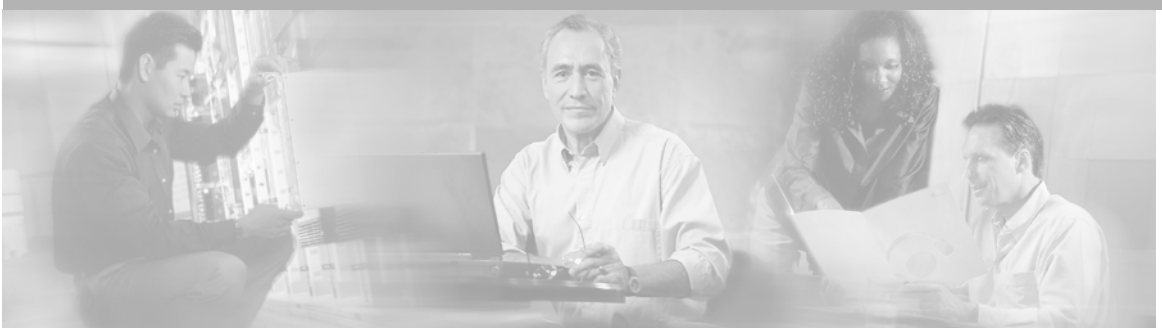

Cisco ONS SONET TL1 Command Guide

Cisco ONS 15454, ONS 15310-CL, ONS-15310-MA, and ONS 15600
Product and Documentation Release 8.0
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: 78-17718-01

THE SPECIFICATIONS AND INFORMATION REGARDING THE PRODUCTS IN THIS MANUAL ARE SUBJECT TO CHANGE WITHOUT NOTICE. ALL STATEMENTS, INFORMATION, AND RECOMMENDATIONS IN THIS MANUAL ARE BELIEVED TO BE ACCURATE BUT ARE PRESENTED WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. USERS MUST TAKE FULL RESPONSIBILITY FOR THEIR APPLICATION OF ANY PRODUCTS.

THE SOFTWARE LICENSE AND LIMITED WARRANTY FOR THE ACCOMPANYING PRODUCT ARE SET FORTH IN THE INFORMATION PACKET THAT SHIPPED WITH THE PRODUCT AND ARE INCORPORATED HEREIN BY THIS REFERENCE. IF YOU ARE UNABLE TO LOCATE THE SOFTWARE LICENSE OR LIMITED WARRANTY, CONTACT YOUR CISCO REPRESENTATIVE FOR A COPY.

The following information is for FCC compliance of Class A devices: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio-frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case users will be required to correct the interference at their own expense.

The following information is for FCC compliance of Class B devices: The equipment described in this manual generates and may radiate radio-frequency energy. If it is not installed in accordance with Cisco's installation instructions, it may cause interference with radio and television reception. This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in part 15 of the FCC rules. These specifications are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

Modifying the equipment without Cisco's written authorization may result in the equipment no longer complying with FCC requirements for Class A or Class B digital devices. In that event, your right to use the equipment may be limited by FCC regulations, and you may be required to correct any interference to radio or television communications at your own expense.

You can determine whether your equipment is causing interference by turning it off. If the interference stops, it was probably caused by the Cisco equipment or one of its peripheral devices. If the equipment causes interference to radio or television reception, try to correct the interference by using one or more of the following measures:

• Turn the television or radio antenna until the interference stops.

• Move the equipment to one side or the other of the television or radio.

• Move the equipment farther away from the television or radio.

• Plug the equipment into an outlet that is on a different circuit from the television or radio. (That is, make certain the equipment and the television or radio are on circuits controlled by different circuit breakers or fuses.)

Modifications to this product not authorized by Cisco Systems, Inc. could void the FCC approval and negate your authority to operate the product.

The Cisco implementation of TCP header compression is an adaptation of a program developed by the University of California, Berkeley (UCB) as part of UCB's public domain version of the UNIX operating system. All rights reserved. Copyright © 1981, Regents of the University of California.

NOTWITHSTANDING ANY OTHER WARRANTY HEREIN, ALL DOCUMENT FILES AND SOFTWARE OF THESE SUPPLIERS ARE PROVIDED "AS IS" WITH ALL FAULTS. CISCO AND THE ABOVE-NAMED SUPPLIERS DISCLAIM ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OR ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE.

IN NO EVENT SHALL CISCO OR ITS SUPPLIERS BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR LOSS OR DAMAGE TO DATA ARISING OUT OF THE USE OR INABILITY TO USE THIS MANUAL, EVEN IF CISCO OR ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: www.cisco.com/go/trademarks. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)

Any Internet Protocol (IP) addresses used in this document are not intended to be actual addresses. Any examples, command display output, and figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses in illustrative content is unintentional and coincidental.

Cisco ONS SONET TL1 Command Guide, Release 8.0
Copyright © 2007–2012 Cisco Systems, Inc. All rights reserved

CONTENTS

About this Guide xvii

Revision History xvii

Document Objectives xix

Audience xix

Related Documentation xx

Document Conventions xxi

Obtaining Optical Networking Information xxvii

Where to Find Safety and Warning Information xxvii

Cisco Optical Networking Product Documentation CD-ROM xxvii

Obtaining Documentation and Submitting a Service Request xxvii

CHAPTER 1 **ACT Commands** 1-1

1.1 ACT-USER 1-1

CHAPTER 2 **ALW Commands** 2-1

2.1 ALW-CONSOLE-PORT 2-1

2.2 ALW-MSG-ALL 2-2

2.3 ALW-MSG-DBCHG 2-2

2.4 ALW-MSG-SECU 2-3

2.5 ALW-PMREPT-ALL 2-3

2.6 ALW-SWDX-EQPT 2-4

2.7 ALW-SWTOPROTN-EQPT 2-5

2.8 ALW-SWTOWKG-EQPT 2-6

2.9 ALW-USER-SECU 2-7

CHAPTER 3 **APPLY Commands** 3-1

3.1 APPLY 3-1

CHAPTER 4 **CANC Commands and Messages** 4-1

4.1 CANC 4-1

4.2 CANC-USER 4-2

4.3 CANC-USER-SECU 4-3

CHAPTER 5 **CHG Commands** 5-1

5.1 CHG-ACCMD-<MOD_TACC> 5-1

5.2 CHG-EQPT 5-3

CHAPTER 6 **CLR Commands** 6-1

6.1 CLR-COND-SECU 6-1

CHAPTER 7 **CONN Commands** 7-1

7.1 CONN-TACC-<MOD_TACC> 7-1

CHAPTER 8 **COPY Commands** 8-1

8.1 COPY-IOSCFG 8-1

8.2 COPY-RFILE 8-3

CHAPTER 9 **DISC Commands** 9-1

9.1 DISC-TACC 9-1

CHAPTER 10 **DLT Commands** 10-1

10.1 DLT-<MOD1PAYLOAD> 10-1

10.2 DLT-<MOD_RING> 10-2

10.3 DLT-BULKROLL-<OCN_TYPE> 10-3

10.4 DLT-CRS-<PATH> 10-4

10.5 DLT-EQPT 10-6

10.6 DLT-FFP-<MOD2DWDMPAYLOAD> 10-7

10.7 DLT-FFP-<OCN_TYPE> 10-7

10.8 DLT-LMP-CTRL 10-8

10.9 DLT-LMP-TLINK 10-8

10.10 DLT-LMP-DLINK 10-9

10.11 DLT-LNK 10-10

10.12 DLT-LNKTERM 10-10

10.13 DLT-NNI-ETH 10-11

10.14 DLT-QNQ-ETH 10-12

10.15 DLT-OCHCC 10-12

10.16 DLT-OCHNC 10-13

10.17 DLT-RMONTH-<MOD2_RMON> 10-14

10.18 DLT-ROLL-<MOD_PATH> 10-19

10.19 DLT-ROUTE 10-20
10.20 DLT-ROUTE-GRE 10-21
10.21 DLT-TADRMAP 10-21
10.22 DLT-TRAPTABLE 10-22
10.23 DLT-TUNNEL-FIREWALL 10-23
10.24 DLT-TUNNEL-PROXY 10-23
10.25 DLT-USER-SECU 10-24
10.26 DLT-VCG 10-25
10.27 DLT-VLAN 10-25
10.28 DLT-WDMSIDE 10-26

CHAPTER 11 ED Commands 11-1
11.1 ED-<GIGE_TYPE> 11-1
11.2 ED-<MOD1FCPAYLOAD> 11-10
11.3 ED-<MOD1FICONPAYLOAD> 11-18
11.4 ED-<MOD2DWDMPAYLOAD> 11-25
11.5 ED-<MOD_PATH> 11-31
11.6 ED-<MOD_RING> 11-36
11.7 ED-<OCN_TYPE> 11-38
11.8 ED-ALS 11-48
11.9 ED-APC 11-48
11.10 ED-BITS 11-49
11.11 ED-BULKROLL-<OCN_TYPE> 11-52
11.12 ED-CMD-SECU 11-53
11.13 ED-COS-ETH 11-54
11.14 ED-CRS-<PATH> 11-55
11.15 ED-DAT 11-57
11.16 ED-DS1 11-57
11.17 ED-EC1 11-59
11.18 ED-ETH 11-62
11.19 ED-EQPT 11-64
11.20 ED-FAC 11-69
11.21 ED-FFP-<MOD2DWDMPAYLOAD> 11-70
11.22 ED-FFP-<OCN_TYPE> 11-71
11.23 ED-FFP-OCH 11-73
11.24 ED-FSTE 11-74

11.25 ED-G1000 **11-76**
11.26 ED-GFP **11-78**
11.27 ED-HDLC **11-79**
11.28 ED-L2-ETH **11-79**
11.29 ED-LMP **11-82**
11.30 ED-LMP-CTRL **11-83**
11.31 ED-LMP-TLINK **11-84**
11.32 ED-LMP-DLINK **11-85**
11.33 ED-LNK **11-86**
11.34 ED-LNKTERM **11-87**
11.35 ED-NE-GEN **11-88**
11.36 ED-NE-PATH **11-90**
11.37 ED-NE-SYNCN **11-91**
11.38 ED-OCH **11-93**
11.39 ED-OCHCC **11-100**
11.40 ED-OCHNC **11-101**
11.41 ED-OMS **11-103**
11.42 ED-OTS **11-104**
11.43 ED-PID **11-106**
11.44 ED-POS **11-107**
11.45 ED-PROTOCOL **11-109**
11.46 ED-QNQ-ETH **11-110**
11.47 ED-ROLL-<MOD_PATH> **11-111**
11.48 ED-SLV-WDMANS **11-112**
11.49 ED-SYNCN **11-113**
11.50 ED-T1 **11-114**
11.51 ED-T3 **11-118**
11.52 ED-TRAPTABLE **11-122**
11.53 ED-TRC-OCH **11-123**
11.54 ED-USER-SECU **11-124**
11.55 ED-VCG **11-126**
11.56 ED-VLAN **11-126**
11.57 ED-WDMANS **11-127**
11.58 ED-WDMSIDE **11-128**

CHAPTER 12 **ENT Commands** 12-1

12.1 ENT-<MOD1PAYLOAD> 12-1
12.2 ENT-<MOD_RING> 12-2
12.3 ENT-BULKROLL-<OCN_TYPE> 12-5
12.4 ENT-CRS-<PATH> 12-6
12.5 ENT-EQPT 12-10
12.6 ENT-FFP-<MOD2DWDMPAYLOAD> 12-19
12.7 ENT-FFP-<OCN_TYPE> 12-21
12.8 ENT-LMP-CTRL 12-24
12.9 ENT-LMP-DLINK 12-25
12.10 ENT-LMP-TLINK 12-26
12.11 ENT-LNK 12-27
12.12 ENT-LNKTERM 12-28
12.13 ENT-NNI-ETH 12-30
12.14 ENT-OCHCC 12-31
12.15 ENT-OCHNC 12-32
12.16 ENT-QNQ-ETH 12-34
12.17 ENT-RMONTH-<MOD2_RMON> 12-35
12.18 ENT-ROLL-<MOD_PATH> 12-41
12.19 ENT-ROUTE 12-42
12.20 ENT-ROUTE-GRE 12-43
12.21 ENT-TADRMAP 12-43
12.22 ENT-TRAPTABLE 12-44
12.23 ENT-TUNNEL-FIREWALL 12-45
12.24 ENT-TUNNEL-PROXY 12-46
12.25 ENT-USER-SECU 12-46
12.26 ENT-VCG 12-48
12.27 ENT-VLAN 12-50
12.28 ENT-WDMSIDE 12-51

CHAPTER 13 **EX Commands** 13-1

13.1 EX-SW-<OCN_BLSR> 13-1

CHAPTER 14 **INH Commands** 14-1

14.1 INH-CONSOLE-PORT 14-1
14.2 INH-MSG-ALL 14-2

14.3 INH-MSG-DBCHG 14-2
14.4 INH-MSG-SECU 14-3
14.5 INH-PMREPT-ALL 14-3
14.6 INH-SWDX-EQPT 14-4
14.7 INH-SWTOPROTN-EQPT 14-5
14.8 INH-SWTOWKG-EQPT 14-6
14.9 INH-USER-SECU 14-8

CHAPTER 15 INIT Commands 15-1
15.1 INIT-REG-<MOD2> 15-1
15.2 INIT-SYS 15-7

CHAPTER 16 OPR Commands 16-1
16.1 OPR-ACO-ALL 16-1
16.2 OPR-ALS 16-2
16.3 OPR-APC 16-2
16.4 OPR-EXT-CONT 16-3
16.5 OPR-LNK 16-4
16.6 OPR-LPBK-<MOD2> 16-5
16.7 OPR-PROTNSW-<MOD2DWDMPAYLOAD> 16-7
16.8 OPR-PROTNSW-<OCN_TYPE> 16-8
16.9 OPR-PROTNSW-<PATH> 16-11
16.10 OPR-PROTNSW-OCH 16-13
16.11 OPR-SLV-WDMANS 16-13
16.12 OPR-SYNCNSW 16-14
16.13 OPR-WDMANS 16-15

