID>	Access identifier from the "25.8 CHANNEL" section on page 25-18.
<PAYLOAD>	Indicates the payload of the connection which is equivalent to the type of the payload configured on the facility port where the connection is originated or terminated. Parameter type is MOD1PAYLOAD.
• 10GFC	10 Gbps Fibre Channel payload
• 10GIGE	10 Gigabit Ethernet payload
• 1GFC	1 Gbps Fibre Channel payload
• 1GFICON	1 Gigabit Ficon payload
• 1GISC3	1 Gbps ISC3 compatible
• 2GFC	2 Gbps Fibre Channel payload
• 2GFICON	2 Gigabit Ficon payload
• 2GISC3	2 Gbps ISC3 compatible
• 4GFC	4 Gbps Fibre channel

• 4GFICON	4 Gbps Fiber connection
• D1VIDEO	D1Video payload
• DV6000	DV6000 payload
• EC1	EC1 payload
• ESCON	ESCON payload
• ETRCLO	ETRCLO payload
• GIGE	1 G Ethernet payload
• HDTV	HDTV payload
• ISC3PEER1G	ISC3PEER1G payload
• ISC3PEER2G	ISC3PEER2G payload
• ISC3PEER2R	ISC3PEER2R payload
• ISCCOMPAT	ISCCOMPAT payload
• OC12	OC12 payload
• OC192	OC192 payload
• OC3	OC3 payload
• OC48	OC48 payload
• T3	DS3 payload
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null the CKTID field will not be displayed.
<PSTPSTQ>	Service state. The parameter is PST_PSTQ, which provides the 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

21.66 RTRV-OCHNC

(Cisco ONS 15454) The Retrieve Optical Channel Network Connection (RTRV-OCHNC) command retrieves the OCH wavelength connection provisioning information.

Usage Guidelines None

Category DWDM

Security Retrieve

Input Format

RTRV-OCHNC:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-OCHNC:VA454-22:CHANWL-1-3-TX-1530.33:116;

Input Parameters

<AID>	Access identifier from the "25.8 CHANNEL" section on page 25-18. Must not be null.

Output Format

SID DATE TIME
M CTAG COMPLD
"<SRC>,<DST>:<WCT>:[CKTID=<CKTID>]::<PSTPSTQ>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"CHANWL-1-3-TX-1530.33,LINEWL-4-1-RX-1530.33:1WAY:CKTID=\"OCHNC-1\":IS-NR"
;

Output Parameters

<SRC>	Source access identifier from the "25.8 CHANNEL" section on page 25-18. In 2-way wavelength connection sources both directions need to be indicated.
<DST>	Destination access identifier from the "25.18 LINEWL" section on page 25-38. In 2-way wavelength connection sources both directions need to be indicated.
<WCT>	Wavelength connection type. The parameter type is WCT. The default is 1WAY.
• 1WAY	A unidirectional wavelength connection for one specified ring direction.
• 2WAY	A bidirectional wavelength connection for both the ring directions.
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null the CKTID field will not be displayed.
<PSTPSTQ>	Service state. The parameter is PST_PSTQ, which provides the 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

21.67 RTRV-OMS

(Cisco ONS 15454) The Retrieve Optical Multiplex Section (RTRV-OMS) command retrieves the attributes (service parameters) and state of an OMS facility.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-OMS:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-OMS:PENNGROVE:BAND-6-1-RX:236;

Input Parameters

<AID>	Access identifier from the "25.4 BAND" section on page 25-16. 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

<AID>	Access identifier from the "25.8 CHANNEL" section on page 25-18.
<RDIRN>	Ring directionality of the optical line. The parameter type is RDIRN_MODE, which is the optical ring directionality.
• E-W	The direction of the signal is from east to west (clockwise).
• W-E	The direction of the signal is from west to east (counterclockwise).
<OPTICALPORTTYPE>	The optical port type. The parameter type is OPTICAL_PORT_TYPE, which qualifies the optical port of a card.
• ADD	The signal is added to the port.
• DROP	The signal is dropped from the port.
• IN-COM	COM channels (without an OSC) that continue the signal from the previous card.
• IN-DC	Input dispersion compensation unit (DCU) port.
• IN-EXP	Express channel that continues the signal from the previous card.
• IN-LINE	All the channels that continue the signal from the previous card.
• IN-OSC	OSC channel that continues the signal from the previous card.
• OUT-COM	COM channels (without an 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>	(Optional) The optical power measured at this port. It can be the input or output power according to port type. POWER is a string.
<EXPBAND>	The expected value of the band for this port. The parameter type is OPTICAL_BAND (optical band).
• 1530.33 to 1532.68	Band 1
• 1534.25 to 1536.61	Band 2
• 1538.19 to 1540.56	Band 3
• 1542.14 to 1544.53	Band 4
• 1546.12 to 1548.51	Band 5
• 1550.12 to 1552.52	Band 6
• 1554.13 to 1556.55	Band 7
• 1558.17 to 1560.61	Band 8
• USE-DEFAULT	This band is not yet configured/retrieved from unit.
<ACTBAND>	(Optional) Identifies the manufacturing optical band (group of four contiguous wavelengths) for this port. The parameter type is OPTICAL_BAND (optical band).
• 1530.33 to 1532.68	Band 1
• 1534.25 to 1536.61	Band 2
• 1538.19 to 1540.56	Band 3
• 1542.14 to 1544.53	Band 4
• 1546.12 to 1548.51	Band 5

• 1550.12 to 1552.52	Band 6
• 1554.13 to 1556.55	Band 7
• 1558.17 to 1560.61	Band 8
• USE-DEFAULT	This band is not yet configured/retrieved from unit.
<ILOSS>	(Optional) Insertion loss expressed in dBm. ILOSS applies to output ports only.
<VOAMODE>	(Optional) The working control mode of the VOA. The parameter type is VOA_CNTR_MODE, which defines the VOA control mode.
• ATTN	VOA has a fixed attenuation.
• POWER	VOA controls the attenuation to obtain a fixed output power.
<VOAATTN>	(Optional) The value of calibrated attenuation for the VOA. VOAATTN is a float and a string.
<VOAPWR>	(Optional) The value of calibrated output power that the VOA is going to set as a result of its attenuation. VOAPWR is a float and a string.
<VOAREFATTN>	(Optional) The value of reference attenuation for the VOA. VOAREFATTN is a float and a string.
<VOAREFPWR>	(Optional) The value of reference output power that the VOA is going to set as a result of its attenuation. VOAREFPWR is a float and a string.
<REFOPWR>	(Optional) The value of the calculated optical power expected for the output line added to the calibration value which equals the total expected output power. REFOPWR is a float and a string.
<CALOPWR>	(Optional) The value of the calibrated optical power expected for the output added to the calculated value, which equals the total expected output power. Expressed in dBm. Defaults to 0 dBm. CALOPWR is a float and a string.
<CHPOWER>	(Optional) The per-channel optical power. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<NAME>	(Optional) Name. NAME is a string.
<PST_PSTQ>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ).
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance

• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.68 RTRV-OPM

(Cisco ONS 15454) The Retrieve Optical Monitoring Parameter (RTRV-OPM) command retrieves the optical power monitoring parameters present at the OCH layer in a reconfigurable optical add/drop multiplexing (ROADM) node.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-OPM:[<TID>]:[<AID>]:<CTAG>[::::];

Input Example

RTRV-OPM:VA454-22:OPM-5-1530.33:116;

Input Parameters

<AID>	Access identifier from the "25.20 OPM" section on page 25-39. 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

<AID>	Access identifier from the "25.20 OPM" section on page 25-39.
<POWEROUT>	(Optional) The value of the output power associated to the add or pass-through channel port of a 32WSS card. POWEROUT is a float.
<POWERADD>	(Optional) The value of the input power associated to the add channel port of a 32WSS card. POWERADD is mutually exclusive with the POWERPT parameter. POWERADD is a float.
<POWERRPT>	(Optional) The value of the input power associated to the pass-through channel port of a 32WSS card. POWERPT is mutually exclusive with the POWERADD parameter. POWERPT is a float.

21.69 RTRV-OSC

(Cisco ONS 15454) The Retrieve Optical Service Channel (RTRV-OSC) command retrieves all the OSC information of the NE.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-OSC:[<TID>]:<AID>:<CTAG

Input Example

RTRV-OSC:PENNGROVE:OSC-1:114;

Input Parameters

AID	Access identifier from the "25.21 OSC" section on page 25-40. Identifies the OSC group of the NE. Only ALL, null, or OSC-# is allowed in the AID. 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

<AID>	Access identifier from the "25.21 OSC" section on page 25-40. Identifies the OSC group of the NE.
<RINGID>	(Optional) OSC ring ID of the NE. It is a string of up to six characters, valid characters are [A to Z, 0 to 0]. The default value is number in the AID OSC-#. RINGID is an integer.
<NODEID>	(Optional) OSC node ID of the NE. It ranges from 0 to 31. NODEID is an integer.
<EAST>	(Optional) The east OC3 facility from the "25.15 FACILITY" section on page 25-33. EAST_OC3 is the AID facility. Only one OC-3 for the east direction is supported in this release.
<WEST>	(Optional) The west OC3 facility from the "25.15 FACILITY" section on page 25-33. EAST_OC3 is the AID facility. Only one OC-3 for the west direction is supported in this release.

21.70 RTRV-OTS

(Cisco ONS 15454) The Retrieve Optical Transport System (RTRV-OTS) command retrieves the attributes (service parameters) and state of an OTS facility.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-OTS:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-OTS:PENNGROVE:LINE-6-1-RX:236;

Input Parameters

<AID>	Access identifier from the "25.17 LINE" section on page 25-37. 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

AID	Access identifier from the “25.17 LINE” section on page 25-37.
RDIRN	Ring directionality of the optical line. The parameter type is RDIRN_MODE, which is the optical ring directionality.
• E-W	The direction of the signal is from east to west (clockwise).
• W-E	The direction of the signal is from west to east (counterclockwise).
OPTICALPORTTYPE	The optical port type. The parameter type is OPTICAL_PORT_TYPE, which qualifies the optical port of a card.
• ADD	The signal is added to the port.
• 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	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>	(Optional) The optical power measured at this port. It can be the input or output power according to port type. POWER is a float.
<ILOSS>	(Optional) Insertion loss.
<VOAMODE>	(Optional) The working control mode of the VOA. The parameter type is VOA_CNTR_MODE, which defines the VOA control mode.
• ATTN	VOA has a fixed attenuation.
• POWER	VOA controls the attenuation to obtain a fixed output power.
<VOAATTN>	(Optional) The value of calibrated attenuation for the VOA. VOAATTN is a float.

<VOAPWR>	(Optional) The value of calibrated output power that the VOA is going to set as a result of its attenuation. VOAPWR is a float.
<VOAREFATTN>	(Optional) The value of reference attenuation for the VOA. VOAREFATTN is a float.
<VOAREFPWR>	(Optional) The value of reference output power that the VOA is going to set as a result of its attenuation. VOAREFPWR is a float.
<OSRI>	(Optional) OSRI enabled or disabled. Present only on a port where the safety is supported. Defaults to off. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<AMPLMODE<	(Optional) The optical amplification control mode. The parameter type is AMPL_MODE, which defines the amplifier control mode.
• GAIN	The amplifier always maintains a fixed gain.
• POWER	The amplifier maintains the output power to a fixed value.
<CHPOWER>	(Optional) The per channel optical power. Applicable only to amplified OTS ports.
<GAIN>	(Optional) The value of the gain of the amplifier. Defaults to 21 dB for preamplifier and 20 dB for booster amplifier.
<EXPGAIN>	(Optional) The expected gain value to be reached from an amplifier when the node is in a DWDM access network. EXPGAIN is a float.
<REFOPWR>	(Optional) The value of the calculated optical power expected for the output line added to the calibration value, which equals the total expected output power. REFOPWR is a float.
<OFFSET>	(Optional) The value of the calibrated optical power expected for the output line, which is added to the calculated value to have the total expected output power. OFFSET is a float.
<REFTILT>	(Optional) The calculated tilt value to be added to the user provided calibration value. REFTILT is a float.
<CALTILT>	(Optional) The amplifier calibration tilt offset to be added to the calculated reference value. CALTILT is a float.
<ASEOPWR>	(Optional) The value of the calibrated optical power expected for the output line, which is provided by the user, added to the calculated value to have the total expected output power. ASEOPWR is a float.
<DCULOSS>	(Optional) The value of insertion loss associated to DCU in between the two stages of a preamplifier unit. DCULOSS is a float.
<AWGST>	The status assumed by AWG. The parameter value is AWG_STATUS, which is the AWG status list.
• ON	The AWG is on.
• WARM-UP	The AWG is warming up.
<HEATST>	(Optional) The status assumed by the heater. The parameter type is HEATER_STATUS, which is the heater status list.
• OFF	The heater is off.
• ON	The heater is on.
<NAME>	(Optional) Name of the port. NAME is a string.

<PST_PSTQ>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ).
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.71 RTRV-PATH-OCH

(ONS 15454) The Retrieve Path Optical Channel (RTRV-PATH-OCH) command retrieves the OCH path inside a node. An OCH path is a list of access identifiers that addresses all the possible facility and internal optical channels which are all associated to the same wavelength.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-PATH-OCH:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-PATH-OCH:PENNGROVE:CHAN-6-2:236;

Input Parameters

<AID>	Access identifier from the "25.8 CHANNEL" section on page 25-18 or the "25.18 LINEWL" section on page 25-38 .

Output Format

SID DATE TIMEM
CTAG COMPLD
"<AID>::[WLEN=<WLEN>],[PATH=<PATH>]:"
;

Output Example

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

M 001 COMPLD

"CHAN-6-2::WLEN=1530.33,PATH=LINEWL-1-3-RX-1530.33&LINEWL-1-1-TX-1530.33&LINEWL-3-1-RX-1530.33&CHAN-3-1-TX&CHAN-6-2:"

;

Output Parameters

<AID>	Access identifier from the "25.8 CHANNEL" section on page 25-18 or the "25.18 LINEWL" section on page 25-38
WLEN	Defines the Optical Wavelength. The parameter type is OPTICAL_WLEN (optical wavelength).
• 1530.33	Wavelength C Band - 1/40
• 1531.12	Wavelength C Band - 2/40
• 1531.90	Wavelength C Band - 3/40
• 1532.68	Wavelength C Band - 4/40
• 1534.25	Wavelength C Band - 6/40
• 1535.04	Wavelength C Band - 7/40
• 1535.82	Wavelength C Band - 8/40
• 1536.61	Wavelength C Band - 9/40
• 1538.19	Wavelength C Band - 11/40
• 1538.98	Wavelength C Band - 12/40
• 1539.77	Wavelength C Band - 13/40
• 1540.56	Wavelength C Band - 14/40
• 1542.14	Wavelength C Band - 16/40
• 1542.94	Wavelength C Band - 17/40
• 1543.73	Wavelength C Band - 18/40
• 1544.53	Wavelength C Band - 19/40
• 1546.12	Wavelength C Band - 21/40
• 1546.92	Wavelength C Band - 22/40
• 1547.72	Wavelength C Band - 23/40
• 1548.51	Wavelength C Band - 24/40
• 1550.12	Wavelength C Band - 26/40
• 1550.92	Wavelength C Band - 27/40
• 1551.72	Wavelength C Band - 28/40
• 1552.52	Wavelength C Band - 29/40
• 1554.13	Wavelength C Band - 31/40
• 1554.94	Wavelength C Band - 32/40

• 1555.75	Wavelength C Band - 33/40
• 1556.55	Wavelength C Band - 34/40
• 1558.17	Wavelength C Band - 36/40
• 1558.98	Wavelength C Band - 37/40
• 1559.79	Wavelength C Band - 38/40
• 1560.61	Wavelength C Band - 39/40
• 1577.44	L Band Wavelength 1577.44
• 1577.86	L Band Wavelength 1577.86
• 1578.27	L Band Wavelength 1578.27
• 1578.69	L Band Wavelength 1578.69
• 1579.10	L Band Wavelength 1579.10
• 1579.52	L Band Wavelength 1579.52
• 1579.93	L Band Wavelength 1579.93
• 1580.35	L Band Wavelength 1580.35
• 1580.77	L Band Wavelength 1580.77
• 1581.18	L Band Wavelength 1581.18
• 1581.60	L Band Wavelength 1581.60
• 1582.02	L Band Wavelength 1582.02
• 1582.44	L Band Wavelength 1582.44
• 1582.85	L Band Wavelength 1582.85
• 1583.27	L Band Wavelength 1583.27
• 1583.69	L Band Wavelength 1583.69
• 1584.11	L Band Wavelength 1584.11
• 1584.53	L Band Wavelength 1584.53
• 1584.95	L Band Wavelength 1584.95
• 1585.36	L Band Wavelength 1585.36
• 1585.78	L Band Wavelength 1585.78
• 1586.20	L Band Wavelength 1586.20
• 1586.62	L Band Wavelength 1586.62
• 1587.04	L Band Wavelength 1587.04
• 1587.46	L Band Wavelength 1587.46
• 1587.88	L Band Wavelength 1587.88
• 1588.30	L Band Wavelength 1588.30
• 1588.73	L Band Wavelength 1588.73
• 1589.15	L Band Wavelength 1589.15
• 1589.57	L Band Wavelength 1589.57
• 1589.99	L Band Wavelength 1589.99
• 1590.41	L Band Wavelength 1590.41
• 1590.83	L Band Wavelength 1590.83
• 1591.26	L Band Wavelength 1591.26
• 1591.68	L Band Wavelength 1591.68

• 1592.10	L Band Wavelength 1592.10
• 1592.52	L Band Wavelength 1592.52
• 1592.95	L Band Wavelength 1592.95
• 1593.37	L Band Wavelength 1593.37
• 1593.79	L Band Wavelength 1593.79
PATH	Access identifier from the "25.8 CHANNEL" section on page 25-18 or the "25.18 LINEWL" section on page 25-38.

21.72 RTRV-PM-<MOD2>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Performance for 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, or VT2 (RTRV-PM-<MOD2>) command retrieves the values of PM parameters for a specified card type.

Usage Guidelines

- See Table 27-1 on page 27-1 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 to 12 and DD (day of the month) ranges from 1 to 31.
- The format for MONTM is HH-MM, where HH (hour of the day) ranges from 0 to 23 and MM (minute of the hour) ranges from 0 to 59.
- If there are no errors to report, the response will be COMPLD (completed).
- If the TMPER is 1-DAY, MONTM is not applicable (null), and is treated as null if MONTM is not null.
- A null value for MONLEV defaults to 1-UP.
- A null value for MONDAT defaults to the current date (MM-DD).
- A null value for MONTM defaults to the current time (HH-MM).
- Unless otherwise stated, DS-1 cards are the only cards that support both the RCV and TRMT directions. All other cards only support the RCV direction.
- After BLSR switching, the working path is switched out, the traffic goes through the protection path, and the IPPM can be retrieved from the protection STS path.
- If there is a STS PCA on the protection path, during the BLSR switching, the PCA path is preemptive; sending this command on the protection path after a BLSR switch, the command returns the PMs from the protection path, not from the PCA path.
- Some MOD2 entities; for example, OCH, CLNT, and Optical (OCn), support negative MONTYPE values. By default, this command defaults to 0–UP (return MONTYPEs where the MONVAL is 0 or higher). To retrieve the negative values, you must issue 0–DN in the MONLEV field. The rules are as follows:

  - Client port only–Laser and SONET PMs are applicable and will appear. If the card payload is in SONET mode, then SONET PMs will appear, provided the MONLEV criteria is met.
  - Trunk port Laser PMs are always available. Laser PMs are only for near end. If ITU-T G.709 is enabled, then the OTN PMs will appear. If ITU-T G.709 and FEC are enabled, then the FEC PMs will appear. If the card payload is in SONET mode, then SONET PMs will appear. All PM MONVALUEs should pass the MONLEV filter criteria.
- For DWDM cards, the MONLEV filter criteria will not support a floating point. It will be returned and interpreted as an integer.
- If the DS-1 mode of the DS3XM-12 card is FDL, the DS-1 path can retrieve FDL/T.403 FEND PM counts up to 32 15-minute intervals in the RTRV-PM-DS1 command.
- RTRV-PM-<MOD2> can also be used to retrieve the RMON-managed PM data.

Category

Performance

Security

Retrieve

Input Format

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

Input Example

RTRV-PM-T1:TID:FAC-2-1:123::CVL,10-UP,NEND,RCV,15-MIN,04-11,12-45;

Input Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1. 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. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• BBE-PM	OTN—Background Block Errors—Path Monitor Point
• BBE-SM	OTN—Background Block Errors—Section Monitor Point
• BBER-PM	OTN—Background Block Error Ratio—Path Monitor Point expressed as one tenth of a percentage
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line

• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second

• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High Order Path Negative Pointer Justification Count
• HP-NPJC-PGEN	High Order Path, Negative Pointer Justification Count
• HP-OI	Outage Intensity
• HP-PJCDIFF	High Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High Order Path Pointer Justification Count
• HP-PJCS-PGEN	High Order Path Pointer Justification Count Seconds
• HP-PPJC-PDET	High Order Path Positive Pointer Justification Count
• HP-PPJC-PGEN	High Order Path, Positive Pointer Justification Count
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in microA
• LBCL-MAX	Maximum Laser Bias current in microA
• LBCL-MIN	Minimum Laser Bias current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current
• LOSSL	Loss of Signal Seconds—Line

• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OPR-AVG	Average Receive Power in one tenth of a microW
• OPR-MAX	Maximum Receive Power in one tenth of a microW
• OPR-MIN	Minimum Receive Power in one tenth of a microW
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microW
• OPT-MAX	Maximum Transmit Power in one tenth of a microW
• OPT-MIN	Minimum Transmit Power in one tenth of a microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span

• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<MONLEV>	The discriminating level of the requested monitored parameter in the format of LEVEL-DIRN, where LEVEL is the measured value of the monitored parameter (MONVAL) and DIRN is the type of direction. A null value defaults to 1-UP. MONLEV is a string.
<LOCN>	Location associated with a particular command in reference to the entity identified by the AID. A null value defaults to NEND. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility
• NEND	Action occurs on the near end of the facility
<DIRECTION>	Type of direction. Must not be null. The parameter type is DIRECTION (transmit and receive directions).

• BTH	Both transmit and receive directions.
• RCV	Receive direction only.
• TRMT	Transmit direction only.
<TMPER>	Accumulation time period for performance counters. If TMPER is 1-DAY, MONTM is not applicable (null), and is treated as null. A null value defaults to 15-MIN. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24-hours. For SONET PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.
<DATE>	The beginning date of the PM or storage register period specified in TMPER. The format of DATE is MM-DD, where MM (month of year) ranges from 1 to 12 and DD (day of month) ranges from 1 to 31. A null value defaults to current date.
<TIME>	The beginning time of day of the PM or storage register period specified in TMPER. The format of TIME is HH-MM, where HH (hour of day) ranges from 0 to 23 and MM (minute of hour) ranges from 0 to 59. A null value defaults to current time.

Output Format

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

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "FAC-2-1,DS1-14:CVL,21,COMPL,NEND,RCV,15-MIN,04-11,12-45"
;
```

Output Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1.
<AIDTYPE>	(Optional) Type of facility, link, or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.
• 1GFC	1 Gigabit Fibre Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fibre Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• 4GFC	4 Gbps Fibre Channel
• 4GFICON	4 Gbps fiber connection
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	GIG Ethernet port alarm
• ISC3PEER1G	ISC3PEER1G alarm
• ISC3PEER2G	ISC3PEER2G alarm
• ISC3PEER2R	ISC3PEER2R alarm
• ISCCOMPAT	ISCCOMPAT 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)
<MONTYPE>	Monitored type. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• BBE-PM	OTN—Background Block Errors—Path Monitor Point
• BBE-SM	OTN—Background Block Errors—Section Monitor Point
• BBER-PM	OTN—Background Block Error Ratio—Path Monitor Point expressed as one tenth of a percentage
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage

• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High Order Path Negative Pointer Justification Count
• HP-NPJC-PGEN	High Order Path, Negative Pointer Justification Count
• HP-OI	Outage Intensity
• HP-PJCDIFF	High Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High Order Path Pointer Justification Count
• HP-PJCS-PGEN	High Order Path Pointer Justification Count Seconds
• HP-PPJC-PDET	High Order Path Positive Pointer Justification Count
• HP-PPJC-PGEN	High Order Path, Positive Pointer Justification Count
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio

• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in microA
• LBCL-MAX	Maximum Laser Bias current in microA
• LBCL-MIN	Minimum Laser Bias current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored

• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OPR-AVG	Average Receive Power in one tenth of a microW
• OPR-MAX	Maximum Receive Power in one tenth of a microW
• OPR-MIN	Minimum Receive Power in one tenth of a microW
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microW
• OPT-MAX	Maximum Transmit Power in one tenth of a microW
• OPT-MIN	Minimum Transmit Power in one tenth of a microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path

• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<MONVAL>	The value to which the register identified by MONTYPE is to be initialized to or the measured value of a monitored parameter. The value is in the form of numeric counts or rates. MOVAL is a string.
<VLDTY>	(Optional) Indicates whether the information for the specified time period was accumulated over the entire time period or some portion thereof. Validity indicator for the reported PM data. The parameter type is VALIDITY, which is the response validity.
• COMPL	Complete response
• PRTL	Partial response
<LOCN>	(Optional) Location associated with a particular command. The parameter type is LOCATION, which is the location where the action is to take place
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRECTION>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
• TRMT	Transmit direction only
<TMPER>	(Optional) Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24-hours. For SONET PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.

• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.
<MONDAT>	(Optional) The beginning date of the PM or storage register period specified in TMPER. The format of MONDAT is MM-DD, where MM (month of year) ranges from 1 to 12 and DD (day of month) ranges from 1 to 31. MONDAT is a string.
<MONTM>	(Optional) The beginning time of day of the PM or storage register period specified in TMPER. The format of MONTM is HH-MM, where HH (hour of day) ranges from 0 to 23 and MM (minute of hour) ranges from 0 to 59. MONTM is a string.

21.73 RTRV-PMMODE-<STS_PATH>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Performance Mode of PM Data Collection for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, or STS9C (RTRV-PMMODE-<STS_PATH>) command retrieves the type of PM mode that has been previously set in the NE. This command can be used to identify whether the PM parameters are Section, Line or Path type, and to identify whether or not the PMs are being collected by the NE.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Note

- The PM mode and state of an entity is set by using the SET-PMMODE command.
- This command returns the categories that are enabled only.
- This near-end monitoring of the intermediate-path performance monitoring (IPPM) only supports OC3, OC12, OC48, OC192, and EC1 on the STS Path.
- The far-end IPPM data collection is supported by the MRC-12 card only.
- This release of software will support only the Path (P) mode type PM parameters with this command, that is, this command will not be applicable for Line (L) and Section (S) mode types. Note that the PM monitoring for Line (L) and Section (S) are supported by the ONS 15454, and the storing PM data is always performed.
- This command only returns the categories that are enabled (pmstate is ON), and does not return the categories that are disabled (pmstate is OFF).

Category

Performance

Security

Retrieve

Input Format

RTRV-PMMODE-<STS_PATH>:[<TID>]:<SRC>:<CTAG>::<LOCN>;

Input Example

RTRV-PMMODE-STS1:CISCO:STS-4-1-2:123::NEND;

Input Parameters

<SRC>	Source access identifier from the "25.10 CrossConnectId" section on page 25-20. 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. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.

Output Format

SID DATE TIME
M CTAG COMPLD
"<CROSSCONNECTID>:[<LOCN>],<MODETYPE>"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"STS-4-1-2:NEND,P"
;

Output Parameters

<CROSSCONNECTID>	Access identifier from the "25.10 CrossConnectId" section on page 25-20.
<LOCN>	(Optional) Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<MODETYPE>	The type of PM parameters that the entity or the subentity is to store as a result of an attribute change. The parameter type is PM_MODE, which is the type of PM parameters.
• P	Transport Path PM parameters.

21.74 RTRV-PMMODE-<VT_PATH>

(Cisco ONS 15310-MA) The Retrieve Performance Mode of PM Data Collection for VT1 and VT2 (RTRV-PMMODE-<VT_PATH>) command retrieves the type of PM mode that has been previously set in the NE. This command can be used to identify whether the PM parameters are Section, Line or Path type, and to identify whether or not the PMs are being collected by the NE.

Usage Guidelines

Note

- The PM mode and state of an entity is set by using the SET-PMMODE command.
- This command returns the categories that are enabled (pmstate is ON) only. It does not return the categories that are disabled (pmstate is OFF).
- This release of software will support only the Path (P) mode type PM parameters with this command, that is, this command will not be applicable for Line (L) and Section (S) mode types.

Category

Performance

Security

Retrieve

Input Format

RTRV-PMMODE-<VT_PATH>:[<TID>]:<SRC>:<CTAG>::<LOCN>;

Input Example

RTRV-PMMODE-VT1:CISCO:VT-1-1-2-2:1::NEND;

Input Parameters

<SRC>	Source access identifier from the "25.10 CrossConnectId" section on page 25-20. 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. The parameter type is LOCATION, which is the location where the action is to take place. Must not be null.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
  "<CROSSCONNECTID>:<LOCN>,<MODETYPE>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "VT1-1-1-2-2:NEND,P"
;
```

Output Parameters

<CROSSCONNECTID>	Access identifier from the "25.11 CrossConnectId1" section on page 25-24.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<MODETYPE>	The type of PM parameters that the entity or the subentity is to store as a result of an attribute change. The parameter type is PM_MODE, which is the type of PM parameters.
• P	Transport Path PM parameters.

21.75 RTRV-PMSCHED-<MOD2>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Performance Monitoring Schedule for 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, or VT2 (RTRV-PMSCHED-<MOD2>) command retrieves the PM reporting schedule that was set for the NE by the SCHED-PMREPT command.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Category

Performance

Security

Retrieve

Input Format

RTRV-PMSCHED-<MOD2>:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-PMSCHED-OC3:CISCO-NODE:FAC-3-1:123;

Input Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1. 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

<AID>	Access identifier from the "25.1 ALL" section on page 25-1.
<AIDTYPE>	(Optional) Type of facility, link or other addressable entity targeted by the message. The parameter type is MOD2, which is the line/path modifier.
• 10GFC	10 Gigabit Fibre Channel
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit Fibre Channel
• 1GFICON	1 Gigabit FICON
• 2GFC	2 Gigabit Fibre Channel
• 2GFICON	2 Gigabit FICON
• D1VIDEO	D1 Video
• DS1	DS1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETR_CLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over packet over SONET. Virtual Ports partitioned using GFP's multiplexing capability.
• GIGE	GIG Ethernet
• HDTV	HDTV
• ISC3PEER1G	ISC3PEER1G
• ISC3PEER2G	ISC3PEER2G
• ISC3PEER2R	ISC3PEER2R
• ISCCOMPAT	ISCCOMPAT
• 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
• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 path
• VT2	VT2 path
<REPTINVL>	Reporting interval. How often a report is to be generated and sent to the appropriate NE. REPTINVL is a string.
<REPTDAT>	Report date. Date for the next report. REPTDAT is a string.
<REPTTM>	Report time. The time of day for the next PM report. REPTTM is a string.
<NUMINVL>	(Optional) The remaining number of intervals over which the PM will be reported. NUMINVL is an integer.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode will be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<TMPER>	(Optional) Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24 hours. For SONET PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.

• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.
<TMOFST>	(Optional) Time offset between reporting/diagnostics/exercises; from the end of the last complete accumulation time period to the beginning of the accumulation time period specified by TMPER. TMOFST is a string.
<INHMODE>	(Optional) Indicates whether a function is inhibited by an INH command. Indicates whether the reporting of PM data is inhibited (by the INH-PMREPT-ALL command) or is allowed (by the ALW-PMREPT-ALL command). The parameter type is INH_MODE, which indicates whether the function is inhibited.
• ALW	Function is allowed.
• INH	Function is inhibited.

21.76 RTRV-PMSCHED-ALL

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Performance Schedule All (RTRV-PMSCHED-ALL) command retrieves all the PM reporting schedules that were set for the NE by the SCHED-PMREPT command.