CHAPTER 17 REPT Messages 17-1
17.1 REPT ALM <MOD2ALM> 17-1
17.2 REPT ALM BITS 17-5
17.3 REPT ALM COM 17-7
17.4 REPT ALM ENV 17-8
17.5 REPT ALM LMP 17-11
17.6 REPT ALM EQPT 17-12
17.7 REPT ALM SECU 17-16
17.8 REPT ALM SYNCN 17-18

17.9 REPT DBCHG 17-22
17.10 REPT EVT <MOD2ALM> 17-23
17.11 REPT EVT BITS 17-28
17.12 REPT EVT COM 17-29
17.13 REPT EVT ENV 17-30
17.14 REPT EVT EQPT 17-33
17.15 REPT EVT FXFR 17-37
17.16 REPT EVT IOSCFG 17-38
17.17 REPT EVT SECU 17-39
17.18 REPT EVT SESSION 17-40
17.19 REPT EVT SYNCN 17-42
17.20 REPT PM <MOD2> 17-46
17.21 REPT SW 17-52

CHAPTER 18 **RLS Commands** 18-1
18.1 RLS-EXT-CONT 18-1
18.2 RLS-LPBK-<MOD2> 18-2
18.3 RLS-PROTNSW-<MOD2DWDMPAYLOAD> 18-4
18.4 RLS-PROTNSW-<OCN_TYPE> 18-4
18.5 RLS-PROTNSW-<PATH> 18-6
18.6 RLS-PROTNSW-OCH 18-7
18.7 RLS-SYNCNSW 18-7

CHAPTER 19 **RMV Commands** 19-1
19.1 RMV-<MOD2> 19-1
19.2 RMV-EQPT 19-2

CHAPTER 20 **RST Commands** 20-1
20.1 RST-<MOD2> 20-1
20.2 RST-EQPT 20-2

CHAPTER 21 **RTRV Commands** 21-1
21.1 RTRV-<MOD1FCPAYLOAD> 21-1
21.2 RTRV-<MOD1FICONPAYLOAD> 21-9
21.3 RTRV-<MOD2DWDMPAYLOAD> 21-16
21.4 RTRV-<MOD_RING> 21-23

21.5 RTRV-<OCN_TYPE> 21-25
21.6 RTRV-<PATH> 21-36
21.7 RTRV-10GIGE 21-43
21.8 RTRV-ALM-<MOD2ALM> 21-49
21.9 RTRV-ALM-ALL 21-53
21.10 RTRV-ALM-BITS 21-57
21.11 RTRV-ALM-ENV 21-60
21.12 RTRV-ALM-EQPT 21-65
21.13 RTRV-ALM-SYNCN 21-68
21.14 RTRV-ALMTH-<MOD2> 21-72
21.15 RTRV-ALMTH-EQPT 21-76
21.16 RTRV-ALS 21-79
21.17 RTRV-APC 21-82
21.18 RTRV-ATTR-CONT 21-83
21.19 RTRV-ATTR-ENV 21-84
21.20 RTRV-AUDIT-LOG 21-89
21.21 RTRV-BFDLPM-<MOD2> 21-90
21.22 RTRV-BITS 21-91
21.23 RTRV-BULKROLL-<OCN_TYPE> 21-94
21.24 RTRV-CMD-SECU 21-95
21.25 RTRV-COND-<MOD2ALM> 21-96
21.26 RTRV-COND-ALL 21-100
21.27 RTRV-COND-BITS 21-103
21.28 RTRV-COND-ENV 21-106
21.29 RTRV-COND-EQPT 21-111
21.30 RTRV-COND-SYNCN 21-114
21.31 RTRV-CONSOLE-PORT 21-118
21.32 RTRV-COS-ETH 21-119
21.33 RTRV-CRS 21-120
21.34 RTRV-CRS-<PATH> 21-124
21.35 RTRV-DFLT-SECU 21-129
21.36 RTRV-DS1 21-131
21.37 RTRV-EC1 21-132
21.38 RTRV-EQPT 21-135
21.39 RTRV-ESCON 21-142

21.40 RTRV-ETH 21-144
21.41 RTRV-EXT-CONT 21-148
21.42 RTRV-FAC 21-149
21.43 RTRV-FFP 21-151
21.44 RTRV-FFP-<MOD2DWDMPAYLOAD> 21-153
21.45 RTRV-FFP-<OCN_TYPE> 21-155
21.46 RTRV-FFP-OCH 21-158
21.47 RTRV-FSTE 21-159
21.48 RTRV-G1000 21-163
21.49 RTRV-GFP 21-167
21.50 RTRV-GIGE 21-168
21.51 RTRV-HDLC 21-177
21.52 RTRV-HDR 21-178
21.53 RTRV-INV 21-179
21.54 RTRV-L2-ETH 21-185
21.55 RTRV-LMP 21-188
21.56 RTRV-LMP-CTRL 21-189
21.57 RTRV-LMP-TLINK 21-192
21.58 RTRV-LMP-DLINK 21-193
21.59 RTRV-LNK 21-195
21.60 RTRV-LNKTERM 21-201
21.61 RTRV-LOG 21-202
21.62 RTRV-MAP-NETWORK 21-204
21.63 RTRV-NE-APC 21-205
21.64 RTRV-NE-GEN 21-206
21.65 RTRV-NE-IPMAP 21-208
21.66 RTRV-NE-PATH 21-209
21.67 RTRV-NE-SYNCN 21-210
21.68 RTRV-NE-WDMANS 21-212
21.69 RTRV-NETYPE 21-215
21.70 RTRV-NNI-ETH 21-216
21.71 RTRV-OCH 21-217
21.72 RTRV-OCHCC 21-225
21.73 RTRV-OCHNC 21-227
21.74 RTRV-OMS 21-228

21.75 RTRV-OPM 21-231
21.76 RTRV-OTS 21-232
21.77 RTRV-PATH-OCH 21-235
21.78 RTRV-PM-<MOD2> 21-238
21.79 RTRV-PM-ALL 21-252
21.80 RTRV-PMMODE-<STS_PATH> 21-266
21.81 RTRV-PMMODE-<VT_PATH> 21-267
21.82 RTRV-PMSCHED-<MOD2> 21-269
21.83 RTRV-PMSCHED-ALL 21-272
21.84 RTRV-POS 21-275
21.85 RTRV-PROTNSW-<MOD2DWDMPAYLOAD> 21-276
21.86 RTRV-PROTNSW-<OCN_TYPE> 21-278
21.87 RTRV-PROTNSW-<PATH> 21-279
21.88 RTRV-PROTNSW-OCH 21-281
21.89 RTRV-PROTOCOL 21-283
21.90 RTRV-PTHTRC-<PATH> 21-284
21.91 RTRV-QNQ-ETH 21-286
21.92 RTRV-RMONTH-<MOD2_RMON> 21-288
21.93 RTRV-ROLL-<MOD_PATH> 21-299
21.94 RTRV-ROUTE 21-300
21.95 RTRV-ROUTE-GRE 21-301
21.96 RTRV-SLV-WDMANS 21-302
21.97 RTRV-STS 21-303
21.98 RTRV-SYNCN 21-309
21.99 RTRV-T1 21-310
21.100 RTRV-T3 21-315
21.101 RTRV-TACC 21-318
21.102 RTRV-TADRMAP 21-320
21.103 RTRV-TH-<MOD2> 21-322
21.104 RTRV-TH-ALL 21-334
21.105 RTRV-TOD 21-345
21.106 RTRV-TRAPTABLE 21-347
21.107 RTRV-TRC-<OCN_BLSR> 21-348
21.108 RTRV-TRC-OCH 21-351
21.109 RTRV-TUNNEL-FIREWALL 21-355

21.110 RTRV-TUNNEL-PROXY 21-356
21.111 RTRV-USER-SECU 21-357
21.112 RTRV-VCG 21-358
21.113 RTRV-VLAN 21-360
21.114 RTRV-VT 21-361
21.115 RTRV-WDMANS 21-364
21.116 RTRV-WDMSIDE 21-366
21.117 RTRV-WLEN 21-367

CHAPTER 22 SCHED Commands 22-1
22.1 SCHED-PMREPT-<MOD2> 22-1

CHAPTER 23 SET Commands 23-1
23.1 SET-ALMTH-<MOD2> 23-1
23.2 SET-ALMTH-EQPT 23-2
23.3 SET-ATTR-CONT 23-4
23.4 SET-ATTR-ENV 23-5
23.5 SET-ATTR-SECUDFLT 23-7
23.6 SET-PMMODE-<STS_PATH> 23-9
23.7 SET-PMMODE-<VT_PATH> 23-11
23.8 SET-TH-<MOD2> 23-12
23.9 SET-TOD 23-17

CHAPTER 24 SW Commands 24-1
24.1 SW-DX-EQPT 24-1
24.2 SW-TOPROTN-EQPT 24-2
24.3 SW-TOWKG-EQPT 24-4

CHAPTER 25 Access Identifiers 25-1
25.1 ALL 25-1
25.2 AidUnionId 25-12
25.3 AidUnionId1 25-17
25.4 BAND 25-17
25.5 BANDWL 25-18
25.6 BITS 25-18
25.7 BLSR 25-19

25.8 CHANNEL 25-20
25.9 COM 25-21
25.10 CrossConnectId 25-22
25.11 CrossConnectId1 25-26
25.12 DS1 25-32
25.13 ENV 25-32
25.14 EQPT 25-33
25.15 FACILITY 25-35
25.16 IPADDR 25-39
25.17 LINE 25-39
25.18 LINEWL 25-40
25.19 LNKTERM 25-42
25.20 OPM 25-43
25.21 OSC 25-43
25.22 PRSLOT 25-43
25.23 RFILE 25-44
25.24 SHELF 25-44
25.25 STS 25-44
25.26 SYN 25-49
25.27 SYN_SRC 25-49
25.28 SYNC_REF 25-50
25.29 SYNCSW 25-51
25.30 UDC 25-52
25.31 VT 25-52
25.32 WDMANS 25-54
25.33 WLEN 25-54
25.34 CTC Port Numbers and TL1 Aids 25-54

CHAPTER 26 **Conditions** 26-1

CHAPTER 27 **Modifiers** 27-1

INDEX

Table 25-1 ALL **25-1 xv**
Table 25-2 AidUnionId **25-12 xv**
Table 25-3 AidUnionId1 **25-17 xv**
Table 25-4 BAND **25-17 xvi**
Table 25-5 BANDWL **25-18 xvi**
Table 25-6 BITS **25-18 xvi**
Table 25-7 BLSR **25-19 xvi**
Table 25-8 CHANNEL **25-20 xvi**
Table 25-9 COM **25-21 xvi**
Table 25-10 CrossConnect Id **25-22 xvi**
Table 25-11 CrossConnectId1 **25-26 xvi**
Table 25-12 DS1 **25-32 xvi**
Table 25-13 ENV **25-32 xvi**
Table 25-14 EQPT **25-33 xvi**
Table 25-15 FACILITY **25-36 xvi**
Table 25-16 IPADDR **25-39 xvi**
Table 25-17 LINE **25-39 xvi**
Table 25-18 LINEWL **25-41 xvi**
Table 25-19 LNKTERM **25-42 xvi**
Table 25-20 OPM **25-43 xvi**
Table 25-21 OSC **25-43 xvi**
Table 25-22 PRSLOT **25-43 xvi**
Table 25-23 RFILE **25-44 xvi**
Table 25-24 SHELF **25-44 xvi**
Table 25-25 STS **25-45 xvi**
Table 25-26 SYN **25-49 xvi**
Table 25-27 SYN_SRC **25-50 xvi**
Table 25-28 SYNC_REF **25-50 xvi**
Table 25-29 SYNCSW **25-51 xvi**
Table 25-30 UDC **25-52 xvi**
Table 25-31 VT **25-52 xvi**
Table 25-32 WDMANS **25-54 xvi**
Table 25-33 WLEN **25-54 xvi**
Table 25-34 CTC Port Numbers and TL1 Aids **25-54 xvi**
Table 26-1 Conditions **26-1 xvi**
Table 27-1 Modifier Support **27-1 xvi**

Table 25-1 ALL **25-1**
Table 25-2 AidUnionId **25-12**
Table 25-3 AidUnionId1 **25-17**

Table 25-4 BAND **25-17**
Table 25-5 BANDWL **25-18**
Table 25-6 BITS **25-18**
Table 25-7 BLSR **25-19**
Table 25-8 CHANNEL **25-20**
Table 25-9 COM **25-21**
Table 25-10 CrossConnect Id **25-22**
Table 25-11 CrossConnectId1 **25-26**
Table 25-12 DS1 **25-32**
Table 25-13 ENV **25-32**
Table 25-14 EQPT **25-33**
Table 25-15 FACILITY **25-36**
Table 25-16 IPADDR **25-39**
Table 25-17 LINE **25-39**
Table 25-18 LINEWL **25-41**
Table 25-19 LNKTERM **25-42**
Table 25-20 OPM **25-43**
Table 25-21 OSC **25-43**
Table 25-22 PRSLOT **25-43**
Table 25-23 RFILE **25-44**
Table 25-24 SHELF **25-44**
Table 25-25 STS **25-45**
Table 25-26 SYN **25-49**
Table 25-27 SYN_SRC **25-50**
Table 25-28 SYNC_REF **25-50**
Table 25-29 SYNCSW **25-51**
Table 25-30 UDC **25-52**
Table 25-31 VT **25-52**
Table 25-32 WDMANS **25-54**
Table 25-33 WLEN **25-54**
Table 25-34 CTC Port Numbers and TL1 Aids **25-54**
Table 26-1 Conditions **26-1**
Table 27-1 Modifier Support **27-1**

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
- Document Objectives
- Audience
- Related Documentation
- Document Conventions
- Obtaining Optical Networking Information
- Obtaining Documentation and Submitting a Service Request

Revision History

Date	Notes
March 2007	Added the Revision History table.
April 2007	Added description for service state transitions in ED-<OCN_TYPE>, ED-EC1, ED-T1, and ED-T3 commands in the “ED Commands” chapter.
May 2007	Added a note regarding Telecordia GR831 non-compliant data and TL1 response in the “RTRV Commands” chapter.
July 2007	Updated About this Guide chapter.
December 2007	Added <SUPPRESS> parameter for ED-ETH, ED-POS, and ED-GIGE commands.