Usage Guidelines None

Category Performance

Security Retrieve

Input Format RTRV-PMSCHED-ALL:[<TID>]::<CTAG>;

Input Example RTRV-PMSCHED-ALL:CISCO-NODE::123;

Input Parameters None that require description

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,[<AIDTYPE>]:<REPTINVL>,<REPTDAT>,<REPTTM>,[<NUMINVL>],,
   [<MONLEV>],<LOCN>,,[<TMPER>],<TMOFST>,[<INHMODE>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "FAC-3-1,OC3:30-MIN,5-25,14-46,100,,1-UP,NEND,,15-MIN,0-0-15,ALW"
;
```

Output Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1.
<AIDTYPE>	(Optional) Type of facility, link or other addressable entity targeted by the message. The parameter type is MOD2, which is the line/path modifier.
• 10GFC	10 Gigabit Fibre Channel
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit Fibre Channel
• 1GFICON	1 Gigabit FICON
• 2GFC	2 Gigabit Fibre Channel
• 2GFICON	2 Gigabit FICON
• D1VIDEO	D1 Video
• DS1	DS-1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETR_CLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over packet over SONET. Virtual Ports partitioned using GFP's multiplexing capability.
• GIGE	GIG Ethernet
• HDTV	HDTV
• ISC3PEER1G	ISC3PEER1G
• ISC3PEER2G	ISC3PEER2G
• ISC3PEER2R	ISC3PEER2R
• ISCCOMPAT	ISCCOMPAT
• OC3	OC-3 facility
• OC12	OC-12 facility
• OC48	OC-48 facility
• OC192	OC-192 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
• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 path
• VT2	VT2 path
<REPTINVL>	Reporting interval. How often a report is to be generated and sent to the appropriate NE. REPTINVL is a string.
<REPTDAT>	Report date. Date for the next report. REPTDAT is a string.
<REPTTM>	Report time. The time of day for the next PM report. REPTTM is a string.
<NUMINVL>	(Optional) The remaining number of intervals over which PM is to be reported. NUMINVL is an integer.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<TMPER>	(Optional) Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24 hours. For SONET PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.

• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.
<TMOFST>	(Optional) Time offset between reporting/diagnostics/exercises; from the end of the last complete accumulation time period to the beginning of the accumulation time period specified by TMPER. TMOFST is a string.
<INHMODE>	(Optional) Indicates whether a function is inhibited by an INH command. Indicates whether the reporting of PM data is inhibited (by the INH-PMREPT-ALL command) or is allowed (by the ALW-PMREPT-ALL command). The parameter type is INH_MODE, which indicates whether the function is inhibited.
• ALW	Function is allowed.
• INH	Function is inhibited.

21.77 RTRV-POS

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Packet Over SONET (RTRV-POS) command retrieves the back-end port information for the Ethernet card when the back-end port is working in POS mode.

Usage Guidelines

- This command is supported for the ML-Series cards, but for the ONS 15310-CL ML-100T-8 card, ADMINSTATE, ENCAP, SOAK, and SOAKLEFT information will not appear.
- This command is supported for the ASAP card, but ADMINSTATE information will not appear.
- Because the back-end port is virtual, the Virtual Facility (VFAC) AID should be used when issuing the command.

Category

Ports

Security

Retrieve

Input Format

RTRV-POS:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-POS:TID:VFAC-1-1:CTAG;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.

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

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<ADMINSTATE>	(Optional) Administration type. The parameter type is UP_DOWN (up or down).
• DOWN	Down
• UP	Up
<LINKSTATE>	(Optional) Link protocol. The parameter type is UP_DOWN (up or down).
• DOWN	Down
• UP	Up
<MTU>	(Optional) Maximum transmission unit. MTU is an integer.
<ENCAP>	Encapsulation. The parameter type is ENCAP, which is the frame encapsulation type.
• GFP_F	GFP frame mode
• GFP_T	GFP transparent mode
• HDLC	HDLC frame mode
• HDLC_LEX	HDLC LAN extension frame mode
• HDLC_X86	HDLC X.86 frame mode
<NAME>	(Optional) Name. NAME is a string.
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer.

<SOAKLEFT<	(Optional) Time remaining for the transition from OOS-AINS to IS measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. Rules for SOAKLEFT are as follows: • When the port is in OOS, OOS_MT, or IS state, the parameter will not appear. • When the port is in OOS_AINS state but the countdown has not started due to a fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in OOS_AINS state and the countdown has started, the value will be shown in HH-MM format.
<PST_PSTQ>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ).
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SST>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.78 RTRV-PROTNSW-<MOD2DWDMPAYLOAD>

(Cisco ONS 15454) The Retrieve Protection Switch for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, HDTV, ISC1, ISC3, or PASSTHRU (RTRV-PROTNSW-<MOD2DWDMPAYLOAD>) command retrieves the protection switch status of client facilities.

Usage Guidelines None

Category DWDM

Security

Retrieve

Input Format

RTRV-PROTNSW-<MOD2DWDMPAYLOAD>:[<TID>]:<SRC>:<CTAG>[::::];

Input Example

RTRV-PROTNSW-HDTV:CISCO:FAC-1-1-1:100;

Input Parameters

<SRC>	Source access identifier from the "25.15 FACILITY" section on page 25-33. 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

<AIDUNIONID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<SC>	Switch command to be initiated on the paths. The parameter type is SW, which is the type of switch to be initiated.
• APS-CLEAR	APS-CLEAR switch state. It is a read-only switch state and is not allowed in the OPR-PROTNSW-xxx commands.
• CLEAR	CLEAR switch state. CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.
<SWITCHTYPE>	(Optional) Switch type. The parameter type is SWITCH_TYPE, which is the BLSR switch type. MANWKSWBK, MANWKSWPR, FRCDWKSWBK, FRCDWKSWPR, LOCKOUTOFPR, and LOCKOUTOFWK are retrieve-only values for RTRV-PROTNSW-OCn commands. They are not applicable for the OPR-PROTNSW-OCn commands. RING and SPAN are the only allowed values for BLSR protection.
• FRCDWKSWBK	Working unit is forced to switch back to working.

• FRCDWKSWPR	Working unit is forced to switch to the protection unit.
• LOCKOUTOFPR	Lockout of protection.
• LOCKOUTOFWK	Lockout of working.
• MANWKSWBK	Manual switch of working unit back to working.
• MANWKSWPR	Manual switch of working unit back to the protection unit.
• RING	BLSR ring switch type.
• SPAN	BLSR span switch type.

21.79 RTRV-PROTNSW-<OCN_TYPE>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Protection Switch for OC3, OC12, OC48, or OC192 (RTRV-PROTNSW-<OSC_TYPE>) command retrieves the switching state of a SONET line specified in the AID.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Category

Protection

Security

Retrieve

Input Format

RTRV-PROTNSW-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-PROTNSW-OC48:CISCO:FAC-5-1:123;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. 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

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<SC>	Switch command to be initiated on the paths. The parameter type is SW, which is the type of switch to be initiated.
• APS-CLEAR	APS-CLEAR switch state. It is a read-only switch state and is not allowed in the OPR-PROTNSW-xxx commands.
• CLEAR	CLEAR switch state. CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.
<SWITCHTYPE>	(Optional) Switch type. The parameter type is SWITCH_TYPE, which is the BLSR switch type. MANWKSWBK, MANWKSWPR, FRCDWKSWBK, FRCDWKSWPR, LOCKOUTOFPR, and LOCKOUTOFWK are retrieve-only values for RTRV-PROTNSW-OCn commands. They are not applicable for the OPR-PROTNSW-OCn commands. RING and SPAN are the only allowed values for BLSR protection.
• FRCDWKSWBK	Working unit is forced to switch back to working.
• FRCDWKSWPR	Working unit is forced to switch to the protection unit.
• LOCKOUTOFPR	Lockout of protection.
• LOCKOUTOFWK	Lockout of working.
• MANWKSWBK	Manual switch of working unit back to working.
• MANWKSWPR	Manual switch of working unit back to the protection unit.
• RING	BLSR ring switch type.
• SPAN	BLSR span switch type.

21.80 RTRV-PROTNSW-<PATH>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Protection Switch for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VT1, or VT2 (RTRV-PROTNSW-<PATH>) command retrieves the switching state of a SONET UPSR STS path specified in the AID. Because Telcordia GR-1400 does not allow LOCKOUT_OF_WORKING on the UPSR WORKING path/AID, the "AID:LOCKOUT,LOCKOUTOFWK" does not appear in this protection switch retrieval result.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Category

Protection

Security

Retrieve

Input Format

RTRV-PROTNSW-<PATH>:[<TID>]:<SRC>:<CTAG>[::::];

Input Example

RTRV-PROTNSW-STS1:CISCO:STS-5-1-1:123;

Input Parameters

<SRC>	Source access identifier from the "25.10 CrossConnectId" section on page 25-20. 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

<CROSSCONNECTID>	Access identifier from the "25.10 CrossConnectId" section on page 25-20.
<SC>	Switch command that is to be initiated on the paths. The parameter type is SW, which is the type of switch to be initiated.
• APS-CLEAR	APS-CLEAR switch state. It is a read-only switch state and is not allowed in the OPR-PROTNSW-xxx commands.
• CLEAR	CLEAR switch state. CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.
<SWITCHTYPE>	(Optional) Switch type. The parameter type is SWITCH_TYPE, which is the BLSR switch type. MANWKSWBK, MANWKSWPR, FRCDWKSWBK, FRCDWKSWPR, LOCKOUTOFPR, and LOCKOUTOFWK are retrieve-only values for RTRV-PROTNSW-OCn commands. They are not applicable for the OPR-PROTNSW-OCn commands. RING and SPAN are the only allowed values for BLSR protection.
• FRCDWKSWBK	Working unit is forced to switch back to working.

• FRCDWKSWPR	Working unit is forced to switch to the protection unit.
• LOCKOUTOFPR	Lockout of protection.
• LOCKOUTOFWK	Lockout of working.
• MANWKSWBK	Manual switch of working unit back to working.
• MANWKSWPR	Manual switch of working unit back to the protection unit.
• RING	BLSR ring switch type.
• SPAN	BLSR span switch type.

21.81 RTRV-PROTNSW-OCH

(Cisco ONS 15454) The Retrieve Protection Switch Optical Channel (RTRV-PROTNSW-OCH) command retrieves the protection switch status of a TXPP_MR_2.5G card.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-PROTNSW-OCH:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-PROTNSW-OCH:VA454-22:CHAN-2-2:100;

Input Parameters

<AID>	Access identifier from the "25.8 CHANNEL" section on page 25-18. 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

<AID>	Access identifier from the "25.8 CHANNEL" section on page 25-18.
<SW>	Indicates the switch operation. The parameter type is SW, which is the type of switch to be initiated.
• APS-CLEAR	APS-CLEAR switch state. It is a read-only switch state and is not allowed in the OPR-PROTNSW-xxx commands.
• CLEAR	CLEAR switch state. CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.
<SWITCHTYPE>	Indicates the switch type operation. The parameter type is SWITCH_TYPE, which is the BLSR switch type. MANWKSWBK, MANWKSWPR, FRCDWKSWBK, FRCDWKSWPR, LOCKOUTOFPR, and LOCKOUTOFWK are retrieve-only values for RTRV-PROTNSW-OCn commands. They are not applicable for the OPR-PROTNSW-OCn commands. RING and SPAN are the only allowed values for BLSR protection.
• FRCDWKSWBK	Working unit is forced to switch back to working.
• FRCDWKSWPR	Working unit is forced to switch to the protection unit.
• LOCKOUTOFPR	Lockout of protection.
• LOCKOUTOFWK	Lockout of working.
• MANWKSWBK	Manual switch of working unit back to working.
• MANWKSWPR	Manual switch of working unit back to the protection unit.
• RING	BLSR ring switch type.
• SPAN	BLSR span switch type.

21.82 RTRV-PROTOCOL

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Protocol (RTRV-PROTOCOL) command retrieves the status of a protocol or service supported in the NE. Valid protocols include SHELL, EMS, TL1, and SNMP. If the AID is not specified, the status of all the protocols is retrieved.

Usage Guidelines

If the AID is TL1, the status can be retrieved to show if the protocol is in SECURE or UNSECURE mode.

Category

Security

Security

Retrieve

Input Format

RTRV-PROTOCOL:[<TID>]:[<AID>]:<CTAG>;

Input Example

RTRV-PROTOCOL::EMS:123;

Input Parameters

<AID>	(Optional) Identifies the protocol or service to which the command pertains. Defaults to ALL. A null value is equivalent to ALL. The parameter type is PROTOCOLAID, which is the AID for the protocol/service.
• EMS	CTC/CTM protocol/service
• SHELL	Shell/file system access protocol
• SNMP	SNMP protocol/service
• TL1	TL1 protocol service

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<PROTOCOLAID>:<PROTOCOLSTAT>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "EMS:UNSECURE"
;
```

Output Parameters

PROTOCOLAID	Identifies the protocol or service to which the command pertains. The parameter type is PROTOCOLAID, which is the AID for the protocol/service.
• EMS	CTC/CTM protocol/service
• SHELL	Shell/file system access protocol
• SNMP	SNMP protocol/service
• TL1	TL1 protocol/service
PROTOCOLSTAT	Identifies the status of the protocol or service. The parameter type is PROTOCOLSTAT, which is the status of the protocol.
• DISABLED	The protocol cannot be used.
• SECURE	The protocol is enabled and communications using the protocol are sure, for example, through SSH. Not applicable for SNMP protocols.
• UNSECURE	The protocol is enabled but communication is not secure, for example, through Telnet.

21.83 RTRV-PTHTRC-<PATH>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Path Trace for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VT1, or VT2 (RTRV-PTHTRC-<PATJ>) command retrieves the contents of the SONET path trace message.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

The path trace message is a 64-character string with the last two characters reserved for the terminating CR (carriage return) and the LF (line feed). The message can be an incoming path trace message, an expected incoming path trace message, or an outgoing path trace message, which is inserted into the path overhead of the outgoing signal.

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

When the expected string is queried under the OFF path trace mode, the expected string is a copy of the provisioned string or NULL. When an expected string is queried under the MANUAL path trace mode, the expected string is a copy of the user-entered string. When an expected string is queried under the AUTO path trace mode, the expected string is a copy of the acquired received string or NULL if the string has not been acquired.

When the incoming string is queried under the OFF path trace mode, the incoming string is NULL. When an incoming string is queried under the MANUAL or AUTO path trace mode, the incoming string is a copy of the received string or NULL if the string has not been received.

When the transmitted string is queried under the OFF, MANUAL, or AUTO path trace mode, the transmitted string is the provisioned transmit string.

Note

- A null value for the MSGTYPE defaults to INCTRC.
- Only the NEND location value is supported. A null value of the location defaults to NEND.
- Sending a FEND of the location with this command will return an “unsupported locn value” error message.
- J1 (EXPTRC/INCTRC) is implemented on the DS1/DS1N, DS3E/DS3NE, DS3XM, EC1, OC3, OC48A, OC192, OC192-XFP, and MRC-12 cards.
- TRC is supported only on DS1(N), DS3(N)E, and DS3XM cards.
- The VCAF AID is only valid on slots holding ML-Series cards.
- After the BLSR switch, the working path is switched out and the traffic goes through the protection path. The J1 trace message can be retrieved from the protection STS path.
- If there is an STS PCA on the protection path during the BLSR switch, the PCA path is preemptive. If this command is sent on the protection path after a BLSR switch, the command will return the trace message off of the protection path and not from the PCA path.
- The J2 path trace on the VT1.5 is supported on the VT1.5 cross-connection of the DS3XM-12 card in Software R5.0 and later.

- The VT2 modifier is not supported in this release.
- According to Telcordia GR-833, RTRV-PTHTRC-<PATH> can only have a single output row, therefore you cannot specify multiple AIDs using '&' with this command because each AID would require it's own output row. You also cannot use the AIDs that end in ALL because this might also result in multiple output rows.
- On the ONS 15310-MA, J2 path trace is supported on DS1 ports only. J2 path trace is not supported on ONS 15310-MA OCn ports and EC1 ports.

Category

Troubleshooting and Test Access

Security

Retrieve

Input Format

RTRV-PTHTRC-<PATH>:[<TID>]:<SRC>:<CTAG>::[<MSGTYPE>][:<LOCN>];

Input Example

RTRV-PTHTRC-STS1:CISCO:STS-2-1-1:123::EXPTRC:NEND;

Input Parameters

<SRC>	Source access identifier from the "25.10 CrossConnectId" section on page 25-20. Must not be null.
<MSGTYPE>	Type of autonomous message to be retrieved. A null value defaults to INCTRC. The parameter type is MSGTYPE, which is the type of trace message.
• EXPTRC	Expected incoming path trace message
• INCTRC	Incoming path trace message
• TRC	Outgoing path trace message
<LOCN>	Location associated with a particular command in reference to the entity identified by the AID. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<TRACMSG>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "TRACMSG"
;
```

Output Parameters		
	<TRACMSG>	The path trace message returned to the requester. The message can be up to 64 characters in length with the last two characters reserved for the CR (carriage return) and the LF (line feed). TRACMSG is a string.

21.84 RTRV-RMONTH-<MOD2_RMON>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA) The Retrieve Remote Monitoring Threshold for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, FSTE, G1000, GFPOS, GIGE, OCH, or POS (RTRV-RMONTH-<MOD2_RMON>) command retrieves the thresholds defined in the RMON alarm table.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Category

Performance

Security

Retrieve

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		
	<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. 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. The parameter type is ALL_MONTYPE, which is the monitoring type list.
	• AISSP	Alarm Indication Signal Seconds—Path
	• ALL	All possible values
	• BBE-PM	OTN—Background Block Errors—Path Monitor Point
	• BBE-SM	OTN—Background Block Errors—Section Monitor Point
	• BBER-PM	OTN—Background Block Error Ratio—Path Monitor Point expressed as one tenth of a percentage.
	• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage.
	• BIEC	FEC—Bit Errors Corrected

• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio

• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High Order Path Negative Pointer Justification Count
• HP-NPJC-PGEN	High Order Path, Negative Pointer Justification Count
• HP-OI	Outage Intensity
• HP-PJCDIFF	High Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High Order Path Pointer Justification Count
• HP-PJCS-PGEN	High Order Path Pointer Justification Count Seconds
• HP-PPJC-PDET	High Order Path Positive Pointer Justification Count
• HP-PPJC-PGEN	High Order Path, Positive Pointer Justification Count
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in microA
• LBCL-MAX	Maximum Laser Bias current in microA
• LBCL-MIN	Minimum Laser Bias current in microA

• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OPR-AVG	Average Receive Power in one tenth of a microW
• OPR-MAX	Maximum Receive Power in one tenth of a microW
• OPR-MIN	Minimum Receive Power in one tenth of a microW
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microW
• OPT-MAX	Maximum Transmit Power in one tenth of a microW
• OPT-MIN	Minimum Transmit Power in one tenth of a microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification

• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<INTVL>	The interval in seconds during which the data is sampled and compared with the rising and falling threshold. A valid value is any integer larger than or equal to 10 (seconds). A null value is equivalent to ALL.
<RISE>	The rising threshold for the sampled statistic. A valid value is any integer. A null value is equivalent to ALL

<FALL>	The falling threshold. A valid value is any integer smaller than the rising threshold. A null value is equivalent to ALL.
<SAMPLE>	The method of calculating the value to be compared to the thresholds. A null value is equivalent to ALL. The parameter type is SAMPLE_TYPE, which describes how the data will be calculated during the sampling period.
• ABSOLUTE	Comparing directly
• DELTA	Comparing with the current value of the selected variable subtracted by the last sample
<STARTUP>	Dictates whether an event will generate if the first valid sample is greater than or equal to the rising threshold, less than or equal to the falling threshold, or both. A null value is equivalent to ALL. The parameter type is STARTUP_TYPE, which indicates whether an event will be generated when the first valid sample is crossing the rising or falling threshold.
• FALLING	Generates the event when the sample is smaller than or equal to the falling threshold.
• RISING	Generates the event when the sample is greater than or equal to the rising threshold.
• RISING-OR-FALLING	Generates the event when the sample is crossing the rising threshold, or the falling threshold.

Output Format

```
   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

<AIDUNIONID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<AIDTYPE>	The type of facility, link, or other addressable entity targeted by the message. The parameter type is MOD2_RMON, which is the line modifiers.
• 10GFC	10 Gigabit Fibre Channel
• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit Fibre Channel
• 1GFICON	1 Gigabit FICON
• 2GFC	2 Gigabit Fibre Channel
• 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. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• BBE-PM	OTN—Background Block Errors—Path Monitor Point
• BBE-SM	OTN—Background Block Errors—Section Monitor Point
• BBER-PM	OTN—Background Block Error Ratio—Path Monitor Point expressed as one tenth of a percentage
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address

• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High Order Path Negative Pointer Justification Count
• HP-NPJC-PGEN	High Order Path, Negative Pointer Justification Count
• HP-OI	Outage Intensity
• HP-PJCDIFF	High Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High Order Path Pointer Justification Count
• HP-PJCS-PGEN	High Order Path Pointer Justification Count Seconds
• HP-PPJC-PDET	High Order Path Positive Pointer Justification Count
• HP-PPJC-PGEN	High Order Path, Positive Pointer Justification Count
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors

• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in microA
• LBCL-MAX	Maximum Laser Bias current in microA
• LBCL-MIN	Minimum Laser Bias current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification

• OPR-AVG	Average Receive Power in one tenth of a microW
• OPR-MAX	Maximum Receive Power in one tenth of a microW
• OPR-MIN	Minimum Receive Power in one tenth of a microW
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microW
• OPT-MAX	Maximum Transmit Power in one tenth of a microW
• OPT-MIN	Minimum Transmit Power in one tenth of a microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point

• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<INTVL>	The interval in seconds over which the data is sampled and compared with the rising and falling threshold. A valid value is any integer larger than or equal to 10 (seconds).
<INDEX>	The index for the threshold created by the system in the RMON threshold table. INDEX is an integer.
<RISE>	The rising threshold for the sampled statistic. A valid value is any integer.
<FALL>	The falling threshold. A valid value is any integer smaller than the rising threshold. AID is an integer
<SAMPLE>	The method of calculating the value to be compared to the thresholds. The parameter type is SAMPLE_TYPE, which describes how the data will be calculated during the sampling period
• ABSOLUTE	Comparing directly
• DELTA	Comparing with the current value of the selected variable subtracted by the last sample
<STARTUP>	Dictates whether an event will generate if the first valid sample is greater than or equal to the rising threshold, less than or equal to the falling threshold, or both. The parameter type is STARTUP_TYPE, which indicates whether an event will be generated when the first valid sample is crossing the rising or falling threshold.
• FALLING	Generates the event when the sample is smaller than or equal to the falling threshold.
• RISING	Generates the event when the sample is greater than or equal to the rising threshold.
• RISING-OR-FALLING	Generates the event when the sample is crossing the rising threshold, or the falling threshold.

21.85 RTRV-ROLL-<MOD_PATH>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Roll for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, VC11, VC12, VC3, VT1, or VT2 (RTRV-ROLL-<MOD_PATH>) command retrieves roll data parameters.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Category Bridge and Roll

Security Retrieve

Input Format RTRV-ROLL-<MOD_PATH>:[<TID>]:<SRC>:<CTAG>;

Input Example RTRV-ROLL-STS1:CISCO:STS-1-1-1:6;

Input Parameters

<SRC>	Source access identifier from the "25.11 CrossConnectId1" section on page 25-24 (except VCM and FACILITY). 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>],
   VLDSIG=<VLDSIG>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "STS-1-1-1,STS-2-1-1:RFROM=STS-2-1-1,RTO=STS-3-1-1,RMODE=AUTO,VLDSIG=N"
;
```

Output Parameters

<FROM>	One of the termination points (legs) of the existing cross-connection. Access identifier from the "25.11 CrossConnectId1" section on page 25-24 (except VCM and FACILITY).
<TO>	One of the termination points (legs) of the existing cross-connection. Access identifier from the "25.11 CrossConnectId1" section on page 25-24 (except VCM and FACILITY).
<RFROM>	The termination point of the existing cross-connect that is to be rolled. AID from the "25.11 CrossConnectId1" section on page 25-24 (except VCM and FACILITY).
<RTO>	The termination point that will become a leg of the new cross-connection. AID from the "25.11 CrossConnectId1" section on page 25-24 (except VCM and FACILITY).
<RMODE>	(Optional) The rolling mode of operation. The parameter type is RMODE, which specifies the roll mode.
• AUTO	Automatic. When a valid signal is available, the roll under AUTO mode will automatically delete the previous end-point.

• MAN	Manual. Enter the corresponding delete roll/bulkroll command to delete the previous end-point.
<VLDSIG>	Shows whether or not the roll has received a valid signal. VLDSIG is Y if the signal is valid and N if it is not. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.

21.86 RTRV-ROUTE

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Route (RTRV-ROUTE) command retrieves static routes.

Usage Guidelines

- There is no DNS service available on the node. Only numeric IP addresses will be accepted.
- The optional parameters DESTIP, IPMASK, NXTHOP, and COST are used to filter the retrieved static routes. In the absence of any optional parameter, all the static routes on the node will be retrieved.

Category

System

Security

Retrieve

Input Format

RTRV-ROUTE:[<TID>]::<CTAG>::[<DESTIP>],[<IPMASK>],[<NXTHOP>],[<COST>];

Input Example

RTRV-ROUTE:CISCO::123::10.64.72.57,255.255.255.0,10.64.10.1,200;

Input Parameters

<DESTIP>	Destination tip. DESTIP is a string. A null value is equivalent to ALL.
<IPMASK>	IP mask. IPMASK is a string. A null value is equivalent to ALL.
<NXTHOP>	Next hop. NXTHOP is a string. A null value is equivalent to ALL.
<COST>	Unsigned integer. Valid range is from 1 to 32,797. A null value is equivalent to ALL.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
  ",:<DESTIP>,<IPMASK>,<NXTHOP>,<COST>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   ",:\"10.64.72.57\",\"255.255.255.0\",\"10.64.10.1\",200"
;
```

Output Parameters

<DESTIP>	Destination tip. DESTIP is a string.
<IPMASK>	IP mask. IPMASK is a string.
<NXTHOP>	Next hop. NXTHOP is a string.
<COST>	Cost. COST is a string.

21.87 RTRV-ROUTE-GRE

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Route Generic Routing Encapsulation (RTRV-ROUTE-GRE) command displays the existing GRE tunnels.

Usage Guidelines None

Category System

Security Retrieve

Input Format RTRV-ROUTE-GRE:[<TID>]::<CTAG>[::::];

Input Example RTRV-ROUTE-GRE:CISCO::123;

Input Parameters None that require description

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   ",:IPADDR=<IPADDR>,IPMASK=<IPMASK>,NSAP=<NSAP>,COST=<COST>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   ",:IPADDR=10.64.72.57,IPMASK=255.255.255.0,
   NSAP=39840F80FFFFFF0000DDDDAA000010CFB4910200,COST=110"
;
```

Output Parameters

<IPADDR>	IP address of the tunnel endpoint. IPADDR is a string.
<IPMASK>	Subnet mask for the tunnel endpoint. IPMASK is a string.
<NSAP>	NSAP address for the tunnel endpoint. NSAP is a string.
<COST>	Routing cost associated with the tunnel. COST is an integer.

21.88 RTRV-SLV-WDMANS

(Cisco ONS 15454) The Retrieve Span Loss Verification Wavelength Division Multiplexing Automatic Node Setup (RTRV-SLV-WDMANS) command retrieves the expected span loss verification provisioned by the ED-SLV-WDMANS command.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-SLV-WDMANS:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-SLV-WDMANS:VA454-22:WDMANS-E:116;

Input Parameters

<AID>	Access identifier from the "25.32 WDMANS" section on page 25-50. 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

<AID>	Access identifier from the "25.32 WDMANS" section on page 25-50.
<HIGHSLVEXP>	(Optional) The high range value of the expected span loss verification. HIGHSLVEXP is a float.
<LOWSLVEXP>	(Optional) The low range value of the expected span loss verification. LOWSLVEXP is a float.
<SLVACT>	(Optional) The value of the calculated span loss verification. SLVACT is a float.
<RESOLUTION>	(Optional) The value of the resolution applied to the calculated span loss verification. RESOLUTION is a float.

21.89 RTRV-STS

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Synchronous Transport Signal (RTRV-STS) command retrieves the attributes associated with an STS path based on the granularity level of NE/SLOT-specific STSs.

Usage Guidelines

- Supported AIDs are ALL, SLOT-N (N=1,2,...,ALL), STS-<SLOT>[-<PORT>]-<STS NUMBER>.
- The SFBER, SDBER, RVRTV, RVTM, SWPDIP, HOLDOFFTIMER, and UPSRPTHSTATE parameters only apply to path protection.
- The path trace message is a 64-character string including the terminating CR (carriage return) and LF (line feed) that is transported in the J1 byte of the SONET STS Path overhead.
- The EXPTRC indicates that the contents of the expected incoming path trace are provisioned by the user in the ED-STS_PATH command. The TRC indicates the contents of the outgoing path trace message. The INCTRC indicates the contents of the incoming path trace message.
- The path trace mode has three modes: OFF, MANUAL, and AUTO. The mode defaults to OFF. The MANUAL mode compares the received string with the user entered expected string. The AUTO mode compares the present received string with an expected string set to a previously received string. If there is a mismatch, the TIM-P alarm is raised. When the path trace mode is in OFF mode, there is no path trace processing, and all the alarm and state conditions are reset.
- When the expected string is queried under the OFF path trace mode, the expected string is a copy of the provisioned string or NULL. When an expected string is queried under the MANUAL path trace mode, the expected string is a copy of the user entered string. When an expected string is queried under the AUTO path trace mode, the expected string is a copy of the acquired received string or NULL if the string has not been acquired.
- When the incoming string is queried under the OFF path trace mode, the incoming string is NULL. When an incoming string is queried under the MANUAL or AUTO path trace mode, the incoming string is a copy of the received string or NULL if the string has not been received.
- J1 (EXPTRC) is implemented on the DS1/DS1N, DS3E/DS3NE, DS3XM, EC1, DS3-EC1-48 OC3, OC12-4, OC48AS, OC192, OC192-XFP, and MRC-12 cards.
- TRC and INCTRC are supported on DS1(N), DS3(N)E, DS3-EC1-48, DS3XM, OC192-XFP and MRC-12 cards.
- In Software R5.0 and later, the ED-VT1 command is only supported to edit the J2 path trace on the VT1.5 cross-connection of the DS3XM-12 card.

Category Paths

Security Retrieve

Input Format

```
RTRV-STS:[<TID>]:<AID>:<CTAG>;
```

Input Example

```
RTRV-STS:TID:STS-2-1-1:1;
```

Input Parameters

<AID>	Access identifier from the "25.2 AidUnionId" section on page 25-11.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>::[LEVEL=<LEVEL>],[SFBER=<SFBER>],[SDBER=<SDBER>],[RVRTV=<RVRTV>],
   [RVTM=<RVTM>],[SWPDIP=<SWPDIP>],[HOLDOFFTIMER=<HOLDOFFTIMER>],
   [EXPTRC=<EXPTRC>],[TRC=<TRC>],[INCTRC=<INCTRC>],[TRCMODE=<TRCMODE>],
   [TACC=<TACC>],[TAPTYPE=<TAPTYPE>],[UPSRPTHSTATE=<UPSRPTHSTATE>],
   [C2=<C>],[BLSRPTHSTATE=<BLSRPTHSTATE>]:<PST_PSTQ>,[<SSTQ>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "STS-2-1-4::LEVEL=STS3C,SFBER=1E-3,SDBER=1E-5,RVRTV=Y,RVTM=1.0,SWPDIP=Y,
   HOLDOFFTIMER=2000,EXPTRC="EXPTRCSTRING",TRC="TRCSTRING",
   INCTRC="INCTRCSTRING",TRCMODE=AUTO,TACC=8,TAPTYPE=SINGLE,
   UPSRPTHSTATE=ACT,C2=0X04,BLSRPTHSTATE=PROTPTHACT:OOS-AU,AINS"
;
```

Output Parameters

<AID>	Access identifier from the "25.2 AidUnionId" section on page 25-11.
<LEVEL>	(Optional) The rate of the cross-connect. Applicable only to STS paths in SONET. The parameter type is STS_PATH, which is the modifier for some STS commands.
• STS1	Synchronous Transport Signal level 1 (51 Mbps)
• STS12C	Synchronous Transport Signal level 12 Concatenated (622 Mbps)
• STS18C	Synchronous Transport Signal level 18 Concatenated (933 Mbps)
• STS192C	Synchronous Transport Signal level 192 (9952 Mbps)
• STS24C	Synchronous Transport Signal level 24 Concatenated (1240 Mbps)
• STS36C	Synchronous Transport Signal level 36 Concatenated (1866 Mbps)
• STS3C	Synchronous Transport Signal level 3 Concatenated (155 Mbps)

• STS48C	Synchronous Transport Signal level 48 Concatenated (2488 Mbps)
• STS6C	Synchronous Transport Signal level 3 Concatenated (310 Mbps)
• STS9C	Synchronous Transport Signal level 9 Concatenated (465 Mbps)
<SFBER>	(Optional) An STS path SFBER that applies only to path protection and only to STS-level paths in SONET. Defaults to 1E-4. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	(Optional) An STS path SDBER that applies only to path protection and only to STS-level paths in SONET. Defaults to 1E-6. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<RVRTV>	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. The 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. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<SWPDIP>	(Optional) Switch on PDI-P. Applicable only to STS-level paths in SONET (STSn). The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<HOLDOFFTIMER>	(Optional) Hold off timer. HOLDOFFTIMER is an integer.
<EXPTRC>	(Optional) Expected path trace content. A 64-character ASCII string including the terminating CR (carriage return) and LF (line feed). Indicates the expected path trace message (J1) contents. Applicable only to STS-Level Paths in SONET. Defaults to null when path protection path is created.

<TRC>	(Optional) The path trace message to be transmitted. The trace byte (J1) continuously transmits a 64-byte, fixed length ASCII string, one byte at a time. A null value defaults to the NE transmitting 62 null characters (hex 00) and CR and LF. A null value defaults to the NE transmitting null characters (Hex 00). Applicable to STS-level paths in SONET (STSn). TRC is a string.
<INCTRC>	(Optional) Identifies the incoming path trace message contents. Can be any combination of 64-characters. Applicable only to STS-level paths in SONET. Defaults to null when a path protection path is created. INCTRC is a string.
<TRCMODE>	(Optional) Path trace mode. Applicable only to STS-level Paths in SONET (STSn). Defaults to the OFF mode. The parameter type is TRCMODE (trace mode).
• AUTO	Use the previously received path trace string as the expected string. Not applicable to MXP/TXP cards.
• AUTO-NO-AIS	Use the previously received path trace string as the expected string and do not turn on AIS and RDI if TIM-P is detected.
• MAN	Use the provisioned expected string as the expected string.
• MAN-NO-AIS	Use the provisioned expected string as the expected string and do not turn on AIS and RDI if TIM-P is detected.
• OFF	Turn off path trace capability. Nothing will be reported.
<TACC>	(Optional) Indicates whether the digroup being provisioned is to be used as a test access digroup. Default is N. TACC is an integer.
<TAPTYPE>	(Optional) TAP type. The parameter type is TAPTYPE, which is the test access point type.
• DUAL	Dual FAD
• SINGLE	Single FAD
<UPSRPTHSTATE>	(Optional) Indicates whether a given AID is the working or standby path of a path protection cross-connect. The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<C>	(Optional) The C2 byte hex code. Applicable only to STS-level paths in SONET (STSn). The parameter type is C2_BYTE, which is the C2 byte hex code.
• 0X00	Unequipped
• 0X01	Equipped-Non-Specific payload
• 0X02	VT-Structured STS-1 SPE
• 0X03	Locked VT Mode
• 0X04	Asynchronous Mapping for DS3
• 0X12	Asynchronous Mapping for DS4NA
• 0X13	Mapping for ATM
• 0X14	Mapping for DQDB
• 0X15	Asynchronous Mapping for FDDI

• 0X16	HDLC-Over-SONET Mapping
• 0XE1	VT-structured STS-1 SPE with 1VTx payload defect
• 0XE2	VT-structured STS-1 SPE with 2VTx payload defects
• 0XE3	VT-structured STS-1 SPE with 3VTx payload defects
• 0XE4	VT-structured STS-1 SPE with 4VTx payload defects
• 0XE5	VT-structured STS-1 SPE with 5VTx payload defects
• 0XE6	VT-structured STS-1 SPE with 6VTx payload defects
• 0XE7	VT-structured STS-1 SPE with 7VTx payload defects
• 0XE8	VT-structured STS-1 SPE with 8VTx payload defects
• 0XE9	VT-structured STS-1 SPE with 9VTx payload defects
• 0XEA	VT-structured STS-1 SPE with 10VTx payload defects
• 0XEB	VT-structured STS-1 SPE with 11VTx payload defects
• 0XEC	VT-structured STS-1 SPE with 12VTx payload defects
• 0XED	VT-structured STS-1 SPE with 13VTx payload defects
• 0XEE	VT-structured STS-1 SPE with 14VTx payload defects
• 0XEF	VT-structured STS-1 SPE with 15VTx payload defects
• 0XF0	VT-structured STS-1 SPE with 16VTx payload defects
• 0XF1	VT-structured STS-1 SPE with 17VTx payload defects
• 0XF2	VT-structured STS-1 SPE with 18VTx payload defects
• 0XF3	VT-structured STS-1 SPE with 19VTx payload defects
• 0XF4	VT-structured STS-1 SPE with 20VTx payload defects
• 0XF5	VT-structured STS-1 SPE with 21VTx payload defects
• 0XF6	VT-structured STS-1 SPE with 22VTx payload defects
• 0XF7	VT-structured STS-1 SPE with 23VTx payload defects
• 0XF8	VT-structured STS-1 SPE with 24VTx payload defects
• 0XF9	VT-structured STS-1 SPE with 25VTx payload defects
• 0XFA	VT-structured STS-1 SPE with 26VTx payload defects
• 0XFB	VT-structured STS-1 SPE with 27VTx payload defects
• 0XFC	VT-structured STS-1 SPE with 28VTx payload defects
• 0XFE	O.181 Test Signal (TSS1 to TSS3) Mapping
• 0XFF	Reserved, however, C2 is 0XFF if AIS-L is being generated by an optical card or cross-connect downstream.
<BLSRPTHSTATE>	(Optional) The BLSR path state only if the port is on the BLSR. Applicable only to STS-level paths in SONET (STSn). The parameter type is BLSR_PTH_STATE, which is the BLSR path state only if the port is on the BLSR.
• PCAPTHACT	Indicates the BLSR is not switched and its PCA path is in the active state.
• PCAPTHSTB	Indicates the BLSR is switched and its PCA path is in the standby state.
• PROTPTHACT	Indicates the BLSR is switched and its protection path is in the active state.