Date	Notes
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. • Updated aidtype, cardmode, and equipment type in ED-EQPT, ENT-EQPT, and RTRV-EQPT commands in Chapter 11, ED Commands, Chapter 12, ENT Commands, and Chapter 21, RTRV Commands. • Updated parameters in ED-GFP and ED-NE-GEN commands in Chapter 11, ED Commands. • Updated parameters in RTRV-NE-GEN in Chapter 21, RTRV Commands.
May 2008	Added a note to the COPY-RFILE command.
June 2008	• Deleted the <PH> parameter and updated the Input Format, Example, and Parameter for the INIT-SYS command in section 15.2 of Chapter 15, INIT Commands. • Added a note to the RTRV-FAC command.
September 2008	Added the table “CTC Port Numbers and TL1 Aids” in the chapter, Access Identifiers.
November 2008	Updated Fan Tray AID description in EQPT AIDs table in Chapter 25, Access Identifiers.
May 2009	• Updated input parameter description for ED-<OCN_TYPE> command in Chapter 11, ED Commands. • 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 input parameters for the ENT-OCHNC command in the chapter, ENT Commands. • Updated the following: – The input format, input example and input parameters for the OPR-APC command in the chapter, OPR Commands. – The WDMANS AID in the chapter, Access Identifiers. • 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.

Date	Notes
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”. • Updated the input parameter for the INIT-SYS command in the chapter, INIT Commands.
September 2010	Updated the table RFILE in the chapter “Access Identifiers”.
November 2010	Removed the “prerequisite” section from the “COPY-RFILE” command.
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”
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 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.

Related Documentation

Use the *Cisco ONS SONET TL1 Command Guide, R8.0* in conjunction with the following referenced publications:

- *Cisco ONS SONET TL1 Reference Guide, Release 8.0*
  Provides general information, procedures, and errors related to using TL1 in the Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA, and ONS 15600.
- *Cisco ONS SONET TL1 Command Quick Reference Guide, Release 8.0*
  Provides input formats and output formats (where applicable) for all R8.0 TL1 commands and autonomous messages.
- *Cisco ONS SONET TL1 for Beginners, Release 8.0*
  Provides basic beginning instruction for using TL1.
- *Cisco ONS 15454 Procedure Guide, Release 8.0*
  Cisco ONS 15310-CL and Cisco ONS 15310-MA Procedure Guide, Release 8.0
  Cisco ONS 15600 Procedure Guide, Release 8.0
  Provides procedures and tasks for the corresponding Cisco ONS node and network.
- *Cisco ONS 15454 Reference Manual, Release 8.0*
  Cisco ONS 15310-CL and Cisco ONS 15310-MA Reference Manual, Release 8.0
  Cisco ONS 15600 Reference Manual, Release 8.0
  Provides reference material for the corresponding Cisco ONS node and network.
- *Cisco ONS 15454 Troubleshooting Guide, Release 8.0*
  Cisco ONS 15310-CL and Cisco ONS 15310-MA Troubleshooting Guide, Release 8.0
  Cisco ONS 15600 Troubleshooting Guide, Release 8.0
  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, Release 8.0*
  Explains installation, turn up, provisioning, and maintenance for Cisco ONS 15454 dense wavelength division (DWDM) systems.
- *Cisco ONS 15454 DWDM Reference Manual, Release 8.0*
  Explains installation, turn up, provisioning, and maintenance for Cisco ONS 15454 dense wavelength division (DWDM) systems.
- *Cisco ONS 15454 DWDM Troubleshooting Guide, Release 8.0*
  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.
- *Cisco ONS 15454 and Cisco ONS 15454 SDH Ethernet Card Software Feature and Configuration Guide, Release 8.0*
  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, Release 8.0*
  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 8.0*
  Release Notes for the Cisco ONS 15310-CL Release 8.0
  Release Notes for the Cisco ONS 15310-MA Release 8.0
  Release Notes for the Cisco ONS 15600 Release 8.0
  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, Cisco ONS 15310-CL, Cisco ONS 15310-MA, and Cisco 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.

ALW Commands

This chapter provides allow (ALW) commands for the Cisco ONS 15454, Cisco ONS 15310-CL, Cisco ONS 15310-MA, and Cisco 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 25-33.

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 25-33.

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 25-33.
<DIRN>	Optional. 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 25-33.
<DIRN>	Optional. 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.

CHAPTER 3

APPLY Commands

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

3.1 APPLY

(Cisco ONS 15454, 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 and Messages

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

CHAPTER 5

CHG Commands

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

5.1 CHG-ACCMD-<MOD_TACC>

(Cisco ONS 15454, ONS 15310-MA, ONS 15600) The Change Test Access Mode for the DS1, DS3I, E1, E3, 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, 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>]:<AID>:<CTAG>::<EQPTTYPE>:[PPMTYPE=PPMTYPE>],
[PPMNUM=<PPMNUM>],[PORTNUM=<PORTNUM>],[PORTRATE=<PORTRATE>];

Input Example

CHG-EQPT::SLOT-14:1::MRC-2.5G-4:PPMTYPE=PPM-1,PPMNUM=1,PORTNUM=1,
PORTRATE=OC48;

Input Parameters

<SRC>	The source access identifier from the "25.14 EQPT" section on page 25-33.
<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
• G1K-4	(ONS 15454) Four port G1000 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
• MRC-2.5G-4	(ONS 15454) 4-port MRC 2.5G card
• MRC-2.5G-12	(ONS 15454) 12-port MRC 2.5G card
• OC3	(ONS 15454) OC-3 card
• OC3-8	(ONS 15454) Eight port OC-3 card
• OC12	(ONS 15454) OC-12 card
• OC12-4	(ONS 15454) Four port OC-12 card
• OC48	(ONS 15454, 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
<PPMTYPE>	Identifies the pluggable port module type.
• PPM-1	Single-port PPM
<PPMNUM>	Identifies the pluggable port module number.
• 1	PPM No. 1
• 2	PPM No. 2
• 3	PPM No. 3
• 4	PPM No. 4
• 5	PPM No. 5
• 6	PPM No. 6
• 7	PPM No. 7
• 8	PPM No. 8
• 9	PPM No. 9
• 10	PPM No. 10
• 11	PPM No. 11
• 12	PPM No. 12
<PORTNUM>	Identifies the port number, which is used on the entity port with PPM.
• 1	Port No. 1
<PORTRATE>	Identifies the port rate, which is used to specify the port rate of the multi-rate card.
• OC3	OC-3 rate
• OC12	OC-12 rate
• OC48	OC- 48 rate

CLR Commands

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

7.1 CONN-TACC-<MOD_TACC>

(Cisco ONS 15454, ONS 15310-MA, ONS 15600) The Connect Test Access for DS1, DS3I, E1, E3, 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

For this command to be applicable, you must first create the TAP using the ED-<VC_PATH> or ED-VC12 command. Intrusive test access modes are traffic-affecting. If a facility/path is connected to a TAP in an intrusive test access mode, it is forced to go into the Locked-Maintenance state. The forced transition could be traffic-affecting. The present state of the facility/path is stored by the NE and is restored when the TAP connection is brought down. Test access connections are dropped automatically if the TL1 session is terminated or is timed out.

The following actions will return error messages:

- If all TAPs are busy, a RABY error message is returned.
- If a requested TAP is busy, a RTBY error message is returned.
- If a requested TAP does not exist, a RTEN error message is returned.
- If a circuit is already connected to another TAP, a SCAT error message is returned.
- If a requested condition already exists, a SRCN error message is returned.
- And invalid AID will return an Input, Invalid Access Identifier (IIAC) error message.
- If an access is not supported, an EANS error message is returned.
- If a requested access configuration is invalid, a SRAC error message is returned.
- You cannot connect a TACC to a cross-connect that is in pending roll.

- A connection can be made to a cross-connection, in which case all modes of access are supported. A connection to an Unmapped AID (an AID without a cross-connect on it) will allow only MONE, SPLTE, and LOOPE modes.
- A connection to the protect path of a 1+1, 1:1, or 1:N is not allowed; however, connecting to the PCA path of a two-fiber or four-fiber multiplex section-shared protection ring (MS-SPRing) is supported. This will be preempted when a MS-SPRing switch occurs.
- When you connect a TACC to a protect subnetwork connection protection (SNCP) trunk, you will always be connected to the working trunk instead.

Category Troubleshooting and Test Access

Security Maintenance

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

Input Example CONN-TACC-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.

CHAPTER 8

COPY Commands

This chapter provides copy (COPY) commands for the Cisco ONS 15454, Cisco ONS 15310-CL, Cisco ONS 15310-MA, and Cisco 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>,[FTTD=<FTTD>];

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

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 25-33.
<SRC>	Source AID. Specifies where the Cisco IOS configuration file is copied from. SRC is a string.
<DEST>	Specifies where the Cisco IOS configuration file is copied to. DEST is a string.
<FTTD>	FTTD is a string.

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 25-44.
<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>	FTTD is a string

DISC Commands

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

9.1 DISC-TACC

(Cisco ONS 15454, ONS 15310-MA, and 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, Cisco ONS 15310-CL, Cisco ONS 15310-MA, and Cisco 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:PETALUMA:FAC-5-1-1-1:1;

Input Parameters		
	<AID>	Access identifier from the "25.15 FACILITY" section on page 25-35 and "25.8 CHANNEL" section on page 25-20

10.2 DLT-<MOD_RING>

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

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 25-17. Identifies the bidirectional line switched ring (BLSR) of the network element (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 25-35 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 25-26 (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 25-26 (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; this leg is identified by the RFROM parameter in ENT-ROLL or ENT-BULKROLL command.
• 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.

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

Note

- The fields after CTAG (including the trailing colons) are optional.
- For one-way cross-connections, the AIDs must be in the same order as originally entered; for two-way cross-connections, either order will work.
- This command does not support the deletion of multiple STS cross-connections.
- Using "&" in the AID field of this command can delete a path protection STS cross-connection.
  - The following command is used to delete a one-way selector or two-way selector and bridge with:

    from points: F1, F2

    to points: T1

    DLT-CRS-{STS_PATH}:[<TID>]:F1&F2,T1:<CTAG>;
  - The following command is used to delete a one-way bridge or two-way selector and bridge with:

    from point: F1

    to points: T1, T2

    DLT-CRS-{STS_PATH}:[<TID>]:F1,T1&T2:<CTAG>;
  - The following command is used to delete a one-way or two-way subtending path protection connection with:

    from point: F1, F2

    to points: T1, T2

    DLT-CRS-{STS_PATH}:[<TID>]:F1&F2,T1&T2:<CTAG>;
  - The AID format in the deletion command is the same as the AID format in the retrieved response message. For example, if the output of any retrieved AID is "F1&F2,T1:CCT,STS3C", the deletion command with the AID format (F1&F2,T1) is required to delete this cross-connection.
  - The following command is used to delete a path protection IDRI (integrated dual-ring interconnect) cross-connection:

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

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

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

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

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

    A, B, C, and D have a positional meaning. Connection type 2WAYDC is used for path protection IDRI cross-connections.
  - The following command is used to delete a path protection dual-ring interconnect (DRI) cross-connection:

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

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

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

C – Traffic to and from Ring Y

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

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

Category

Cross Connections

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

<SRC>	Source AID from the "25.11 CrossConnectId1" section on page 25-26.
<DST>	Destination AID from the "25.11 CrossConnectId1" section on page 25-26.
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null, the CKTID field will not be displayed.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.

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

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 endpoint.

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

Usage Guidelines

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

Error conditions for deleting equipment can be:

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

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 25-33. 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, 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 25-35.
<DST>	The protecting facility AID from the "25.15 FACILITY" section on page 25-35.

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 25-35.
<PROTECT>	The protect facility AID from the "25.15 FACILITY" section on page 25-35.

10.8 DLT-LMP-CTRL

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Delete Link Management Protocol Control Channel (DLT-LMP-CTRL) command deletes an LMP control channel.

Usage Guidelines This command is only applicable on nodes that support the LMP protocol and have the LMP protocol enabled.

Category DWDM

Security Maintenance

Input Format DLT-LMP-CTRL:[<TID>]:<SRC>:<CTAG>;

Input Example DLT-LMP-CTRL:PETALUMA:CTRL-3:704;

Input Parameters

<SRC>	The LMP control channel.
• CTRL-ALL	Specifies all the control channels.
• CTRL-{1-4}	Specifies an individual control channel.

10.9 DLT-LMP-TLINK

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Delete Link Management Protocol Traffic Engineering (TE) Link (DLT-LMP-TLINK) command deletes an LMP TE link.

Usage Guidelines This command is only applicable on nodes that support the LMP protocol and have the LMP protocol enabled.

Category DWDM

Security Maintenance

Input Format DLT-LMP-TLINK:[<TID>]:<SRC>:<CTAG>;

Input Example DLT-LMP-TLINK:PETALUMA:TLINK-3:704;

Input Parameters

<SRC>	LMP TE link.
• TLINK-ALL	Specifies all the TE links.
• TLINK-{1-256}	Specifies an individual TE link.

10.10 DLT-LMP-DLINK

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Delete Link Management Protocol Data Link (DLT-LMP-DLINK) command deletes an LMP data link.

Usage Guidelines This command is only applicable on nodes that support the LMP protocol and have the LMP protocol enabled.