• WKGPTHACT	Indicates the BLSR is not switched and its working path is in the active state.
• WKGPTHSTB	Indicates the BLSR is switched and its working path is in the standby state.
<PST_PSTQ>	Administrative state in the PST_PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ).
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.90 RTRV-SYNCN

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Synchronization command retrieves the synchronization reference list used to determine the sources for the NE's reference clock and the BITS output clock. For each clock, up to three synchronization sources can be specified (for example, PRIMARY, SECOND, THIRD).

Usage Guidelines

- To retrieve/set the timing mode, SSM message Set or Quality of RES information, use the RTRV-NE-SYNCN and ED-NE-SYNCN commands.
- The output example shown here is under line timing mode.

Category

Synchronization

Security

Retrieve

Input Format

RTRV-SYNCN:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-SYNCN:BOYES:SYNC-NE:234;

Input Parameters

<AID>	Access identifier from the "25.28 SYNC_REF" section on page 25-47. 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

<AID>	Access identifier from the "25.28 SYNC_REF" section on page 25-47.
<REF>	Rank of synchronization reference. Access identifier from the "25.29 SYNCSW" section on page 25-48.
<REFVAL>	Value of a synchronization reference. "25.27 SYN_SRC" section on page 25-47.
<QREF>	(Optional) Indicates whether the working or protect card (in a protection group) provides timing. This parameter has no significance if the reference source is BITS or INTERNAL and is left blank. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not Use For Synchronization
• PRS	Primary Reference Source, Stratum 1 Traceable
• RES	Reserved For Network Synchronization Use
• SMC	SONET Minimum Clock Traceable
• ST2	Stratum 2 Traceable
• ST3	Stratum 3 Traceable
• ST3E	Stratum 3E Traceable
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<STATUS>	(Optional) Status. The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.

<PROTECTSTATUS>	(Optional) Applicable to 1+1. Designates the role of the entity in the protection group. Either it is the working or the protect entity. Not applicable to the ONS 15600 platform. The parameter type is SIDE, which is the role the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.

21.91 RTRV-T1

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA) The Retrieve T1 Facility (RTRV-T1) command retrieves the DS-1 facilities configuration.

Usage Guidelines

- T1 facilities on the ONS 15327 and the ONS 15310-CL are on the XTC and 15310-CL-CTX cards, respectively.
- The parameters SYNCMAP, ADMSSM, VTMAP, INHFELPBK, AND PROVIDESYNC are only displayed on the DS1/E1-56 card (ONS 15454).

Category

Ports

Security

Retrieve

Input Format

RTRV-T1:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-T1:TID:FAC-2-1:1223;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. 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>],[SYNCMSG=<SYNCMSG>],
  [SENDDUS=<SENDDUS>],[RETIME=<RETIME>],[AISONLPBK=<AISONLPBK>],
  [AISVONAIS=<AISVONAIS>],[AISONLOF=<AISONLOF>],[MODE=<MODE>],
  [SYNCMAP=<SYNCMAP>],[ADMSSM=<ADMSSM>],[PROVIDESYNC=<PROVIDESYNC>],
  [VTMAP=<VTMAP>],[INHFELPBK=<INHFELPBK>]:<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\",SYNCMSG=Y,
   SENDDUS=Y,RETIME=Y,AISONLPBK=AIS_ON_LPBK_ALL,AISVONAIS=Y,,AISONLOF=Y,
   MODE=FDL,SYNCMAP=ASYNC,ADMSSM=STU,PROVIDESYNC=N,VTMAP=GR253,
   INHFELPBK=N:OOS-AU,AINS"
;
```

Output Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<LINECDE>	(Optional) Line code. The parameter type is LINE_CODE.
• AMI	Line code value is AMI.
• B8ZS	Line code value is B8ZS.
<FMT>	(Optional) Digital signal frame format. The parameter type is FRAME_FORMAT, which is the frame format for a T1 port.
• D4	Frame format is D4.
• ESF	Frame format is ESF.
• UNFRAMED	Frame format is unframed.
<LBO>	(Optional) Line buildout settings. LBP is an integer. The parameter type is 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>	(Optional) Defines the STS as a test access port with a selected unique TAP number. The TAP number is within a range of 0, 1 to 999. When TACC is 0 (zero), the TAP is deleted. Default is N.
<TAPTYPE>	(Optional) TAP type. The parameter type is TAPTYPE, which is the test access point type.
• DUAL	Dual FAD
• SINGLE	Single FAD
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer.

<SOAKLEFT>	(Optional) Time remaining for the transition from OOS-AINS to IS measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. SOAKLEFT is a string. Rules for SOAKLEFT are as follows: • When the port is in OOS, OOS_MT, or IS state, the parameter will not appear. • When the port is in OOS_AINS but the countdown has not started due to fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in OOS_AINS state and the countdown has started, the value will be shown in HH-MM format.
<SFBER>	(Optional) The port signal failure threshold. Defaults to 1E-4. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	(Optional) Port signal degrade threshold. Defaults to 1E-7. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<NAME>	(Optional) Port name. NAME is a string.
<SYNCMSG>	Synchronization status messaging is enabled or disabled on the T1 facility. **Note** For ONS 15310-CL, SYNCMSG defaults to N. SYNCMSG is not supported on the ONS 15454 or ONS 15327. The parameter type is YES_NO, which is whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes
<SENDDUS>	The facility will send the DUS 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 ONS 15327. The parameter type is YES_NO, which is whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.

<RETIME>	(Optional) 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 ONS 15327. The parameter type is YES_NO, which is whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes
• FDL	Indicates the DS1 path of the DS3XM-12 is in FDL T1-403 mode.
<AISONLPBK>	(Optional) Defaults to AIS_ON_LPBK_ALL. The parameter type is AIS_ON_LPBK, which indicates if AIS is sent on a loopback
• AIS_ONLPBK_FACILITY	AIS is sent on facility loopbacks.
• AIS_ON_LPBK_ALL	AIS is sent on all loopbacks.
• AIS_ON_LPBK_OFF	AIS is not sent on loopbacks.
• AIS_ON_LPBK_TERMINAL	AIS is sent on terminal loopbacks.
<AISVONAIS>	(Optional) Defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<AISVONLOF>	(Optional) The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<MODE>	(Optional) Mode. Default value is FDL. The parameter type is DS1MODE, which is the DS1 path mode of the DS3XM-12 card
• ATT	Indicates the DS1 path of the DS3XM-12 is in AT&T 54016 mode.
• FDL	Indicates the DS1 path of the DS3XM-12 is in FDL T1-403 mode.
<SYNCMAP<	(Optional) The synchronous mapping for the DS1 facility. Defaults to ASYNC. Only supported on ONS 15454. The parameter type is SYNCMAP, which is the synchronous mapping type.
• ASYNC	Asynchronous
• BYTE	Byte
• JBYTE	Jbyte
<ADMSSM>	(Optional) The administrative synchronization status message. Only supported on the ONS 15454. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level.
• DUS	Do Not Use For Synchronization
• PRS	Primary Reference Source, Stratum 1 Traceable
• RES	Reserved For Network Synchronization Use
• SMC	SONET Minimum Clock Traceable
• ST2	Stratum 2 Traceable
• ST3	Stratum 3 Traceable

• ST3E	Stratum 3E Traceable
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<PROVIDESYNC>	(Optional) Indicates whether the facility provides synchronization. Only supported on ONS 15454. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<VTMAP>	(Optional) The port to VT mapping type for that particular STS. Only supported on ONS 15454. Defaults to GR253. The parameter type is VTMAP, which is the VT mapping.
• GR253	Mapping based on Telcordia GR-253.
• INDUSTRY	Mapping based on industry standard.
<INHFELPBK>	(Optional) Indicates whether far end loopbacks are inhibited on the facility. Only supported on ONS 15454. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<PST_PSTQ>	Primary state. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ).
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.92 RTRV-T3

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA) The Retrieve T3 (RTRV-T3) command retrieves the facility properties of a DS3 or a DS3XM card.

Usage Guidelines

- T3 facilities on the ONS 15327 and the ONS 15310-CL are on the XTC and 15310-CL-CTX cards, respectively.
- CTC can set the FMT attribute of a DS3NE line to AUTOPROVISION, to set the framing based on the incoming framing. This would result in the FMT field being blanked out for a few seconds or blanked out forever for a preprovisioned DS3NE card on CTC.
- The autoprovision is not considered a valid DS3 framing type. It is used only to trigger an autosense and subsequent autoprovisioning of a valid DS3 framing type (unframed, M23, C-BIT).
- TL1 does not have the autoprovision mode according to Telcordia GR-199. TL1 maps/returns the autoprovision to be unframed.
- For the DS3XM-12 card, the DS3/T3 configurable attributes (PM, TH, alarm, etc.) only apply on the ported ports (1 to 12) and the DS3-mapped (even) portless ports in xxx-xxx-T3 commands. If you attempt to provision or retrieve DS3/T3 attributes on the VT-mapped (odd) portless port in xxx-xxx-T3 commands, an error message will be returned.
- For the DS3XM-12 card, if the administrative state is already set for a portless port the state setting operation over its associated ported port is an invalid operation.

Category

Ports

Security

Retrieve

Input Format

RTRV-T3:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-T3:CISCO:FAC-1-2:123;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. 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>],[AISONLPBK=<AISONLPBK>]:<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\",AISONLPBK=AIS_ON_LPBK_ALL:OOS-AU,AINS"
;
```

Output Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33.
<FMT>	(Optional) Digital signal format. The parameter type is DS_LINE_TYPE, which is the 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>	(Optional) Line code. The parameter type is DS_LINE_CODE, which is the DS123 line code.
• B3ZS	Binary three-zero substitution.
<LBO>	(Optional) Line buildout settings. LBO is an integer. The parameter type is E_LBO, which is the electrical signal line buildout.
• 0–225	Electrical signal line buildout range is 0–225.
• 226–450	Electrical signal line buildout range is 226–450.
<INHFELPBK>	(Optional) Far-end loopback inhibition attribute of the port. If it is Y, the automatic far-end loopbacks are inhibited. It is either on or off. The system default is N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<TAP>	(Optional) Defines the STS as a test access port with a selected unique TAP number. The TAP number is within a range of 0, 1 to 999. When TACC is 0 (zero), the TAP is deleted. Default is N.
<TAPTYPE>	(Optional) TAP type. The parameter type is TAPTYPE, which is the test access point type.
• DUAL	Dual FAD
• SINGLE	Single FAD
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer.
<SOAKLEFT>	(Optional) Time remaining for the transition from OOS-AINS to IS measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. SOAKLEFT is a string. Rules for <SOAKLEFT> are as follows: • When the port is in OOS, OOS_MT, or IS state, the parameter will not appear. • When the port is in OOS_AINS but the countdown has not started due to fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in OOS_AINS state and the countdown has started, the value will be shown in HH-MM format.
<SFBER>	(Optional) The port signal failure threshold. Defaults to 1E-4. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.

• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	(Optional) Port signal degrade threshold. Defaults to 1E-7. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<NAME>	(Optional) Port name. NAME is a string.
<AISONLPBK>	(Optional) AIS on loopback. The parameter type is AIS_ON_LPBK, which indicates if AIS is sent on a loopback.
• AIS_ONLPBK_FACILITY	AIS is sent on facility loopbacks.
• AIS_ON_LPBK_ALL	AIS is sent on all loopbacks.
• AIS_ON_LPBK_OFF	AIS is not sent on loopbacks.
• AIS_ON_LPBK_TERMINAL	AIS is sent on terminal loopbacks.
<PST_PSTQ>	Primary state. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (SST) and a primary state qualifier (PSTQ).
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.93 RTRV-TACC

(Cisco ONS 15454, ONS 15327, ONS 15310-MA, ONS 15600) The Retrieve Test Access (RTRV-TACC) command retrieves details associated with a TAP. The TAP is identified by the TAP number. The ALL input TAP value means that the command will return all the configured TACCs in the NE.

Usage Guidelines

None

Category

Troubleshooting and Test Access

Security

Retrieve

Input Format

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

Input Example

RTRV-TACC:CISCO:241:CTAG;

Input Parameters

<TAP>	The assigned number for AID being used as a test access point. TAP must be an integer within a range of 1 to 999. The ALL TAP value returns all the configured TACCs in this NE. TAP is a string. TAP must not be null.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<TAP>:<TACC_AIDA>,<TACC_AIDB>,[<MD>],[<CROSSCONNECTID1>],
   <AIDUNIONID>,<PATHWIDTH>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "241:STS-2-1-1,STS-2-1-2,MONE,STS-12-1-1,STS-13-1-1,STS1"
;
```

Output Parameters

<TAP>	The assigned number for the AID being used as a test access point. TAP is an integer.
<TACC_AIDA>	Access identifier from the "25.10 CrossConnectId" section on page 25-20. The A path of the test access point. The first STS/VT path of the TAP.
<TACC_AIDB>	Access identifier from the "25.10 CrossConnectId" section on page 25-20. The B path of the test access point. The second STS/VT path of the TAP. For single FAD TAP this path will be empty.
<MD>	(Optional) Test access mode. It identifies the mode of access between the TAP and the circuit connected to the TAP. The parameter type is TACC_MODE, which is the test access mode.

• LOOPE	Indicates to split both the A and B paths. Connect the line incoming from E direction to the line outgoing in the E direction, and connect this looped configuration to the FAD. The line outgoing in the F direction will have a QRS connected, and the line incoming from the F direction shall be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.
• LOOPF	Indicates to split both the A and B paths. Connect the line incoming from F direction to the line outgoing in the F direction, and connect this looped configuration to the FAD. The line outgoing in the E direction shall have a QRS connected, and the line incoming from the E direction shall be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.
• MONE	Indicates that a monitor connection is to be provided from the FAD to the A transmission path of the accessed circuit.
• MONEF	Indicates that a monitor connection is to be provided from the FAD1 to a DFAD, or from the odd pair of a FAP to the A transmission path and from FAD2 of the same DFAD, or from the even pair of a FAP to the B transmission path of the accessed circuit.
• MONF	Indicates that a monitor connection is to be provided from the FAD to the B transmission path of the accessed circuit.
• SPLTA	Indicates that a connection is to be provided from both the E and F sides of the A transmission path of the circuit under test to the FAD and split the A transmission path. Intrusive test access mode.
• SPLTB	Indicates that a connection is to be provided from both the E and F sides of the B transmission path of the circuit under test to the FAD and split the B transmission path. Intrusive test access mode.
• SPLTE	Indicates to split both the A and B paths and connect the E side of the accessed circuit to the FAD. The line outgoing in the F direction shall have a QRS connected, and the line incoming from the F direction shall have a QRS connected, and the line incoming from the E direction shall be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.
• SPLTEF	Indicates to split both the A and B paths, and connect the E side of the accessed circuit to FAD1 and the F side to FAD2. Intrusive test access mode.
• SPLTF	Indicates to split both the A and B paths, and connect the F side of the accessed circuit to the FAD. The line outgoing in the E direction shall have a QRS connected, and the line incoming in the E direction shall have a QRS connected, and the line incoming from the E direction shall be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.
<CROSSCONNECTID1>	(Optional) Access identifier from the "25.10 CrossConnectId" section on page 25-20. The E path of the cross-connect.
<PATHWIDTH>	The cross-connection width. The parameter type is CRS_TYPE, which is the cross-connection type.
• STS	Indicates all the STS cross-connections.
• STS1	STS1 cross-connect
• STS3C	STS3C cross-connect

• STS6C	STS6C cross-connect
• STS9C	STS9C cross-connect
• STS12C	STS12C cross-connect
• STS18C	STS18C cross-connect
• STS24C	STS24C cross-connect
• STS36C	STS36C cross-connect
• STS48C	STS48C cross-connect
• STS192C	STS192C cross-connect
• VT	Indicates all the VT1 cross-connections.
• VT1	VT1 cross-connect
• VT2	VT2 cross-connect
<CROSSCONNECTID2>	(Optional) Access identifier from the "25.10 CrossConnectId" section on page 25-20. The F path of the cross-connect.

21.94 RTRV-TADRMAP

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Target Identifier Address Mapping (RTRV-TADRMAP) command retrieves the contents of the TADRMAP table.

Usage Guidelines

None

Category

System

Security

Retrieve

Input Format

RTRV-TADRMAP:[<TID>]:[<AID>]:<CTAG>[:::MODE=<MODE>];

Input Example

RTRV-TADRMAP:CISCO:AIP:100:::MODE=PROV;

Additional input examples:

1. To retrieve another node's NSAP (TID=NODE-1) while using a TL1 session on the local node (TID=NODE-2), follow this input example:

   RTRV-TADRMAP:NODE-2:NODE-1:1:::MODE=NSAP;

   Output example:

   NODE-2 2006-01-26 14:47:30

   M 1 COMPLD

   "TIDNAME=NODE-1,NSAP=TARP request has been initiated. Check again later."

;

RTRV-TADRMAP:NODE-2::123;

NODE-2 2006-01-26 14:47:38

M 123 COMPLD

"TIDNAME=NODE-2,IPADDR=10.92.24.146,"

"TIDNAME=NODE-1,NSAP=39840F800000000000000000010010CFCE5A0200"

;

2. To retrieve the NSAP address of a node (TID=NODE-2) itself, follow this input example:

RTRV-TADRMAP:NODE-2:NODE-2:1:::MODE=NSAP;

Output example:

NODE-2 2006-01-26 14:48:07

M 1 COMPLD

"TIDNAME=NODE-2,NSAP=39840F800000000000000000001000BFCF8A88500"

;

3. To retrieve the local TARP data cache (TDC) of a node (no AID required) follow this input example:

RTRV-TADRMAP:NODE-2::123:::MODE=NSAP;

Output example:

NODE-2 2006-01-26 13:47:38

M 123 COMPLD

"TIDNAME=FOREIGN-NODE-1,NSAP=39840F800000000000000000001000075DE520800"

"TIDNAME=FOREIGN-NODE-2,NSAP=39840F800000000000000000001000075D07A4A00"

"TIDNAME=NODE-1,NSAP=39840F800000000000000000010010CFCE5A0200"

;

Input Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1. Must not be null.
<MODE>	Must not be null. The parameter type is MODE, which determines the category of addresses to return.
• ALL	Discovered and provisioned addresses
• DISC	Discovered addresses
• IP	IP addresses
• NSAP	NSAP addresses
• PROV	Provisioned

Output Format

SID DATE TIME
M CTAG COMPLD
"[TID=<TID>],[IP ADDRESS =<IPADDRESS>],[NSAP=<NSAP>]"
;

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "TID=RANGERS1,IP ADDRESS = 64.101.245.5,
   NSAP=39840FFFFFFFOOOODDDDAA01D00F0400000700"
;
```

Output Parameters

<TID>	(Optional) Target identifier. TID is a string.
<IPADDRESS>	(Optional) IP address. IPADDRESS is a string.
<NSAP>	(Optional) NSAP address. NSAP is a string.

21.95 RTRV-TH-<MOD2>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Threshold for 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, VT1, or VT2 (RTRV-TH-<MOD2>) command retrieves the threshold level of one or more monitored parameters.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Note

- After the BLSR switch, the working path is switched out, the traffic goes through the protection path, and the threshold can be retrieved from the protection path.
- If there is an STS PCA on the protection path during BLSR switching, the PCA path is preemptive; sending this command on the protection path after the BLSR switch, the command returns the PMs off the protection path, not from the PCA path.
- The message is issued to retrieve the thresholds for PM and alarm thresholds. If it is used to retrieve the alarm thresholds, the time-period is not applicable.
- The presentation rules are as follows:
  - Client port only–Laser, Alarm and SONET Thresholds are applicable and will appear. Laser and alarm thresholds are only for near end. If the card payload is in SONET mode, then SONET thresholds will appear. The Receiver Temperature Montypes (RXT) are only applicable to the Trunk Port. The Transceiver Voltage Montypes (XCVR) are not applicable, though it may be displayed or handled.
  - Laser and Alarm thresholds are always available. Laser and alarm thresholds are only for near end. If ITU-T G.709 is enabled, then the OTN thresholds will appear. If ITU-T G.709 is enabled and FEC is enabled, then the FEC thresholds will appear. If the card payload is in SONET mode, then SONET thresholds will appear. The Transceiver Voltage Montypes (XCVR) are not applicable, though it is displayed or handled.
- Refer to the *Cisco ONS SONET TL1 Reference Guide* for specific card provisioning rules.

Category Performance

Security Retrieve

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

<AID>	Access identifier from the "25.1 ALL" section on page 25-1. 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. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• BBE-PM	OTN—Background Block Errors—Path Monitor Point
• BBE-SM	OTN—Background Block Errors—Section Monitor Point
• BBER-PM	OTN—Background Block Error Ratio—Path Monitor Point expressed as one tenth of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path

• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High Order Path Negative Pointer Justification Count
• HP-NPJC-PGEN	High Order Path, Negative Pointer Justification Count
• HP-OI	Outage Intensity
• HP-PJCDIFF	High Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High Order Path Pointer Justification Count
• HP-PJCS-PGEN	High Order Path Pointer Justification Count Seconds

• HP-PPJC-PDET	High Order Path Positive Pointer Justification Count
• HP-PPJC-PGEN	High Order Path, Positive Pointer Justification Count
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in microA
• LBCL-MAX	Maximum Laser Bias current in microA
• LBCL-MIN	Minimum Laser Bias current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated

• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OPR-AVG	Average Receive Power in one tenth of a microW
• OPR-MAX	Maximum Receive Power in one tenth of a microW
• OPR-MIN	Minimum Receive Power in one tenth of a microW
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microW
• OPT-MAX	Maximum Transmit Power in one tenth of a microW
• OPT-MIN	Minimum Transmit Power in one tenth of a microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path

• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<LOCN>	Location associated with a particular command in reference to the entity identified by the AID. LOCN defaults to NEND (near end). A null value is equivalent to ALL. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<TMPER>	Accumulation time period for performance counters. Defaults to 15-MIN. Must not be null. The parameter type is TMPER, which is the accumulation time period for the performance management center
• 1-DAY	Performance parameter accumulation interval length; every 24-hours. For SONET PM data only one day of history data is available. For RMON managed PM data seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.

• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>,[<AIDTYPE>]:<MONTYPE>,[<LOCN>],,<THLEV>,[<TMPER>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"FAC-1-3,DS3:CVL,NEND,,1,15-MIN"
;

Output Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1. Must not be null.
<AIDTYPE>	(Optional) Type of facility, link, or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.
• 1GFC	1 Gigabit Fibre Channel alarm
• 1GFICON	1 Gigabit FICON alarm
• 2GFC	2 Gigabit Fibre Channel alarm
• 2GFICON	2 Gigabit FICON alarm
• 4GFC	4 Gbps Fibre Channel
• 4GFICON	4 Gbps fiber connection
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	GIG Ethernet port alarm
• ISC3PEER1G	ISC3PEER1G alarm

• ISC3PEER2G	ISC3PEER2G alarm
• ISC3PEER2R	ISC3PEER2R alarm
• ISCCOMPAT	ISCCOMPAT 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)
<MONTYPE>	Monitored type. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• BBE-PM	OTN—Background Block Errors—Path Monitor Point
• BBE-SM	OTN—Background Block Errors—Section Monitor Point
• BBER-PM	OTN—Background Block Error Ratio—Path Monitor Point expressed as one tenth of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations

• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error

• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High Order Path Negative Pointer Justification Count
• HP-NPJC-PGEN	High Order Path, Negative Pointer Justification Count
• HP-OI	Outage Intensity
• HP-PJCDIFF	High Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High Order Path Pointer Justification Count
• HP-PJCS-PGEN	High Order Path Pointer Justification Count Seconds
• HP-PPJC-PDET	High Order Path Positive Pointer Justification Count
• HP-PPJC-PGEN	High Order Path, Positive Pointer Justification Count
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in microA
• LBCL-MAX	Maximum Laser Bias current in microA
• LBCL-MIN	Minimum Laser Bias current in microA
• LBCN	Normalized Laser Bias Current for OC3-8

• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OPR-AVG	Average Receive Power in one tenth of a microW
• OPR-MAX	Maximum Receive Power in one tenth of a microW
• OPR-MIN	Minimum Receive Power in one tenth of a microW
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microW
• OPT-MAX	Maximum Transmit Power in one tenth of a microW
• OPT-MIN	Minimum Transmit Power in one tenth of a microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification

• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<LOCN>	(Optional) Location associated with a particular command. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<THELV>	Threshold level. THLEV is a float.

<TMPER>	(Optional) Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24-hours. For SONET PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.

21.96 RTRV-TH-ALL

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Threshold All (RTRV-TH-ALL) command retrieves the threshold level of all monitored parameters on the NE.

Usage Guidelines

- After a BLSR switch, the working path is switched out, the traffic goes through the protection path, and the threshold can be retrieved from the protection STS path.
- If there is an STS PCA on the protection path during BLSR switching, the PCA path is preemptive; sending this command on the protection path after a BLSR switch, the command returns the PMs from the protection path, not from the PCA path.
- Multiple RTRV completion codes will appear after the execution of this command according to Telcordia GR-1831-CORE for bulk retrievals. The final completion code after the multiple RTRV codes is COMPLD.
- Some monitored types are not available for some cards or cross-connect types. In that case, a 0 value will appear for the monitored type. This will happen only when a user requests the thresholds of a specific monitored parameter on the NE, and the monitored type does not apply to that card or cross-connect type. When the user does not filter by monitored type, the applicable thresholds will be retrieved.
- If the user requests the thresholds of a particular monitored type and if the monitored type is not applicable to some of the entities, DENY will not be returned.
- Refer to the *Cisco ONS SONET TL1 Reference Guide* for specific card provisioning rules.

Category

Performance

Security Retrieve

Input Format RTRV-TH-ALL:[<TID>]::<CTAG>::[<MONTYPE>],[<LOCATION>],[<TMPER>][::];

Input Example RTRV-TH-ALL:CHARGERS6::123::CVL,NEND,15-MIN;

Input Parameters

<MONTYPE>	Monitored type. A null value defaults to ALL. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• BBE-PM	OTN—Background Block Errors—Path Monitor Point
• BBE-SM	OTN—Background Block Errors—Section Monitor Point
• BBER-PM	OTN—Background Block Error Ratio—Path Monitor Point expressed as one tenth of a percentage
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path

• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High Order Path Negative Pointer Justification Count
• HP-NPJC-PGEN	High Order Path, Negative Pointer Justification Count
• HP-OI	Outage Intensity
• HP-PJCDIFF	High Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High Order Path Pointer Justification Count
• HP-PJCS-PGEN	High Order Path Pointer Justification Count Seconds
• HP-PPJC-PDET	High Order Path Positive Pointer Justification Count
• HP-PPJC-PGEN	High Order Path, Positive Pointer Justification Count
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors

• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in microA
• LBCL-MAX	Maximum Laser Bias current in microA
• LBCL-MIN	Minimum Laser Bias current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification

• OPR-AVG	Average Receive Power in one tenth of a microW
• OPR-MAX	Maximum Receive Power in one tenth of a microW
• OPR-MIN	Minimum Receive Power in one tenth of a microW
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microW
• OPT-MAX	Maximum Transmit Power in one tenth of a microW
• OPT-MIN	Minimum Transmit Power in one tenth of a microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point

• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<LOCATION>	The location. A null value defaults to NEND. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<TMPER>	The accumulation time period for performance counters. A null value defaults to 15-MIN. The parameter type is TMPER, which is the accumulation time period for the performance management counter.
• 1-DAY	Performance parameter accumulation interval length is every 24 hours.
• 1-HR	Performance parameter accumulation interval length is every 1 hour.
• 1-MIN	Performance parameter accumulation interval length is every 1 minute.
• 15-MIN	Performance parameter accumulation interval length is every 15 minutes.
• RAW-DATA	Performance parameter accumulation interval length starts from the last time the counters were cleared. This is only applicable to RMON-managed PMs.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,<AIDTYPE>:<MONTYPE>,<LOCATION>,,<THLEV>,<TMPER>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-1-1,DS3:CVL,NEND,,1,15-MIN"
;
```

Output Parameters

<AID>	Access identifier from the "25.2 AidUnionId" section on page 25-11.
<AIDTYPE>	Specifies the type of facility, link, or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type for certain generic TL1 commands.

• 1GFC	1 Gigabit Fibre Channel
• 1GFICON	1 Gigabit FICON
• 2GFC	2 Gigabit Fibre Channel
• 2GFICON	2 Gigabit FICON
• 4GFC	4 Gbps Fibre Channel
• 4GFICON	4 Gbps fiber connection
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FC	Fibre Channel alarm
• FSTE	FSTE alarm
• G1000	G1000 alarm
• GIGE	GIGE alarm
• ISC3PEER1G	ISC3PEER1G alarm
• ISC3PEER2G	ISC3PEER2G alarm
• ISC3PEER2R	ISC3PEER2R alarm
• ISCCOMPAT	ISCCOMPAT alarm
• MIC	MIC alarm (ONS 15327)
• MIC-EXT	MIC-EXT Alarm (ONS 15327)
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS alarm
• STS1	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. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• BBE-PM	OTN—Background Block Errors—Path Monitor Point
• BBE-SM	OTN—Background Block Errors—Section Monitor Point
• BBER-PM	OTN—Background Block Error Ratio—Path Monitor Point expressed as one tenth of a percentage
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section

• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High Order Path Negative Pointer Justification Count
• HP-NPJC-PGEN	High Order Path, Negative Pointer Justification Count
• HP-OI	Outage Intensity
• HP-PJCDIFF	High Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High Order Path Pointer Justification Count
• HP-PJCS-PGEN	High Order Path Pointer Justification Count Seconds
• HP-PPJC-PDET	High Order Path Positive Pointer Justification Count
• HP-PPJC-PGEN	High Order Path, Positive Pointer Justification Count
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets

• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in microA
• LBCL-MAX	Maximum Laser Bias current in microA
• LBCL-MIN	Minimum Laser Bias current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration

• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OPR-AVG	Average Receive Power in one tenth of a microW
• OPR-MAX	Maximum Receive Power in one tenth of a microW
• OPR-MIN	Minimum Receive Power in one tenth of a microW
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microW
• OPT-MAX	Maximum Transmit Power in one tenth of a microW
• OPT-MIN	Minimum Transmit Power in one tenth of a microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage

• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<LOCATION>	The location. A null value defaults to NEND. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<THLEV>	Threshold level. Indicates the threshold value. THLEV is a float.
<TMPER>	The accumulation time period for performance counters. A null value defaults to 15-MIN. The parameter type is TMPER, which is the accumulation time period for the performance management counter.
• 1-DAY	Performance parameter accumulation interval length is every 24 hours.
• 1-HR	Performance parameter accumulation interval length is every 1 hour.
• 1-MIN	Performance parameter accumulation interval length is every 1 minute.
• 15-MIN	Performance parameter accumulation interval length is every 15 minutes.
• RAW-DATA	Performance parameter accumulation interval length starts from the last time the counters were cleared. This is only applicable to RMON-managed PMs.

21.97 RTRV-TOD

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Time of Day (RTRV-TOD) command retrieves the system date and time at the instant when the command was executed. The time returned is in Coordinated Universal Time (UTC).

Usage Guidelines None

Category System

Security Retrieve

Input Format RTRV-TOD:[<TID>]::<CTAG>;

Input Example RTRV-TOD:CAZADERO::230;

Input Parameters None that require description

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<YEAR>,<MONTH>,<DAY>,<HOUR>,<MINUTE>,<SECOND>,<DIFFERENCE>:<TMTYPE>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "2002,05,08,17,01,33,840:LINT"
;
```

Output Parameters

<YEAR>	The current calendar year. YEAR is a string.
<MONTH>	The month of the year. Ranges from 01 to 12. MONTH is a string.
<DAY>	The day of the month. Ranges from 01 to 31. DAY is a string.
<HOUR>	The hour of the day. Ranges from 00 to 23. HOUR is a string.
<MINUTE>	The minute of the hour. Ranges from 00 to 59. MINUTE is a string.
<SECOND>	The second of the minute. Ranges from 00 to 59. SECOND is a string.
<DIFFERENCE>	The number of minutes off UTC. The parameter type is DIFFERENCE, which is the number of minutes off UTC.
• -120	2 hours before UTC
• -180	3 hours before UTC
• -210	3.5 hours before UTC
• -240	4 hours before UTC
• -300	5 hours before UTC
• -360	6 hours before UTC
• -420	7 hours before UTC
• -480	8 hours before UTC
• -540	9 hours before UTC

• -60	1 hour before UTC
• -600	10 hours before UTC
• -660	11 hours before UTC
• 0	UTC
• 120	2 hours after UTC
• 180	3 hours after UTC
• 210	3.5 hours after UTC
• 240	4 hours after UTC
• 270	4.5 hours after UTC
• 300	5 hours after UTC
• 330	5.5 hours after UTC
• 345	5.75 hours after UTC
• 360	6 hours after UTC
• 390	6.5 hours after UTC
• 420	7 hours after UTC
• 480	8 hours after UTC
• 540	9 hours after UTC
• 570	9.5 hours after UTC
• 60	1 hour after UTC
• 600	10 hours after UTC
• 630	10.5 hours after UTC
• 660	11 hours after UTC
• 690	11.5 hours after UTC
• 720	12 hours after UTC
• 765	12.75 hours after UTC
• 780	13 hours after UTC
• 840	14 hours after UTC
TMTYPE	Identifies the time zone. String

21.98 RTRV-TRAPTABLE

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Trap Table (RTRV-TRAPTABLE) command retrieves a trap destination entry identified by a specific trap destination address.

Usage Guidelines None

Category System

Security Retrieve

Input Format RTRV-TRAPTABLE:[<TID>]:[<AID>]:<CTAG>;

Input Example RTRV-TRAPTABLE::1.2.3.4:1;

Input Parameters

<AID>	Access identifier from the "25.16 IPADDR" section on page 25-36. IP address identifying the trap destination. Only a numeric IP address is allowed. A null value is equivalent to ALL.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<DEST>,<TRAPPORT>,<COMMUNITY>,<SNMPVERSION>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "1.2.3.4,162,\"PRIVATE\",SNMPV1"
;
```

Output Parameters

<DEST>	Access identifier from the "25.16 IPADDR" section on page 25-36.
<TRAPPORT>	UDP port number associated with the trap destination. Defaults to 162. Integer
<COMMUNITY>	Community name associated to the trap destination. Maximum of 32 characters. COMMUNITY is a string.
<SNMPVERSION>	SNMP version number. Defaults to SNMPv1. The parameter type is SNMP_VERSION, which is the SNMP version.
• SNMPV1	SNMP version 1 (default)
• SNMPV2	SNMP version 2

21.99 RTRV-TRC-<OCN_BLSR>

(Cisco ONS 15454, ONS 15327, ONS 15600) The Retrieve Trace Client for OC12, OC192, or OC48 (RTRV-TRC-<OCN_BLSR>) command retrieves the valid J1 expected trace string, retrieved trace string, trace mode, C2 byte, and STS bandwidth of the OC-N port only if the port has a BLSR.

Usage Guidelines

- See Table 27-1 on page 27-1 for supported modifiers by platform.
- This command only applies to OC48AS and OC192 cards.

- 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

Input Format

RTRV-TRC-<OCN_BLSR>:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-TRC-OC48:CISCO:FAC-6-1:238;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-33. 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

<AID>	Access identifier from the "25.25 STS" section on page 25-41.
<LEVEL>	(Optional) The rate of the cross-connect. The parameter type is STS_PATH, which is the modifier for some STS commands.
• STS1	Synchronous Transport Signal level 1 (51 Mbps)
• STS12C	Synchronous Transport Signal level 12 Concatenated (622 Mbps)
• STS18C	Synchronous Transport Signal level 18 Concatenated (933 Mbps)
• STS192C	Synchronous Transport Signal level 192 (9952 Mbps)
• STS24C	Synchronous Transport Signal level 24 Concatenated (1240 Mbps)
• STS36C	Synchronous Transport Signal level 36 Concatenated (1866 Mbps)
• STS3C	Synchronous Transport Signal level 3 Concatenated (155 Mbps)
• STS48C	Synchronous Transport Signal level 48 Concatenated (2488 Mbps)
• STS6C	Synchronous Transport Signal level 3 Concatenated (310 Mbps)

• STS9C	Synchronous Transport Signal level 9 Concatenated (465 Mbps)
<EXPTRC>	(Optional) Expected path trace content. Indicates the expected path trace message (J1) contents. EXPTRC is any 64-character ASCII string, including the terminating CR (carriage return) and LF (line feed). EXPTRC is a string.
<INCTRC>	(Optional) The incoming path trace message contents. INCTRC is any combination of 64 characters including CR and LF. INCTRC is a string.
<TRCMODE>	(Optional) Trace mode. The parameter type is TRCMODE (trace mode).
• AUTO	Use the previously received path trace string as the expected string. Not applicable to MXP/TXP cards.
• AUTO-NO-AIS	Use the previously received path trace string as the expected string and do not turn on AIS and RDI if TIM-P is detected.
• MAN	Use the provisioned expected string as the expected string
• MAN-NO-AIS	Use the provisioned expected string as the expected string and do not turn on AIS and RDI if TIM-P is detected.
• OFF	Turn off path trace capability. Nothing will be reported
<C2>	(Optional) The C2 byte hex code. Applicable only to STS-level paths in SONET (STSn). The parameter type is C2_BYTE, which is the C2 byte hex code.
• 0X00	Unequipped
• 0X01	Equipped-Non Specific payload
• 0X02	VT-Structured STS-1 SPE
• 0X03	Locked VT Mode
• 0X04	Asynchronous Mapping for DS3
• 0X12	Asynchronous Mapping for DS4NA
• 0X13	Mapping for ATM
• 0X14	Mapping for DQDB
• 0X15	Asynchronous Mapping for FDDI
• 0X16	HDLC-Over-SONET Mapping
• 0XE1	VT-structured STS-1 SPE with 1VTx payload defect
• 0XE2	VT-structured STS-1 SPE with 2VTx payload defects
• 0XE3	VT-structured STS-1 SPE with 3VTx payload defects
• 0XE4	VT-structured STS-1 SPE with 4VTx payload defects
• 0XE5	VT-structured STS-1 SPE with 5VTx payload defects
• 0XE6	VT-structured STS-1 SPE with 6VTx payload defects
• 0XE7	VT-structured STS-1 SPE with 7VTx payload defects
• 0XE8	VT-structured STS-1 SPE with 8VTx payload defects
• 0XE9	VT-structured STS-1 SPE with 9VTx payload defects
• 0XEA	VT-structured STS-1 SPE with 10VTx payload defects
• 0XEB	VT-structured STS-1 SPE with 11VTx payload defects
• 0XEC	VT-structured STS-1 SPE with 12VTx payload defects
• 0XED	VT-structured STS-1 SPE with 13VTx payload defects

• 0XEE	VT-structured STS-1 SPE with 14VTx payload defects
• 0XEF	VT-structured STS-1 SPE with 15VTx payload defects
• 0XF0	VT-structured STS-1 SPE with 16VTx payload defects
• 0XF1	VT-structured STS-1 SPE with 17VTx payload defects
• 0XF2	VT-structured STS-1 SPE with 18VTx payload defects
• 0XF3	VT-structured STS-1 SPE with 19VTx payload defects
• 0XF4	VT-structured STS-1 SPE with 20VTx payload defects
• 0XF5	VT-structured STS-1 SPE with 21VTx payload defects
• 0XF6	VT-structured STS-1 SPE with 22VTx payload defects
• 0XF7	VT-structured STS-1 SPE with 23VTx payload defects
• 0XF8	VT-structured STS-1 SPE with 24VTx payload defects
• 0XF9	VT-structured STS-1 SPE with 25VTx payload defects
• 0XFA	VT-structured STS-1 SPE with 26VTx payload defects
• 0XFB	VT-structured STS-1 SPE with 27VTx payload defects
• 0XFC	VT-structured STS-1 SPE with 28VTx payload defects
• 0XFE	O.181 Test Signal (TSS1 to TSS3) Mapping
• 0XFF	Reserved, however, C2 is 0XFF if AIS-L is being generated by an optical card or cross-connect downstream.

21.100 RTRV-TRC-OCH

(Cisco ONS 15454) The Retrieve Trace Optical Channel (RTRV-TRC-OCH) command retrieves the sent trace string, expected trace string, received trace string, trace mode, and the trace level for the SONET J0 Section, the TTI PATH and SECTION monitoring levels of the DWDM facility.

Usage Guidelines

The following rules apply:

- Client port–only the J0 Section trace applies.
- The J0 Section trace applies only if the card termination mode is not transparent and the payload is SONET/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 ITU-T G.709 (DWRAP) is enabled.

Depending on the settings, the following filtering applies:

- If no TRCLEVEL is provided, all TRCLEVELs are reported as applicable.
- If TRCLEVEL is provided and no MSGTYPE is provided, all applicable MSGTYPEs for the given level are displayed.
- If no MSGTYPE is provided, all MSGTYPEs are reported as applicable.
- If a MSGTYPE is provided with out a TRCLEVEL, then the given MSGTYPE for all TRCLEVELs are displayed.

Category DWDM

Security Retrieve

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

Input Example RTRV-TRC-OCH:CISCO:CHAN-2-2:100::EXPTRC,TTI-PM;

Input Parameters

<SRC>	Access identifier from the "25.8 CHANNEL" section on page 25-18. Must not be null.
<MSGTYPE>	Type of autonomous message to be retrieved. A null value is equivalent to ALL. The parameter type is MSGTYPE, which is the type of trace message.
• EXPTRC	Expected incoming path trace message
• INCTRC	Incoming path trace message
• TRC	Outgoing path trace message
<TRCLEVEL>	The trace level to be managed. A null value is equivalent to ALL. The parameter type is TRCLEVEL, which is the trace mode options.
• J0	Identifies the SONET J0 Section trace level
• TTI-PM	Identifies the TTI Path monitoring point
• TTI-SM	Identifies the TTI Section monitoring point

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<CHANNEL>,<MOD>::[TRCLEVEL=<TRCLEVEL>],[EXPTRC=<EXPTRC>],
   [TRC=<TRC>],[INCTRC=<INCTRC>],[TRCMODE=<TRCMODE>],
   [TRCFORMAT=<TRCFORMAT>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "CHAN-2-2,OCH::TRCLEVEL=TTI-PM,EXPTRC=\"AAA\",TRC=\"AAA\",
   INCTRC=\"AAA\",TRCMODE=MAN,TRCFORMAT=64-BYTE"
;
```

Output Parameters

<CHANNEL>	Access identifier from the "25.8 CHANNEL" section on page 25-18.
<MOD>	Indicates an OCH AID type. The parameter type is MOD2, which is the line/path modifier.
• 10GFC	10 Gigabit Fibre Channel

• 10GIGE	10 Gigabit Ethernet
• 1GFC	1 Gigabit Fibre Channel
• 1GFICON	1 Gigabit FICON
• 1GISC3	1 Gbps ISC3 compatible
• 2GFC	2 Gigabit Fibre Channel
• 2GFICON	2 Gigabit FICON
• 2GISC3	2 Gbps ISC3 compatible
• 4GFC	4 Gbps Fibre Channel
• 4GFICON	4 Gbps fiber connection
• D1VIDEO	D1 video
• DS1	DS1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETRCLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over packet over SONET. Virtual Ports partitioned using GFP's multiplexing capability.
• GIGE	GIG Ethernet
• HDTV	HDTV
• ISC3PEER1G	ISC3PEER1G
• ISC3PEER2G	ISC3PEER2G
• ISC3PEER2R	ISC3PEER2R
• ISCCOMPAT	ISCCOMPAT
• ISC3PEER1G	ISC3PEER1G
• ISC3PEER2G	ISC3PEER2G
• ISC3PEER2R	ISC3PEER2R
• ISCCOMPAT	ISCCOMPAT
• OC3	OC-3 facility
• OC12	OC-12 facility
• OC48	OC-48 facility
• OC192	OC-192 facility
• OCH	Optical Channel
• OCHCC	OCH channel connection
• OCHNC	OCH network connection
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS port
• STS1	STS1 path
• STS3C	STS3c path

• STS6C	STS6c path
• STS9C	STS9c path
• STS18C	STS18c path
• STS12C	STS12c path
• STS24C	STS24c path
• STS36C	STS36c path
• STS48C	STS48c path
• STS192C	STS192c path
• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 path
• VT2	VT2 path
<TRCLEVEL>	(Optional) The trace level to be managed. The parameter type is TRCLEVEL, which is the trace mode options.
• J0	Identifies the SONET J0 Section trace level.
• TTI-PM	Identifies the TTI Path monitoring point.
• TTI-SM	Identifies the TTI Section monitoring point.
<EXPTRC>	(Optional) Expected path trace content. A 64 character ASCII string.
<TRC>	(Optional) The path trace message to be transmitted. The trace byte continuously transmits a 64 byte, fixed length ASCII string, one byte at a time. A null value defaults to the NE transmitting 62 null characters (hex 00) and CR and LF. TRC is a string.
<INCTRC>	(Optional) The incoming path trace message contents. INCTRC is a string.
<TRCMODE>	(Optional) Trace mode. The parameter type is TRCMODE (trace mode).
• AUTO	Use the previously received path trace string as the expected string. Not applicable to MXP/TXP cards.
• AUTO-NO-AIS	Use the previously received path trace string as the expected string and do not turn on AIS and RDI if TIM-P is detected.
• MAN	Use the provisioned expected string as the expected string.
• MAN-NO-AIS	Use the provisioned expected string as the expected string and do not turn on AIS and RDI if TIM-P is detected.
• OFF	Turn off path trace capability. Nothing will be reported.
TRCFORMAT	(Optional) The size of the trace message. If in SONET/SDH mode, only 1 or 16 bytes is applicable for the J0 section trace. The TTI level trace is only 64 bytes. The parameter type is TRCFORMAT (trace format).
• 1-BYTE	1 byte trace message
• 16-BYTE	16 byte trace message
• 64-BYTE	64 byte trace message
• Y	Enable an attribute.

21.101 RTRV-TUNNEL-FIREWALL

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Tunnel Firewall (RTRV-TUNNEL-FIREWALL) command retrieves the contents of the firewall tunnel table.

Usage Guidelines None

Category System

Security Retrieve

Input Format RTRV-TUNNEL-FIREWALL:[<TID>]::<CTAG>;

Input Example RTRV-TUNNEL-FIREWALL:TID::CTAG;

Input Parameters None that require description

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "[SRC ADDR=<SRCADDR>],[SRC MASK=<SRCMASK>],[DEST ADDR=<DESTADDR>],
   [DEST MASK=<DESTMASK>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "SRC ADDR=64.101.150.10,SRC MASK=255.255.255.0,DEST ADDR=64.101.144.7,
   DEST MASK=255.255.255.0"
;
```

Output Parameters

<SRCADDR>	(Optional) Source IP address. SRCADDR is a string.
<SRCMASK>	(Optional) Source mask. SRCMASK is a string.
<DESTADDR>	(Optional) Destination IP address. DESTADDR is a string.
<DESTMASK>	(Optional) Destination mask. DESTMASK is a string.

21.102 RTRV-TUNNEL-PROXY

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Tunnel Proxy command retrieves the contents of the proxy tunnel table.

Usage Guidelines None

Category System

Security Retrieve

Input Format RTRV-TUNNEL-PROXY:[<TID>]::<CTAG>;

Input Example RTRV-TUNNEL-PROXY:TID::CTAG;

Input Parameters None that require descriptions

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "[SRC ADDR=<SRCADDR>],[SRC MASK=<SRCMASK>],[DEST ADDR=<DESTADDR>],
   [DEST MASK=<DESTMASK>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "SRC ADDR=64.101.150.10,SRC MASK=255.255.255.0,DEST ADDR=64.101.144.7,
   DEST MASK=255.255.255.0"
;
```

Output Parameters

<SRCADDR>	(Optional) Source IP address. SRCADDR is a string.
<SRCMASK>	(Optional) Source mask. SRCMASK is a string.
<DESTADDR>	(Optional) Destination IP address. DESTADDR is a string.
<DESTMASK>	(Optional) Destination mask. DESTMASK is a string.

21.103 RTRV-USER-SECU

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve User Security (RTRV-USER-SECU) command retrieves the security information of a specified user or list of users. The keyword ALL can be used to obtain a list of all users. For security reasons the password cannot be retrieved.

Usage Guidelines

A Superuser can retrieve any user's security information. A user with MAINT, PROV, or RTRV privileges can only retrieve their own information.

Note When using the keyword ALL, all users created for the system are displayed. This includes users created outside of the TL1 environment (for example, user IDs and passwords greater than 10 characters in length). Although displayed by the RTRV-USER-SECU command, these users will not be able to log into the TL1 environment.

Category

Security

Security

Retrieve

Note Maintenance, Provisioning and Retrieve users can retrieve their own information only.

Input Format

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

Input Example

RTRV-USER-SECU::CISCO15:1;

Input Parameters

<UID>	User identifier. The user ID or the keyword ALL. A non-Superuser can only specify his own user ID. Must not be null. UID is a string.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<UID>:,<PRIVILEGE>:LOGGEDIN=<LOGGEDIN>,[NUMSESSIONS=<NUMSESS>,]
   [LOCKEDOUT=<LOCKEDOUT>,][DISABLED=<DISABLED>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "CISCO15:,SUPER:LOGGEDIN=YES,NUMSESSIONS=1,LOCKEDOUT=NO,DISABLED=NO"
;
```

Output Parameters

<UID>	User identifier. The user ID that was retrieved. UID is a string.
<PRIVILEGE>	The privilege level of the user. The parameter type is PRIVILEGE, which is the security level.
• MAINT	Maintenance security level. 60 minutes of idle time.
• PROV	Provision security level. 30 minutes of idle time.
• RTRV	Retrieve security level. Unlimited idle time.
• SUPER	Superuser security level. 15 minutes of idle time.
<LOGGEDIN>	Indicates whether the user is logged in to the NE. The parameter type is YES_NO, which indicates whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes
<NUMSESS>	(Optional) The number of times the user is logged into the NE. NUMSESS is an integer.
<LOCKEDOUT>	(Optional) Indicates whether the user is locked out of the NE. The parameter type is YES_NO, which indicates whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes
<DISABLED>	(Optional) Indicates if the user is disabled. The parameter type is YES_NO, which indicates whether the user's password is about to expire, the user is logged into the NE, or the user is locked out of the NE.
• NO	No
• YES	Yes

21.104 RTRV-VCG

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Retrieve Virtual Concatenation Group (RTRV-VCG) command retrieves all the attributes provisioned for a VCG.

Usage Guidelines

None

Category

VCAT

Security

Retrieve

Input Format

RTRV-VCG:[<TID>]:<SRC>:<CTAG>[::::];

Input Example