Category DWDM

Security Maintenance

Input Format DLT-LMP-DLINK:[<TID>]:<SRC>:<CTAG>;

Input Example DLT-LMP-DLINK:PETALUMA:FAC-14-1-1:704;

Input Parameters

<SRC>	Access identifier from the "25.15 FACILITY" section on page 25-35.

10.11 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 25-17
<TO>	The identifier at the other end of the optical link from the AID "25.4 BAND" section on page 25-17

10.12 DLT-LNKTERM

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) 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 25-42. Indicates a link (provisionable patchcord) termination on the local node.

10.13 DLT-NNI-ETH

(Cisco ONS 15454) The Delete Ethernet Network-to-Network Interface (DLT-NNI-ETH) command deletes the NNI S-VLAN ID for the NNI of an L2 Ethernet port.

Usage Guidelines

- The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use the RTRV-ETH command to obtain the current value.
- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The ALL AID is invalid for this command.

Category Ethernet

Security Provisioning

Input Format DLT-NNI-ETH:[<TID>]:<AID>:<CTAG>::<SVLANID>[::];

Input Example DLT-NNI-ETH:PETALUMA:ETH-1-1-1:1::1010;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "25.15 FACILITY" section on page 25-35.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

10.14 DLT-QNQ-ETH

(Cisco ONS 15454) The Delete Ethernet QinQ (DLT-QNQ-ETH) command deletes the IEEE 802.1Q tunneling (QinQ) relationship between the CE-VLAN and the S-VLAN for Gigabit Ethernet uniport provisioning associated to an L2 Ethernet port.

Usage Guidelines

The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use the RTRV-ETH command to obtain the current value.

Category

Ethernet

Security

Provisioning

Input Format

DLT-QNQ-ETH:[<TID>]:<AID>:<CTAG>::<FIRSTCEVLANID>,<LASTCEVLANID>,<SVLANID>[::];

Input Example

DLT-QNQ-ETH:PETALUMA:ETH-1-1-1:1::10,11,100;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "25.15 FACILITY" section on page 25-35.
<FIRSTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<LASTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

10.15 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 25-35.
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null, the CKTID field will not be displayed.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state in which the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.

10.16 DLT-OCHNC

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

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

Category DWDM

Security Provisioning

Input Format

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

Input Example

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

Input Parameters

<SRC>	Source access identifier from the "25.8 CHANNEL" section on page 25-20. In two-way wavelength connection sources, both directions need to be indicated.
<DST>	Destination access identifier from the "25.18 LINEWL" section on page 25-40. In two-way wavelength connection sources, both directions need to be indicated.
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null, the CKTID field will not be displayed.
<CMDMDE>	The parameter type is command mode, which forces the system to execute a given command regardless of any standing conditions. NORM mode is the default behavior for all commands but you can specify FRCD to force the system to override a state in which the command would normally be denied.
• FRCD	Force the system to override a state in which the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.

10.17 DLT-RMONTH-<MOD2_RMON>

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Delete Remote Monitoring Threshold for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 4GFC, 4GFICON, ETH, 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 multiple thresholds can be created for a particular MONTYPE, you must specify all of the necessary parameters for the specific threshold that you want to delete.

Usage Guidelines

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 25-35. 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 microamps
• LBCL-MAX	Maximum Laser Bias current in microamps
• LBCL-MIN	Minimum Laser Bias current in microamps
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds—A
• LP-ESB	Low-Order Path Errored Seconds—B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order Positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in tenths of a microwatt

• OPR-MAX	Maximum Receive Power in tenths of a microwatt
• OPR-MIN	Minimum Receive Power in tenths of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in tenths of a microwatt
• OPT-MAX	Maximum Transmit Power in tenths of a microwatt
• OPT-MIN	Minimum Transmit Power in tenths of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• 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

10.18 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.

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 25-26 (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 25-26 (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 is identified by the RFROM parameter in the ENT-ROLL command.
• STOP	The rolling operation will be deleted and reverted to the previous configuration.

10.19 DLT-ROUTE

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

Usage Guidelines None

Category System

Security Provisioning

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

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

Input Parameters

<DESPID>	Destination IP address. DESPID is a string.

10.20 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.

10.21 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:DXT::CTAG:::TIDNAME=ENENODENAME,ADDRTYPE=IPADDR;

Input Parameters

<TIDNAME>	TID of the entity to be removed from the TADRMAP. TIDNAME is a string.
<ADDRTYPE>	Specifies to remove either the IP address entry, the NSAP address entry, or both entries from the TADRMAP.
• IP	IP address
• IP-AND-NSAP	IP and NSAP addresses
• NSAP	NSAP address

10.22 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 25-39. IP address identifies the trap destination. Only numeric IP addresses are allowed.

10.23 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.

10.24 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.

10.25 DLT-USER-SECU

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Delete User Security (DLT-USER-SECU) command deletes a user. It can only be performed by a Superuser. Privilege levels are described in the ENT-USER-SECU command.

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

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

Category Security

Security Superuser

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

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

Input Parameters

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

10.26 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 25-35. ML-Series cards use the VFAC AID and FC_MR-4 cards use the FAC AID.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state in which the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.

10.27 DLT-VLAN

(Cisco ONS 15454) The Delete Virtual LAN (DLT-VLAN) command deletes a VLAN from the VLAN database. The VLAN database is a collection of VLANs used in an NE.

Usage Guidelines

- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The ALL AID is invalid for this command.

Category Ethernet

Security Provisioning

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

Input Example DLT-VLAN:PETALUMA:VLAN-4096:1;

Input Parameters

<AID>	The AID is used to access the VLAN.
• VLAN-ALL	All AIDs for the VLAN.
• VLAN-{0-4096}	The AID used for a single VLAN. VLAN ID 0 is reserved for untagged VLANs.

10.28 DLT-WDMSIDE

(Cisco ONS 15454) The Delete Wavelength Division Multiplexing Side (DLT-WDMSIDE) command deletes a WDM side.

Usage Guidelines

- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The ALL AID is invalid for this command.

Category DWDM

Security Maintenance

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

Input Example DLT-WDMSIDE:PENNGROVE:WDMSIDE-A:114;

Input Parameters

<AID>	The AID used to access the WDM side of a Multiservice Transport Platform (MSTP) node.
• WDMSIDE-{UNKNOWN,A,B,C,D,E,F,G,H}	MSTP side identifier.

CHAPTER 11

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, Cisco ONS 15310-CL, Cisco ONS 15310-MA, and Cisco ONS 15600.

11.1 ED-<GIGE_TYPE>

(Cisco ONS 15454 and ONS 15600) The Edit 10GIGE or GIGE (ED-<GIGE_TYPE>) command edits Ethernet facility attributes. See Table 27-1 on page 27-1 for supported modifiers by platform.

Usage Guidelines

The default values for all optional parameters are network element (NE) default values. These values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

The user can change the service state of a facility to OOS-MA OR DSBLD, only if all the following conditions are met

- The facility is not sourcing a synchronization clock
- The facility's DCC is disabled.
- The facility is not part of a protection group
- The facility is not supporting cross-connects

Note The conditions stipulated can be overridden by using the CMDMDE=FRCD option. The FRCD option will immediately remove the facility from service with no consideration for orderly interruption. Do not use in scripts or automated batch operations.

Note To completely disable the CMDMDE=FRCD option, provision the <to be defined parameter> in the NE defaults to FALSE. This will prevent the FRCD option from being honored by the NE. The NE default parameter can be provisioned using the CTC only.

Note The following parameters apply only to ED-GIGE; ADMINSTATE, LINKSTATE, MTU, FLOWCTRL, AUTONEG, HIWMRK, LOWMRK, DUPLEX, SPEED, and SOAK.

Note 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>],[SUPPRESS=<SUPPRESS>],[MACADDR=<MACADDR>],[FREQ=<FREQ>],[LOSSB=<LOSSB>],
[SOAK=<SOAK>]:[<PST>[,<SST>]];

Input Example

ED-GIGE:PETALUMA:FAC-1-1:123:::ADMINSTATE=DOWN,LINKSTATE=DOWN,MTU=1548,
FLOWCTRL=NONE,AUTONEG=Y,HIWMRK=485,LOWMRK=25,OPTICS=1000_BASE_LX,
DUPLEX=AUTO,SPEED=AUTO,NAME="GIGE PORT",CMDMDE=FRCD,
SUPPRESS=Y,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 25-35.
<ADMINSTATE>	Administration type. The parameter type is UP_DOWN, which indicates an up or down value.
• DOWN	Down
• UP	Up
<LINKSTATE>	Link state. 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 Megabits per seconds
• 10_GBPS	10 Gigabits per second
• 10_MBPS	10 Megabits per second
• 1_GBPS	1 Gigabit per second
• AUTO	Automatic
<NAME>	Port name. NAME is a string. Defaults to NULL. Maximum length is 32 characters.

<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<SUPPRESS>	Pre-service alarm flag for data ports. This parameter is supported on ML-series cards only.
• Y	Enable suppress.
• N	Disable suppress. Default is Off.
<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 1GISC3, 2GISC3, D1VIDEO, DV6000, ESCON, ETRCLO, HDTV or PASSTHRU (ED-<MODFCPAYLOAD>) command edits the attributes related to the Fibre Channel (FC) facility. The state IS,AINS is not supported on the FC port. See Table 27-1 on page 27-1 for supported modifiers by platform.

Usage Guidelines

The user can change the service state of a facility to locked-enabled or disabled, only if all the following conditions are met

- The facility is not sourcing a synchronization clock
- The facility's DCC is disabled.
- The facility is not part of a protection group
- The facility is not supporting cross-connects

Note The conditions stipulated can be overridden by using the CMDMDE=FRCD option. The FRCD option will immediately remove the facility from service with no consideration for orderly interruption. Do not use in scripts or automated batch operations.

Note To completely disable the CMDMDE=FRCD option, provision the <to be defined parameter> in the NE defaults to FALSE. This will prevent the FRCD option from being honored by the NE. The NE default parameter can be provisioned using the CTC only.

Note

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

Category

Ports

Security

Provisioning

Input Format

ED-<MOD1FCPAYLOAD>:[<TID>]:<AID>:<CTAG>:::[LINKRCVRY=<LINKRCVRY>],
[DISTEXTN=<DISTEXTN>],[AUTODETECTION=<AUTODETECTION>],
[LINKCREDITS=<LINKCREDITS>],[MFS=<MFS>],[NAME=<NAME>],
[CMDMDE=<CMDMDE>],[SOAK=<SOAK>],[FREQ=<FREQ>],
[LOSSB=<LOSSB>]:[<PST>[,[<SST>]];

Input Example

ED-1GFC:PETALUMA: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 25-35.
<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. User-assigned port name.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<SOAK>	OOS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer.
<FREQ>	The parameter type is OPTICAL_WLEN, which is the optical wavelength.
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 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:PETALUMA:FAC-6-1:1:::LINKRCVRY=Y,DISTEXTN=NONE, AUTODETECTION=Y, LINKCREDITS=10,MFS=2148,NAME="FCPORT",CMDMDE=CMDMDE, SOAK=32,FREQ=1550,LOSSB=LR-1:OOS,MT;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-35.
<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. User-assigned port name.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.

<SOAK>	OOS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer.
<FREQ>	The parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	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, 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 25-35.
<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. User-assigned port name.

<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<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 25-26.
<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 protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. Only applies to path protection. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. RVTM is not allowed to be set while RVRTV is N. Only applies to path protection. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<SWPDIP>	On/off switch for path protection payload defect level switching. Applicable only to STS-level paths in SONET (STSn). For the selector path on a BLSR, SWPDIP is not editable and always ON. Defaults to N. The parameter type is ON_OFF, which disables or enables an attribute.

• N	Disable an attribute.
• Y	Enable an attribute.
<HOLDOFFTIMER>	Hold off timer for path protection dual-ring interconnect (DRI). Values must be within 0 and 10000 ms (0 to 10 seconds), with increments of 100 ms. Defaults to "existed value." HOLDOFFTIMER is an integer.
<EXPTRC>	Expected path trace content. Indicates the expected path trace message (J1) contents. EXPTRC is any 64-character ASCII string, including the terminating CR (carriage return) and LF (line feed). Applicable to STS-level paths in SONET (STSn). Applicable to VT-level paths for the DS3XM-12 and CE-100T-8 card 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>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. Defaults to IS. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. Defaults to AINS. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.6 ED-<MOD_RING>

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

Usage Guidelines

ONS 15600 does 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 25-17. 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 protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. 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). See Table 27-1 on page 27-1 for supported modifiers by platform.

Usage Guidelines

- The OPRNOMINAL parameter is supported only by optical card types that support Optical PM. The following cards support OPRNOMINAL: OC3-8, MRC-12, MRC-12-2.5G, MRC-4-2.5G, OC192-XFP, CTX-2500, CTX, OC192-4, OC48-16, OC192-4-DWDM, ASAP-4.
- The data communications channel (DCC) transmit side is bridged to both working and protect in a 1+1 protection scheme. On the receive side, the active one is selected for DCC. The DCC is provisioned on the working port only in a 1+1 protection scheme.
- All lines in a 1+1 BLSR must have the same mode. If you change the mode of a line that is in a 1+1 BLSR, an error message will be returned.
- You cannot directly transition a facility from IS to OOS-MA,DSBLD service state. You can transition a facility to OOS-MA,DSBLD service state from any state except OOS-MA,MT. To transition a facility from OOS-MA,MT to OOS-MA,DSBLD service state, all the following conditions must be met:
  - The facility is not sourcing a synchronization clock
  - The facility's DCC is disabled
  - The facility is not part of a protection group

- The facility is not supporting cross-connects
- The facility is not using overhead connections or overhead terminations (such as express orderwire, local orderwire, or user data channels [UDCs])

Note The conditions stipulated can be overridden by using the CMDMDE=FRCD option. The FRCD option will immediately remove the facility from service (except for IS to OOS-MA,DSBLD transition) with no consideration for orderly interruption.