```
RTRV-VCG:NODE1:FAC-1-1:1234;
```

Input Parameters

<SRC>	Source access identifier from the "25.15 FACILITY" section on page 25-33. 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

<SRC>	Source access identifier from the "25.15 FACILITY" section on page 25-33. ML1000-2 and ML100T-12 cards use the VFAC AID. The FC_MR-4 card uses the FAC AID.
<TYPE>	The type of the entity being provisioned. Null indicates not applicable. TYPE can be a CLEI code or another value. The type of member cross-connect. ML1000-2 and ML100T-12 cards support STS1, STS3c, and STS12c. The FC_MR-4 card supports STS3c only. The parameter type is MOD_PATH, which is the STS/VT path modifier.
• STS1	STS1 path
• STS12C	STS12c path
• STS18C	STS18c path
• STS192	STS192c path
• STS24C	STS24c path
• STS36C	STS36c path
• STS3C	STS3c path
• STS48C	STS48c path
• STS6C	STS6c path
• STS9C	STS9c path
• VT1	VT1 path
• VT2	VT2 path
<TXCOUNT>	Number of VCG members in the transmit (Tx) direction. For ML1000-2 and ML100T-12 cards, the only valid value is 2. For the FC_MR-4 card, the only valid value is 8. TXCOUNT is an integer.

<CCT>	Type of connection; one-way or two-way. Cross-connect type for the VCG member cross-connects. The parameter type is CCT, which is the type of cross-connect to be created.
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	Path protection multicast drop with 1-way continue
• 1WAYEN	Path protection multicast end node (1-way continue)
• 1WAYMON	A bidirectional connection between the two tributaries **Note** 1WAYMON is not supported with TL1. However, it is still supported from CTC. Using CTC, you can create 1WAYMON cross-connects that can be retrieved by TL1.
• 1WAYPCA	A unidirectional connection from a source tributary to a destination tributary on the protection path/fiber
• 2WAY	A bidirectional connection between the two tributaries
• 2WAYDC	A bidirectional drop and continue connection applicable only to path protection traditional and integrated dual-ring interconnects
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber
• DIAG	Diagnostics cross-connect. Supports BERT (BLSR PCA diagnostics cross-connect).
<LCAS>	(Optional) Link capacity adjustment scheme. The parameter type is LCAS, which is the link capacity adjustment scheme mode for the VCG created.
• LCAS	LCAS is enabled.
• NONE	No LCAS.
• SW-LCAS	Supports the temporary removal of a VCG member during the member failure. Only supported by the ML1000-2 and ML100T-12 cards.
<BUFFERS>	(Optional) Buffer type. The default value is DEFAULT. The FC_MR-4 card supports DEFAULT and EXPANDED buffers. Other data cards support DEFAULT buffers only. The parameter type is BUFFER_TYPE, which is the buffer type (used in VCAT).
• DEFAULT	Default buffer value
• EXPANDED	Expanded buffer value
<NAME>	(Optional) Name of the VCAT group. NAME is a string.
<PST>	(Optional) Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In Service
• OOS	Out of Service

21.105 RTRV-VT

(Cisco ONS 15454) The Retrieve Virtual Tributary (RTRV-VT) command retrieves the attributes associated with a VT path based on the granularity level of NE- or slot-specific VTs.

Usage Guidelines

- Supported AIDs are ALL, SLOT-N (N=1,2,...ALL), VT-<SLOT>[-<PORT>]-<STS NUMBER>-<VT GROUP>-<VT NUMBER>.
- The RVRTV, RVTM, HOLDOFFTIMER, and UPSRPTHSTATE parameters only apply to path protection.

Category

Paths

Security

Retrieve

Input Format

RTRV-VT:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-VT:TID:VT1-1-1-1-1:1;

Input Parameters

<AID>	Access identifier from the "25.2 AidUnionId" section on page 25-11. 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

<AID>	Access identifier from the "25.2 AidUnionId" section on page 25-11.
<LEVEL>	(Optional) The rate of the cross-connect. Indicates the rate of the cross-connected channel. Applicable only to VT1 path in SONET. The parameter type is VT_PATH, which is the modifier for some VT commands.
• VT1	Virtual Tributary 1
• VT2	Virtual Tributary 2

<RVRTV>	(Optional) Revertive mode. 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. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<RVTM>	(Optional) Revertive time. Only applies to path protection. Defaults to empty because RVRTV is N when a path protection path is created. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<HOLDOFFTIMER>	(Optional) Hold off timer. HOLDOFFTIMER is an integer.
<TACC>	(Optional) Test access. Indicates whether the digroup being provisioned is to be used as a test access digroup. Defaults to N.
<TAPTYPE>	(Optional) TAP type. The parameter type is TAPTYPE, which is the test access point type.
• DUAL	Dual FAD
• SINGLE	Single FAD
<UPSRPTHSTATE>	(Optional) Indicates whether a given AID is the working or standby path of a path protection cross-connect. The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In Service
• OOS	Out of Service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.106 RTRV-WDMANS

(Cisco ONS 15454) The Retrieve Wavelength Division Multiplexing Automatic Node Setup (RTRV-WDMANS) command edits the automatic optical node setup (AONS) application attributes.

Usage Guidelines

None

Category

DWDM

Security

Maintenance

Input Format

RTRV-WDMANS:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-WDMANS:PENNGROVE:WDMANS-W:114;

Input Parameters

<AID>	Access identifier from the "25.32 WDMANS" section on page 25-50. 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

<AID>	Access identifier from the "25.32 WDMANS" section on page 25-50.
<POWERIN>	(Optional) Input power for an OADM section of an OADM NE. POWERIN is a float.

<POWEROUT>	(Optional) Output power for an OADM or multiplex/demultiplex section of HUB, TERMINAL, or OADM nodes. POWEROUT is a float.
<POWEREXP>	(Optional) Express power for a multiplex/demultiplex section of a HUB or TERMINAL NE. POWEREXP is a float.
<NTWTYPE>	(Optional) Type of network with DWDM node installed. The parameter type is DWDM_RING_TYPE, which is the 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>	(Optional) The optical configuration type for the NE. The parameter type is OPTICAL_NODE_TYPE, which is the optical configuration types for NEs.
• HUB	A terminal site, EAST, WEST, or both with 32 channel multiplex/demultiplex 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 ROADM cards.
• TDM-HYBRID	A time-division multiplexing (TDM) node with an amplifier directly connected to a TXP/MXP card.
• UNKNOWN	The node type is undefined.
<LASTRUNDAT>	(Optional) The last date when the WDMANS application was run automatically or by user request. The format is MM-DD, where MM (month of year) ranges from 1 to 12 and DD (day of month) ranges from 1 to 31.
<LASTRUNTM>	(Optional) The last time when the WDMANS application was run automatically or by user request. The format is HH-MM, where HH (hour of day) ranges from 1 to 23 and MM (minute of hour) ranges from 0 to 59.

CHAPTER 22

SCHED Commands

This chapter provides schedule (SCHED) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

22.1 SCHED-PMREPT-<MOD2>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Schedule Performance Monitoring Report for 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, or VT2 (SCHED-PMREPT-<MOD2>) command schedules/reschedules the network element (NE) to report the performance monitoring (PM) data for a line facility or for a synchronous transport signal (STS) path periodically, using the automatic REPT PM message. This command can also remove the previously created schedule.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

The automatic PM reporting scheduled by this command is inhibited by default. ALW-PMREPT-ALL can be used to allow the NE to send the PM report. INH-PMREPT-ALL can be used to stop the NE from sending the PM report. The schedules created for the NE can be retrieved by RTRV-PMSCHED command.

The deletion of the schedule for the automatic PM reporting can be done by issuing SCHED-PMREPT-<MOD2> with the NUMREPT parameter equal to zero.

Note

- 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 PM reporting will significantly degrade the performance of the NE.
- A schedule cannot be created if the card associated with the schedule is not provisioned, or if the cross-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.
- The number of outstanding PM reports counter (NUMREPT) will not be decremented, and the scheduled automatic PM reporting will not start if the card associated with the schedule is not physically plugged into the slot.

- An expired schedule would not be automatically removed. The SCHED-PMREPT command has to be issued with the NUMREPT parameter equal to zero in order to delete the expired schedule.
- Identical schedules for an NE are not allowed. Two schedules are considered identical if they have the same AID, MOD2 type, performance monitor type, performance monitor level, location, direction, and time period.

  An error message “Duplicate Schedule” is returned if you try to create a schedule that is a duplicate of a existing schedule. However, if the existing schedule expires (with the parameter NUMINVL equal to zero when retrieved by the RTRV-PMSCHED command, that is, no more PM reporting is sent) the new schedule with the identical parameters will replace the existing schedule.
- 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 PM 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.
- VT1 level schedules cannot be created on Optical ports. The VT-level PMs are monitored only on the path terminating ports.
- 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

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

<AID>	Access identifier from the "25.1 ALL" section on page 25-1. Must not be null.
<REPTINVL>	Reporting interval. How often a report is generated and sent to the appropriate operating system (OS). Specifies how often a PM 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 • 1 to 24 if UN is HR • 5 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. REPTINVL is a string.
<REPTSTATM>	The start time for the PM report. The format is HOD-MOH, where HOD (hour of day) ranges from 0 to 23, and MOH (minute of hour) ranges from 0 to 59. If the input value of the starting time is smaller than the current time, for example, the input value is 5-30 (5:30 in the morning), and the current time is 10:30, the reporting will be scheduled to start at 5:30 the next day. A null value defaults to the current time of day. REPTSTATM is a string.
<NUMREPT>	The number of reports that the schedule is expected to produce. A value of 0 is used to delete 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 PM reporting is inhibited. NUMREPT is an integer.
<MONLEV>	The discriminating level of the requested monitored parameter. It applies to all MONTYPE of the scheduled PM report. The null input defaults to 1-UP. MONLEV is a string.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.
<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. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<TMPER>	(Optional) Accumulation time period for performance counters. Defaults to 15-MIN. The parameter type is TMPER, which is the accumulation time period for the performance management center.

• 1-DAY	Performance parameter accumulation interval length; every 24 hours. For SONET PM data, only one day of history data is available. For remote monitoring (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. TMOFST is a string.

CHAPTER 23

SET Commands

This chapter provides set (SET) commands for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

23.1 SET-ALMTH-<MOD2>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA) The Set Alarm Threshold for 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, or VT2 (SET-ALMTH-<MOD2>) command sets the alarm thresholds on the following cards/ports/channels: MXP_2.5G_10G, TXP_MR_10G, optical service channel (OSC), optical amplifier, dispersion compensation unit (DCU), multiplexer, demultiplexer, and optical add/drop multiplexing (OADM).

Usage Guidelines The only applicable MOD2 values are CLNT, OCH, OMS, and OTS.

Category Fault

Security Provisioning

Input Format SET-ALMTH-<MOD2>:[<TID>]:<AID>:<CTAG>::<CONDTYPE>,<THLEV>[,,,];

Input Example SET-ALMTH-{MOD2}::FAC-1-1:1::OPT-LOW,10;

Input Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1. Must not be null.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is ALM_THR, which is the alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B cards.
• 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 microA as one tenth of a percentage. High Warning Threshold, Low Warning Threshold. Measured value (0.0 percent, 100.0 percent)
• OPR-HIGH	Receive power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)
• OPR-LOW	Receive power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)
• OPT-HIGH	Transmit power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)
• OPT-LOW	Transmit power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)
• OPWR-HDEG	Optical Power—High Degrade Threshold
• OPWR-HFAIL	Optical Power—High Failure Threshold
• OPWR-LDEG	Optical Power—Low Degrade Threshold
• OPWR-LFAIL	Optical Power—Low Failure Threshold
• VOA-HDEG	VOA Attenuation—High Degrade Threshold
• VOA-HFAIL	VOA Attenuation—High Failure Threshold
• VOA-LDEG	VOA Attenuation—Low Degrade Threshold
• VOA-LFAIL	VOA Attenuation—Low Failure Threshold
<THLEVEL>	Threshold level. THLEVEL is a float.

23.2 SET-ALMTH-EQPT

(Cisco ONS 15454) The Set Alarm Threshold Equipment (SET-ALMTH-EQPT) command sets the alarm thresholds to manage the power level monitoring on an NE.

Usage Guidelines

None

Category Equipment

Security Provisioning

Input Format SET-ALMTH-EQPT:[<TID>]:[<AID>]:<CTAG>::<ALMTHTYPE>,<THLEV>[,,,];

Input Example

SET-ALMTH-EQPT:::1::BATV-HIGH,-53.5;

SET-ALMTH-EQPT::SHELF-2:1::BATV-HIGH,-53.5;

Input Parameters

<AID>	The node or shelf access identifier from the "25.24 SHELF" section on page 25-41. If omitted it addresses the node or first shelf of the node. Must not be null
<CONDTYPE>	Alarm threshold type. The parameter type is ALM_THR, which is the alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B cards.
• BATV-EHIGH	Battery Voltage—Extremely High
• BATV-ELOW	Battery Voltage—Extremely Low
• BATV-HIGH	Battery Voltage—High
• BATV-LOW	Battery Voltage—Low
• GAIN-HDEG	Gain not reached—High Degrade Threshold
• GAIN-HFAIL	Gain not reached—High Failure Threshold
• GAIN-LDEG	Gain not reached—Low Degrade Threshold
• GAIN-LFAIL	Gain not reached—Low Failure Threshold
• LBCL-HIGH	Laser Bias current in microA as one tenth of a percentage High Warning Threshold, Low Warning Threshold. Measured value (0.0 percent, 100.0 percent)
• OPR-HIGH	Receive power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)
• OPR-LOW	Receive power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)
• OPT-HIGH	Transmit power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)
• OPT-LOW	Transmit power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)
• OPWR-HDEG	Optical Power—High Degrade Threshold
• OPWR-HFAIL	Optical Power—High Failure Threshold
• OPWR-LDEG	Optical Power—Low Degrade Threshold
• OPWR-LFAIL	Optical Power—Low Failure Threshold
• VOA-HDEG	VOA Attenuation—High Degrade Threshold
• VOA-HFAIL	VOA Attenuation—High Failure Threshold

• VOA-LDEG	VOA Attenuation—Low Degrade Threshold
• VOA-LFAIL	VOA Attenuation—Low Failure Threshold
<THLEVEL>	Threshold level. THLEV is a float.

23.3 SET-ATTR-CONT

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Set Attribute Control (SET-ATTR-CONT) command sets the attributes associated with an external control. The attributes are used when an external control is operated or released. To send the attributes, use the RTRV-ATTR-CONT command.

Usage Guidelines

- If the CONTTYPE parameter is not specified, the control specified by AID is unprovisioned.
- A control should be unprovisioned before it is reprovisioned to another type of control.

Category

Environment

Security

Provisioning

Input Format

SET-ATTR-CONT:[<TID>]:<AID>:<CTAG>[::<CONTTYPE>];

Input Example

SET-ATTR-CONT:CISCO:ENV-OUT-1:123::AIRCOND;

Input Parameters

<AID>	Access identifier from the "25.13 ENV" section on page 25-30. Identifies the external control for which attributes are being retrieved.
<CONTTYPE>	Environmental control type. A null value is equivalent to ALL. The parameter type is CONTTYPE, which is the environmental control type.
• AIRCOND	Air conditioning
• AUDIBLE	Audible (ONS 15310-MA only)
• ENGINE	Engine
• FAN	Fan
• GEN	Generator
• HEAT	Heat
• LIGHT	Light
• MISC	Miscellaneous
• SPKLR	Sprinkler

23.4 SET-ATTR-ENV

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Set Attribute Environment (SET-ATTR-ENV) command sets the attributes associated with an external control.

Usage Guidelines

- If the NTFCNCDE, ALMTYPE, and ALMMSG parameters are omitted, the environmental alarm specified by AID is unprovisioned.
- An alarm should be unprovisioned and you should wait for any raised alarm to clear before reprovisioning the alarm to another alarm type.
- CL in NOTIF_CODE is not valid for provisioning commands. It is only valid for autonomous messages.

Category

Environment

Security

Provisioning

Input Format

SET-ATTR-ENV:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<ALMTYPE>],[<ALMMSG>];

Input Example

SET-ATTR-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR,\“OPEN DOOR\”;

Input Parameters

<AID>	Access identifier from the “25.13 ENV” section on page 25-30. Must not be null.
<NTFCNCDE>	Two-letter notification code. Must not be null. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<ALMTYPE>	The alarm type for the environmental alarm. Must not be null. The parameter type is ENV_ALM, which is the environmental alarm type.
• AIRCOMPR	Air compressor failure
• AIRCOND	Air conditioning failure
• AIRDRYR	Air dryer failure
• BATDSCHRG	Battery discharging
• BATTERY	Battery failure

• CLFAN	Cooling fan failure
• CPMAJOR	Centralized power major failure
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail
• HATCH	CEV hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnected bypass
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage

• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure
>ALMMSG>	Alarm message. ALMMSG is a string. Must not be null.

23.5 SET-ATTR-SECUDFLT

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Set Attribute Security Default (SET-ATTR-SECUDFLT) command sets the system-wide default values associated with several security parameters.

Usage Guidelines

The following parameters are set on a system-wide basis for all users and all privilege levels: MXINV, DURAL, UOUT, PFRCD, POLD, PINT, and LOGIN. The PRIVLVL keyword cannot be used to set these parameters for a specific privilege level.

The following parameters are set on a privilege-level basis: PAGE, PCND, and TMOUT. If any of these values are specified, the PRIVLVL keyword must also be present. If none of these parameters are specified, the PRIVLVL keyword cannot be used.

Note Password aging can only be enabled/disabled for all privilege levels. The PRIVLVL keyword cannot be used with PAGE=0 to disable a specific user privilege level.

When system-level and privilege-level keywords are combined in the same command, system-level parameters are still set for all privilege levels, regardless of the value specified by PRIVLVL. Privilege-level parameters are only set for the privilege level specified by PRIVLVL.

Note If PAGE and PINT both have values greater than 0, PINT must be less than PAGE.

The order of keywords is not restricted. Commas are only needed to separate keywords. If no keywords are specified, all parameters are left as-is.

Category

Security

Security

Superuser

Input Format

SET-ATTR-SECUDFLT:[<TID>]::<CTAG>::[PAGE=<PAGE>],[PCND=<PCND>],
[MXINV=<MXINV>],[DURAL=<DURAL>],[TMOUT=<TMOUT>],[UOUT=<UOUT>],
[PFRCD=<PFRCD>],[POLD=<POLD>],[PINT=<PINT>],[LOGIN=<LOGIN>],
[PRIVLVL=<PRIVLVL>],[PDIF=<PDIF>];

Input Example

SET-ATTR-SECUDFLT:CISCO::123::PAGE=45,PCND=5,MXINV=5,DURAL=30,
TMOUT=0,UOUT=20,PFRCD=NO,POLD=5,PINT=20,LOGIN=MULTIPLE,
PRIVLVL=RTRV,PDIF=1;

Input Parameters

<PAGE>	Password aging interval. It is the number of days before a user is prompted to change his/her password. 0 indicates that the policy is turned off and is the default. If PAGE is turned on for all privilege levels and is not specified for each privilege level, it defaults to 45 days. PAGE ranges from 20 to 90 days. PAGE is an integer.
<PCND>	Number of days a password can be used before a new one is mandatory (for example, the warning period). Default is 5 days. PCND ranges from 2 to 20 days. PCND is an integer.
<MXINV>	Maximum number of consecutive and invalid session setup attempts allowed to occur before an intrusion attempt is suspected (for example, “Failed Logins Before Lockout” from Cisco Transport Controller [CTC]). 0 indicates the policy is turned off. Default is 5. MXINV ranges from 0 to 10. MXINV is an integer.
<DURAL>	Time interval (in seconds) during which a user ID is locked out when an intrusion attempt is suspected (for example, “Lockout Duration”). If the user is locked out until unlocked by a Superuser, DURAL=INFINITE. Default is 30 seconds. DURAL ranges from 0 to 600 seconds. DURAL is a string.
<TMOUT>	Interval (in minutes) after which a session is terminated if no messages are exchanged between the user and the NE. 0 indicates that the session will not timeout. TMOUT ranges from 0 minutes to 999 minutes. Defaults are 0 (no timeout) for RTRV users, 60 minutes for MAINT users, 30 minutes for PROV users, and 15 minutes for SUPER users. TMOUT is an integer.
<UOUT>	UID aging interval, expressed in days. If a user ID has not been used in UOUT days, the user will be forced to change his/her password (or logout) at the next login. No other command is allowed until the password has been changed. 0 indicates the policy is turned off and is the default. UOUT ranges from 0 to 99 days. UOUT is an integer.
<PFRCD>	Indicates that a password change is required when a new user establishes a session to the NE for the first time (for example, “Require password change on 1st login”). Default is NO. The parameter type is YES_NO, which indicates whether the user’s password is about to expire, the user is logged into the NE, or the user is locked out of the NE.

• NO	No
• YES	Yes
<POLD>	Number of prior passwords that cannot be reused (for example, “Prevent reusing last X passwords”). Default is 1. POLD ranges from 1 to 10. POLD is an integer.
<PINT>	Number of days that must pass before a password can be changed. If PINT is 0, the policy is turned off. Default is off. PINT ranges from 20 to 95 days. PINT is an integer.
<LOGIN>	Number of times a user can log into an NE. LOGIN is either SINGLE or MULTIPLE. If LOGIN is SINGLE, a user can only log into an NE one time with any given user ID, regardless of the method of login (for example, CTC, TL1, etc.). Default is MULTIPLE. The parameter type is USER_LOGINS, which is the number of times a user can log into the same NE with the same user ID.
• MULTIPLE	A user can log into the same NE many times.
• SINGLE	A user can log into the NE only once (includes both CTC and TL1 sessions).
<PRIVLVL>	User’s access privilege. The parameter type is PRIVILEGE, which is the security level.
• MAINT	Maintenance security level. 60 minutes of idle time.
• PROV	Provision security level. 30 minutes of idle time.
• RTRV	Retrieve security level. Unlimited idle time.
• SUPER	Superuser security level. 15 minutes of idle time.
<PDIF>	Indicates how many characters must differ between the old and new password. Default minimum character difference is 1. PDIF ranges from 1 to 5 characters. PDIF is a rangeable integer.

23.6 SET-PMMODE-<STS_PATH>

(Cisco ONS 15454) The Set Performance Mode of PM Data Collection for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, or STS9C (SET-PMMODE-<STS_PATH>) command sets the mode and turns the performance monitoring (PM) data collection mode on or off.

Usage Guidelines

See Table 27-1 on page 27-1 for supported modifiers by platform.

Note

- The PM mode and state of an entity are retrieved by using the RTRV-PMMODE command.
- The near-end monitoring of the intermediate-path performance monitoring (IPPM) only supports OC3, OC12, OC48, OC192, and EC-1 on STS Path.
- The far-end IPPM data collection is supported by the MRC-12 card only.

- This release of software will support only the Path (P) mode type PM parameters with this command, that is, this command is not applicable for Line (L) and Section (S) mode types. PM monitoring for Line (L) and Section (S) are supported by the ONS 15454, and the storing PM data is always performed.

Category Performance

Security Provisioning

Input Format SET-PMMODE-<STS_PATH>:[<TID>]:<SRC>:<CTAG>::<LOCN>,<MODETYPE>,[<PMSTATE>];

Input Example SET-PMMODE-STS1:CISCO:STS-4-1-2:123::NEND,P,ON;

Input Parameters

<SRC>	Source access identifier from the "25.10 CrossConnectId" section on page 25-20.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. Only near-end PM data collection is supported. The parameter type is LOCATION, which is the location where the action is to take place.
• NEND	Action occurs on the near end of the facility.
<MODETYPE>	The type of PM parameters that the entity or the sub entity is to store as a result of an attribute change. Only the path (P) PM parameter is supported. The parameter type is PM_MODE, which is the type of PM parameter.
• P	Transport Path PM parameters
<PMSTATE>	Directs the named PM mode type to turn on or off. A null value defaults to on. The parameter type is PM_STATE, which directs the named PM mode type (P) state.
• OFF	Disable the mode
• ON	Enable the mode

23.7 SET-PMMODE-<VT_PATH>

(Cisco ONS 15310-MA) The Set Performance Mode of PM Data Collection for VT1 and VT2 (SET-PMMODE-<VT_PATH>) command sets the mode and turns the performance monitoring (PM) data collection mode on or off.

Usage Guidelines

Note

- The PM mode and state of an entity is retrieved by using the RTRV-PMMODE command.
- This release of software will support only the Path (P) mode type PM parameters with this command, that is, this command will not be applicable for Line (L) and Section (S) mode types.

Category Performance

Security Provisioning

Input Format SET-PMMODE-<VT_PATH>:[<TID>]:<SRC>:<CTAG>::<LOCN>,<MODETYPE>,[<PMSTATE>];

Input Example SET-PMMODE-VT1:CISCO:VT1-1-1-2-2:123::NEND,P,ON;

Input Parameters

<SRC>	Source access identifier from the "25.11 CrossConnectId1" section on page 25-24. Must not be null.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be set. Only near end (NEND)PM data collection is supported. The parameter type is LOCATION, which is the location where the action is to take place. Must not be null.
• NEND	Action occurs on the near end of the facility.
<MODETYPE>	The type of PM parameters that the entity or the subentity is to store as a result of an attribute change. Only the path (P) type is supported. The parameter type is PM_MODE, which is the type of PM parameters.
• P	Transport Path PM parameters.
<PMSTATE>	Directs the named PM mode type to turn on or off. A null value defaults to on. The parameter type is PM_STATE, which directs the named PM mode type (P) state.
• OFF	Disable the mode
• ON	Enable the mode

23.8 SET-TH-<MOD2>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Set Threshold for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, D1VIDEO, DS1, DS3I, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STM1E, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C,

STS48C, STS6C, STS9C, T1, T3, VC11, VC12, VC3, VT1, or VT2 (SET-TH-<MOD2>) command sets the threshold for PMs and sets the alarm thresholds for the MXP_2.5G_10G and TXP_MR_10G cards. If this command is used to set the alarm thresholds, the time period is not applicable.

Usage Guidelines

See Table 27-1 on page 27-1 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.

Refer to the *Cisco ONS SONET TL1 Reference Guide* for specific card provisioning rules.

Category

Performance

Security

Provisioning

Input Format

SET-TH-<MOD2>:[<TID>]:<AID>:<CTAG>::<MONTYPE>,<THLEV>,[<LOCN>],,[<TMPER>];

Input Example

SET-TH-T3:CISCO:FAC-1-1:123::CVL,12,NEND,,15-MIN;

Input Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1. All of the STS, VT1, Facility, and DS1 AIDs are supported.
<MONTYPE>	Monitored type. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• BBE-PM	OTN—Background Block Errors—Path Monitor Point
• BBE-SM	OTN—Background Block Errors—Section Monitor Point
• BBER-PM	OTN—Background Block Error Ratio—Path monitor point expressed as one tenth of a percentage
• BBER-SM	OTN—Background Block Error Ratio—Section monitor point expressed as one tenth of a percentage
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line

• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FC-L	Failure Count—Line
• FC-P	Failure Count—Path
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block

• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High-Order Path Negative Pointer Justification Count
• HP-NPJC-PGEN	High-Order Path, Negative Pointer Justification Count
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload cyclic redundancy check (CRC) errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in microA
• LBCL-MAX	Maximum Laser Bias current in microA
• LBCL-MIN	Minimum Laser Bias current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current

• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OPR-AVG	Average Receive Power in one tenth of a microW
• OPR-MAX	Maximum Receive Power in one tenth of a microW
• OPR-MIN	Minimum Receive Power in one tenth of a microW
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microW
• OPT-MAX	Maximum Transmit Power in one tenth of a microW
• OPT-MIN	Minimum Transmit Power in one tenth of a microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring

• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<THELV>	Threshold level. THLEV is a float.
<LOCN>	Location associated with a particular command. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility
• NEND	Action occurs on the near end of the facility

<TMPER>	(Optional) Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24-hours. For SONET PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.

23.9 SET-TOD

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Set Time of Day (SET-TOD) command sets the system date and time for the NE. The year should be entered using four digits while the hour should be entered using a 24-hour time period (for example, military time).

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

SET-TOD:[<TID>]::<CTAG>::<YEAR>,<MONTH>,<DAY>,<HOUR>,<MINUTE>,<SECOND>,[<DIFFERENCE>][:DST=<DST>];

Input Example

SET-TOD:CAZADERO::240::1998,05,08,13,18,55,480:DST=Y;

Input Parameters

<YEAR>	The current calendar year. YEAR is an integer.
<MONTH>	The month of the year. Ranges from 01 to 12. MONTH is an integer.
<DAY>	The day of the month. Ranges from 01 to 31. DAY is an integer.

<HOUR>	The hour of the day. Ranges from 00 to 23. HOUR is an integer.
<MINUTE>	The minute of the hour. Ranges from 00 to 59. MINUTE is an integer.
<SECOND>	The second of the minute. Ranges from 00 to 59. SECOND is an integer.
<DIFFERENCE>	The number of minutes off UTC. DIFFERENCE is an integer.
<DST>	Daylight savings time. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.

CHAPTER 24

SW Commands

This chapter provides switch (SW) commands for Cisco ONS 15454, Cisco ONS 15600, and ONS 15310-MA.

Note SW commands do not apply to ONS 15327, ONS 15310-CL.

24.1 SW-DX-EQPT

(Cisco ONS 15454 and Cisco ONS 15600) The Switch Duplex Equipment (SW-DX-EQPT) command switches a cross-connect card with the mate card within the NE.

Usage Guidelines 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

Input Format SW-DX-EQPT:[<TID>]:<AID>:<CTAG>::[<MODE>][,];

Input Example SW-DX-EQPT:CISCO:SLOT-1:123::FRCD;

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31. Identifies the equipment unit in the network element (NE) that is to be switched with its mate.

<MODE>	Command mode. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that could make the command fail.

24.2 SW-TOPROTN-EQPT

(Cisco ONS 15454, ONS 15310-MA) The Switch to Protection Equipment (SW-TOPROTN-EQPT) command performs an equipment unit protection switch.

Usage Guidelines

This command is used for electrical cards (for example, 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 that 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 nonrevertive protection group, the unit specified by the AID will raise the transient condition of WKSWPR if the command were executed without an error.

The following actions will return error messages:

- Sending this command to a card that is not in a protection group will return the SNVS (Status, Not in Valid State) error message.
- Sending this command to a missing working card will return the SWFA (Status, Working Unit Failed) error message.
- Sending this command to a protection card will return the IIAC (Input, Invalid Access Identifier) error message.
- Sending a mode parameter with a value other than NORM, FRCD, or null will return the IDNV (Input, Data Not Valid) error message.
- Sending this command to a working card when the working card has raised INHSWPR will return the SWLD (Status, Working Unit Locked) error message.
- Sending this command to a working card when the protection card has raised INHSWPR will return the SPLD (Status, Protection Unit Locked) error message.

- Sending this command to an active working card when the protect card is already carrying traffic (this only occurs in a 1:N protection group where N is greater than 1) will return the SNVS (Status, Not in Valid State) error message.
- Sending this command to an active working card when the protect card is failed or missing will return the SPFA (Status, Protection Unit Failed) error message.
- Sending this command to a standby working card will return the SNVS (Status, Not in Valid State) error message.

Note

- The default PROTID is the protect unit if there is only one protect unit per protection group in the NE. Otherwise, a DENY error message will be responsed.
- This command only supports the BTH or null value of the DIRN parameter. A command with any other value is considered an incorrect use of the command and will return An IDNV (Input, Data Not Valid) error message.
- This command is not used for the common control (TCC2/TCC2P or XCVT/XC10G) cards. A command on a common control card will return an IIAC (Input, Invalid Access Identifier) error message. To use the switch common control cards, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
- This command is not used for SONET (OC-N) cards. A command on a SONET card will return an IIAC (Input, Invalid Access Identifier) error message. To switch a SONET card, use the OPR-PROTNSW and RLS-PROTNSW commands.

Category

Equipment

Security

Maintenance

Input Format

SW-TOPROTN-EQPT:[<TID>]:<AID>:<CTAG>::[<MODE>],[<PROTID>],[<DIRN>];

Input Example

SW-TOPROTN-EQPT:CISCO:SLOT-1:123::FRCD,SLOT-3,BTH;

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-31. 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 will generate the same switching behavior as sending the NORM value. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.

• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that could make the command fail.
<PROTID>	(Optional) Access identifier from the "25.22 PRSLOT" section on page 25-40. Identifies the protection unit to be switched when there is more than one protection unit within the NE.
<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. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions

24.3 SW-TOWKG-EQPT

(Cisco ONS 15454, ONS 15310-MA) The Switch to Working Equipment (SW-TOWKG-EQPT) command switches the protected working unit back to working unit.

Usage Guidelines

This command is used for electrical cards (for example, 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 nonrevertive protection group, the unit specified by the AID will raise the transient condition of WKSWBK if the command were executed without an error.

The following actions will return error messages:

- Sending this command to a card that is not in a protection group will return the SNVS (Status, Not in Valid State) error message.
- Sending this command to a missing working card will return the SWFA (Status, Working Unit Failed) error message.
- Sending this command to a protection card will return the IIAC (Input, Invalid Access Identifier) error message.
- Sending a mode parameter with a value other than NORM, FRCD, or null will return the IDNV (Input, Data Not Valid) error message.
- Sending this command to a working card when the working card has raised INHSWWKG will return the SWLD (Status, Working Unit Locked) error message.
- Sending this command to a working card when the protection card has raised INHSWWKG will return the SPLD (Status, Protection Unit Locked) error message.
- Sending this command to an active working card will return the SNVS (Status, Not in Valid State) error message.

Note

- This command only supports the BTH or null value of the DIRN parameter. A command with any other value is considered an incorrect use of the command and will return An IDNV (Input, Data Not Valid) error message.
- This command is not used for the common control (TCC2/TCC2P or XCVT/XC10G) cards. A command on a common control card will return an IIAC (Input, Invalid Access Identifier) error message. To switch the common control cards, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
- This command is not used for SONET (OC-N) cards. A command on a SONET card will return an IIAC (Input, Invalid Access Identifier) error message. To switch a SONET card, use the OPR-PROTNSW and RLS-PROTNSW commands.

Category

Equipment

Security

Maintenance

Input Format

SW-TOWKG-EQPT:[<TID>]:<AID>:<CTAG>::[<MODE>][,<DIRN>];

Input Example

SW-TOWKG-EQPT:CISCO:SLOT-2:123::FRCD,BTH;

Input Parameters

<AID>	Access identifier from the "25.22 PRSLOT" section on page 25-40. 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. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that could make the command fail.
<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. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions

CHAPTER 25

Access Identifiers

This chapter describes the access identifiers (AIDs) of TL1 commands and autonomous messages for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

The AID code directs an input command to its intended physical or data entity inside the network element (NE). Equipment modules and facilities are typical examples of entities addressed by the access code. The AIDs in this section apply to the SONET ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600, except where noted.

25.1 ALL

Table 25-1 ALL

AID	Pattern
AidUnionId	FACILITY
	STS
	VT
AidUnionId1	BLSR
BAND	ALL
	BAND[-{1-8}]-{1-6,12-17}-{1-4}-ALL
	BAND[-{1-8}]-{1-6,12-17}-{1-4}-{RX,TX}
	BAND[-{1-8}]-{1-6,12-17}-{1}-ALL
	BAND[-{1-8}]-{1-6,12-17}-{1}-{RX,TX}
BANDWL	BANDWL-{1-6,12-17}-{1-32}-{RX,TX}-1530.33
	BANDWL-{1-6,12-17}-{1-32}-{RX,TX}-ALL
	BANDWL-[{1-8}-]{1-6,12-17}-{1-32}-{RX,TX,PT}-<WLEN>
	BANDWL-[{1-8}-]{1-6,12-17}-{1-32}-{RX,TX,PT}-ALL

Table 25-1 ALL (continued)

AID	Pattern	
BITS	ALL	
	BITS-ALL	
	BITS[<SHELFID>]-ALL	
	BITS[<SHELFID>]-{1,2}	
	SYNC[<SHELFID>]-BITS{1,2}	
BLSR	BLSR-RINGID	
CHANNEL	ALL	
	CHAN[-{1-8}]-{1-6,12-17}-ALL	
	CHAN[-{1-8}]-{1-6,12-17}-{1-32}-ALL	
	CHAN[-{1-8}]-{1-6,12-17}-{1-32}-{RX,TX}	
	CHAN[-{1-8}]-{1-6,12-17}-{1-4}-ALL	
	CHAN[-{1-8}]-{1-6,12-17}-{1-4}-{RX,TX}	
	CHAN[-{1-8}]-{1-6,12-17}-{2,3}	
	CHAN[-{1-8}]-{1-6,12-17}-{5}	
	CHAN[-{1-8}]-{1-6,12-17}-{9,10}	
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[-{1-8}]-{1-6}
	ENV-IN-ALL	ENV-OUT-ALL
	ENV-IN[-{1-8}]-ALL	ENV-OUT[-{1-8}]-ALL
	ENV-IN[-{1-8}]-{1-20}	ENV-OUT[-{1-8}]-{1-16}
	ENV-IN[-{1-8}]-{1-32}	ENV-OUT[-{1-8}]-{1-2}
	ENV-IN[-{1-8}]-{1-3}	ENV-OUT[-{1-8}]-{1-4}
	ENV-IN[-{1-8}]-{1-4}	ENV-{IN,OUT}[-{1-8}]-{1-16}

Table 25-1 ALL (continued)

AID	Pattern	
EQPT	ALL	PPM[-{1-8}]-{1-4,11-14}-{1-4}-{1-4}
	AIP-ALL	PPM[-{1-8}]-{1-6,12-17}-{1-4}
	AIP[-{1-8}]	PPM[-{1-8}]-{1-6,12-17}-{1-8}
	BIC-ALL	PWR-ALL
	BIC[-{1-8}]-ALL	PWR[-{1-8}]-ALL
	BIC[-{1-8}]-{A,B}	PWR[-{1-8}]-{A,B}
	BP-ALL	SLOT-ALL
	BP[-{1-8}]	SLOT[-{1-8}]-ALL
	FAN-ALL	SLOT[-{1-8}]-{1-14}
	FAN[-{1-8}]	SLOT[-{1-8}]-{1-17}
	PIM[-{1-8}]-{1-4,11-14}-ALL	SLOT[-{1-8}]-{1-2}
	PIM[-{1-8}]-{1-4,11-14}-{1-4}	SLOT[-{1-8}]-{1-4,11-14}
	PPM[-{1-8}]-1-{1,2}	SLOT[-{1-8}]-{1-6,12-17}
	PPM[-{1-8}]-2-{1,2}	SLOT[-{1-8}]-{1-8}
	PPM[-{1-8}]-{1-4,11-14}-{1-4}-ALL	

Table 25-1 ALL (continued)

AID	Pattern	
FACILITY	ALL	FAC[-{1-8}]-{5-6}-{1-3}
	EC1-{1,2,5,6}-{1-3}	FAC[-{1-8}]-{8,10}-{1}
	EC1-{2}-{1-3}	FSTE-{1,2,5,6}-{0-7}
	FAC[-{1-8}]-{1-4,11-14}-ALL	FSTE-{1,2,5,6}-{1-8}
	FAC[-{1-8}]-{1-4,11-14}-{1-16}	FSTE-{1}-{0-7}
	FAC[-{1-8}]-{1-4,11-14}-{1-4}	FSTE-{1}-{1-8}
	FAC[-{1-8}]-{1-4,11-14}-{1-4}-{1-4}-{1}	OC12-{2}-{1-2}-{1}
	FAC[-{1-8}]-{1-4,14-17}-{1-8}	OC12-{3,4}-{1-2}-{1}
	FAC[-{1-8}]-{1-4}-1	OC3-{2}-{1-2}-{1}
	FAC[-{1-8}]-{1-4}-{1-4}	OC3-{3,4}-{1-2}-{1}
	FAC[-{1-8}]-{1-6,12-17}-1	OC48-{3,4}-{1-2}-{1}
	FAC[-{1-8}]-{1-6,12-17}-ALL	T1-{1,2,5,6}-{1-28}
	FAC[-{1-8}]-{1-6,12-17}-{0-11}	T1-{1,2,5,6}-{1-84}
	FAC[-{1-8}]-{1-6,12-17}-{0-1}	T1-{2}-{1-21}
	FAC[-{1-8}]-{1-6,12-17}-{1-12,14,16,18,20,22,24,26,28,30,32,34,36}	T3-{1,2,5,6}-{1-3}
		T3-{2}-{1-3}
	FAC[-{1-8}]-{1-6,12-17}-{1-12,14,16,18,20,22,24}	VFAC-{1,2,5,6}-{0-1}
		VFAC-{1,2,5,6}-{1-8}
	FAC[-{1-8}]-{1-6,12-17}-{1-12}	VFAC[-{1-8}]-{1-4,11-14}-{1-4}-{1-4}-1
	FAC[-{1-8}]-{1-6,12-17}-{1-4}	VFAC[-{1-8}]-{1-6,12-17}-{0-1}
	FAC[-{1-8}]-{1-6,12-17}-{1-6}	VFAC[-{1-8}]-{1-6,12-17}-{1,2}
	FAC[-{1-8}]-{1-6,12-17}-{1}	VFAC[-{1-8}]-{1-6,12-17}-{1,2}-{1,8}
	FAC[-{1-8}]-{1-6}-ALL	VFAC[-{1-8}]-{1}-{0-1}
	FAC[-{1-8}]-{5,6,12,13}-{1}	VFAC[-{1-8}]-{1}-{1-8}
	FAC[-{1-8}]-{5-6}-{1-28}	
IPADDR	111.222.333.444	

Table 25-1 ALL (continued)

AID	Pattern
LINE	LINE[-{1-8}]-{1-6,12-17}-{1-2}-ALL
	LINE[-{1-8}]-{1-6,12-17}-{1-2}-{RX,TX}
	LINE[-{1-8}]-{1-6,12-17}-{1-3}-ALL
	LINE[-{1-8}]-{1-6,12-17}-{1-3}-{RX,TX}
	LINE[-{1-8}]-{8,10}-{1}-ALL
	LINE[-{1-8}]-{8,10}-{1}-{RX,TX}
	LINE-[{1-8}-]{1-6,12-17}-{1}-{RX,TX}(COM)
	LINE-[{1-8}-]{1-6,12-17}-{2}-{RX,TX}(OSC)
	LINE-[{1-8}-]{1-6,12-17}-{3}-{RX,TX}(LINE)
	LINE-[{1-8}-]{1-6,12-17}-{1-3}-ALL
	LINE-[{1-8}-]{1-6,12-17}-{1}-{RX,TX}(LINE)
	LINE-[{1-8}-]{1-6,12-17}-{2}-{RX,TX}(COM)
	LINE-[{1-8}-]{1-6,12-17}-{3}-{RX,TX}(OSC)
	LINE-[{1-8}-]{1-6,12-17}-{4}-{RX,TX}(DC)
	LINE-[{1-8}-]{1-6,12-17}-{1-4}-ALL
	LINE-[{1-8}-]{1-6,12-17}-1-RX (For input OTS)
	LINE-[{1-8}-]{1-6,12-17}-1-ALL
	CHAN-[{1-8}-]{1-6,12-17}-{1-32}-TX (For drop OCH)
	CHAN-[{1-8}-]{1-6,12-17}-{1-32}-ALL
	LINE-[{1-8}-]{1-5,12-16}-{1}-{RX,TX} (EXP)
	LINE-[{1-8}-]{1-5,12-16}-{2}-{RX,TX} (COM)
	LINE-[{1-8}-]{1-5,12-16}-{3}-{TX} (DROP)
	LINE-[{1-8}-]{1-5,12-16}-{1-3}-ALL
	CHAN-[{1-8}-]{1-5,12-16}-{1-32}-{RX} (ADD)
	CHAN-[{1-8}-]{1-5,12-16}-{1-32}-{PT} (PT)
	CHAN-[{1-8}-]{1-5,12-16}-{1-32}-ALL
	LINE-[{1-8}-]{1-6,12-17}-{1}-{RX,TX} (EXP)
	LINE-[{1-8}-]{1-6,12-17}-{2}-{RX,TX} (COM)
	LINE-[{1-8}-]{1-6,12-17}-{3}-{RX,TX} (EXP to other ring)
	LINE-[{1-8}-]{1-6,12-17}-{1-3}-ALL
LINEWL	LINEWL-{1-6,12-17}-{1-32}-{RX,TX}-1530.33
	LINEWL-{1-6,12-17}-{1-32}-{RX,TX}-ALL
	LINEWL-[{1-8}-]{1-6,12-17}-{1-32}-{RX,TX,PT}-<WLEN>
	LINEWL -[{1-8}-]{1-6,12-17}-{1-32}-{RX,TX,PT}-ALL
OSC	OSC-RINGID

Table 25-1 ALL (continued)

AID	Pattern
OPM	ALL
	OPM[-{1-8}]-{1-5,12-16}-<WLEN>
	OPM[-{1-8}]-{1-5,12-16}-ALL
PRSLOT	NULL
	SLOT-1
	SLOT-13
	SLOT-15
	SLOT-17
	SLOT-3
	SLOT-5
RFILE	RFILE-DB
	RFILE-LOG
	RFILE-PKG
	RFILE-COMPDB
SHELF	SHELF-ALL
	SHELF-{1-8}
STS	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}
	FAC-{1-6,12-17}-{1-4}
	STS-{1,2,5,6}-1
	STS-{1,2,5,6}-{1-3}
	STS-{1,2,5,6}-{1-3}-1
	STS-{1-4,11-14}-{1-16}-1
	STS-{1-4,11-14}-{1-16}-ALL
	STS-{1-4,11-14}-{1-16}-{1,13,25,37}
	STS-{1-4,11-14}-{1-16}-{1,25}
	STS-{1-4,11-14}-{1-16}-{1,4,7,10,-,46}
	STS-{1-4,11-14}-{1-4}-1
	STS-{1-4,11-14}-{1-4}-ALL
	STS-{1-4,11-14}-{1-4}-{1,13,25,37,-,181}
	STS-{1-4,11-14}-{1-4}-{1,25,49,73,-,169}
	STS-{1-4,11-14}-{1-4}-{1,4,7,10,-,190}
	STS-{1-4,11-14}-{1-4}-{1,49,97,145}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,13,25,37}

Table 25-1 ALL (continued)

AID	Pattern
STS (continued)	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,25}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,13,16,25,28,37,40}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7,10,13,16,19,22,25,28,31,34,37,40,43,46}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-12}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-3}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-48}
	STS-{1-4,11-14}-{1-4}-{1-192}
	STS-{1-4,11-14}-{1-4}-{1-4}-{1}-ALL
	STS-{1-4,11-14}-{1-4}-{1-4}-{1}-{1,4,7,13,16,19,25,28,31,43}
	STS-{1-4,14-17}-{1-16}-{1-48}
	STS-{1-4,14-17}-{1-4}-1
	STS-{1-4,14-17}-{1-4}-ALL
	STS-{1-4,14-17}-{1-4}-{1,4,7,10}
	STS-{1-4,14-17}-{1-4}-{1,4,7}
	STS-{1-4,14-17}-{1-4}-{1-3}
	STS-{1-4,14-17}-{1-8}-1
	STS-{1-4,14-17}-{1-8}-ALL
	STS-{1-4,14-17}-{1-8}-{1-3}
	STS-{1-4}-1-1
	STS-{1-4}-1-ALL
	STS-{1-4}-1-{1,13,25,37}
	STS-{1-4}-1-{1,4,7,10,-.,46}
	STS-{1-4}-1-{1,4,7,10}
	STS-{1-4}-1-{1,7,13,19,-,43}
	STS-{1-4}-1-{1,7}
	STS-{1-4}-1-{1-12}
	STS-{1-4}-1-{1-48}
	STS-{1-6,12-17}-1
	STS-{1-6,12-17}-1-1
	STS-{1-6,12-17}-1-ALL
	STS-{1-6,12-17}-1-{1,13,25,37}
	STS-{1-6,12-17}-1-{1,4,10,13,16,19,25,28,37,40}
	STS-{1-6,12-17}-1-{1,4,7,10,13,16,19,22,25}

Table 25-1 ALL (continued)

AID	Pattern
STS (continued)	STS-{1-6,12-17}-1-{1,4,7,10-46}
	STS-{1-6,12-17}-1-{1,4,7,10}
	STS-{1-6,12-17}-1-{1,4,7,13,16,19,25,28,37,40,43}
	STS-{1-6,12-17}-1-{1,4,7}
	STS-{1-6,12-17}-1-{1,4}
	STS-{1-6,12-17}-1-{1-12}
	STS-{1-6,12-17}-1-{1-48}
	STS-{1-6,12-17}-ALL
	STS-{1-6,12-17}-{1-12}-1
	STS-{1-6,12-17}-{1-24}-1
	STS-{1-6,12-17}-{1-36}-1
	STS-{1-6,12-17}-{1-4}-1
	STS-{1-6,12-17}-{1-4}-ALL
	STS-{1-6,12-17}-{1-4}-{1,4,7,10-46}
	STS-{1-6,12-17}-{1-4}-{1,4,7}
	STS-{1-6,12-17}-{1-4}-{1,4}
	STS-{1-6,12-17}-{1-4}-{1-12}
	STS-{1-6,12-17}-{1-6}
	STS-{2}-{1-2}-{1}-{1,4,7,10}
	STS-{2}-{1-2}-{1}-{1,7}
	STS-{2}-{1-2}-{1}-{1-12}
	STS-{2}-{1-2}-{1}-{1-3}
	STS-{2}-{1-2}-{1}-{1}
	STS-{2}-{1-3}-{1}
	STS-{2}-{1}
	STS-{3,4}-{1,2}-1-{1-12}
	STS-{3,4}-{1,2}-1-{1-3}
	STS-{3,4}-{1,2}-1-{1-48}
	STS-{5,6,12,13}-1-1
	STS-{5,6,12,13}-1-{1,13,25,37-180}
	STS-{5,6,12,13}-1-{1,13,25,37}
	STS-{5,6,12,13}-1-{1,4,7,10,13,16,19,22,25}
	STS-{5,6,12,13}-1-{1,4,7,10-190}
	STS-{5,6,12,13}-1-{1,4,7,10-46}
	STS-{5,6,12,13}-1-{1,4,7,13,16,19,25,28,37,40,43}

Table 25-1 ALL (continued)

AID	Pattern	
STS (continued)	STS-{5,6,12,13}-1-{1,49,97,145}	
	STS-{5,6,12,13}-1-{1-192}	
	STS-{5,6,12,13}-1-{1-48}	
	STS-{5,6}-1	
	STS-{5,6}-{1-4}-1	
	STS-{5-6}-ALL	
	VFAC-{1-6,12-17}-{0-1}	
SYN	SYNC-NE	
SYN_SRC	BITS-1	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	SYNC-ALL	
	SYNC-NE	
	SYNC-{BITS1,BITS2}	
SYNCSW	INT	
	PRI	
	SEC	
UDC	UDC-{F,DCC}-{A,B}	

Table 25-1 ALL (continued)

AID	Pattern	
VT	VT1-{1,2,5,6}-1-{1-7}-{1-4}	VT1-{2}-{1-2}-{1}-{1-3}-{1-7}-{1-4}
	VT1-{1,2,5,6}-{1-3}-1-{1-7}-{1-4}	VT1-{2}-{1-3}-{1}-{1-7}-{1-4}
	VT1-{1,2,5,6}-{1-3}-{1-7}-{1-4}	VT1-{2}-{1}-{1-7}-{1-3}
	VT1-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-4}	VT1-{3,4}-{1-2}-{1}-{1-12}-{1-7}-{1-4}
	VT1-{1-4}-1-{1-12}-{1-7}-{1-4}	VT1-{3,4}-{1-2}-{1}-{1-3}-{1-7}-{1-4}
	VT1-{1-4}-1-{1-48}-{1-7}-{1-4}	VT1-{3,4}-{1-2}-{1}-{1-48}-{1-7}-{1-4}
	VT1-{1-4}-{1-4}-{1-3}-{1-7}-{1-4}	VT1-{5,6,12,13}-1-{1-192}-{1-7}-{1-4}
	VT1-{1-6,12-17}-1-{1-12}-{1-7}-{1-4}	VT1-{5,6,12,13}-1-{1-48}-{1-7}-{1-4}
	VT1-{1-6,12-17}-1-{1-48}-{1-7}-{1-4}	VT1-{5-6}-1-{1-7}-{1-2}
	VT1-{1-6,12-17}-1-{1-7}-{1-2}	VT1-{5-6}-1-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-12}-1-{1-7}-{1-4}	VT2-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-3}
	VT1-{1-6,12-17}-{1-24}-1-{1-7}-{1-4}	VT2-{1-6,12-17}-1-{1-12}-{1-7}-{1-3}
	VT1-{1-6,12-17}-{1-36}-1-{1-7}-{1-4}	VT2-{1-6,12-17}-1-{1-48}-{1-7}-{1-3}
	VT1-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-4}	VT2-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-3}
	VT1-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-4}	VT2-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-3}
	VT1-{1-6,12-17}-{1-6}-{1-7}-{1-4}	VT2-{5,6,12,13}-1-{1-192}-{1-7}-{1-3}
	VT1-{2}-{1-2}-{1}-{1-12}-{1-7}-{1-4}	VT2-{5,6,12,13}-1-{1-48}-{1-7}-{1-3}
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}	

25.2 AidUnionId

Table 25-2 AidUnionId

AID	Patterns	
Facility	ALL	FAC-{5-6}-{1-3}
	EC1-{1,2,5,6}-{1-3}	FAC-{8,10}-{1}
	EC1-{2}-{1-3}	FSTE-{1,2,5,6}-{0-7}
	FAC-{1-4,11-14}-ALL	FSTE-{1,2,5,6}-{1-8}
	FAC-{1-4,11-14}-{1-16}	FSTE-{1}-{0-7}
	FAC-{1-4,11-14}-{1-4}	FSTE-{1}-{1-8}
	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}	OC12-{2}-{1-2}-{1}
	FAC-{1-4,14-17}-{1-8}	OC12-{3,4}-{1-2}-{1}
	FAC-{1-4}-1	OC3-{2}-{1-2}-{1}
	FAC-{1-4}-{1-4}	OC3-{3,4}-{1-2}-{1}
	FAC-{1-6,12-17}-1	T1-{1,2,5,6}-{1-28}
	FAC-{1-6,12-17}-ALL	T1-{1,2,5,6}-{1-84}
	FAC-{1-6,12-17}-{0-11}	T1-{2}-{1-21}
	FAC-{1-6,12-17}-{0-1}	T3-{1,2,5,6}-{1-3}
	FAC-{1-6,12-17}-{1-12,14,16,18,20,22,24,26,28,30,32,34,36}	T3-{2}-{1-3}
	FAC-{1-6,12-17}-{1-12,14,16,18,20,22,24}	VFAC-{1,2,5,6}-{0-1}
	FAC-{1-6,12-17}-{1-12}	VFAC-{1,2,5,6}-{1-8}
	FAC-{1-6,12-17}-{1-4}	VFAC-{1-4,11-14}-{1-4}-{1-4}-1
	FAC-{1-6,12-17}-{1-6}	VFAC-{1-6,12-17}-{0-1}
	FAC-{1-6,12-17}-{1}	VFAC-{1-6,12-17}-{1,2}
	FAC-{1-6}-ALL	VFAC-{1-6,12-17}-{1,2}-{1,8}
	FAC-{5,6,12,13}-{1}	VFAC-{1}-{0-1}
	FAC-{5-6}-{1-28}	VFAC-{1}-{1-8}

Table 25-2 AidUnionId (continued)

AID	Patterns
STS	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}
	FAC-{1-6,12-17}-{1-4}
	STS-{1,2,5,6}-1
	STS-{1,2,5,6}-{1-3}
	STS-{1,2,5,6}-{1-3}-1
	STS-{1-4,11-14}-{1-16}-1
	STS-{1-4,11-14}-{1-16}-ALL
	STS-{1-4,11-14}-{1-16}-{1,13,25,37}
	STS-{1-4,11-14}-{1-16}-{1,25}
	STS-{1-4,11-14}-{1-16}-{1,4,7,10,-,46}
	STS-{1-4,11-14}-{1-4}-1
	STS-{1-4,11-14}-{1-4}-ALL
	STS-{1-4,11-14}-{1-4}-{1,13,25,37,-,181}
	STS-{1-4,11-14}-{1-4}-{1,25,49,73,-,169}
	STS-{1-4,11-14}-{1-4}-{1,4,7,10,-,190}
	STS-{1-4,11-14}-{1-4}-{1,49,97,145}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,13,25,37}

Table 25-2 AidUnionId (continued)

AID	Patterns
STS (continued)	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,25}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,13,16,25,28,37,40}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7,10,13,16,19,22,25,28,31,34,37,40,43,46}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-12}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-3}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-48}
	STS-{1-4,11-14}-{1-4}-{1-192}
	STS-{1-4,11-14}-{1-4}-{1-4}-{1}-ALL
	STS-{1-4,11-14}-{1-4}-{1-4}-{1}-{1,4,7,13,16,19,25,28,31,43}
	STS-{1-4,14-17}-{1-16}-{1-48}
	STS-{1-4,14-17}-{1-4}-1
	STS-{1-4,14-17}-{1-4}-ALL
	STS-{1-4,14-17}-{1-4}-{1,4,7,10}
	STS-{1-4,14-17}-{1-4}-{1,4,7}
	STS-{1-4,14-17}-{1-4}-{1-3}
	STS-{1-4,14-17}-{1-8}-1
	STS-{1-4,14-17}-{1-8}-ALL
	STS-{1-4,14-17}-{1-8}-{1-3}
	STS-{1-4}-1-1
	STS-{1-4}-1-ALL
	STS-{1-4}-1-{1,13,25,37}
	STS-{1-4}-1-{1,4,7,10,-.,46}
	STS-{1-4}-1-{1,4,7,10}
	STS-{1-4}-1-{1,7,13,19,-,43}
	STS-{1-4}-1-{1,7}
	STS-{1-4}-1-{1-12}
	STS-{1-4}-1-{1-48}
	STS-{1-6,12-17}-1
	STS-{1-6,12-17}-1-1
	STS-{1-6,12-17}-1-ALL
	STS-{1-6,12-17}-1-{1,13,25,37}
	STS-{1-6,12-17}-1-{1,4,10,13,16,19,25,28,37,40}
	STS-{1-6,12-17}-1-{1,4,7,10,13,16,19,22,25}

Table 25-2 AidUnionId (continued)

AID	Patterns
STS (continued)	STS-{1-6,12-17}-1-{1,4,7,10-46}
	STS-{1-6,12-17}-1-{1,4,7,10}
	STS-{1-6,12-17}-1-{1,4,7,13,16,19,25,28,37,40,43}
	STS-{1-6,12-17}-1-{1,4,7}
	STS-{1-6,12-17}-1-{1,4}
	STS-{1-6,12-17}-1-{1-12}
	STS-{1-6,12-17}-1-{1-48}
	STS-{1-6,12-17}-ALL
	STS-{1-6,12-17}-{1-12}-1
	STS-{1-6,12-17}-{1-24}-1
	STS-{1-6,12-17}-{1-36}-1
	STS-{1-6,12-17}-{1-4}-1
	STS-{1-6,12-17}-{1-4}-ALL
	STS-{1-6,12-17}-{1-4}-{1,4,7,10-46}
	STS-{1-6,12-17}-{1-4}-{1,4,7}
	STS-{1-6,12-17}-{1-4}-{1,4}
	STS-{1-6,12-17}-{1-4}-{1-12}
	STS-{1-6,12-17}-{1-6}
	STS-{2}-{1-2}-{1}-{1,4,7,10}
	STS-{2}-{1-2}-{1}-{1,7}
	STS-{2}-{1-2}-{1}-{1-12}
	STS-{2}-{1-2}-{1}-{1-3}
	STS-{2}-{1-2}-{1}-{1}
	STS-{2}-{1-3}-{1}
	STS-{2}-{1}
	STS-{3,4}-{1,2}-1-{1-12}
	STS-{3,4}-{1,2}-1-{1-3}
	STS-{3,4}-{1,2}-1-{1-48}
	STS-{5,6,12,13}-1-1
	STS-{5,6,12,13}-1-{1,13,25,37-180}
	STS-{5,6,12,13}-1-{1,13,25,37}
	STS-{5,6,12,13}-1-{1,4,7,10,13,16,19,22,25}
	STS-{5,6,12,13}-1-{1,4,7,10-190}
	STS-{5,6,12,13}-1-{1,4,7,10-46}
	STS-{5,6,12,13}-1-{1,4,7,13,16,19,25,28,37,40,43}

Table 25-2 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-{1,2,5,6}-1-{1-7}-{1-4}
	VT1-{1,2,5,6}-{1-3}-1-{1-7}-{1-4}
	VT1-{1,2,5,6}-{1-3}-{1-7}-{1-4}
	VT1-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-4}
	VT1-{1-4}-1-{1-12}-{1-7}-{1-4}
	VT1-{1-4}-1-{1-48}-{1-7}-{1-4}
	VT1-{1-4}-{1-4}-{1-3}-{1-7}-{1-4}
	VT1-{1-6,12-17}-1-{1-12}-{1-7}-{1-4}
	VT1-{1-6,12-17}-1-{1-48}-{1-7}-{1-4}
	VT1-{1-6,12-17}-1-{1-7}-{1-2}
	VT1-{1-6,12-17}-{1-12}-1-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-24}-1-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-36}-1-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-6}-{1-7}-{1-4}
	VT1-{2}-{1-2}-{1}-{1-12}-{1-7}-{1-4}
	VT1-{2}-{1-2}-{1}-{1-3}-{1-7}-{1-4}
	VT1-{2}-{1-3}-{1}-{1-7}-{1-4}
	VT1-{2}-{1}-{1-7}-{1-3}
	VT1-{3,4}-{1-2}-{1}-{1-12}-{1-7}-{1-4}
	VT1-{3,4}-{1-2}-{1}-{1-3}-{1-7}-{1-4}
	VT1-{3,4}-{1-2}-{1}-{1-48}-{1-7}-{1-4}
	VT1-{5,6,12,13}-1-{1-192}-{1-7}-{1-4}
	VT1-{5,6,12,13}-1-{1-48}-{1-7}-{1-4}

Table 25-2 AidUnionId (continued)

AID	Patterns
VT (continued)	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}

25.3 AidUnionId1

Table 25-3 AidUnionId1

AID	Patterns
BLSR	ALL
	BLSR-RINGID

25.4 BAND

(Cisco ONS 15454 only) The BAND AID is used to access Optical Multiplex Section (OMS) layer of optical networking units.

Table 25-4 BAND

Pattern	Description
ALL	All of the OMSs of the NE. The ALL AID is applicable for retrieve-only commands.
BAND[-{1-8}]-{1-6,12-17}-{1-4}-ALL	All the channels in a Band OADM (1Bn, 4Bn) unit.
BAND[-{1-8}]-{1-6,12-17}-{1-4}-{RX,TX}	The Receive/Transmit channels in a Band OADM (1Bn, 4Bn) unit.
BAND[-{1-8}]-{1-6,12-17}-{1}-ALL	All the channels in an Optical Multiplexer/Demultiplexer (4Ch) unit.
BAND[-{1-8}]-{1-6,12-17}-{1}-{RX,TX}	The Receive/Transmit channels in an Optical Multiplexer/Demultiplexer (4Ch) unit.

25.5 BANDWL

Band wavelength. Identifies a wavelength channel included in any of the lower layer OMS facilities.

Table 25-5 BANDWL

Pattern	Description
BANDWL-{1-6,12-17}-{1-32}-{RX,TX}-1530.33	Identifies an allocated wavelength channel included in any of the lower layer OMS facilities.
BANDWL-{1-6,12-17}-{1-32}-{RX,TX}-ALL	Identifies all of the allocated wavelength channels included in any of the lower layer OMS facilities.
BANDWL-[{1-8}-]{1-6,12-17}-{1-32}-{RX,TX,PT}-<WLEN>	OCH is the termination point of OCHNC connections and it is also used to report alarms and conditions eventually notified by the node connection anomalies. Because the end points of an OCHNC connection can be both at the OCH filter level and at the node LINE OTS single wavelength level, this logical termination is useful to represent univocally a wavelength termination independently by the physical port it is contained in. The format is CHAN-[SHELF]-[SLOT]-[PORT]-[PORTDIRECTION]-[WAVELENGTH (in the form of 15xx.yy)]
BANDWL-[{1-8}-]{1-6,12-17}-{1-32}-{RX,TX,PT}-ALL	OCH is the termination point of OCHNC connections and it is also used to report alarms and conditions eventually notified by the node connection anomalies. Because the end points of an OCHNC connection can be both at the OCH filter level and at the node LINE OTS single wavelength level, this logical termination is useful to represent univocally a wavelength termination independently by the physical port it is contained in. The format is CHAN-[SHELF]-[SLOT]-[PORT]-[PORTDIRECTION]-[WAVELENGTH (in the form of 15xx.yy)]

25.6 BITS

AID for building integrated timing supply (BITS).

Table 25-6 BITS

Pattern	Description
ALL	The ALL AID is applicable to RTRV commands only (RTRV-BITS and RTRV-ALM/COND-BITS). The All AID is equivalent to BITS-ALL for these commands. For RTRV-ALM/COND-SYNCN, the ALL AID translates to BITS-ALL, SYNC-BITS1, and SYNC-BITS2.
BITS-ALL	BITS AIDS of both BITS-1 and BITS-2 in the RTRV-BITS command.
BITS[<SHELFID>]-ALL	BITS shelf ID of both BITS-1 and BITS-2 in the RTRV-BITS command.

Table 25-6 BITS (continued)

Pattern	Description
BITS[<SHELFID>]-{1,2}	Individual BITS AID. **Note** ONS 15310-CL does not support BITS-2.
SYNC[<SHELFID>]-BITS{1,2}	BITS-OUT AIDs of BITS-1 and BITS-2. These AIDs are applicable only in ED/RTRV-BITS commands and are used for setting and retrieving the BITS-OUT parameters. **Note** ONS 15310-CL does not support SYNC-BITS-2.

25.7 BLSR

(ONS 15454, ONS 15327, ONS 15600) BLSR AIDs are used to access the specific BLSR of the NE.

Table 25-7 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).

25.8 CHANNEL

(Cisco ONS 15454 only) Accesses the optical channels (OCH) layer of optical networking units.

Table 25-8 CHANNEL

Value	Description
ALL	ALL OCHs of the NE. The ALL AID is applicable for retrieve-only commands.
CHAN[-{1-8}]-{1-6,12-17}-ALL	All the channels of an Optical Transponder/Muxponder. The format is CHAN-[SLOT]-ALL
CHAN[-{1-8}]-{1-6,12-17}-{1-32}-ALL	All the channels in an Optical Multiplexer/Demultiplexer/WSS (32Ch) unit. The format is CHAN-[SHELF]-[SLOT]-[PORT]-ALL
CHAN[-{1-8}]-{1-6,12-17}-{1-32}-{RX,TX}	The Receive/Transmit channels in an Optical Multiplexer/Demultiplexer (32Ch) units. The format is CHAN-[SHELF]-[SLOT]-[PORT]-[DIRECTION]
CHAN[-{1-8}]-{1-6,12-17}-{1-32}-{RX,PT}	The Receive/Passthrough channels in an Optical WSS (32Ch) units. The format is CHAN-[SHELF]-[SLOT]-[PORT]-[DIRECTION]
CHAN[-{1-8}]-{1-6,12-17}-{1-4}-ALL	All the Channels in an OADM (1Ch, 2Ch, 4Ch) units and Optical Multiplexer/Demultiplexer (4Ch) units. The format is CHAN-[SHELF]-[SLOT]-[PORT]-ALL
CHAN[-{1-8}]-{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-[SHELF]-[SLOT]-[PORT]-[DIRECTION]

Table 25-8 CHANNEL (continued)

Value	Description
CHAN[-{1-8}]-{1-6,12-17}-{2,3}	A single channel of an Optical Transponder/Muxponder. The TXP_MR_10G, TXP_MR_10E, and TXP_MR_2.5G use CHAN-[SHELF]-SLOT-2 for the 1 DWDM Facility. TXPP_MR_2.5G uses CHAN-[SHELF]-SLOT-{2,3} for the 2 DWDM Facilities. The format is CHAN-[SHELF]-[SLOT]-[PORT]
CHAN[-{1-8}]-{1-6,12-17}-{5}	A single channel of an Optical Muxponder. The TXP_MR_10G and TXP_MR_10E use CHAN-[SHELF]-SLOT-5 for the 1 DWDM facility. The TXP_MR_10G uses the CHAN-[SHELF]-SLOT-5 for the 1 DWDM facility. The format is CHAN-[SHELF]-[SLOT]-[PORT]
CHAN[-{1-8}]-{1-6,12-17}-{9,10}	A single channel of an Optical Muxponder. The MXP_MR_10DME_C and MXP_2.5G_10G use CHAN-[SHELF]-SLOT-9 for the 1 DWDM Facility. The MXPP_2.5G_10G uses CHAN-[SHELF]-SLOT-{9,10} for the 2 DWDM Facilities. The format is CHAN-[SHELF]-[SLOT]-[PORT]

25.9 COM

Common

Table 25-9 COM

Pattern	Description
COM	Common

25.10 CrossConnectId

Table 25-10 CrossConnect Id

Pattern	Description	
FACILITY	ALL	FAC-{5-6}-{1-3}
	EC1-{1,2,5,6}-{1-3}	FAC-{8,10}-{1}
	EC1-{2}-{1-3}	FSTE-{1,2,5,6}-{0-7}
	FAC-{1-4,11-14}-ALL	FSTE-{1,2,5,6}-{1-8}
	FAC-{1-4,11-14}-{1-16}	FSTE-{1}-{0-7}
	FAC-{1-4,11-14}-{1-4}	FSTE-{1}-{1-8}
	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}	OC12-{2}-{1-2}-{1}
	FAC-{1-4,14-17}-{1-8}	OC12-{3,4}-{1-2}-{1}
	FAC-{1-4}-1	OC3-{2}-{1-2}-{1}
	FAC-{1-4}-{1-4}	OC3-{3,4}-{1-2}-{1}
	FAC-{1-6,12-17}-1	T1-{1,2,5,6}-{1-28}
	FAC-{1-6,12-17}-ALL	T1-{1,2,5,6}-{1-84}
	FAC-{1-6,12-17}-{0-11}	T1-{2}-{1-21}
	FAC-{1-6,12-17}-{0-1}	T3-{1,2,5,6}-{1-3}
	FAC-{1-6,12-17}-{1-12,14,16,18,20,22,24,26,28,30,32,34,36}	T3-{2}-{1-3}
	FAC-{1-6,12-17}-{1-12,14,16,18,20,22,24}	VFAC-{1,2,5,6}-{0-1}
	FAC-{1-6,12-17}-{1-12}	VFAC-{1,2,5,6}-{1-8}
	FAC-{1-6,12-17}-{1-4}	VFAC-{1-4,11-14}-{1-4}-{1-4}-1
	FAC-{1-6,12-17}-{1-6}	VFAC-{1-6,12-17}-{0-1}
	FAC-{1-6,12-17}-{1}	VFAC-{1-6,12-17}-{1,2}
	FAC-{1-6}-ALL	VFAC-{1-6,12-17}-{1,2}-{1,8}
	FAC-{5,6,12,13}-{1}	VFAC-{1}-{0-1}
	FAC-{5-6}-{1-28}	VFAC-{1}-{1-8}

Table 25-10 CrossConnect Id (continued)

Pattern	Description
STS	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}
	FAC-{1-6,12-17}-{1-4}
	STS-{1,2,5,6}-1
	STS-{1,2,5,6}-{1-3}
	STS-{1,2,5,6}-{1-3}-1
	STS-{1-4,11-14}-{1-16}-1
	STS-{1-4,11-14}-{1-16}-ALL
	STS-{1-4,11-14}-{1-16}-{1,13,25,37}
	STS-{1-4,11-14}-{1-16}-{1,25}
	STS-{1-4,11-14}-{1-16}-{1,4,7,10,-,46}
	STS-{1-4,11-14}-{1-4}-1
	STS-{1-4,11-14}-{1-4}-ALL
	STS-{1-4,11-14}-{1-4}-{1,13,25,37,-,181}
	STS-{1-4,11-14}-{1-4}-{1,25,49,73,-,169}
	STS-{1-4,11-14}-{1-4}-{1,4,7,10,-,190}
	STS-{1-4,11-14}-{1-4}-{1,49,97,145}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,13,25,37}

Table 25-10 CrossConnect Id (continued)

Pattern	Description
STS (continued)	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,25}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,13,16,25,28,37,40}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7,10,13,16,19,22,25,28,31,34,37,40,43,46}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-12}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-3}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-48}
	STS-{1-4,11-14}-{1-4}-{1-192}
	STS-{1-4,11-14}-{1-4}-{1-4}-{1}-ALL
	STS-{1-4,11-14}-{1-4}-{1-4}-{1}-{1,4,7,13,16,19,25,28,31,43}
	STS-{1-4,14-17}-{1-16}-{1-48}
	STS-{1-4,14-17}-{1-4}-1
	STS-{1-4,14-17}-{1-4}-ALL
	STS-{1-4,14-17}-{1-4}-{1,4,7,10}
	STS-{1-4,14-17}-{1-4}-{1,4,7}
	STS-{1-4,14-17}-{1-4}-{1-3}
	STS-{1-4,14-17}-{1-8}-1
	STS-{1-4,14-17}-{1-8}-ALL
	STS-{1-4,14-17}-{1-8}-{1-3}
	STS-{1-4}-1-1
	STS-{1-4}-1-ALL
	STS-{1-4}-1-{1,13,25,37}
	STS-{1-4}-1-{1,4,7,10,-.,46}
	STS-{1-4}-1-{1,4,7,10}
	STS-{1-4}-1-{1,7,13,19,-,43}
	STS-{1-4}-1-{1,7}
	STS-{1-4}-1-{1-12}
	STS-{1-4}-1-{1-48}
	STS-{1-6,12-17}-1
	STS-{1-6,12-17}-1-1
	STS-{1-6,12-17}-1-ALL
	STS-{1-6,12-17}-1-{1,13,25,37}
	STS-{1-6,12-17}-1-{1,4,10,13,16,19,25,28,37,40}
	STS-{1-6,12-17}-1-{1,4,7,10,13,16,19,22,25}

Table 25-10 CrossConnect Id (continued)

Pattern	Description
STS (continued)	STS-{1-6,12-17}-1-{1,4,7,10-46}
	STS-{1-6,12-17}-1-{1,4,7,10}
	STS-{1-6,12-17}-1-{1,4,7,13,16,19,25,28,37,40,43}
	STS-{1-6,12-17}-1-{1,4,7}
	STS-{1-6,12-17}-1-{1,4}
	STS-{1-6,12-17}-1-{1-12}
	STS-{1-6,12-17}-1-{1-48}