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=<OPRNOMINAL>]:[<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=SINGLESHELF,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 25-35.
<DCC>	Indicates whether or not the SDCC is to be used. Identifies the SDCC connection of the port. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<AREA>	The area ID and shows up only if the DCC is enabled. AREA is a string.
<SYNCMSG>	Synchronization status message. The parameter type is EXT_RING, which indicates whether the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.

• Y	The ring does support the extended K1/K2/K3 protocol.
<SENDDUS>	The facility will send the DUS (Do not use for Synchronization) value as the SSM for that facility. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<PJMON>	Identifies an OC-N port PJMON. PJMON is an integer. It defaults to 0 (zero). Set a valid STS number of the optical port. **Note** The PJMON number displayed in TL1 interface does not correspond to the PJVC4MON number in CTC, but instead corresponds to the STS number of the optical port.
<SFBER>	Signal failure threshold. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	Signal degrade threshold. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<MODE>	This parameter identifies the facility's operating mode. The mode could be either SONET or SDH.
• SDH	SDH/ETSI mode
• SONET	SONET/ANSI mode
<MUX>	BLSR extension byte (supported only on the OC48AS card). MUX cannot be configured if: • The card is SONET and the media type is SDHT. • The card has an orderwire or user data channel (UDC) connection. • This is a protect line and the working line has an orderwire or UDC connection. The parameter type is MUX_TYPE, which is the BLSR extension type.
• E2	E2 byte (orderwire)
• F1	F1 byte (user)
• K3	K3 byte
• Z2	Z2 byte
<SOAK>	OOS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). Defaults to 32. SOAK is an integer.

<OSFP>	The Open Shortest Path First discovery. Defaults to Y. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<LDCC>	The LDCC connection on the port. Defaults to N. the parameter type is EXT_RING, which indicates if the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<NAME>	NAME is a user-specified string to identify the facility. It defaults to NULL. Its maximum length is 32 characters.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<EXPTRC>	Expected section trace content. Indicates the expected section trace message (J1) contents. EXPTRC is any 64-character ASCII string, including the terminating CR (carriage return) and LF (line feed). Applicable to STS-level paths in SONET (STSn). Applicable to VT-level paths for the DS3XM-12 card on the ONS 15454. Defaults to NULL. EXPTRC is a string.
<TRC>	The section trace message to be transmitted. The trace byte (J1) continuously transmits a 64-byte, fixed length ASCII string, one byte at a time. A null value defaults to the NE transmitting 62 null characters (hex 00) and CR and LF. Applicable to STS-level paths in SONET (STSn). Applicable to VT-level paths for the DS3XM-12 card on the ONS 15454. TRC is a string.
<TRCMODE>	Secton trace mode. Applicable only to STS-level paths in SONET (STSn). Defaults to MAN. The parameter type is TRCMODE (trace mode).
• AUTO	Use the previously received section trace string as the expected string. Not applicable to MXP or TXP cards.
• AUTO-NO-AIS	Use the previously received section trace string as the expected string and do not turn on AIS and RDI if TIMP is detected.
• MAN	Use the provisioned expected string as the expected string.
• MAN-NO-AIS	Use the provisioned expected string as the expected string and do not turn on AIS and RDI if TIMP is detected.
• OFF	Turn off section trace capability. Nothing will be reported.
<TRCFORMAT>	Trace message size. The parameter type is TRCFORMAT (trace format).
• 1-BYTE	1 byte trace message

• 16-BYTE	16 byte trace message
• 64-BYTE	64 byte trace message
<ADMSSM>	SSM selectable value. It will only appear when SSM is disabled. Defaults to STU. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not Use For Synchronization
• PRS	Primary Reference Source, Stratum 1 Traceable
• RES	Reserved For Network Synchronization Use
• SMC	SONET Minimum Clock Traceable
• ST2	Stratum 2 Traceable
• ST3	Stratum 3 Traceable
• ST3E	Stratum 3E Traceable
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<SENDDUSFF>	The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<AISONLPBK>	The parameter type is AIS_ON_LPBK, which indicates if AIS is sent on a loopback.
• 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, ONS 15600) The Edit Automatic Laser Shutdown (ED-ALS) command is used to modify the ALS attributes of an OC-N facility and all the facilities that support the ALS feature. For transponder and muxponder cards, this command is used to modify the ALS parameter of the OC48 and OC192 ports.

Usage Guidelines None

Category Ports

Security Provisioning

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

Input Example ED-ALS::CHAN-1-1-1:100:::ALSMODE=AUTO,ALSRCINT=130,ALSRCPW=80.1;

Input Parameters

<SRC>	Access identifier from the "25.2 AidUnionId" section on page 25-12.
<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 retrieve 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:WDMSIDE-A:CTAG:::APCENABLE=N;

Input Parameters

<WDMSIDE>	The AID is used to access the WDM side of an MSTP node.
• WDMSIDE-{UNKNOWN,A, B,C,D,E,F,G,H}	MSTP side identifier
<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. Use a retrieve command to obtain the current value.

Category Synchronization

Security Provisioning

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

Input Example

ED-BITS:SONOMA:BITS-2:779:::LINECDE=AMI,FMT=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 25-18.
<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:PETALUMA:FAC-1-1:1:::RFROMSTART=STS-1-1-1,
RFROMEND=STS-1-1-11,CMDMDE=FRCD;

Input Parameters

<FROM>	One of the endpoints. Access identifier from the "25.15 FACILITY" section on page 25-35 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 25-26 (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 25-26 (except VCM and FACILITY). Defaults to STS-<FROMSLOT>-<FROMPORT>-N, where <FROMSLOT> and <FROMPORT> are the slot and port of the <FROM> AID and N is the value of OCn. (for example, OC48, n=48).

<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.

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-COS-ETH

(Cisco ONS 15454) The Edit Ethernet Cost of Service Table (ED-ETH COS) command edits the egress parameter of a cost of service table associated to an L2 Ethernet port.

Usage Guidelines

The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

Category

Ethernet

Security

Provisioning

Input Format

ED-COS-ETH:[<TID>]:<AID>:<CTAG>:::[QOSENABLED=<QOSENABLED>],[BW0=<BWO>],
[WEIGHT0=<WEIGHT0>],[BW1=<BW1>],[WEIGHT1=<WEIGHT1>],[BW2=<BW2>],
[WEIGHT2=<WEIGHT2>],[BW3=<BW3>],[WEIGHT3=<WEIGHT3>],[BW4=<BW4>],
[WEIGHT4=<WEIGHT4>],[BW5=<BW5>],[WEIGHT5=<WEIGHT5>],[BW6=<BW6>],
[WEIGHT6=<WEIGHT6>],[BW7=<BW7>],[WEIGHT7=<WEIGHT7>][:];

Input Example

ED-COS-ETH:PETALUMA:ETH-1-1-1:1:::QOSENABLED=Y,BW0=10,WEIGHT0=0,BW1=20,
WEIGHT1=2,BW2=40,WEIGHT2=4,BW3=60,WEIGHT3=6,BW4=70,WEIGHT4=8,BW5=80,
WEIGHT5=10,BW6=85,WEIGHT6=12,BW7=100,WEIGHT7=15:;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "25.15 FACILITY" section on page 25-35.
<QOSENABLED>	Used to enable or disable the egress QOS policy of an L2 Ethernet port.
• N	Disable the service.
• Y	Enable the service.
<BW0>	Bandwidth percentage, a value between 0 and 100.
<WEIGHT0>	Value represents the weighted round-robin (WRR) weight associated to the COS values, an integer value between 0 and 15.
<BW1>	Bandwidth percentage, a value between 0 and 100.
<WEIGHT1>	Value represents the WRR weight associated to the COS values, an integer value between 0 and 15.
<BW2>	Bandwidth percentage, a value between 0 and 100.
<WEIGHT2>	Value represents the WRR weight associated to the COS values, an integer value between 0 and 15.
<BW3>	Bandwidth percentage, a value between 0 and 100.

<WEIGHT3>	Value represents the WRR weight associated to the COS values, an integer value between 0 and 15.
<BW4>	Bandwidth percentage, a value between 0 and 100.
<WEIGHT4>	Value represents the WRR weight associated to the COS values, an integer value between 0 and 15.
<BW5>	Bandwidth percentage, a value between 0 and 100.
<WEIGHT5>	Value represents the WRR weight associated to the COS values, an integer value between 0 and 15.
<BW6>	Bandwidth percentage, a value between 0 and 100.
<WEIGHT6>	Value represents the WRR weight associated to the COS values, an integer value between 0 and 15.
<BW7>	Bandwidth percentage, a value between 0 and 100.
<WEIGHT7>	Value represents the WRR weight associated to the COS values, an integer value between 0 and 15.

11.14 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, path protection_DROP, path protection_DC, and path protection_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 25-26.
<DST>	Destination AID from the "25.11 CrossConnectId1" section on page 25-26.
<CCT>	Cross-connection. The parameter type is CCT which indicates the type of cross-connection to be created.
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	Path Protection multicast drop (one-way continue)
• 1WAYEN	Path Protection multicast end node (one-way continue)
• 1WAYMON	A bidirectional connection between the two tributaries **Note** In ONS 15454 Software Release 3.0 and later, 1WAYMON is not supported with TL1. However, it is still supported from Cisco Transport Controller (CTC). Using CTC, you can create 1WAYMON cross-connects that can be retrieved with TL1.
• 1WAYPCA	A unidirectional connection from a source tributary to a destination tributary on the protection path/fiber
• 2WAY	A bidirectional connection between the two tributaries
• 2WAYDC	A bidirectional drop and continue connection applicable only to path protection traditional and integrated DRIs
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber
• DIAG	Diagnostics cross-connect. Supports BERT (BLSR PCA diagnostics cross-connect).
<ADD>	AID from the "25.2 AidUnionId" section on page 25-12.
<REMOVE>	AID from the "25.2 AidUnionId" section on page 25-12.
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null, the CKTID field will not be displayed.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.

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

11.15 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:PETALUMA::1234::99-12-21,14-35-15;

Input Parameters

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

11.16 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 25-32.
<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.

11.17 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.
- You cannot directly transition a facility from IS to OOS-MA,DSBLD service state. You can transition a facility to OOS-MA,DSBLD service state from any state except OOS-MA,MT. To transition a facility from OOS-MA,MT to OOS-MA,DSBLD service state, all the following conditions must be met:
  - The facility is not sourcing a synchronization clock
  - The facility's DCC is disabled
  - The facility is not part of a protection group
  - The facility is not supporting cross-connects
  - The facility is not using overhead connections or overhead terminations (such as express orderwire, local orderwire, or user data channels [UDCs])

Note The conditions stipulated can be overridden by using the CMDMDE=FRCD option. The FRCD option will immediately remove the facility from service (except for IS to OOS-MA,DSBLD transition) with no consideration for orderly interruption.

Category Ports

Security Provisioning

Input Format

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

Input Example

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

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-35.
<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>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. Defaults to IS. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. Defaults to AINS. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.

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

11.18 ED-ETH

(Cisco ONS 15454, ONS 15310-CL, and 15310-MA) The Edit Ethernet (ED-ETH) command edits the front-end port information of a 10/100/1000 Mbps Ethernet card.

Usage Guidelines

The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

Note This command is available in Software Release 8.0.1 and all subsequent releases. It is not available in R8.0.0.

Category

Ethernet

Security

Provisioning

Input Format

ED-ETH:[<TID>]:<AID>:<CTAG>:::[FLOW=<FLOW>],[EXPDUPLEX=<EXPDUPLEX>],[EXPSPEED=<EXPSPEED>],[VLANCOS=<VLANCOS>],[IPTOS=<IPTOS>],[NAME=<NAME>],[CMDMDE=<CMDMDE>],[SUPPRESS=<SUPPRESS>],[SOAK=<SOAK>]:[<PST>[,<SST>]];

Input Example

ED-ETH:CISCO:FAC-1-1:123:::FLOW=Y,EXPDUPLEX=AUTO,EXPSPEED=10_MBPS,
VLANCOS=1175S,IPTOS=368,NAME="ETH PORT",CMDMDE=NORM,
SUPPRESS=Y,SOAK=32:IS,AINS;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "25.15 FACILITY" section on page 25-35.
<FACILITY>	Access identifier from the "25.15 FACILITY" section on page 25-35

<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 Megabits per second
• 10_GBPS	10 Gigabits per second
• 10_MBPS	10 Megabits per second
• 1_GBPS	1 Gigabit per second
• AUTO	Auto
<VLANCOS>	(Optional) Priority queing threshold based on VLAN class of service for incoming Ethernet packets. VLANCOS is an integer.
<IPTOS>	(Optional) Priority queing threshold based on IP type of service for incoming Ethernet packets. IPTOS is an integer.
<NAME>	(Optional) Name. NAME is a string.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
<SUPPRESS>	Pre-service alarm flag for data ports. This parameter is supported on ML-series cards only.
• Y	Enable suppress.
• N	Disable suppress. Default is Off.
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. 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

11.19 ED-EQPT

(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 node controller (NC) to shelf controller (SC) on an NE configured in multishelf mode.

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

Usage Guidelines

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

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

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

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

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

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

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

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

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

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

1:1 protection group:

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

1:N protection group:

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

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

- Editing the PRTYPE or PROTID (non-NULL value) parameters.
- Editing RVRTV or RVTM when no protection group exists.
- Editing RVRTV for 1:N protection.
- Failed to remove, currently switched to protect.
- CARDMODE provisioning is allowed on the DS3XM-12 cards as follows:
  - DS3XM-12 card provisioning is based on the XCON type and DS3XM-12 card's location. For example, the DS3XM-12 card in the lower speed I/O slot with the XCVT card only allows the DS3XM-12-STS12 CARDMODE. Other cases allow the CARDMODE to be DS3XM-12-STS-48.
  - There is no card reboot if the CARDMODE is changed on the DS3XM-12 card.
  - The DS3XM-12 card can be upgraded or downgraded by changing the CARDMODE with the ED-EQPT command.

CMDMDE provisioning behaves as follows:

- If the command mode (CMDMDE) is set to NORM during the creation of a 1:1 or 1:N protection group, all cards must be physically plugged in and in the service state (IS). If the cards are not physically plugged in and are not in ready state, the command is denied with an appropriate error message. CMDMDE=FRCD will override the default behavior and allow creation of protection group regardless of the physical presence and ready state of cards.
- If the command mode is set to NORM during the removal of a card in a 1:1 or 1:N protection group, there must be no cross-connects (for example, services) present on the card. CMDMDE=FRCD will override the default behavior and allow deletion of protection group regardless of presence of cross-connects on the card.

RETIME provisioning is allowed only on the DS1/E1-56 (ONS 15454) and DS1-84-DS3-EC1-3 (ONS 15310-MA SONET) cards.

Input parameters <PEERID>,<REGENNAME>,<PEERNAME>,<SHELFROLE>,<NEWSHELFID>, <FRPROLE>, and, <FRPSTATE> are not supported on Cisco ONS 15310-MA SONET.

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>,][CARDMODE=<CARDMODE>,][PEERID=<PEERID>,]
[REGENNAME=<REGENNAME>,][PEERNAME=<PEERNAME>,][CMDMDE=<CMDMDE>,]
[RETIME=<RETIME>,][SHELFROLE=<SHELFROLE>,][NEWSHELFID=<NEWSHELFID>,]
[FRPROLE=<FRPROLE>,][FRPSTATE=<FRPSTATE>];[<PST>[,<SST>]];

Input Example

ED-EQPT:CISCO:SLOT-2:123:::PROTID=SLOT-1,PRTYPE=1-1,RVRTV=Y,RVTM=9.0,
CARDMODE=DS3XM12-STS48,PEERID=SLOT-2,REGENNAME="THIS GROUP",
CMDMDE=FRCD,RETIME=Y,SHELFROLE=SC,NEWSHELFID=2:OOS,MT,
FRPROLE=MASTER,FRPSTATE=Y:OOS,MT;

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-33.
<PROTID>	Protect card slot number of the protection group from the "25.22 PRSLOT" section on page 25-43.
<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.
<CARDMODE>	Defines the card mode.
• AMPL-BST	The optical amplifier is working as an optical booster.
• AMPL-PRE	The optical amplifier is working as an optical preamplifier.
• CEMR-AUTO	Auto allocation of back-end channels for CE-MR-6 (Cisco ONS 15310-MA SONET only) cards.
• CEMR-MANUAL	Manual allocation of back-end channels for CE-MR-6 (Cisco ONS 15310-MA SONET only) cards.
• DS1E1-DS1ONLY	DS1 mode on DS1E1 card
• DS1E1-E1ONLY	E1 mode on DS1E1 card
• DS3XM-12-STS12	Indicates the DS3XM-12 card in the STS12 back plane rate mode
• DS3XM-12-STS48	Indicates the DS3XM-12 card in the STS48 back plane rate mode

• DWDM-LINE	Line terminating mode
• DWDM-SECTION	Section terminating mode
• DWDM-TRANS-AIS	Transparent mode AIS
• DWDM-TRANS-SQUELCH	Transparent mode SQUELCH
• FCMR-DISTEXTN	FC_MR-4 card with distance extension support
• FCMR-LINERATE	FC_MR-4 card without distance extension support
• GEXP-10x1Gx2-MXP	GE-XP behaves as a double Muxponder having ten 1 Gbps client facilities with one trunk. The first 10 GIGE clients are associated to the first trunk (21), while GIGE facilities from 11 to 20 are associated to trunk 22.
• GEXP-20x1G-MXP	GE-XP behaves as a single Muxponder having ten 1 Gbps client facilities with one trunk. Only the first 10 GIGE clients are associated to the first trunk (21) while the other facilities are unused.
• GEXP-L2ETH	GE-XP behaves as an L2 Ethernet Switch.
• 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
• ML-IEEE-RPR	Ml-Series card in DOS FPGA THAT supports Resilient Packet Ring (RPR)
• MXPMR10DME-4GFC	4-Gbps Fibre Channel/FICON mode for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on Ports 1 and 5
• MXPMR10DME-4GFC-FCGEISC	4-Gbps Fibre Channel/FICON supported on Port 1 and Fibre Channel, GIGE, and ISC modes for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on Ports 5 to 8
• MXPMR10DME-FCGEISC	Fibre Channel, GIGE, and ISC modes for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on all eight ports
• MXPMR10DME-FCGEISC-4GFC	Fibre Channel, GIGE, and ISC modes for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on Ports 1 to 4 and 4-Gbps Fibre Channel/FICON supported on Port 5
• MXPMR10G-FCGEISC	Fibre Channel, GIGE, and ISC modes for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on all eight ports
• MXPMR10G-4GFC	4-Gbps Fibre Channel/FICON mode for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on Ports 1 and 5
• MXPMR10G-FCGEISC-4GFC	Fibre Channel, GIGE, and ISC modes for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on Ports 1 to 4 and 4-Gbps Fibre Channel/FICON supported on Port 5

• MXPMR10G-4GFC-FCGEISC	4-Gbps Fibre Channel/FICON supported on Port 1 and Fibre Channel, GIGE, and ISC modes for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on Ports 5 to 8.
• 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
• UNKNOWN	Unknown equipment type
<PEERID>	The regeneration peer slot from the "25.14 EQPT" section on page 25-33.
<REGENNAME>	The name of a regeneration group. REGENNAME is a string.
<PEERNAME>	PEERNAME is a user-specified string used to identify ADM-10G peer groups. It defaults to NULL. Its maximum length is 32 characters.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<RETIME>	(Optional) Indicates the RETIME function for all the facilities on this card. Applicable only to the DS1/E1-56 (ONS 15454) and DS1-84-DS3-EC1-3 (ONS 15310-MA SONET) cards. The parameter type is ON_OFF, which disables or enables an attribute.
• 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.
<FRPROLE>	Indicates the fast ring protection enable mode for GE-XP/10GE-XP units involved in a protection scheme.
• MASTER	Role is of card master of the ring.
• SLAVE	Role is of card slave of the ring.

<FRPSTATE>	Indicates the fast ring protection enable state.
• DISABLED	Disabled protection
• ENABLED	Enabled protection
• FORCED	Forced protection
<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

11.20 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. Use a retrieve command to obtain the current value.

Note Command is supported only on the STM1E-12 card.

Usage Guidelines None

Category Ports

Security Provisioning

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

Input Example

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

Input Parameters

<SRC>	Source access identifier from the "25.15 FACILITY" section on page 25-35.
<PAYLOAD>	The payload for the card. The parameter type is PAYLOAD, which identifies the payload type.
• E4 Framed	E4 Framed facility
• E4 Unframed	E4 Unframed facility
• STM 1E	STM 1E facility
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. Defaults to IS. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. Defaults to AINS. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• MT	Maintenance mode
• OOG	Out of group

11.21 ED-FFP-<MOD2DWDMPAYLOAD>

(Cisco ONS 15454) The Edit Facility Protection Group for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 4GFC, 4GFICON, D1VIDEO, DV6000, ETRCLO, GIGE, or HDTV (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-1GFC: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 25-35.
<PROTAID>	The protection group identifier (protection group name). Defaults to the protecting port AID of the protection group. PROTAID can have a maximum length of 32 characters. It is a string.
<RVRTV>	Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. Only applies to path protection configurations. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. RVTM is not allowed to be set while "RVRTV" is N. Only applies to path protection configurations. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	Protection switch operation. Identifies the switching mode. Defaults to UNI. **Note** The MXP_2.5G_10G and TXP_MR_10G cards do not support bidirectional switching. The parameter type is UNI_BI (unidirectional switch operations).
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching

11.22 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. Use a retrieve command obtain the current value.

Category

Protection

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-35.
<PROTAID>	The protection group identifier (protection group name). PROTAID can have a maximum length of 32 characters. It is a string.
<RVRTV>	Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	Protection switch operation. Indicates the switch mode. Defaults to UNI. The parameter type is UNI_BI (unidirectional and bidirectional switch operations).
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching
<VRGRDTM>	Verification guard timer. Only applicable to optimized 1+1. The parameter type is VERIFICATION_GUARD_TIMER (optimized 1+1 verification guard timer).
• 0.5	500 milliseconds
• 1.0	1 second

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

11.23 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 25-20.
<PROTAID>	The protection group identifier (protection group name). PROTAID is a string.

<RVRTV>	Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
<PSDIRN>	Protection switch operation. The parameter type is TRANS_MODE (G1000 transponder mode)
• BI	Bidirectional
• NONE	Not in transponder mode
• UNI	Unidirectional

11.24 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. Use a retrieve command to obtain the current value.

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>],[SUPPRESS=<SUPPRESS>],[SOAK=<SOAK>]:[<PST>[,<SST>]];

Input Example

ED-FSTE:CISCO:FAC-1-1:123:::FLOW=Y,EXPDUPLEX=AUTO,EXPSPEED=10_MBPS,VLANCOS=1175,IPTOS=368,NAME="FSTE PORT",CMDMDE=NORM,SUPPRESS=Y,SOAK=32:UNLOCKED,AUTOMATICINSERVICE;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-35.
<FLOW>	Flow control. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<EXPDUPLEX>	Ethernet duplex mode. The parameter type is ETHER_DUPLEX (duplex mode).
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode
<EXPSPEED>	Ethernet speed. The parameter type is ETHER_SPEED (Ethernet speed).
• 100_MBPS	100 Megabits per second
• 10_GBPS	10 Gigabits per second
• 10_MBPS	10 Megabits per second
• 1_GBPS	1 Gigabits per second
• 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>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<SUPPRESS>	Pre-service alarm flag for data ports. This parameter is supported on ML-series cards only.
• Y	Enable suppress.
• N	Disable suppress. Default is Off.
<SOAK>	OOS-AINS to IS transition soak time as measured in 15 minute intervals, so a value of 4 translates to a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer.
<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

11.25 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. Use a retrieve command to obtain the current value.

Category

Ports

Security

Provisioning

Input Format

ED-G1000:[<TID>]:<AID>:<CTAG>:::[MFS=<MFS>],[FLOW=<FLOW>],
[LOWMRK=<LOWMRK>],[HIWMRK=<HIWMRK>],[AUTONEG=<AUTONEG>],
[NAME=<NAME>],[CMDMDE=<CMDMDE>],[SOAK=<SOAK>]:[<PST>[,<SST>]];

Input Example

ED-G1000:PETALUMA:FAC-1-1:CTAG:::MFS=1548,FLOW=Y,LOWMRK=20,HIWMRK=492,
AUTONEG=Y,NAME="G1000 PORT",CMDMDE=FRCD,SOAK=32:OOS,DSBLD;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-35.

<MFS>	Maximum frame size. the parameter type is MFS_TYPE, which is the maximum frame size used by an Ethernet card.
• 1548	Normal frame size
• JUMBO	Jumbo frame size
<FLOW>	Flow control. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<LOWMRK>	Low watermark value. LOWMRK is an integer. Defaults to 25. LOWMRK is available in Software Release 4.0.1 and later.
<HIWMRK>	High watermark value. HIWMRK is an integer. Defaults to 485.
<AUTONEG>	Automatic negotiation. Defaults to Y. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Disable an attribute.
• Y	Enable an attribute.
<NAME>	Name. NAME is a string. Default is NULL. Maximum length is 32 characters.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<SOAK>	OOS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer. Defaults to 32.
<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

11.26 ED-GFP

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Generic Framing Protocol (ED-GFP) command edits GFP parameters on the ONS 15454 CE-100T-8, FC_MR-4, CE-1000-4, and the ONS 15310-CL CE-100T-8, and the ONS 15600 ASAP cards.

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:PETALUMA:VFAC-1-0:123:::FCS=N,AUTOTHGFPBUF=Y,GFPBUF=16, FILTER=INGRESS;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-35. **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.
• INGRESS	Activate filter feature on the ingress port.
• NONE	Turn off filter feature.

11.27 ED-HDLC

(Cisco ONS 15454 and 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:PETALUMA:VFAC-SLOT-PORT:CTAG:::FCS=FCS-16;

Input Parameters

<SRC>	Access identifier from the "25.15 FACILITY" section on page 25-35. 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

11.28 ED-L2-ETH

(Cisco ONS 15454, ONS 15310-CL, and ONS 15310-MA) The Edit Layer 2 Ethernet (ED-L2-ETH) command edits the layer 2 port information of GE-XP and 10GE-XP Ethernet cards.

Usage Guidelines

The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

Category

Ethernet

Security

Provisioning

Input Format

ED-ETH:[<TID>]:<AID>:<CTAG>:::[NIMODE=<NIMODE>],
[MACLEARNING=<MACLEARNING>],[INGRESSCOS=<INGRESSCOS>],
[ETHERCETYPE=<ETHERCETYPE>],[ETHERSTYPE=<ETHERSTYPE>],
[ALWMACADDR=<ALWMACADDR>],[INHMACADDR=<INHMACADDR>],[BPDU=<BPDU>],
[BRIDGESTATE=<BRIDGESTATE>],[QNQMODE=<QNQMODE>],
[TRNSPSVLAN=<TRNSPSVLAN>],[NAME=<NAME>],[CMDMDE=<CMDMDE>]:
[<PST>[,<SST>]];

Input Example

ED-L2-ETH:CISCO:ETH-1-1-1:123:::NIMODE=NNI,MACLEARNING=Y,INGRESSCOS=8,
ETHERCETYPE=8100,ETHERSTYPE=8100,
ALWMACADDR=aa-bb-cc-dd-ee-ff&zz-yy-ww-tt-ss-rr,,BPDU=Y,BRIDGESTATE=DISABLED,
QNQMODE=TRANSPARENT,TRNSPSVLAN=4096,NAME="Ethernet",
CMDMDE=FRCD:IS,AINS;

ED-L2-ETH:CISCO:ETH-1-1-1:123:::NIMODE=NNI,MACLEARNING=Y,INGRESSCOS=8,
ETHERCETYPE=8100,ETHERSTYPE=8100,INHMACADDR=aa-bb-cc-dd-ee-ff&zz-yy-ww-tt-ss-rr,,
BPDU=Y,BRIDGESTATE=DISABLED,QNQMODE=SELECTIVE,NAME="Ethernet",
CMDMDE=FRCD:IS,AINS;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "25.15 FACILITY" section on page 25-35.
<NIMODE>	Identifies the Ethernet Network Interface Mode.
• NNI	(Default) Network-Network Interface Mode
• UNI	User-Network Interface Mode
<MACLEARNING>	MAC address learning mode. This activates the MAC address learning on the interface to avoid packet broadcasting.
• Y	Enables MAC learning
• N	Disable MAC learning
<INGRESSCOS>	Identifies the COS value set in the S-VLAN tag.
<ETHERCETYPE>	Identifies a customer foreseen Ethernet type. If the customer uses a non-standard Ethernet type, the incoming packets will be accepted only if the CE-VLAN Ethernet type matches this parameter.