	STS-{1-6,12-17}-ALL
	STS-{1-6,12-17}-{1-12}-1
	STS-{1-6,12-17}-{1-24}-1
	STS-{1-6,12-17}-{1-36}-1
	STS-{1-6,12-17}-{1-4}-1
	STS-{1-6,12-17}-{1-4}-ALL
	STS-{1-6,12-17}-{1-4}-{1,4,7,10-46}
	STS-{1-6,12-17}-{1-4}-{1,4,7}
	STS-{1-6,12-17}-{1-4}-{1,4}
	STS-{1-6,12-17}-{1-4}-{1-12}
	STS-{1-6,12-17}-{1-6}
	STS-{2}-{1-2}-{1}-{1,4,7,10}
	STS-{2}-{1-2}-{1}-{1,7}
	STS-{2}-{1-2}-{1}-{1-12}
	STS-{2}-{1-2}-{1}-{1-3}
	STS-{2}-{1-2}-{1}-{1}
	STS-{2}-{1-3}-{1}
	STS-{2}-{1}
	STS-{3,4}-{1,2}-1-{1-12}
	STS-{3,4}-{1,2}-1-{1-3}
	STS-{3,4}-{1,2}-1-{1-48}
	STS-{5,6,12,13}-1-1
	STS-{5,6,12,13}-1-{1,13,25,37-180}
	STS-{5,6,12,13}-1-{1,13,25,37}
	STS-{5,6,12,13}-1-{1,4,7,10,13,16,19,22,25}
	STS-{5,6,12,13}-1-{1,4,7,10-190}
	STS-{5,6,12,13}-1-{1,4,7,10-46}
	STS-{5,6,12,13}-1-{1,4,7,13,16,19,25,28,37,40,43}

Table 25-10 CrossConnect Id (continued)

Pattern	Description
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}

25.11 CrossConnectId1

Table 25-11 CrossConnectId1

AID	Pattern
VCM	VCM-{1,2,5,6}-{0-1}-{1-256}
	VCM-{1,2,5,6}-{1-8}-{1-256}
	VCM-{1-6,12-17}-{0-1}-ALL
	VCM-{1-6,12-17}-{0-1}-{1-256}
	VCM-{1-6,12-17}-{1-4}-ALL
	VCM-{1-6,12-17}-{1-4}-{1-256

Table 25-11 CrossConnectId1 (continued)

AID	Pattern	
FACILITY	ALL	FAC-{5-6}-{1-3}
	EC1-{1,2,5,6}-{1-3}	FAC-{8,10}-{1}
	EC1-{2}-{1-3}	FSTE-{1,2,5,6}-{0-7}
	FAC-{1-4,11-14}-ALL	FSTE-{1,2,5,6}-{1-8}
	FAC-{1-4,11-14}-{1-16}	FSTE-{1}-{0-7}
	FAC-{1-4,11-14}-{1-4}	FSTE-{1}-{1-8}
	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}	OC12-{2}-{1-2}-{1}
	FAC-{1-4,14-17}-{1-8}	OC12-{3,4}-{1-2}-{1}
	FAC-{1-4}-1	OC3-{2}-{1-2}-{1}
	FAC-{1-4}-{1-4}	OC3-{3,4}-{1-2}-{1}
	FAC-{1-6,12-17}-1	T1-{1,2,5,6}-{1-28}
	FAC-{1-6,12-17}-ALL	T1-{1,2,5,6}-{1-84}
	FAC-{1-6,12-17}-{0-11}	T1-{2}-{1-21}
	FAC-{1-6,12-17}-{0-1}	T3-{1,2,5,6}-{1-3}
	FAC-{1-6,12-17}-{1-12,14,16,18,20,22,24,26,28,30,32,34,36}	T3-{2}-{1-3}
	FAC-{1-6,12-17}-{1-12,14,16,18,20,22,24}	VFAC-{1,2,5,6}-{0-1}
	FAC-{1-6,12-17}-{1-12}	VFAC-{1,2,5,6}-{1-8}
	FAC-{1-6,12-17}-{1-4}	VFAC-{1-4,11-14}-{1-4}-{1-4}-1
	FAC-{1-6,12-17}-{1-6}	VFAC-{1-6,12-17}-{0-1}
	FAC-{1-6,12-17}-{1}	VFAC-{1-6,12-17}-{1,2}
	FAC-{1-6}-ALL	VFAC-{1-6,12-17}-{1,2}-{1,8}
	FAC-{5,6,12,13}-{1}	VFAC-{1}-{0-1}
	FAC-{5-6}-{1-28}	VFAC-{1}-{1-8}

Table 25-11 CrossConnectId1 (continued)

AID	Pattern
STS	FAC-{1-4,11-14}-{1-4}-{1-4}-{1}
	FAC-{1-6,12-17}-{1-4}
	STS-{1,2,5,6}-1
	STS-{1,2,5,6}-{1-3}
	STS-{1,2,5,6}-{1-3}-1
	STS-{1-4,11-14}-{1-16}-1
	STS-{1-4,11-14}-{1-16}-ALL
	STS-{1-4,11-14}-{1-16}-{1,13,25,37}
	STS-{1-4,11-14}-{1-16}-{1,25}
	STS-{1-4,11-14}-{1-16}-{1,4,7,10,-,46}
	STS-{1-4,11-14}-{1-4}-1
	STS-{1-4,11-14}-{1-4}-ALL
	STS-{1-4,11-14}-{1-4}-{1,13,25,37,-,181}
	STS-{1-4,11-14}-{1-4}-{1,25,49,73,-,169}
	STS-{1-4,11-14}-{1-4}-{1,4,7,10,-,190}
	STS-{1-4,11-14}-{1-4}-{1,49,97,145}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,13,25,37}

Table 25-11 CrossConnectId1 (continued)

AID	Pattern
STS (continued)	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,25}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,13,16,25,28,37,40}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7,10,13,16,19,22,25,28,31,34,37,40,43,46}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-12}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-3}
	STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-48}
	STS-{1-4,11-14}-{1-4}-{1-192}
	STS-{1-4,11-14}-{1-4}-{1-4}-{1}-ALL
	STS-{1-4,11-14}-{1-4}-{1-4}-{1}-{1,4,7,13,16,19,25,28,31,43}
	STS-{1-4,14-17}-{1-16}-{1-48}
	STS-{1-4,14-17}-{1-4}-1
	STS-{1-4,14-17}-{1-4}-ALL
	STS-{1-4,14-17}-{1-4}-{1,4,7,10}
	STS-{1-4,14-17}-{1-4}-{1,4,7}
	STS-{1-4,14-17}-{1-4}-{1-3}
	STS-{1-4,14-17}-{1-8}-1
	STS-{1-4,14-17}-{1-8}-ALL
	STS-{1-4,14-17}-{1-8}-{1-3}
	STS-{1-4}-1-1
	STS-{1-4}-1-ALL
	STS-{1-4}-1-{1,13,25,37}
	STS-{1-4}-1-{1,4,7,10,-.,46}
	STS-{1-4}-1-{1,4,7,10}
	STS-{1-4}-1-{1,7,13,19,-,43}
	STS-{1-4}-1-{1,7}
	STS-{1-4}-1-{1-12}
	STS-{1-4}-1-{1-48}
	STS-{1-6,12-17}-1
	STS-{1-6,12-17}-1-1
	STS-{1-6,12-17}-1-ALL
	STS-{1-6,12-17}-1-{1,13,25,37}
	STS-{1-6,12-17}-1-{1,4,10,13,16,19,25,28,37,40}
	STS-{1-6,12-17}-1-{1,4,7,10,13,16,19,22,25}

Table 25-11 CrossConnectId1 (continued)

AID	Pattern
STS (continued)	STS-{1-6,12-17}-1-{1,4,7,10-46}
	STS-{1-6,12-17}-1-{1,4,7,10}
	STS-{1-6,12-17}-1-{1,4,7,13,16,19,25,28,37,40,43}
	STS-{1-6,12-17}-1-{1,4,7}
	STS-{1-6,12-17}-1-{1,4}
	STS-{1-6,12-17}-1-{1-12}
	STS-{1-6,12-17}-1-{1-48}
	STS-{1-6,12-17}-ALL
	STS-{1-6,12-17}-{1-12}-1
	STS-{1-6,12-17}-{1-24}-1
	STS-{1-6,12-17}-{1-36}-1
	STS-{1-6,12-17}-{1-4}-1
	STS-{1-6,12-17}-{1-4}-ALL
	STS-{1-6,12-17}-{1-4}-{1,4,7,10-46}
	STS-{1-6,12-17}-{1-4}-{1,4,7}
	STS-{1-6,12-17}-{1-4}-{1,4}
	STS-{1-6,12-17}-{1-4}-{1-12}
	STS-{1-6,12-17}-{1-6}
	STS-{2}-{1-2}-{1}-{1,4,7,10}
	STS-{2}-{1-2}-{1}-{1,7}
	STS-{2}-{1-2}-{1}-{1-12}
	STS-{2}-{1-2}-{1}-{1-3}
	STS-{2}-{1-2}-{1}-{1}
	STS-{2}-{1-3}-{1}
	STS-{2}-{1}
	STS-{3,4}-{1,2}-1-{1-12}
	STS-{3,4}-{1,2}-1-{1-3}
	STS-{3,4}-{1,2}-1-{1-48}
	STS-{5,6,12,13}-1-1
	STS-{5,6,12,13}-1-{1,13,25,37-180}
	STS-{5,6,12,13}-1-{1,13,25,37}
	STS-{5,6,12,13}-1-{1,4,7,10,13,16,19,22,25}
	STS-{5,6,12,13}-1-{1,4,7,10-190}
	STS-{5,6,12,13}-1-{1,4,7,10-46}
	STS-{5,6,12,13}-1-{1,4,7,13,16,19,25,28,37,40,43}

Table 25-11 CrossConnectId1 (continued)

AID	Pattern
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-{1,2,5,6}-1-{1-7}-{1-4}
	VT1-{1,2,5,6}-{1-3}-1-{1-7}-{1-4}
	VT1-{1,2,5,6}-{1-3}-{1-7}-{1-4}
	VT1-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-4}
	VT1-{1-4}-1-{1-12}-{1-7}-{1-4}
	VT1-{1-4}-1-{1-48}-{1-7}-{1-4}
	VT1-{1-4}-{1-4}-{1-3}-{1-7}-{1-4}
	VT1-{1-6,12-17}-1-{1-12}-{1-7}-{1-4}
	VT1-{1-6,12-17}-1-{1-48}-{1-7}-{1-4}
	VT1-{1-6,12-17}-1-{1-7}-{1-2}
	VT1-{1-6,12-17}-{1-12}-1-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-24}-1-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-36}-1-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-4}
	VT1-{1-6,12-17}-{1-6}-{1-7}-{1-4}
	VT1-{2}-{1-2}-{1}-{1-12}-{1-7}-{1-4}
	VT1-{2}-{1-2}-{1}-{1-3}-{1-7}-{1-4}
	VT1-{2}-{1-3}-{1}-{1-7}-{1-4}
	VT1-{2}-{1}-{1-7}-{1-3}
	VT1-{3,4}-{1-2}-{1}-{1-12}-{1-7}-{1-4}
	VT1-{3,4}-{1-2}-{1}-{1-3}-{1-7}-{1-4}
	VT1-{3,4}-{1-2}-{1}-{1-48}-{1-7}-{1-4}
	VT1-{5,6,12,13}-1-{1-192}-{1-7}-{1-4}
	VT1-{5,6,12,13}-1-{1-48}-{1-7}-{1-4}

25.12 DS1

(Cisco ONS 15454 only) Used to access the DS-1 frame layer of the DS3XM. The format is DS1-[SLOT]-[DS3PORT]-[DS1PORT].

Table 25-12 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}-{1-2 8}	DS1 AIDs for the DS3XM-12 card STS48 backplane rate. The format is DS1-[SLOT]-[DS3PORT]-[DS1PORT]. Ports 1–12 are always available and odd ports after 12 are available. **Note** The DS3XM-12 even DS3Ports (after 12) are valid DS3XM-12 DS1 AIDs, which are applied on DS3XM-12 TCA autonomous events (REPT EVT DS1) only. **Note** The DS3XM-12 even DS3Ports (after 12) are not valid DS3XM-12 DS1 AIDs for all DS3XM-12 DS1 provisioning/retrieval non-TCA event commands.
DS1-{1-6,12-17}-{1-12,13,15,17, 19,21,23}-{1-28}	DS1 AIDs for DS3XM-12 card STS48 backplane rate. The format is DS1-[SLOT]-[DS3PORT]-[DS1PORT]. Ports 1–12 are always available and odd ports after 12 are available **Note** The DS3XM-12 even DS3Ports (after 12) are valid DS3XM-12 DS1 AIDs, which are applied on DS3XM-12 TCA autonomous events (REPT EVT DS1) only. **Note** The DS3XM-12 even DS3Ports (after 12) are not valid DS3XM-12 DS1 AIDs for all DS3XM-12 DS1 provisioning/retrieval non-TCA event commands.
DS1-{1-6,12-17}-{1-6}-{1-28}	DS1 AIDs for DS3XM-6 cards. Format is DS1-[SLOT]-[DS3PORT]-[DS1PORT].

25.13 ENV

The environmental AID for the AIC-I cards.“IN” is used for environmental alarms. “OUT” is used for environmental controls.

Table 25-13 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, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.
ENV-IN[-{1-8}]-ALL	Environmental AID for ALL multishelf environmental alarms
ENV-IN[-{1-8}]-{1-3}	(ONS 15310-CL only) Environmental alarm AID for the ONS 15310-CL.
ENV-IN[-{1-8}]-{1-4}	(ONS 15454 only) Environmental alarm AID for the AIC-I card on the ONS 15454.
ENV-IN[-{1-8}]-{1-6}	(ONS 15327 only) Environmental alarm AID for the ONS 15327.
ENV-IN[-{1-8}]-{1-16}	(ONS 15454 only) Environmental alarm AID on the ONS 15454.
ENV-IN[-{1-8}]-{1-20}	(ONS 15454 only) Environmental alarm AID for the AIC-I card on the ONS 15454.

Table 25-13 ENV (continued)

Pattern	Description
ENV-IN[-{1-8}]-{1-32}	(ONS 15454 and ONS 15310-MA) Environmental alarm AID for AIC-I card extensions on the ONS 15454. Environmental alarm AID for the ONS 15310-MA.
ENV-{IN,OUT}[-{1-8}]-{1-16}	ENV-IN-{1-16} is used for environmental alarm AIDs. ENV-OUT-{1-16} is used for external control AIDs.
ENV-OUT-ALL	All environmental control output contacts.
ENV-OUT[-{1-8}]-ALL	Environmental AID for AIC-I cards. “OUT” is used for environmental controls
ENV-OUT[-{1-8}]-{1-2}	Environmental control AID for the ONS 15327 and ONS 15310-CL.
ENV-OUT[-{1-8}]-{1-4}	(ONS 15454 only) Environmental control AID for the AIC-I cards on the ONS 15454.
ENV-OUT[-{1-8}]{1-9}	(ONS 15310-MA) Environmental control AID for the ONS 15310-MA.
ENV-OUT[-{1-8}]-{1-16}	(ONS 15454 only) Environmental control AID for AIC-I card extensions on the ONS 15454.

25.14 EQPT

Equipment AIDs are used to access specific cards.

In the ONS 15454, the OC-48/OC-192 cards are only used in Slots 5, 6, 12, and 13.

In the ONS 15327, Slots 1 through 4 are for multiservice cards (Ethernet and optical cards). Slots 5 and 6 are for XTC cards, and Slots 7 and 8 are for MIC cards.

In the ONS 15600, Slots 1 through 4 and Slots 11 through 14 are used for optical cards. Slots 5 and 10 are reserved for the TSC cards. Slots 6, 7, 8, and 9 are reserved for the SSXC cards.

In the ONS 15310-CL, Slot-1 is used for I/O cards. Slot-2 is the 15310-CL-CTX card.

In the ONS 15310-MA, Slots 1, 2, 5, and 6 are used for I/O Cards. Slots 3 and 4 are reserved for the CTX2500 card.

Table 25-14 EQPT

Pattern	Description
AIP-[-{1-8}]	(ONS 15454 only) The AID for the alarm interface panel (AIP). It is used for RTRV-INV output only.
AIP-ALL	(ONS 15454 only) The AID for all of the AIPs in any shelf of the node. It is used for RTRV-INV output only.
ALL	Only used for RTRV-INV, RTRV-EQPT, and RTRV-ALM/COND-EQPT commands. RTRV-INV returns all the inventory information for the NE. The ONS 15454 includes the multiservice cards, common control cards, and the AIP, BP, and FAN. The ONS 15327 includes the multiservice cards and common control 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 and conditions.
BIC-ALL	AIDs for the backplane interface connectors (BICs), BIC-A and BIC-B. These AIDs are valid only for the RTRV-ALM-EQPT and RTRV-COND-EQPT commands.

Table 25-14 EQPT (continued)

Pattern	Description
BIC-[-{1-8}]-ALL	AIDs for the backplane interface connectors (BICs), BIC-A and BIC-B of a single shelf in a multishelf node. These AIDs are valid only for the RTRV-ALM-EQPT and RTRV-COND-EQPT commands.
BIC[-{1-8}]-{A,B}	AIDs for the BICs. These AIDs are valid only for the RTRV-ALM-EQPT and RTRV-COND-EQPT commands.
BP[-{1-8}]	(ONS 15454 and ONS 15310-MA) The AID for the backplane. It is used for RTRV-INV output only.
BP-ALL	(ONS 15454 and ONS 15310-MA) The AID for all of the backplanes in any shelf on the multishelf node. It is used for RTRV-INV output only.
FAN[-{1-8}]	The AID for the fan tray. It is used for RTRV-INV output only.
FAN-{1-3}	The fan AID for the ONS 15600.
FAN-ALL	The AID for all of the fan tray in all the shelves of a multishelf node. It is used for RTRV-INV output only.
PIM-{1-4,11-14}-ALL	(ONS 15600 only) Pluggable interface module. Applicable to RTRV-EQPT and RTRV-INV commands pertaining to the ASAP card. Format is PIM-[SLOT]-[PIM]-[PPM].
PIM-{1-4,11-14}-{1-4}	(ONS 15600 only) Pluggable interface module. Applicable for ENT/ED/RTRV/DLT-EQPT and RTRV-INV commands pertaining to the ASAP card. Format is PPM-[SLOT]-[PIM]-[PPM].
PPM-2-{1,2}	(ONS 15310-CL only) Pluggable port module AID for the ML-100T-8 and CE-100T-8 cards. Format is PPM-[SLOT]-[PPM].
PPM-{1-4,11-14}-{1-4}-1	(ONS 15600) Pluggable Port Module for the ONS 15600 ASAP card only. For ENT/ED/RTRV/DLT-EQPT and RTRV-INV commands pertaining to the ASAP card single port PIM. Format is PPM-[SLOT]-[PIM]-[PPM]
PPM[-{1-8}]-{1-4,11-14}-{1-4}-ALL	PPM AID. Applicable for the RTRV-EQPT and RTRV-INV commands pertaining to the ASAP card. Format is PPM-[SLOT]-[PIM]-[PPM].
PPM[-{1-8}]-{1-4,11-14}-{1-4}-{1-4}	PPM AID. Applicable for the ENT/ED/RTRV/DLT-EQPT and RTRV-INV commands pertaining to the ASAP card. Format is PPM-[SLOT]-[PIM]-[PPM].
PPM-{1-6,12-17}-1	PPM for the OC192-XFP card. Format is PPM-[SLOT]-[PPM].
PPM-{1-6,12-17}-{1-12}	PPM for the MRC-12 card. Format is PPM-[SLOT]-[PPM].
PPM[-{1-8}]-{1-6,12-17}-{1-4}	PPM AID for dense wavelength division multiplexing (DWDM) MXP_2.5G_10G, TXP_MR_10G, TXP_MR_2.5G, TXPP_MR_2.5G, MXP_2.5G_10E, and TXP_MR_10E cards. Format of AID is PPM-[SLOT]-[PPM].
PPM[-{1-8}]-{1-6,12-17}-{1-8}	(ONS 15454 only) PPM AID for the MXP_MR_2.5G and MXPP_MR_2.5G cards. Format of AID is PPM-[SLOT]-[PPM].
PPM-{3,4}-{1,2}	(ONS 15310-MA only) PPM AID for the ONS 15310-MA. Format 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[-{1-8}]-{A,B}	AIDs for the power supply sources. These AIDs are valid only for the RTRV-ALM-EQPT and RTRV-COND-EQPT commands.
PWR[-{1-8}]-ALL	AIDs for all of the power supply sources. These AIDs are valid only for the RTRV-ALM-EQPT and RTRV-COND-EQPT commands.

Table 25-14 EQPT (continued)

Pattern	Description
SLOT-ALL	All of the NE equipment AIDs.
SLOT[-{1-8}]-{1-14}	(ONS 15600 only) EQPT AID where the format is SLOT-[SLOT].
SLOT[-{1-8}]-{1-17}	(ONS 15454 only) EQPT AID where the format is SLOT-[SLOT].
SLOT[-{1-8}]-{1-2}	(ONS 15310-CL only) EQPT AID where the format is SLOT-[SLOT].
SLOT[-{1-8}]-{1-4,11-14}	(ONS 15600 only) Optical slots.
SLOT[-{1-8}]-{1-6,12-17}	(ONS 15454 only) Individual equipment AID of the multiservice card units or slots where the format is SLOT-[SLOT].
SLOT-{1-6}	(ONS 15310-MA only) EQPT AID where the format is SLOT-SLOT
SLOT[-{1-8}]-{1-8}	(ONS 15327 only) EQPT AID where the format is SLOT-[SLOT].

25.15 FACILITY

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) Facility AIDs are used to access specific ports.

Note Because the ONS 15310-CL and ONS 15310-MA support more than one type of facility per slot, the FAC-AID format is not supported. The formats Tn-, EC1- , and OCn- are used instead.

ONS 15454, ONS 15327, and ONS 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 packet-over-SONET (POS) ports: VFAC-[SLOT]-[PORT]
- Format for POS ports with PIMs and PPMs: VFAC-[SLOT]-[PIM]-[PPM]-[PORT]

ONS 15310-CL and ONS 15310-MA Facility AID format:

- Format for optical facilities without PPMs: OCn-[SLOT]-[PORT]
- Format for optical facilities with PPMs: 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 25-15 FACILITY

Pattern	Description
ALL	The ALL AID is applicable for RTRV-only commands (RTRV-rr type of commands), for example, RTRV-OC48 with the ALL AID returns all OC48 facilities on the node. RTRV-T1 with the ALL AID returns all T1 facilities on the node.
EC1-{1,2,5,6}-{1-3}	(ONS 15310-MA only) Facility AIDs for EC1 ports where the format is EC1-SLOT-PORT.
EC1-{2}-{1-3}	(ONS 15310-CL only) Facility AID for EC1 ports on the 15310-CL-CTX card, where the format is EC1-[SLOT]-[PORT].
FAC[-{1-8}]-{1-4,11-14}-ALL	(ONS 15600 only) Facility AID for all optical cards or slots, where the format is FAC-[SLOT]-ALL.
FAC[-{1-8}]-{1-4,11-14}-{1-16}	(ONS 15600 only) Facility AID for the 16-port OC-48, where the format is FAC-[SLOT]-[PORT].
FAC[-{1-8}]-{1-4,11-14}-{1-4}	(ONS 15600 only) Facility AID for the 4-port OC-192, where the format is FAC-[SLOT]-[PORT].
FAC[-{1-8}]-{1-4,11-14}-{1-4}-{1-4}-{1}	Facility AID for the ASAP card with PIM and PPM. The format is FAC-[SLOT]-[PIM]-[PPM]-[PORT].
FAC[-{1-8}]-{1-4,14-17}-{1-8}	(ONS 15454 only) Facility AID for an OC3-8 card, where the format is FAC-[SLOT]-[PORT].
FAC[-{1-8}]-{1-4}-1	(ONS 15327 only) Facility AID for OC12 and OC-48 cards, where the format is FAC-[SLOT]-[PORT].
FAC[-{1-8}]-{1-4}-{1-4}	(ONS 15327 only) Facility AID for the 4-port OC-3 card, where the format is FAC-[SLOT]-[PORT].
FAC[-{1-8}]-{1-6,12-17}-1	(ONS 15454 only) Facility AID for the 1 Client (CLNT) port on a TXP_MR_10G, TXP_MR_2.5G, TXP_MR_2.5G, or TXPP_MR_2.5G card, where the format is FAC-[SLOT]-[PORT].
FAC[-{1-8}]-{1-6,12-17}-ALL	(ONS 15454 only) All the facilities of an multiservice unit or slot, where the format is FAC-[SLOT]-[ALL].
FAC[-{1-8}]-{1-6,12-17}-{0-11}	(ONS 15454 only) Facility AID for the Ethernet front-end ports on the ML-100T-12 card. Ports are numbered starting with 0. The first port is FAC-SLOT-0, the second port is FAC-SLOT-1, and so on. The last port is FAC-SLOT-11. The format is FAC-[SLOT]-[PORT].
FAC[-{1-8}]-{1-6,12-17}-{0-1}	(ONS 15454 only) Facility AID for the Ethernet back-end ports on the ML1000-2 card. Ports are numbered starting with 0. The first port is FAC-SLOT-0 and the second port is FAC-SLOT-1). The format is FAC-[SLOT]-[PORT].
FAC-{1-6,12-17}-{1-8}	(ONS 15454 only) Facility AID for the Ethernet front-end ports on the CE-100T-8 card The format is FAC-[SLOT]-[PORT].
FAC-{1-6,12-17}-{0-11}	Facility AID for the Ethernet front-end ports on the MS-ISC-100T The first port is FAC-SLOT-0, the second port is FAC-SLOT-1, and so on. The last port is FAC-SLOT-11. The format is FAC-[SLOT]-[PORT].
FAC[-{1-8}]-{1-6,12-17}-{1-12, 14,16,18,20,22,24,26,28,30,32,34, 36}	Facility AID for the DS3XM-12 STS48 backplane rate, where the format is FAC-[SLOT]-[PORT]. Ports 1 through 12 are always available, but only even ports greater than 12 are available.

Table 25-15 FACILITY (continued)

Pattern	Description
FAC[-{1-8}]-{1-6,12-17}-{1-12, 14,16,18,20,22,24}	Facility AID for DS3XM-12 STS12 backplane, rate where the format is FAC-[SLOT]-[PORT]. Ports 1 through 12 are always available, but only even ports greater than 12 are available.
FAC[-{1-8}]-{1-6,12-17}-{1-12}	(ONS 15454 only) Facilities AID for the EC1 and DS3 cards, where the format is FAC-[SLOT]-[PORT].
FAC[-{1-8}]-{1-6,12-17}-{1-4}	(ONS 15454 only) Facility AID for the four Client (CLNT) facilities on the MXP_2.5G_10G card. Facility AID for 4-port G1000/FC_MR-4 card. Facility AID for creating/editing cross-connects (STS1/VC3, STS3C/VC4, STS6C/VC4-2C, STS9C/VC4-3C, STS12C/VC4-4C, and STS24C/VC4-8C) for the 4-port G1000/FC_MR-4 card, where the format is FAC-[SLOT]-[PORT].
FAC[-{1-8}]-{1-6,12-17}-{1-6}	(ONS 15454 only) Facility AID for the DS3XM card, where the format FAC-[SLOT]-[PORT].
FAC[-{1-8}]-{1-6,12-17}-{1}	(ONS 15454 only) Facility AID for a single-port OC12, OC48AS and OC3 in OSC-CSM cards. Facility AID for the client ports on the muxponder (MXP) and transponder (TXP) cards, where the format is FAC-[SLOT]-[PORT].
FAC[-{1-8}]-{1-6}-ALL	(ONS 15327 only) Facility AID for multiservice units or slots, where the format is FAC-[SLOT]-[ALL].
FAC[-{1-8}]-{5,6,12,13}-{1}	(ONS 15454 only) Facility AID for the OC48/OC192 cards. The OC48/OC192 cards can only use Slots 5, 6, 12, and 13), where the format is FAC-[SLOT]-[PORT].
FAC[-{1-8}]-{5-6}-{1-28}	(ONS 15327 only) Facility AID for the T1 ports on the XTC-28-3 card, where the format is FAC-[SLOT]-[PORT].
FAC[-{1-8}]-{5-6}-{1-3}	(ONS 15327 only) Facility AID on the TR ports in the XTC-28-3 card, where the format is FAC-[SLOT]-[PORT]
FAC[-{1-8}]-{8,10}-{1}	(ONS 15454 only) Facility AID for the OSCM card. The OSCM cards can use only the XC slots (Slot 8, Slot 10), where the format is FAC-[SLOT]-[PORT].
FSTE-{1,2,5,6}-{0-7}	(ONS 15310-MA only) Facility AID for front-end ports on the CE-100T-8 card on when provisioned in L2/L3 mode. The format is FSTE-SLOT-PORT. Port numbering is 0-based.
FSTE-{1,2,5,6}-{1-8}	(ONS 15310-MA only) Facility AID for front-end ports on the ML-100T-8 card on when provisioned in Mapper mode. The format is FSTE-SLOT-PORT. Port numbering is 1-based.
FSTE-{1}-{0-7}	(ONS 15310-CL only) Facility AID for front-end ports on the ML-100T-8 card when provisioned in L2L3 mode. The format is FSTE-[SLOT]-[PORT]. Port numbering starts at 0.
FSTE-{1}-{1-8}	(ONS 15310-CL only) Facility AID for front-end ports on the CE-100T-8 card when provisioned in Mapper mode. The format is FSTE-[SLOT]-[PORT]. Port numbering starts at 1.
OC12-{2}-{1-2}-{1}	(ONS 15310-CL only) Facility AID for OC12 ports on the 15310-CL-CTX card, where the format is OC12-[SLOT]-[PPM]-[PORT].
OC12-{3,4}-{1-2}-{1}	(ONS 15310-MA only) Facility AID for OC12 ports where the format is OC12-SLOT-PPM-PORT.
OC3-{2}-{1-2}-{1}	(ONS 15310-CL only) Facility AID for OC3 ports on the 15310-CL-CTX card, where the format is OC3-[SLOT]-[PPM]-[PORT].

Table 25-15 FACILITY (continued)

Pattern	Description
OC3-{3,4}-{1-2}-{1}	(ONS 15310-MA only) Facility AID for the OC3 ports where the format is OC3-SLOT-PPM-PORT.
OC48-{3,4}-{1-2}-{1}	(ONS 15310-MA only) Facility AID for the OC48 ports where the format is OC48-SLOT-PPM-PORT.
T1-{1,2,5,6}-{1-28}	(ONS 15310-MA only) Facility AID for the T1 ports on the DS1-28/DS3-EC1-3 card where the format is T1-SLOT-PORT.
T1-{1,2,5,6}-{1-84}	(ONS 15310-MA only) Facility AID for the DS1-84/DS3-EC1-3 card where the format is T1-SLOT-PORT
T1-{2}-{1-21}	(ONS 15310-CL only) Facility AID for T1 ports on the 15310-CL-CTX card, where the format is T1-[SLOT]-[PORT].
T3-{1,2,5,6}-{1-3}	(ONS 15310-MA only) Facility AID for the DS3 ports on both the DS1-28/DS3-EC1-3 and DS1-84/DS3-EC1-3 cards where the format is T3-SLOT-PORT.
T3-{2}-{1-3}	(ONS 15310-CL only) Facility AIDs for T3 ports on the 15310-CL-CTX card, where the format is T3-[SLOT]-[PORT].
VFAC-{1,2,5,6}-{0-1}	(ONS 15310-MA only) Facility AID for the back-end ports on the ML-100T-8 card when provisioned in L2/L3 mode. The format is VFAC-SLOT-PORT. Port numbering is 0-based.
VFAC-{1,2,5,6}-{1-8}	(ONS 15310-MA only) Facility AID for the back-end ports of the CE-100T-8 card when provisioned in Mapper mode. The format is VFAC-SLOT-PORT. Port numbering is 1-based.
VFAC[-{1-8}]-{1-4,11-14}-{1-4}-{1-4}-1	(ONS 15600 only) Facility AID for the back-end POS ports on the L1P_ETHERNET PORT on an ASAP card, where the format is VFAC-[SLOT]-[PIM]-[PPM]-[PORT].
VFAC[-{1-8}]-{1-6,12-17}-{0-1}	(ONS 15454 only) Facility AID for the back-end POS ports on the ML-Series cards. Port numbering is 0-based (first POS port is VFAC-SLOT-0, second POS port is VFAC-SLOT-1). VC4, VC4-2C, VC4-3C, VC4-4C, and VC4-8C for the ML1000 and ML100T cards. Format is VFAC-[SLOT]-[PORT].
VFAC[-{1-8}]-{1-6,12-17}-{1,2}	Generic framing procedure (GFP) facility AIDS on the MXP-MR-2.5G and MXPP-MR-2.5G cards.
VFAC[-{1-8}]-{1-6,12-17}-{1,2}-{1,8}	GFP client facility AIDS for MXP-MR-2.5G and MXPP-MR-2.5G cards.
VFAC[-{1-8}]-{1}-{0-1}	(ONS 15310-CL only) Facility AIDs for back-end ports on the ML-100T-8 card when provisioned in L2L3 mode. Format is VFAC-[SLOT]-[PORT]. Port numbering starts at 0.
VFAC[-{1-8}]-{1}-{1-8}	(ONS 15310-CL only) Facility AID for back-end ports on the ML-100T-8 card when provisioned in L2L3 mode. Format is VFAC-[SLOT]-[PORT]. Port numbering starts at 1.
FAC[-{1-30}]-{1-4,14-17}-{1-4}	Facility AID for four Ether Ports on the CE1000 card.
VFAC[-{1-30}]-{1-4,14-17}-{1-4}	Facility AID for the back-end ports on the CE1000 card.

25.16 IPADDR

IP Address

Table 25-16 IPADDR

Pattern	Description
111.222.333.444	Standard 4-part IP address notation
ALL	ALL

25.17 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 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 25-17 LINE

Values	Description
ALL	All of the OTSs of the NE. The ALL AID applies for retrieve-only commands.
LINE-{1-6,12-17}-{1-2}-ALL	All the lines in an OPT-PRE, OCS-CSM, AD-1B, AD-4B, AD-1C, AD-2C, or AD-4C unit.
LINE-{1-6,12-17}-{1-2}-{RX,TX}	The receive/transmit lines in an OPT-PRE, OCS-CSM, AD-1B, AD-4B, AD-1C, AD-2C, or AD-4C unit.
LINE-{1-6,12-17}-{1-3}-{RX,TX}	The receive/transmit lines in an OPT-BST unit.
LINE-{8,10}-{1}-ALL	All the lines in OSCM units.
LINE-{8,10}-{1}-{RX,TX}	The receive/transmit lines in OSCM units.
LINE-[{1-8}-]{1-6,12-17}-{1}-{RX,TX}	For Booster units, there is an input OTS for LINE(1) and an output OTS (Amplified) for amplification stage COM(2), 2 OTS for input line COM(2) and output LINE(1) and 2 OTS for OSC(3) Add & Drop service channel.
LINE-[{1-8}-]{1-6,12-17}-{2}-{RX,TX}	
LINE-[{1-8}-]{1-6,12-17}-{3}-{RX,TX}	
LINE-[{1-8}-]{1-6,12-17}-{1-3}-ALL	
LINE-[{1-8}-]{1-6,12-17}-{1}-{RX,TX}	Pre-Amplifier unit with 2 stages of amplification; input OTS for LINE(1) and an output OTS (Amplified) for amplification stage COM(2), 2 OTS for input line COM(2) and output LINE(1) and 2 OTS for OSC(3) Add & Drop service channel and output and an input OTS for the DCU(2).
LINE-[{1-8}-]{1-6,12-17}-{2}-{RX,TX}	
LINE-[{1-8}-]{1-6,12-17}-{3}-{RX,TX}	
LINE-[{1-8}-]{1-6,12-17}-{4}-{RX,TX}	
LINE-[{1-8}-]{1-6,12-17}-{1-4}-ALL	

Table 25-17 LINE (continued)

Values	Description
LINE-[{1-8}-]{1-6,12-17}-1-RX For input OTS	For demux units there is an OTS for input line, and up to 32 OCH for drop channel connectors. Demux is a unidirectional unit.
LINE-[{1-8}-]{1-6,12-17}-1-ALL	
CHAN-[{1-8}-]{1-6,12-17}-{1-32}-TX For Drop OCH	
CHAN-[{1-8}-]{1-6,12-17}-{1-32}-ALL	
LINE-[{1-8}-]{1-5,12-16}-{1}-{RX,TX} (EXP)	Wavelength switch selector unit has input and output OTS for signal coming from amplifier units COM(2), input and output OTS for signal continuing to next WSS unit in the node EXP(1) and an output PT(3) drop port for the signal continuing to 32-DMX-L card. It also has 32 internal OCH pass-through channels (PT) and 32 external input channels (ADD). This unit is 2 slots sized.
LINE-[{1-8}-]{1-5,12-16}-{2}-{RX,TX} (COM)	
LINE-[{1-8}-]{1-5,12-16}-{3}-{TX} (DROP)	
LINE-[{1-8}-]{1-5,12-16}-{1-3}-ALL	
CHAN-[{1-8}-]{1-5,12-16}-{1-32}-{RX} (ADD)	
CHAN-[{1-8}-]{1-5,12-16}-{1-32}-{PT} (PT)	
CHAN-[{1-8}-]{1-5,12-16}-{1-32}-ALL	
LINE-[{1-8}-]{1-6,12-17}-{1}-{RX,TX} (EXP)	Multiring/mesh unit has 6 OTS connectors: 2 are the input and output OTS for signal coming from amplifier units COM(1), the other are for the split 50/50 signal continuing to AD, MUX/DEMUX, WSS unit. Because the incoming signal is split into 2 separate signals, there are two sets of input and output EXP port (2 and 3).
LINE-[{1-8}-]{1-6,12-17}-{2}-{RX,TX} (COM)	
LINE-[{1-8}-]{1-6,12-17}-{3}-{RX,TX} (EXP to other ring)	
LINE-[{1-8}-]{1-6,12-17}-{1-3}-ALL	

25.18 LINEWL

Line wavelength. Identifies a wavelength channel included in any of the lower layer OTS facilities.

Table 25-18 LINEWL

Values	Description
LINEWL-{1-6,12-17}-{1-32}-{RX,TX}-1530.33	Identifies an allocated wavelength channel included in any of the lower layer OTS facilities.
LINEWL-{1-6,12-17}-{1-32}-{RX,TX}-ALL	Identifies all of the allocated wavelength channels included in any of the lower layer OTS facilities.

Table 25-18 LINEWL (continued)

Values	Description
LINEWL-[{1-8}-]{1-6,12-17}-{1-32}-{RX,TX,PT}-<WLEN>	OCH is the termination point of OCHNC connections and it is also used to report alarms and conditions eventually notified by the node connection anomalies. Because the end points of an OCHNC connection can be both at the OCH filter level and at the node LINE OTS single wavelength level, this logical termination is useful to represent univocally a wavelength termination independently by the physical port it is contained in. The format is CHAN-[SHELF]-[SLOT]-[PORT]-[PORTDIRECTION]-[WAVELENGTH (in the form of 15xx.yy)].
LINEWL -[{1-8}-]{1-6,12-17}-{1-32}-{RX,TX,PT}-ALL	OCH is the termination point of OCHNC connections and it is also used to report alarms and conditions eventually notified by the node connection anomalies. Because the end points of an OCHNC connection can be both at the OCH filter level and at the node LINE OTS single wavelength level, this logical termination is useful to represent univocally a wavelength termination independently by the physical port it is contained in. The format is CHAN-[SHELF]-[SLOT]-[PORT]-[PORTDIRECTION]-[WAVELENGTH (in the form of 15xx.yy)].

25.19 LNKTERM

Link termination AIDs are used to access the termination points of a provisionable patchcord.

Table 25-19 LNKTERM

Pattern	Description
ALL	Indicates all the provisionable patchcord terminations on a node. Applicable only for the retrieve commands.
LNKTERM-ALL	Indicates all the provisionable patchcord terminations on a node. Applicable only for the retrieve commands.
LNKTERM-{1-65535}	Indicates a single provisionable patchcord termination point on a node, where the format is LNKTERM-.

25.20 OPM

OPM AIDs represent the single wavelength inside an optical power monitoring object.

Table 25-20 OPM

Values	Description
ALL	The first ID represents the shelf, the second ID represents the slot, and the last ID is the wavelength, represented in the form of 15xx.yy nanometers. The last index of the wavelength is the value of the wavelength as described in OPTICAL_WLEN.
OPM[-{1-8}]-{1-5,12-16}-ALL	
OPM[-{1-8}]-{1-5,12-16}-<wlen>	

25.21 OSC

(Cisco ONS 15454 only) OSC AIDs are used to access the OSC of the NE.

Table 25-21 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).

25.22 PRSLOT

(Cisco ONS 15454 only) Valid protection slots for the electrical cards.

Table 25-22 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.

25.23 RFILE

(ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA) File transfer type.

Table 25-23 RFILE

Pattern	Description
RFILE-DB	Transferring the provisioning database.
RFILE-LOG	Transferring a log file.

Table 25-23 RFILE

RFILE-PKG	Transferring a software package.
RFILE-COMPDB	Transferring the provisioning and system database.

25.24 SHELF

(ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA) Identifies a shelf within a node. SHELF is applicable only to nodes that are set to MULTISHELF or MULTISHELFETH mode.

Table 25-24 SHELF

Pattern	Description
SHELF-ALL	All of the shelves in the node.
SHELF-{1-8}	A specific shelf in the node (shelf 1 through 8).

25.25 STS

SONET frame-level AID set:

- STS AID format for optical and EC1 facilities without PPM: STS-[SLOT]-[PORT]-[STS]
- STS AID format for optical facilities with PPMs: STS-[SLOT]-[PPM]-[PORT]-[STS]
- STS AID format for optical facilities with PIMs and PPMs: STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS]
- STS AID format for DS1 electrical facilities: STS-[SLOT]-[STS]
- STS AID format for DS3 (except DS3i) electrical facilities: STS-[SLOT]-[PORT]-[STS]
- STS AID format for DS3i electrical facilities: STS-[SLOT]-[STS]
- STS AID format for G1K-4 card Gigabit Ethernet (GIGE) facilities: FAC-[SLOT]-[PORT]

Table 25-25 STS

Pattern	Description
ALL	The ALL AID applies to the RTRV-only commands: RTRV-STS with the ALL AID retrieves all STS interfaces on the NE. RTRV-STS1 with ALL AID retrieves all STS1 interfaces on the NE. RTRV-STS3c with ALL AID retrieves all STS3c interfaces on the NE.
FAC-{1-4,11-14}-{1-4}-{1-4}-{1}	Dynamically allocated STSs of all widths for the GIGE port on an ASAP card. Format is FAC-[SLOT]-[PIM]-[PPM]-[PORT].
FAC-{1-6,12-17}-{1-4}	(ONS 15454 only) Dynamically allocated STSs of all widths for the G1K-4 card. Format is FAC-[SLOT]-[PORT]
STS-{1,2,5,6}-1	(ONS 15310-MA only) STS1 AID for the T1 ports on the DS1-28/DS3-EC1-3 card where the format IS STS-SLOT-STS. There is only one STS for all T1 ports on this card.