<ETHERSTYPE>	Identifies a customer foreseen Ethernet type. If the customer uses a non-standard Ethernet type, the incoming packets will be accepted only if the CE-VLAN Ethernet type matches this parameter.
<ALWMACADDR>	Identifies the allowed MAC addresses filtered out by the L2 Ethernet port. Every single MAC address is in the format of aa-bb-cc-dd-ee-ff, where every digit is in a hexadecimal form.
<INHMACADDR>	Identifies the inhibited MAC addresses filtered out by the L2 Ethernet port. Every single MAC address is in the format of aa-bb-cc-dd-ee-ff, where every digit is in a hexadecimal form.
<BPDU>	BPDU (Bridge Protocol Data Unit) management mode; Drop/Passthrough BPDU tagged packets.
• Y	Enables the BPDU tag.
• N	Disables the BPDU tag.
<BRIDGESTATE>	Defines if the traffic is blocked on the port.
• Unknown	Unknown state
• Disabled	Disabled state
• Blocking	Blocking state
• Listening	Listening state
• Learning	Learning state
• Forwarding	Forwarding state
• Broken	Broken state
<QNQMODE>	This is used to represent the QinQ mode operations.
• Selective	The S-VLAN tag is added only on specified CE-VLANs. The other packets are dropped.
• Transparent	The S-VLAN tag is always performed where all packets having the S-VLAN-ID identified by TRNSPSVLAN parameter are allowed.
<TRNSPSVLAN>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<NAME>	(Optional) Name. NAME is a string.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.

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

11.29 ED-LMP

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Link Management Protocol (ED-LMP) command edits the global LMP protocol attributes.

Usage Guidelines

This command is only available on platforms that support the LMP protocol.

Category

LMP

Security

Provisioning

Input Format

ED-LMP:[<TID>]::<CTAG>:::[ENABLED=<ENABLED>],[WDMEXT=<WDM>], [ROLE=<ROLE>], [LMPNODEID-<NODEID>][:];

Input Example

ED-LMP:PETALUMA::704:::ENABLED=Y,WDMEXT=Y,ROLE=PEER,LMPNODEID=198.133.219.25;

Input Parameters

<ENABLED>	LMP protocol status.
• Y	The protocol is enabled.
• N	The protocol is disabled.
• <WDM>	Determines if the LMP wave division multiplexing (WDM) extensions are in effect.
• Y	The LMP WDM extensions are in effect.
• N	The LMP WDM extensions are not in effect.
• <ROLE>	The role the LMP protocol is configured to play.
• OLS	The LMP protocol is configured to respond as an optical line system (OLS).

• PEER	The LMP protocol is configured to respond as a peer node.
• <NODEID>	LMP node ID. NODEID is a stable IP address that is always reachable if there is any connectivity to it. The default LMP node ID value is the IP address of the node.

11.30 ED-LMP-CTRL

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Link Management Protocol Control Channel (ED-LMP-CTRL) command edits the LMP control channels.

Usage Guidelines

This command is only available on nodes where the LMP protocol is available and has been enabled.

Category

LMP

Security

Provisioning

Input Format

ED-LMP-CTRL:[<TID>]:<SRC>:<CTAG>:::[LOCALPORT=<LOCALPORT>], [REMOTENE=<REMOTENE>],[REMOTEIP=<REMOTEIP>],[HELLO=<HELLO>], [HELLOMIN=<HELLOMIN>],[HELLOMAX=<HELLOMAX>],[DEAD=<DEAD>], [DEADMIN=<DEADMIN>], [DEADMAX=<DEADMAX>]:[<PST>][,<SST>];

Input Example

ED-LMP-CTRL:PETALUMA:CTRL-123:704:::LOCALPORT=FAC-1-1-1 ,REMOTENE=15.15.15.115,REMOTEIP=126.0.0.1,HELLO=500,HELLOMIN=300, HELLOMAX=5000,DEAD=12000,DEADMIN=2000,DEADMAX=20000:OOS,DSBLD;

Input Parameters

<SRC>	The LMP control channel AID values.
• CTRL-ALL	Specifies all the control channels.
• CTRL-{1-4}	Specifies an individual control channel.
<LOCALPORT>	The pathway that the LMP control channel will use to send and receive messages.
<REMOTENE>	Remote IP address used by the far-end LMP control channel.
<REMOTEIP>	Remote IP address used by the LMP control channel to send and receive messages.
<HELLO>	The time interval in which the LMP protocol sends HELLO messages.
<HELLOMIN>	The minimum amount of time within which the LMP control channels can send out HELLO messages to the remote node.
<HELLOMAX>	The maximum amount of time that the LMP control channel can wait between HELLO messages.

<DEAD>	Time interval an LMP control channel will wait for a HELLO message from the remote side before listing the control channel as down.
<DEADMIN>	The minimum amount of time that an LMP control channel can wait before listing the control channel status as down.
<DEADMAX>	The maximum amount of time that the LMP control channel can wait before listing the control channel as down.
<PST>	Primary state. This parameter indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.31 ED-LMP-TLINK

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Link Management Protocol Traffic Engineering (TE) Link (ED-LMP-TLINK) command edits the LMP TE link.

Usage Guidelines

This command can only be used on nodes that have the LMP protocol available and enabled.

Category

LMP

Security

Provisioning

Input Format

ED-LMP-TLINK:[<TID>]:<SRC>:<CTAG>:::REMOTEID=<REMOTE_ID>, REMOTETE=<REMOTE_TELINK>, [MUXCAP=<MUXCAP>]:[<PST>[,<SST>]];

Input Example

ED-LMP-TLINK:PETALUMA:TLINK-123:704:::REMOTEID=15.15.15.115,REMOTETE=123, MUXCAP=LAMBDA:OOS,DSBLD;

Input Parameters

<SRC>	LMP TE link AID values.
• TLINK-ALL	Specifies all the TE links.
• TLINK-{1-256}	Specifies an individual TE link.
<REMOTEID>	Remote node ID associated with the LMP TE link.
<REMOTETE>	Remote ID used by the far end LMP TE link.
<MUXCAP>	The muxponder capability of the LMP TE link.
• PKTSWITCH1	Packet Switching 1
• PKTSWITCH2	Packet Switching 2
• PKTSWITCH3	Packet Switching 3
• PKTSWITCH4	Packet Switching 4
• LAYER2	Layer 2 switching
• TDM	Time-division multiplexing (TDM) switching
• LAMBDA	Lambda switching
• FIBER	Fiber switching
<PST>	Primary state. This parameter indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.32 ED-LMP-DLINK

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Edit Link Management Protocol Data Link (ED-LMP-DLINK) command edits the LMP data link.

Usage Guidelines

This command can only be used on nodes that have the LMP protocol available and enabled.

Category LMP

Security Provisioning

Input Format ED-LMP-DLINK:[<TID>]:<SRC>:<CTAG>:::[LINKTYPE=<LINKTYPE>],TELINK=<TELINK>, REMOTEID=<REMOTEID>;

Input Example ED-LMP-DLINK:PETALUMA:FAC-14-1-1:704:::LINKTYPE=PORT,TELINK=TLNK-45, REMOTEID=646631;

Input Parameters

<SRC>	Access identifier from the "25.15 FACILITY" section on page 25-35.
<LINKTYPE>	The type of LMP data link.
• PORT	Port data link
• COMPONENT	Component data link
<TELINK>	Used to map LMP data links to LMP TE links.
<REMOTEID>	The remote LMP data link ID.

11.33 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. Use a retrieve command to obtain the current value.

Categories DWDM

Security Provisioning

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

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

Input Parameters

<FROM>	Identifier at one end of the optical link from the "25.4 BAND" section on page 25-17.
<TO>	Identifier at the other end of the optical link from the "25.4 BAND" section on page 25-17.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. **Note** PST is not supported for optical channel (OCH) provisioning. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. **Note** SST is not supported for OCH provisioning. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.34 ED-LNKTERM

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) 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 25-42. 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.

11.35 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. Use a retrieve command to obtain the current value.

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:PETALUMA::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.

• SINGLESHELF	The NE contains only one shelf and the AID representation does not consider the shelf identifier for command requests/response and autonomous reports.
• MULTISHELF	The AID representation considers the shelf identifier for command requests/response and autonomous reports. This means the NE has more than one shelf configured or the user wants to use the new AID style.
• MULTISHELFETH	The AID representation considers the shelf identifier for command requests/response and autonomous reports. This means the NE has more than one shelf configured or the user wants to use the new AID style. The shelves are connected by means of an external Ethernet switch.

11.36 ED-NE-PATH

(Cisco ONS 15454, 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.

11.37 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>]::<CTAG>:::[TMMD=<TMMD>],[SSMGEN=<SSMGEN>],[QRES=<QRES>],[RVRTV=<RVRTV>],[RVTM=<RVTM>];

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

Input Example

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

ED-NE-SYNCN:PETALUMA::123:::TMMD=LINE,RVRTV=Y,RVTM=8.0,SYSTMN=SONET;

Input Parameters

<AID>	The node or shelf access identifier from the "25.24 SHELF" section on page 25-44. If omitted it addresses the node or first shelf of the node. Must not be null.
<TMMD>	Timing mode. A null value is equivalent to ALL. Defaults to EXTERNAL. The parameter type is TIMING_MODE, which is the timing mode for the current node.
• EXTERNAL	The node derives its clock from the BITS input.
• LINE	The node derives its clock from the SONET lines.
• MIXED	The node derives its clock from the mixed timing mode.
<SSMGEN>	Synchronization status message set. Defaults to GEN1. A null value is equivalent to ALL. The default is ABOVE-STU. The parameter type is SYNC_GENERATION (synchronization status message set generation).

• GEN1	First generation SSM set
• GEN2	Second generation SSM set
<QRES>	Quality of the RES. A null value is equivalent to ALL. Defaults to DUS. The parameter type is SYNC_QUALITY_LEVEL, which is the network synchronization quality level.
• ABOVE-PRS	Better than primary reference source. Valid setting for Generation-1 and Generation-2 SSM Set.
• ABOVE-SMC	Between SMC and ST3. Valid setting for Generation-1 and Generation-2 SSM Set.
• ABOVE-ST2	Between ST2 and STU. Valid setting for Generation-1 and Generation-2 SSM Set.
• ABOVE-ST3	For Generation-1 SSM set, between ST3 and ST2. For Generation-2 SSM set, between ST3 and ST3E.
• ABOVE-ST3E	Between ST3E and TNC. Valid setting only for Generation-2 SSM set.
• ABOVE-ST4	Between ST4 and ST3. Valid setting for Generation-1 and Generation-2 SSM Set.
• ABOVE-STU	Between STU and PRS. Valid setting for Generation-1 and Generation-2 SSM Set. This is default setting.
• ABOVE-TNC	Between TNC and ST2. Valid setting only for Generation-2 SSM set.
• BELOW-ST4	Below ST4 but still usable. Valid setting for Generation-1 and Generation-2 SSM Set.
• SAME-AS-DUS	Disable the RES message by equating it to DUS. Valid setting for Generation-1 and Generation-2 SSM Set.
<RVRTV>	Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. A null value is equivalent to ALL. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. A null value is equivalent to ALL. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<SYSTMN>	(ONS 15454 only) Identifies the system timing standard used by the node.
• SONET	SONET timing standard
• SDH	SDH timing standard

11.38 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>:::[EXPWLEN=<EXPWLEN>],[NAME=<PORTNAME>],[GCC=<GCC>],[GCCRATE=<GCCRATE>],[OSDBER=<OSDBER>],[DWRAP=<DWRAP>],[FEC=<FEC>],[PAYLOADMAP=<PAYLOADMAP>],[SOAK=<SOAK>],[CMDMDE=<CMDMDE>],[LOSSB=<LOSSB>]:[<PST>[,<SST>]];

Input Example

ED-OCH:CISCO:CHAN-6-2:114:::EXPWLEN=1530.32,NAME="NYLINE",GCC=Y,GCCRATE=192K,OSDBER=1E-6,DWRAP=Y,FEC=STD,PAYLOADMAP=ASYNCH,SOAK=10,CMDMDE=FRCD:IS,AINS;

Input Parameters

<AID>	Access identifier from the "25.8 CHANNEL" section on page 25-20.
<EXPWLEN>	(Optional) Optical wavelength for this port. Applicable only to the following types of cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexer and demultiplexer cards, and optical add/drop multiplexing (OADM) cards. The parameter type is OPTICAL_WLEN, which is the optical wavelength.
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 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
<PORTNAME>	(Optional) Port name. PORTNAME is a string.
<GCC>	Identifies the Generic communication channel (GCC) connection of the port.
• Y	GCC can be utilized
• N	GCC cannot be utilized

<GCCRATE>	(Optional) The data rate of the GCC traffic. The default is 192 Kbps. For MXP_2.5G_10G and TXP_MR_10G cards, this applies only to the DWDM port. The parameter type is GCCRATE, which is the data rate of the GCC traffic.
• 192K	192 Kbps
• 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>	(Optional) The ITU-T G.709 monitoring digital wrapper. It is either on or off. The system default is ON. For MXP_2.5G_10G and TXP_MR_10G cards, this applies only to the DWDM port. The parameter type is ON_OFF (disable or enable an attribute). To enable ITU-T G.709 monitoring, there should be no GCC on the DWDM port and the payload (in which the card is configured) should not be UNFRAMED. To disable ITU-T G.709 monitoring, there should be no GCC on the DWDM port, the FEC should be turned to off, there should be no overhead circuit created on the DWDM port, and none of the client ports on the card should be part of a Y-cable protection group (muxponder only).
• N	Disable an attribute.
• Y	Enable an attribute.
<FEC>	(Optional) Forward error correction. It can be enabled only if ITU-T G.709 monitoring is turned ON. It is either off or enabled in standard or enhanced mode. The system default is standard FEC enabled. The FEC level PM and thresholds apply if the FEC is turned ON. The parameter type is FEC_MODE, which specifies the type of forward error correction.
• ENH	Enhanced FEC is enabled.
• OFF	FEC is disabled.
• STD	Standard FEC is enabled.
<PAYLOADMAP>	(Optional) The type of payload mapping. It can be enabled only if ITU-T G.709 monitoring is turned ON and FEC is enabled. The parameter type is PAYLOAD_MAPPING, which is the payload mapping mode.
• ASYNCH	Asynchronous mapping mode
• ODU	ODU multiplex structure mode
• SYNCH	Synchronous mapping mode
• N	Disable an attribute.
• Y	Enable an attribute.