Table 25-25 STS (continued)

Pattern	Description
STS-{1,2,5,6}-{1-3}	(ONS 15310-MA (ONS 15310-MA) STS1 AID for the T1 ports on the DS1-84/DS3-EC1-3 card where the format is STS-SLOT-STS. STS1 maps to ports 1–28. STS2 maps to ports 29–56. STS3 maps to ports 57–84.
STS-{1,2,5,6}-{1-3}-1	(ONS 15310-MA only) STS1 AID for the T3/EC1 ports on the DS1-28/DS3-EC1-28 and DS1-84/DS3-EC1-3 cards. The format is STS-SLOT-PORT-STS. STS's are port-based.
STS-{1-4,11-14}-{1-16}-1	(ONS 15600 only) STS48c AID for 16-port OC48 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,11-14}-{1-16}-ALL	(ONS 15600 only) All STSs of all path widths on the 16-port OC48 card. Format is STS-[SLOT]-[PORT]-ALL.
STS-{1-4,11-14}-{1-16}-{1,13,25,37}	(ONS 15600 only) STS12C AID for the 16-port OC48 card. Format is STS-[SLOT]-[PORT]-ALL.
STS-{1-4,11-14}-{1-16}-{1,25}	(ONS 15600 only) STS24C AID for the 16-port OC48 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,11-14}-{1-16}-{1,4,7,10,-,46}	(ONS 15600 only) STS3c AID for the 16-port OC48 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-1	(ONS 15600 only) STS192c AID for the 4-port OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-ALL	(ONS 15600 only) All STSs of all path widths on the 4-port OC192 card. Format is STS-[SLOT]-[PORT]-ALL.
STS-{1-4,11-14}-{1-4}-{1,13,25,37,-,181}	(ONS 15600 only) STS12c AID for the 4-port OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,25,49,73,-,169}	(ONS 15600 only) STS24c AID for the 4-port OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4,7,10,-,190}	(ONS 15600 only) STS3c AID for the 4-port OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,49,97,145}	(ONS 15600 only) STS48c AID for the 4-port OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}	StS3c AID for the ASAP card with an OC3 port provisioned. STS12C AID for the ASAP card with an OC12 port provisioned. STS48C AID for the ASAP card with OC48 port provisioned. Format of AID is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,13,25,37}	STS12C AID for the ASAP card with an OC48 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,25}	STS24C AID for the ASAP card with an OC48 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,13,16, 25,28,37,40}	STS9C AID for the ASAP card with an OC48 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7,10,13,16,19, 22,25,28,31,34,37,40,43,46}	STS3C AID for the ASAP card with an OC48 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7}	STS6C AID for the ASAP card with an OC12 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].

Table 25-25 STS (continued)

Pattern	Description
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4}	STS9C AID for the ASAP card with an OC12 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-12}	STS1 AID for the ASAP card with an OC12 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-3}	STS1 AID for the ASAP card with an OC3 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-48}	STS1 AID for the ASAP card with an OC48 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1-192}	(ONS 15600 only) STS1 AID for the 4-port OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1-4}-{1}-ALL	STS1, STS3C, STS6C, STS9C, STS12C, STS24C, and STS48C AID for the ASAP card with an OCN port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1-4}-{1}-{1,4,7,13,16,19,25, 28,31,43}	STS6C AID for the ASAP card with an OC48 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,14-17}-{1-16}-{1-48}	(ONS 15600 only) STS1 AID for the 16-port OC48 card Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,14-17}-{1-4}-1	(ONS 15454 only) STS12C AIDs for a 4-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,14-17}-{1-4}-ALL	(ONS 15454 only) All the STSs for a given 4-port OC12 card. Format is STS-[SLOT]-[PORT]-ALL.
STS-{1-4,14-17}-{1-4}-{1,4,7,10}	(ONS 15454 only) STS3C for the 4-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,14-17}-{1-4}-{1,4,7}	(ONS 15454 only) STS6C AIDs for a 4-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,14-17}-{1-4}-{1-3}	(ONS 15454 only) STS1 AID for the 4-port OC3 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,14-17}-{1-8}-1	(ONS 15454 only) STS3C for the 8-port OC3 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4,14-17}-{1-8}-ALL	(ONS 15454 only) All the STSs for a given 8-port OC3 card. Format is STS-[SLOT]-[PORT]-ALL.
STS-{1-4,14-17}-{1-8}-{1-3}	(ONS 15454 only) STS1 AID for the 8-port OC3 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4}-1-1	(ONS 15327 only) STS48c AID for a single-port OC48 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4}-1-ALL	(ONS 15327 only) STS ALL AID for a single-port card. Format is STS-[SLOT]-ALL.
STS-{1-4}-1-{1,13,25,37}	(ONS 15327 only) STS12c AID for a single-port OC48 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4}-1-{1,4,7,10,-.,46}	(ONS 15327 only) STS3c AID for a single-port OC48 card. Format is STS-[SLOT]-[PORT]-[STS].

Table 25-25 STS (continued)

Pattern	Description
STS-{1-4}-1-{1,4,7,10}	(ONS 15327 only) STS3c AID for 4-port OC3 or a single-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4}-1-{1,7,13,19,-,43}	(ONS 15327 only) STS6c AID for a single-port OC48 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4}-1-{1,7}	(ONS 15327 only) STS6c AID for a single-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4}-1-{1-12}	(ONS 15327 only) STS1 AID for 4-port OC3 card or a single-port OC12. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-4}-1-{1-48}	(ONS 15327 only) STS1 AID for a single-port OC48. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1	(ONS 15454 only) STS1 AID for a DS1 card. Format is STS-[SLOT]-[STS]. There is only 1 STS for the DS1 card.
STS-{1-6,12-17}-1-1	(ONS 15454 only) STS12C AID for a single-port OC12 card STS48C AID for an OC48AS card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1-ALL	(ONS 15454 only) All the STSs of an STS bandwidth on a single port optical card. Format is STS-[SLOT]-[PORT]-ALL.
STS-{1-6,12-17}-1-{1,13,25,37}	(ONS 15454 only) STS12C AIDs for an OC48AS card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-{1,4,10,13,16,19,25,28,37,40}	(ONS 15454 only) STS9C AID for an OC48AS card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1-{1,4,7,10,13,16,19,22,25}	(ONS 15454 only) STS24C AID for an OC48AS card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1-{1,4,7,10-46}	(ONS 15454 only) STS3C AID for an OC48AS card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1-{1,4,7,10}	(ONS 15454 only) STS3C AID for a single-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1-{1,4,7,13,16,19,25,28,37,40,43}	(ONS 15454 only) STS6C AID for an OC48AS card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1-{1,4,7}	(ONS 15454 only) STS6C AID for an OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1-{1,4}	(ONS 15454 only) STS9C AID for a single-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1-{1-12}	(ONS 15454 only) STS1 AID for a single-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-1-{1-48}	(ONS 15454 only) STS1 AID for an OC48AS card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-ALL	(ONS 15454 only) STS ALL AID for the card in the given slot. Format is STS-[SLOT]-[ALL].
STS-{1-6,12-17}-{1-12}-1	(ONS 15454 only) STS1 AID for EC1 and DS3 cards. Format is STS-[SLOT]-[PORT]-[STS].

Table 25-25 STS (continued)

Pattern	Description
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	(ONS 15454 only) STS3C AID for a 4-port OC3 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-{1-4}-ALL	(ONS 15454 only) All the STSs for a 4-port OC3 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-{1-4}-{1,4,7,10-46}	Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-{1-4}-{1,4,7}	(ONS 15454 only) STS6c AID for a 4-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-{1-4}-{1,4}	(ONS 15454 only) STS9C AID for a 4-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-{1-4}-{1-12}	(ONS 15454 only) STS1 AID for a 4-port OC12 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{1-6,12-17}-{1-6}	(ONS 15454 only) STS1 AID for a DS3XM card. Format is STS-[SLOT]-[STS].
STS-{2}-{1-2}-{1}-{1,4,7,10}	(ONS 15310-CL only) STS3c AID for the OC12 port. Format is STS-[SLOT]-[PPM]-[PORT]-[STS].
STS-{2}-{1-2}-{1}-{1,7}	(ONS 15310-CL only) STS6c AID for the OC12 port. Format is STS-[SLOT]-[PPM]-[PORT]-[STS].
STS-{2}-{1-2}-{1}-{1-12}	(ONS 15310-CL only) STS1 AID for the OC12 port. Format is STS-[SLOT]-[PPM]-[PORT]-[STS].
STS-{2}-{1-2}-{1}-{1-3}	STS1 AID for the OC3 port. Format is STS-[SLOT]-[PPM]-[PORT]-[STS].
STS-{2}-{1-2}-{1}-{1}	(ONS 15310-CL only) STS3c AID for the OC3 port, or STS9C AID for the OC12 port, or STS12c AID for the OC12 port. Format is STS-[SLOT]-[PPM]-[PORT]-[STS].
STS-{2}-{1-3}-{1}	(ONS 15310-CL only) STS1 AID for the 15310-CL-CTX T3 ports. Format is STS-[SLOT]-[PORT]-[STS]. The AIDs are port-based and presented as one STS per port.
STS-{2}-{1}	(ONS 15310-CL only) STS1 AID for the 15310-CL-CTX T1 port. Format is STS-[SLOT]-[STS]. There is only one STS for the WBE ports on the 15310-CL-CTX card.
STS-{3,4}-{1,2}-1-{1-12}	(ONS 15310-MA only) STSx AID for the OC12 ports where the format is STS-SLOT-PPM-PORT-STS. STS numbers are restricted according to path width: STS1 = 1–12, STS3c = 1,4,7,10, STS6c = 1,7, and STS9c/12c = 1.
STS-{3,4}-{1,2}-1-{1-3}	(ONS 15310-MA only) STS1/3c AID for the OC3 ports where the format is STS-SLOT-PPM-PORT-STS. STS numbers are restricted according to path width: STS1 = 1–3, STS3c = 1 only.

Table 25-25 STS (continued)

Pattern	Description
STS-{3,4}-{1,2}-1-{1-48}	(ONS 15310-MA only) STS1 AID for the OC48 ports where the format is STS-SLOT-PPM-PORT-STS. STS numbers are restricted according to path width: STS1 = 1–48, STS3c = 1,4,7,10-46, STS6c = 1,4,7,13,16,19,25,28,37,40,43, STS9c/STS12c =1,13,25,37, STS24c = 1,4,7,10,13,16,19,22,25, STS48C = 1.
STS-{5,6,12,13}-1-1	(ONS 15454 only) STS48c AID for an OC48 card, or STS192 AID for an OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{5,6,12,13}-1-{1,13,25,37-180}	(ONS 15454 only) STS12c AID for an OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{5,6,12,13}-1-{1,13,25,37}	(ONS 15454 only) STS12c AIDs for an OC48 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{5,6,12,13}-1-{1,4,7,10,13,16,19,22,25}	(ONS 15454 only) STS24c AID for an OC48 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{5,6,12,13}-1-{1,4,7,10-190}	(ONS 15454 only) STS3c for an OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{5,6,12,13}-1-{1,4,7,10-46}	(ONS 15454 only) STS3c AID for an OC48 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{5,6,12,13}-1-{1,4,7,13,16,19,25,28,37,40,43}	(ONS 15454 only) STS6c AID for an OC48 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{5,6,12,13}-1-{1,49,97,145}	(ONS 15454 only) STS48c AID for an OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{5,6,12,13}-1-{1-192}	(ONS 15454 only) STS1 AID for an OC192 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{5,6,12,13}-1-{1-48}	(ONS 15454 only) STS1 AID for an OC48 card. Format is STS-[SLOT]-[PORT]-[STS].
STS-{5,6}-1	(ONS 15327 only) STS1 AID for the T1 ports within the XTC-14 and XTC-28-3 cards. Format is STS-[SLOT]-[STS]. There is only one STS for the T1 ports.
STS-{5,6}-{1-4}-1	(ONS 15327 only) STS1 on a DS3 port on the XTC-28 card.
STS-{5-6}-ALL	(ONS 15327 only) STS ALL AID for the T1 and T3 ports within the XTC-14 and XTC-28-3. Format is STS-[SLOT]-ALL.
VFAC-{1-6,12-17}-{0-1}	(ONS 15454 only) Virtual facility AID for the ML-Series card back-end POS ports. Both the ML1000-2 and ML100T-12 have two POS ports. Port numbering starts at 0. Format is VFAC-[SLOT]-[PORT].

25.26 SYN

Synchronization AIDs

Table 25-26 SYN

Pattern	Description
SYNC-NE	NE synchronization AID

25.27 SYN_SRC

Synchronization source

Table 25-27 SYN_SRC

Pattern	Description
BITS-1	(ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) Synchronization source is BITS-1. Format is BITS-[PORT].
BITS-2	(ONS 15454, ONS 15327, ONS 15310-MA, ONS 15600) Synchronization source is BITS-2. Format is BITS-[PORT].
FAC-{1-4,11-14}-{1-16}	(ONS 15600 only) Synchronization source is 16-port OC48. Format is FAC-[SLOT]-[PORT].
FAC-{1-4,11-14}-{1-4}	Synchronization source is 4-port OC192. Format is FAC-[SLOT]-[PORT].
FAC-{1-4}-1	(ONS 15327 only) Synchronization source is the optical card (single-port OC12, OC48) facility. Format is FAC-[SLOT]-[PORT].
FAC-{1-4}-{1-4}	(ONS 15327 only) Synchronization source is the optical card (4-port OC3) facility. Format is FAC-[SLOT]-[PORT].
FAC-{1-6,12-17}-{1-4}	(ONS 15454 only) Synchronization source is the optical card (four-port OC3 and four-port OC12) facility. Format is FAC-[SLOT]-[PORT].
FAC-{1-6,12-17}-{1}	(ONS 15454 only) Synchronization source is the optical card (one-port OC12 and OC48AS) facility. Format is FAC-[SLOT]-[PORT].
FAC-{5,6,12,13}-{1}	Synchronization source is the optical card (OC48, OC192) facility. Format is FAC-[SLOT]-[PORT].
INTERNAL	Set the SYN_SRC to be the system default value. The INTERNAL value of the SYN_SRC is only applied for the SYNC-NE AID on the ED-SYNCN command.
NONE	Set the SYNC_SRC value to the default value for BITS-OUT. The NONE value of SYNC_SRC only applies to the BITS-1 and BITS-2 AID of the ED-SYNCN command.
OC12-{2}-{1-2}-{1}	(ONS 15310-CL, ONS 15310-MA) Synchronization source is the OC12 facility. Format is OC12-[SLOT]-[PPM]-[PORT].
OC3-{2}-{1-2}-{1}	(ONS 15310-CL, ONS 15310-MA) Synchronization source is the OC3 facility. 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}	(ONS 15310-CL, ONS 15310-MA) Synchronization source is the T1 facility. Format is T1-[SLOT]-[PORT].

25.28 SYNC_REF

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) Synchronization AIDs.

Table 25-28 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 synchronization AID.
SYNC-{BITS1,BITS2}	BITS1 and BITS2 synchronization AIDs. **Note** BITS2 is not supported on the ONS 15310-CL.

25.29 SYNCSW

New synchronization reference that will be used.

Table 25-29 SYNCSW

Pattern	Description
INT	Internal clock. The INT value is only applied for the SYNC-NE AID on the OPR-SYNCSW command.
PRI	Primary timing reference.
SEC	Secondary timing reference.

25.30 UDC

(ONS 15454, ONS 15310-CL, ONS 15310-MA) UDC AIDs for F-UDC and DCC-UDC channels on the AIC-I card.

Table 25-30 UDC

Pattern	Description
ALL	Applicable to RTRV-only commands, for example, RTRV-ALM/COND-UDCF and RTRV-ALM/COND-UDCDCC. Corresponds to a superset of F-UDC and DCC-UDC AIDs.
UDC-{F,DCC}-{A,B}	F-UDC and DCC-UDC AIDs for A and B channels. DCC-UDC is supported on the ONS 15454 only. F-UDC is supported on both the ONS 15454, ONS 15310-CL, and ONS 15310-MA.

25.31 VT

(ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA) Virtual tributary.

- VT1 AID format for optical and EC1 facilities without PPM: VT1-[SLOT]-[PORT]-[STS]-[VTG]-[VTN]
- VT1 AID format for optical facilities with PPM: VT1-[SLOT]-[PPM]-[PORT]-[STS]-[VTG]-[VTN]

- VT1 AID format for DS1 electrical facilities: VT1-[SLOT]-[STS]-[VTG]-[VTN]
- VT1 AID format for DS3 electrical facilities: VT1-[SLOT]-[PORT]-[STS]-[VTG]-[VTN]

Table 25-31 VT

Pattern	Description
ALL	Applies to RTRV-only commands. For example, the RTRV-VT and RTRV-VT1 with ALL AIDs return all VT1 interfaces on the node.
VT1-{1,2,5,6}-1-{1-7}-{1-4}	(ONS 15310-MA only) DS1 VTs on the DS1-28/DS3-EC1-3 card where the format is VT-[SLOT]-[STS]-[VTG]-[VTN].
VT1-{1,2,5,6}-{1-3}-1-{1-7}-{1-4}	(ONS 15310-MA only) EC1 VTs where the format is VT1-[SLOT]-[PORT]-[STS]-[VTG]-[VTN].
VT1-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-4}	(ONS 15454 only) 8-port OC3 card
VT1-{1-4}-1-{1-12}-{1-7}-{1-4}	(ONS 15327 only) VT AIDs for a single-port OC12
VT1-{1-4}-1-{1-48}-{1-7}-{1-4}	(ONS 15327 only) VT AIDs for a single-port OC48
VT1-{1-4}-{1-4}-{1-3}-{1-7}-{1-4}	(ONS 15327 only) VT AIDs for 4-port OC3
VT1-{1-6,12-17}-1-{1-12}-{1-7}-{1-4}	(ONS 15454 only) Single-port OC12 card
VT1-{1-6,12-17}-1-{1-48}-{1-7}-{1-4}	(ONS 15454 only) OC48AS card
VT1-{1-6,12-17}-1-{1-7}-{1-2}	(ONS 15454 only) DS1 card
VT1-{1-6,12-17}-{1-12}-1-{1-7}-{1-4}	(ONS 15454 only) EC1 card
VT1-{1-6,12-17}-{1-24}-1-{1-7}-{1-4}	VT1.5 AIDs for DS3XM-12 STS12 backplane rate cards
VT1-{1-6,12-17}-{1-36}-1-{1-7}-{1-4}	VT1.5 AIDs for DS3XM-12 STS48 backplane rate cards
VT1-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-4}	(ONS 15454 only) 4-port OC12 card
VT1-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-4}	(ONS 15454 only) 4-port OC3 card
VT1-{1-6,12-17}-{1-6}-{1-7}-{1-4}	(ONS 15454 only) DS3XM-6 card
VT1-{2}-{1-2}-{1}-{1-12}-{1-7}-{1-4}	(ONS 15310-CL only) VT1 AIDs for OC3 port on a 15310-CL-CTX card
VT1-{2}-{1-2}-{1}-{1-3}-{1-7}-{1-4}	(ONS 15310-CL only) VT1 AIDs for OC3 port on a 15310-CL-CTX card
VT1-{2}-{1-3}-{1}-{1-7}-{1-4}	(ONS 15310-CL only) VT1 AIDs for BBE port on a 15310-CL-CTX card. The AIDs are port-based and presented as one STS per port. VTs are supported only for EC1 ports.
VT1-{2}-{1}-{1-7}-{1-3}	(ONS 15310-CL only) VT1 AIDs for T1 (WBE) port on a 15310-CL-CTX card. There is only one STS for the WBE ports on the 15310-CL-CTX card. There are seven VT groups, each containing three VTs.
VT1-{3,4}-{1-2}-{1}-{1-12}-{1-7}-{1-4}	(ONS 15310-MA only) OC12 VTs where the format is VT1-[SLOT]-[PPM]-[PORT]-[STS]-[VTG]-[VT].
VT1-{3,4}-{1-2}-{1}-{1-3}-{1-7}-{1-4}	(ONS 15310-MA only) OC3 VTs where the format is VT1-[SLOT]-[PPM]-[PORT]-[STS]-[VTG]-[VTN].
VT1-{3,4}-{1-2}-{1}-{1-48}-{1-7}-{1-4}	(ONS 15310-MA only) OC49 VTs where the format is VT1-[SLOT]-[PPM]-[PORT]-[STS]-[VTG]-[VTN].
VT1-{5,6,12,13}-1-{1-192}-{1-7}-{1-4}	(ONS 15454 only) OC192 card

Table 25-31 VT (continued)

Pattern	Description
VT1-{5,6,12,13}-1-{1-48}-{1-7}-{1-4}	(ONS 15454 only) OC48 card
VT1-{5-6}-1-{1-7}-{1-2}	(ONS 15327 only) VT AIDs for T1 port within XTC-14. There is only one STS for the T1 ports within the XTC-14 card.
VT1-{5-6}-1-{1-7}-{1-4}	(ONS 15327 only) VT AID for T1 port with XTC-28-3. There is only one STS for the T1 ports within the XTC-28 card.
VT2-{1-4,14-17}-{1-8}-{1-3}-{1-7}-{1-3}	(ONS 15454 only) Eight-port OC3 card
VT2-{1-6,12-17}-1-{1-12}-{1-7}-{1-3}	(ONS 15454 only) Single-port OC12 card
VT2-{1-6,12-17}-1-{1-48}-{1-7}-{1-3}	(ONS 15454 only) OC48AS card
VT2-{1-6,12-17}-{1-4}-{1-12}-{1-7}-{1-3}	(ONS 15454 only) Four-port OC12 card
VT2-{1-6,12-17}-{1-4}-{1-3}-{1-7}-{1-3}	(ONS 15454 only) Four-port OC3 card
VT2-{5,6,12,13}-1-{1-192}-{1-7}-{1-3}	(ONS 15454 only) OC192 card
VT2-{5,6,12,13}-1-{1-48}-{1-7}-{1-3}	(ONS 15454 only) OC48 card

25.32 WDMANS

(Cisco ONS 15454 only) This AID is used to access the automatic optical node setup (AONS) application of the NE.

Table 25-32 WDMANS

Pattern	Description
AONS-{E,W}	Automatic optical node setup identifier (based on ring direction)
WDMANS-{E,W}	Automatic optical node setup identifier (based on ring direction)

25.33 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 25-33 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

25.34 CTC Port Numbers and TL1 Aids

Table 25-34 CTC Port Numbers and TL1 Aids

Equipment	CTC Port Name	CTC Port Number	TL1 Aid
OSC-CSM	COM-RX	2	LINE-shelf-slot-1-RX
	COM-TX	3	LINE-shelf-slot-1-TX
	LINE-RX	4	LINE-shelf-slot-2-RX
	LINE-TX	5	LINE-shelf-slot-2-TX
	OSC-RX	6	LINE-shelf-slot-3-RX
	OSC-TX	7	LINE-shelf-slot-3-TX
	OC3	1	FAC-shelf-slot-1
32 DMX	CHAN TX	1-32	CHAN-shelf-slot-i-TX (i=1..32)
	COM-RX	33	LINE-shelf-slot-1-RX
OPT-PRE	COM-RX	1	LINE-shelf-slot-1-RX
	COM-TX	2	LINE-shelf-slot-1-TX
	DC-RX	3	LINE-shelf-slot-2-RX
	DC-TX	4	LINE-shelf-slot-2-TX
4 MD	CHAN-RX	1	CHAN-shelf-slot-1-RX
	CHAN-TX	2	CHAN-shelf-slot-1-TX
	CHAN-RX	3	CHAN-shelf-slot-2-RX
	CHAN-TX	4	CHAN-shelf-slot-2-TX
	CHAN-RX	5	CHAN-shelf-slot-3-RX
	CHAN-TX	6	CHAN-shelf-slot-3-TX
	CHAN-RX	7	CHAN-shelf-slot-4-RX
	CHAN-TX	8	CHAN-shelf-slot-4-TX
	COM-RX	9	LINE-shelf-slot-1-RX
	COM-TX	10	LINE-shelf-slot-1-TX
32 DMX L	CHAN TX	1 - 32	CHAN-shelf-slot-i-TX (i=1..32)
	COM RX	33	LINE-shelf-slot-1-RX
32 WSS L	ADD-RX	1-32	CHAN-shelf-slot-i-RX (i=1..32)
	PT	33-64	CHAN-shelf-slot-i-PT (i=1..32)
	DROP-TX	69	LINE-shelf-slot-3-TX
	EXP-RX	66	LINE-shelf-slot-2-RX
	EXP-TX	65	LINE-shelf-slot-2-TX
	COM-RX	68	LINE-shelf-slot-1-RX
	COM-TX	67	LINE-shelf-slot-1-TX

Table 25-34 CTC Port Numbers and TL1 Aids

Equipment	CTC Port Name	CTC Port Number	TL1 Aid
OPT-BST	COM-RX	1	LINE-shelf-slot-1-RX
	COM-TX	2	LINE-shelf-slot-1-TX
	OSC-RX	3	LINE-shelf-slot-2-RX
	OSC-TX	4	LINE-shelf-slot-2-TX
	LINE-RX	5	LINE-shelf-slot-3-RX
	LINE-TX	6	LINE-shelf-slot-3-TX
OPT-BST E	COM-RX	1	LINE-shelf-slot-1-RX
	COM-TX	2	LINE-shelf-slot-1-TX
	OSC-RX	3	LINE-shelf-slot-2-RX
	OSC-TX	4	LINE-shelf-slot-2-TX
	LINE-RX	5	LINE-shelf-slot-3-RX
	LINE-TX	6	LINE-shelf-slot-3-TX
OPT-BST L	COM-RX	1	LINE-shelf-slot-1-RX
	COM-TX	2	LINE-shelf-slot-2-TX
	OSC-RX	3	LINE-shelf-slot-1-RX
	OSC-TX	4	LINE-shelf-slot-2-TX
	LINE-RX	5	LINE-shelf-slot-1-RX
	LINE-TX	6	LINE-shelf-slot-2-TX
MMU	EXPA-RX	5	LINE-shelf-slot-3-RX
	EXPA-TX	6	LINE-shelf-slot-3-TX
	EXP-RX	1	LINE-shelf-slot-1-RX
	EXP-TX	2	LINE-shelf-slot-1-TX
	COM-RX	3	LINE-shelf-slot-2-RX
	COM-TX	4	LINE-shelf-slot-2-TX
AD 1B	BAND-RX	1	BAND-shelf-slot-1-RX
	BAND-TX	2	BAND-shelf-slot-1-TX
	EXP-RX	3	LINE-shelf-slot-1-RX
	EXP-TX	4	LINE-shelf-slot-1-TX
	COM-RX	5	LINE-shelf-slot-2-RX
	COM-TX	6	LINE-shelf-slot-2-TX

Table 25-34 CTC Port Numbers and TL1 Aids

Equipment	CTC Port Name	CTC Port Number	TL1 Aid
AD 1C	CHAN-RX	1	CHAN-shelf-slot-1-RX
	CHAN-TX	2	CHAN-shelf-slot-1-TX
	EXP-RX	3	LINE-shelf-slot-1-RX
	EXP-TX	4	LINE-shelf-slot-1-TX
	COM-RX	5	LINE-shelf-slot-2-RX
	COM-TX	6	LINE-shelf-slot-2-TX
AD 2C	CHAN-RX	1	CHAN-shelf-slot-1-RX
	CHAN-TX	2	CHAN-shelf-slot-1-TX
	CHAN-RX	3	CHAN-shelf-slot-2-RX
	CHAN-TX	4	CHAN-shelf-slot-2-TX
	EXP-RX	5	LINE-shelf-slot-1-RX
	EXP-TX	6	LINE-shelf-slot-1-TX
	COM-RX	7	LINE-shelf-slot-2-RX
	COM-TX	8	LINE-shelf-slot-2-TX
AD 4C	CHAN-RX	1	CHAN-shelf-slot-1-RX
	CHAN-TX	2	CHAN-shelf-slot-1-TX
	CHAN-RX	3	CHAN-shelf-slot-2-RX
	CHAN-TX	4	CHAN-shelf-slot-2-TX
	CHAN-RX	5	CHAN-shelf-slot-3-RX
	CHAN-TX	6	CHAN-shelf-slot-3-TX
	CHAN-RX	7	CHAN-shelf-slot-4-RX
	CHAN-TX	8	CHAN-shelf-slot-4-TX
	EXP-RX	9	LINE-shelf-slot-1-RX
	EXP-TX	10	LINE-shelf-slot-1-TX
	COM-RX	11	LINE-shelf-slot-2-RX
	COM-TX	12	LINE-shelf-slot-2-TX
32 WSS	ADD-RX	1-32	CHAN-shelf-slot-i-RX (i=1..32)
	PT	33-64	CHAN-shelf-slot-i-PT (i=1..32)
	DROP-TX	69	LINE-shelf-slot-3-TX
	EXP-RX	66	LINE-shelf-slot-2-RX
	RXP-TX	65	LINE-shelf-slot-2-TX
	COM-RX	68	LINE-shelf-slot-1-RX
	COM-TX	67	LINE-shelf-slot-1-TX
32 DMXO	CHAN-TX	1-32	CHAN-shelf-slot-i-TX (i=1..32)
	COM-RX	33	LINE-shelf-slot-1-RX

Table 25-34 CTC Port Numbers and TL1 Aids

Equipment	CTC Port Name	CTC Port Number	TL1 Aid
32 MUXO	CHAN RX	1-32	CHAN-shelf-slot-i-RX (i=1..32)
	COM TX	33	LINE-shelf-slot-1-TX

CHAPTER 26

Conditions

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 conditions for TL1 commands and autonomous messages for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600.

Conditions include any problem detected on an ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, or ONS 15600 shelf. They can include standing or transient notifications. A snapshot of all currently raised standing conditions on the network, node, or card can be retrieved in the Cisco Transport Controller (CTC) Conditions window or using the RTRV-COND commands. (In addition, some but not all cleared conditions are found in the CTC History tab.)

Table 26-1 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 Automatic Protection Switch (APS) Code
APSCDFLTK	Default K Byte
APSCINCON	Inconsistent APS Code
APSCM	Protection Switching Channel Match Failure
APSCNMIS	Node ID Mismatch
APSIMP	APS Invalid Mode

Table 26-1 Conditions (continued)

Condition	Description
APSMM	Automatic Protection Switch Mode Mismatch
AS-CMD	Alarms Suppressed By User Command
AS-MT	Alarms Suppressed For Maintenance
AU-LOF	Loss of Frame (LOF)–Administration Unit–Loss of Multiframe
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
BAT-HGH-VLT	High Volt
BAT-LOW-VLT	Low Volt
BKUPMEMP	Primary Nonvolatile Backup Memory Failure
BLSROSYNC	BLSR Out Of Sync
CARLOSS	Carrier Loss On The LAN
CKTDOWN	Signaling Unable to Set Up Circuit
CLDRESTART	Cold Restart
COMIOXC	Input/Output (IO) Slot To Cross-connect (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 Synchronization
DS3-MISM	DS3 Frame Format Mismatch
DSP-COMM-FAIL	DSP Communication Failure

Table 26-1 Conditions (continued)

Condition	Description
DSP-FAIL	DSP Failure
DUP-IPADDR	IP address already in use within the same data communications channel (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 Voltage
ELWBATVG	Extreme Low Voltage
EOC	Section DCC (SDCC) Termination Failure
EOC-L	Line DCC (LDCC) Termination Failure
EQPT	Equipment Failure
EQPT-MISS	Replaceable Equipment/Unit is Missing
ERFI-P-CONN	Enhanced Remote Failure Indication–Path–Connectivity
ERFI-P-PAYLD	Enhanced Remote Failure Indication–Path–Payload
ERFI-P-SRVR	Enhanced Remote Failure Indication–Path–Server
ERROR-CONFIG	Error in Startup Configuration
ETH-LINKLOSS	Rear Panel Ethernet Link Removed
EXCCOL	Excess Collisions on the LAN
EXERCISE-RING-FAIL	Exercise Request on Ring Failed
EXERCISE-RING-REQ	Exercise Request on Ring
EXERCISE-SPAN-FAIL	Exercise Request on Span Failed
EXERCISE-SPAN-REQ	Exercise Request on Span
EXT	Failure Detected External To The NE
EXTRA-TRAF-PREEMPT	Extra Traffic Preempted
FAILTOSW	Failure To Switch To Protection
FAILTOSW-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 Loss of Signal (LOS)
FE-DS3-NSA	Far End DS3 Equipment Failure–Non-Service-Affecting
FE-DS3-SA	Far End DS3 Equipment Failure–Service-Affecting

Table 26-1 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 Synchronization
HI-LASERBIAS	Equipment High Laser Bias
HI-RXPOWER	Equipment High Receive (Rx) Power
HI-TXPOWER	Equipment High Transmit (Tx) Power
HITEMP	High Temperature
HLDOVRSYNC	Holdover Synchronization Mode
I-HITEMP	Industrial High Temperature
IMPROPRMVL	Improper Removal

Table 26-1 Conditions (continued)

Condition	Description
INC-GFP-OUTOFFRAME	Out Of Frame Detected by Generic Framing Procedure (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 Configuration Copy In Progress
KB-PASSTHR	K Byte Pass Through Is Active
KBYTE-APS-CHANNEL-FAILURE	K Byte 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 Multiframe
LOP-P	Loss Of Pointer–Path
LOP-V	Loss Of Pointer–VT
LOS	Loss Of Signal
LPBKCRS	Cross-connect Loopback
LPBKDS1FEAC	DS1 Loopback Due To FEAC Command
LPBKDS1FEAC-CMD	DS1 Loopback Command Sent To Far End
LPBKDS3FEAC	DS3 Loopback Due To FEAC Command
LPBKDS3FEAC-CMD	DS3 Loopback Command Sent To Far End
LPBKFACILITY	Facility Loopback

Table 26-1 Conditions (continued)

Condition	Description
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 Deactivation Failure
OCHNC-FAIL	Optical Channel Connection Failure
OCHNC-INC	Optical Channel Incomplete
ODUK-AIS-PM	ODUk: Alarm Indication Signal
ODUK-BDI-PM	ODUk: PM Backward Defect Indication
ODUK-LCK-PM	ODUk: Locked Defect–PM
ODUK-OCI-PM	ODUk: Open Connection Indication
ODUK-SD-PM	ODUk: Signal Degrade
ODUK-SF-PM	ODUk: Signal Failure
ODUK-TIM-PM	ODUk: Trail Trace Identifier Mismatch
OOU-TPT	Out of Use–Transport Failure
OPTNTWMIS	Optical Network Type Mismatch
OTUK-AIS	OTUk: Alarm Indication Signal
OTUK-BDI	OTUk: Backward Defect Indication
OTUK-LOF	OTUk: Loss Of Frame
OTUK-SD	OTUk: Signal Degrade
OTUK-SF	OTUk: Signal Failure
OTUK-TIM	OTUk: Trail Trace Identifier Mismatch
OUT-OF-SYNC	8B10B Out of Sync

Table 26-1 Conditions (continued)

Condition	Description
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 Configuration
SD	Signal Degrade
SD-L	Bit Error Rate (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	Simple Network Time Protocol (SNTP) Host Failure
SPAN-SW-EAST	Span Switch Is Active On The East Side
SPAN-SW-WEST	Span Switch Is Active On The West Side
SQM	Sequence Mismatch

Table 26-1 Conditions (continued)

Condition	Description
SQUELCH	Ring Is Squelching Traffic
SQUELCHED	Equipment Squelched
SSM-DUS	Do Not Use For Synchronization
SSM-FAIL	Failed To Receive Synchronization Status Message
SSM-LNC	G812–Local Node Clock Traceable
SSM-OFF	Synchronization Status Messages Are Disabled On This Interface
SSM-PRC	G811–Primary Reference Clock Traceable
SSM-PRS	Stratum 1 Primary Reference Source Traceable
SSM-RES	Reserved For Network Synchronization Use
SSM-SDH-TN	G812–Transit Node Clock Traceable
SSM-SETS	G813–Synchronous Equipment Timing Source Traceable
SSM-SMC	SONET Minimum Clock Traceable
SSM-ST2	Stratum 2 Traceable
SSM-ST3	Stratum 3 Traceable
SSM-ST3E	Stratum 3E Traceable
SSM-ST4	Stratum 4 Traceable
SSM-STU	Synchronized–Traceability Unknown
SSM-TNC	Transit Node Clock Traceable
SWMTXMOD	Switching Matrix Module Failure
SWTOPRI	Switch To Primary Reference
SWTOSEC	Switch To Second Reference
SWTOTHIRD	Switch To Third Reference
SYNC-FREQ	Synchronization Reference Frequency Out Of Bounds
SYNCPRI	Primary Synchronization Reference Failure
SYNCSEC	Secondary Synchronization Reference Failure
SYNCTHIRD	Third Synchronization Reference Failure
SYSBOOT	System Reboot
TIM	TIM Section–Trace Identifier Mismatch Failure
TIM-MON	TIM Section Monitor–Trace Identifier Mismatch Failure
TIM-P	STS Path Trace Identifier Mismatch
TPTFAIL	Transport layer failure
TRMT	Transmit Failure
TRMT-MISS	Facility Termination Equipment–Transmitter Missing
TUNDERRUN	Ether Tx Under-run
TX-AIS	Alarm Indication Signal in Tx

Table 26-1 Conditions (continued)

Condition	Description
TX-RAI	Remote Alarm Indication in Tx
UNC-WORD	Forward Error Correction (FEC) Uncorrected Word
UNEQ-P	Unequipped–Path
UNEQ-V	Signal Label Mismatch Failure–Unequipped VT
VCG-DEG	Virtual Concatenation (VCAT) Group Degraded
VCG-DOWN	VCAT Group Down
WKSWPR	Switched To Protection
WTR	Wait To Restore
WVL-MISMATCH	Equipment Wavelength Mismatch

Modifiers

This chapter describes the modifiers for TL1 commands and autonomous messages for the Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, and ONS 15600. Table 27-1 details the TL1 modifiers 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 27-1 Modifier Support

Modifier	ONS 15454	ONS 15327	ONS 15310-CL	ONS 15310-MA	ONS 15600
10GFC	Yes	No	No	No	—
10GIGE	Yes	No	No	No	—
1GFC	Yes	No	No	No	—
1GFICON	Yes	No	No	No	—
2GFC	Yes	No	No	No	—
2GFICON	Yes	No	No	No	—
D1VIDEO	Yes	No	No	No	—
DS1	Yes	—	—	—	—
DV6000	Yes	No	No	No	—
E100	Yes	Yes	No	No	—
E1000	Yes	Yes	No	No	—
EC1	Yes	—	Yes	Yes	—
FSTE	Yes	No	Yes	Yes	—
G1000	Yes	Yes	No	No	—
GIGE	Yes	No	No	No	Yes
HDTV	Yes	No	No	No	—
ISC1	Yes	No	No	No	—
OC12	Yes	Yes	Yes	Yes	Yes
OC192	Yes	No	No	No	Yes
OC3	Yes	Yes	Yes	Yes	Yes
OC48	Yes	Yes	No	Yes	Yes

Table 27-1 Modifier Support (continued)

Modifier	ONS 15454	ONS 15327	ONS 15310-CL	ONS 15310-MA	ONS 15600
OCH	Yes	No	No	No	—
OMS	No	—	—	—	—
OTS	No	—	—	—	—
POS	Yes	No	Yes	Yes	Yes
STS1	Yes	Yes	Yes	Yes	Yes
STS12C	Yes	Yes	Yes	Yes	Yes
STS192C	Yes	No	No	No	Yes
STS24C	Yes	Yes	No	Yes	Yes
STS18C	Yes	Yes	No	No	No
STS36C	Yes	Yes	No	No	No
STS3C	Yes	Yes	Yes	Yes	Yes
STS48C	Yes	Yes	No	Yes	Yes
STS6C	Yes	Yes	Yes	Yes	Yes
STS9C	Yes	Yes	Yes	Yes	Yes
T1	Yes	Yes	Yes	Yes	—
T3	Yes	Yes	Yes	Yes	—
VT1	Yes	Yes	Yes	Yes	—

Numerics

A

B

C

D

E

F

G

H

I

J

L

M

N

O

P

R

S

T

U

V

W

X

Y