<SOAK>	(Optional) Locked-AutomaticInService to Unlocked transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer.
<CMDMDE>	(Optional) The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state in which the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that could make the command fail.
<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
<PST>	(Optional) Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• Unlocked	In service
• Locked	Out of service
<SST>	(Optional) Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.

• AutomaticInService	Automatic in service
• Disabled	Disabled
• Loopback	Loopback
• MismatchofEquipmentAlarm	Mismatch of equipment and attributes
• Maintenance	Maintenance mode
• OutOfGroup	Out of group
• SoftwareDownload	Software downloading
• Unassigned	Unassigned
• NotInstalled	Unequipped

11.39 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. Use a retrieve command to obtain the current value.

Category

DWDM

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-35.
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null the CKTID field will not be displayed.

<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state in which the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity. The default is IS.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ. The default is AINS.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.40 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. Use a retrieve command to obtain the current value.

Category

DWDM

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

<SRC>	Source access identifier from the "25.8 CHANNEL" section on page 25-20. In two-way wavelength connection sources, both directions need to be indicated.
<DST>	Destination access identifier from the "25.18 LINEWL" section on page 25-40. In two-way wavelength connection sources, both directions need to be indicated.
<CKTID>	Cross-connect ID. The default is Blank or None. String of ASCII characters. Maximum length is 48. If CKTID is empty or null the CKTID field will not be displayed.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state in which the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<WLOPWR>	The value of calibrated output power that the VOA is going to set as a result of its attenuation. WLOPWR is a float.
<VOAATTN>	The value of calibrated attenuation for the VOA expressed in dBm. The range is 0.0 to +30.0. VOAATTN is a float.
<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

11.41 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 25-17.
<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>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.42 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 25-39.
<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>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

11.43 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:PETALUMA: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.

11.44 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. Use the retrieve command to obtain the current value. ED-POS cannot set ENCAP and PST/SST.

Usage Guidelines This command is supported for the ONS 15454 CE-100T-8 and CE-1000-4 cards, 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>],[SUPPRESS=<SUPPRESS>],[SOAK=<SOAK>]:[<PST>[,<SST>]];

Input Example

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

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-35.
<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>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<SUPPRESS>	Pre-service alarm flag for data ports. This parameter is supported on ML-series cards only.
• Y	Enable suppress.
• N	Disable suppress. Default is Off.
<SOAK>	OOS-AINS to IS transition soak time as measured in 15 minute intervals, so a value of 4 translates to a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer.
<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-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>]:<AID>:<CTAG>::<PROTSTAT>;

Input Example

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

Input Parameters

<AID>	The protocol/service to which the command pertains. The parameter type is PROTOCOLAID, which is the AID for the protocol/service.
• EMS	CTC/CTM protocol/service
• SHELL	Shell/file system access protocol
• SNMP	SNMP protocol/service
• TL1	TL1 protocol service
<PROTSTAT>	Identifies the status of the protocol/service. The parameter type is PROTOCOLSTAT, which is the status of the protocol.

• DISABLED	The protocol cannot be used.
• SECURE	The protocol is enabled and communication using the protocol are sure, for example, through Secure Shell Protocol (SSH). Not applicable for SNMP protocols.
• UNSECURE	The protocol is enabled but communication is not secure, for example, through Telnet.

11.46 ED-QNQ-ETH

(Cisco ONS 15454) The Edit ETH QinQ Table (ED-QNQ-ETH) command modifies the IEEE 802.1Q tunneling (QinQ) relationship between the customer VLAN (CE-VLAN) and the service provider VLAN (S-VLAN) for Gigabit Ethernet uniport provisioning associated to an L2 Ethernet port.

Usage Guidelines

- The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use a retrieve command to obtain the current value.
- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The ALL AID is invalid for this command.

Category

Ethernet

Security

Provisioning

Input Format

ED-QNQ-ETH:[<TID>]:<AID>:<CTAG>::<FIRSTCEVLAN_ID>,<LASTCEVLANID>, <SVLANID>:[RULE=<RULE>][:];

Input Example

ED-QNQ-ETH:PETALUMA:ETH-1-1-1:1::10,11,100:RULE=ADD;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "25.15 FACILITY" section on page 25-35.
<FIRSTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<LASTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<RULE>	Used to represent the rules allowed for VLAN tagging operations.
• ADD	The service provider VLAN tag is added to the customer VLAN tag.
• XLTE	The service provider VLAN tag replaces the CE-VLAN tag (single Q).

11.47 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, which 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:PETALUMA: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 25-26. 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 25-26. It is one of the termination points (legs) of the existing cross-connection. If the existing cross-connection is one-way, then this termination point (leg) should be the TO-AID termination point. Otherwise, the TO is not significant. FROM and TO should be entered as they are entered in the ENT-CRS command. You can issue RTRV-CRS command, and use the response for FROM and TO parameters.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states. **Note** CMDMDE can only go from NORM to FRCD (cannot go from FRCD to NORM). CMDMDE cannot be set to NORM using this command.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.

11.48 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 25-54.
<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.

11.49 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 25-50.
<PRI>	Primary reference of the synchronization from the "25.27 SYN_SRC" section on page 25-49.
<SEC>	Secondary reference of the synchronization from the "25.27 SYN_SRC" section on page 25-49.
<THIRD>	Third reference of the synchronization from the"25.27 SYN_SRC" section on page 25-49.

11.50 ED-T1

(Cisco ONS 15454, 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 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 a retrieve command to retrieve the current value.
- The parameters SYNCMAP, ADMSSM, VTMAP, and INHFELPBK are only supported on the DS1/E1-56 card on the ONS 15454.
- You cannot directly transition a facility from IS to OOS-MA,DSBLD service state. You can transition a facility to OOS-MA,DSBLD service state from any state except OOS-MA,MT. To transition a facility from OOS-MA,MT to OOS-MA,DSBLD service state, all the following conditions must be met:
  - The facility is not sourcing a synchronization clock
  - The facility's DCC is disabled
  - The facility is not part of a protection group
  - The facility is not supporting cross-connects
  - The facility is not using overhead connections or overhead terminations (such as express orderwire, local orderwire, or user data channels [UDCs])

Note The conditions stipulated can be overridden by using the CMDMDE=FRCD option. The FRCD option will immediately remove the facility from service (except for IS to OOS-MA,DSBLD transition) with no consideration for orderly interruption.

Category Ports

Security Provisioning

Input Format

ED-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:PETALUMA: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 25-35.
<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. 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. 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. 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>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<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

11.51 ED-T3

(Cisco ONS 15454, 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 15310-CL are on the 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 a retrieve command to retrieve the current default values.
- You cannot directly transition a facility from IS to OOS-MA,DSBLD service state. You can transition a facility to OOS-MA,DSBLD service state from any state except OOS-MA,MT. To transition a facility from OOS-MA,MT to OOS-MA,DSBLD service state, all the following conditions must be met:
  - The facility is not sourcing a synchronization clock

- The facility's DCC is disabled
- The facility is not part of a protection group
- The facility is not supporting cross-connects
- The facility is not using overhead connections or overhead terminations (such as express orderwire, local orderwire, or user data channels [UDCs])

Note The conditions stipulated can be overridden by using the CMDMDE=FRCD option. The FRCD option will immediately remove the facility from service (except for IS to OOS-MA,DSBLD transition) with no consideration for orderly interruption.

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:PETALUMA: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 25-35.
<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>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.

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

11.52 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 25-39. 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

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

Input Parameters

<SRC>	Source access identifier from the "25.8 CHANNEL" section on page 25-20.
<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

11.54 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.

11.55 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 25-35.
<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.

11.56 ED-VLAN

(Cisco ONS 15454) The Edit VLAN (ED-VLAN) command modifies a VLAN entry in the VLAN database. The VLAN database is a collection of VLANs used in an NE.

Usage Guidelines A VLAN having the specified AID should be present in the node.

Category Ethernet

Security Provisioning

Input Format ED-VLAN:[<TID>]:<AID>:<CTAG>:::[NAME=<NAME>],[PROTN=<PROTN>][:];

Input Example

ED-VLAN:PETALUMA:VLAN-4096:1:::NAME="MYVLAN",PROTN=N

Input Parameters

<AID>	AID is used to access the VLAN.
VLAN-ALL	All AIDs for the VLAN.
VLAN-{0-4096}	Single AID for the VLAN. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
NAME	Indicates the name of the VLAN.
PROTN	Indicates the VLAN protection, enable or disable feature

11.57 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:WDMSIDE-A:114:::POWERIN=10.0,POWEROUT=10.0,POWEREXP=10.0;

ED-WDMANS:PENNGROVE:WDMNODE:114:::NTWTYPE=METRO-CORE;

Input Parameters

<AID>	Access identifier from the "25.32 WDMANS" section on page 25-54.
<WDMSIDE>	The AID is used to access the WDM side of an MSTP node.
• WDMSIDE-{UNKNOWN,A,B,C,D,E,F,G,H}	MSTP side identifier
<WDMNODE>	The AID is used to access the WDM side of an MSTP node.
• WDMNODE	MSTP side identifier
<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.

11.58 ED-WDMSIDE

(Cisco ONS 15454) The Edit Wavelength Division Multiplexing Side (ED-WDMSIDE) command modifies the WDM node side attribute.

Usage Guidelines

- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- The ALL AID is invalid for this command.

Category

DWDM

Security

Maintenance

Input Format

ED-WDMSIDE:[<TID>]:<AID>:<CTAG>:::[NEWSIDE=<NEWSIDE>][:];

Input Example

ED-WDMSIDE:PENNGROVE:WDMSIDE-A:114:::NEWSIDE=WDMSIDE-B;

Input Parameters

<AID>	The AID is used to access the WDM side of an MSTP node.
• WDMSIDE-{A,B,C,D,E,F,G,H}	MSTP side identifier.
<NEWSIDE>	The AID is used to access the WDM side of an MSTP node.
• WDMSIDE-{A,B,C,D,E,F,G,H}	MSTP side identifier.

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, Cisco ONS 15310-CL, Cisco ONS 15310-MA, and Cisco 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, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OC-12, OC-192, OC-3, OC-48, 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 ED-1GFICON or ED-2GFICON) to any other setting will be denied with the error message "Provisioning Rules Failed."
- Support is limited to ports with pluggable port modules (PPMs).
- 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 25-35.

12.2 ENT-<MOD_RING>

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

Note The ONS 15600 does 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 OC-12 cards, or a two-fiber BLSR on OC-3 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 only one NE can support up to five BLSRs.
- 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 while accessing the 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 an SROF (Cannot Set NodeId) error message.

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 Four-fiber BLSR:

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;

Two-fiber BLSR:

ENT-BLSR:PETALUMA:BLSR-2:123:::RINGID=2,NODEID=1,MODE=2F,RVRTV=Y, RVTM=5.0,EASTWORK=FAC-5-1,WESTWORK=FAC-6-1;

Input Parameters

<AID>	Access identifier from the "25.3 AidUnionId1" section on page 25-17. Identifies the BLSR of the NE. ALL or BLSR-ALL AIDs are not allowed for editing the BLSR. This command only supports a single BLSR AID.
<RINGID>	(Optional) The BLSR ID of the NE up to six characters. Valid characters are A-Z and 0-9. RINGID is a string. The parameter defaults to the text in the AID that follows the "BLSR-".
<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>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. Defaults to 5.0. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	(Optional) 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>	(Optional) 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 25-35.
<WESTWORK>	West working facility. AID from the "25.15 FACILITY" section on page 25-35.
<EASTPROT>	(Optional) East protect facility. AID from the "25.15 FACILITY" section on page 25-35.
<WESTPROT>	(Optional) West protect facility. AID from the "25.15 FACILITY" section on page 25-35.

12.3 ENT-BULKROLL-<OCN_TYPE>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter Bulk Roll for OC-12, OC-192, OC-3, or OC-48 (ENT-BULKROLL-<OCN_TYPE>) command enters information about rolling traffic from one end point to another without interrupting service. This command can be used for line-level rolling and bulk rolling and cannot be used for single-path-level rolling.

Usage Guidelines

None

Category

Bridge and Roll

Security

Provisioning

Input Format

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

Input Example

ENT-BULKROLL-OC-48:CISCO:FAC-5-1:123:::RTOSTART=STS-6-1-1,RFROMSTART=STS-5-1-1,RFROMEND=STS-5-1-4,RMODE=AUTO,CMDMDE=FRCD;

Input Parameters

<FROM>	One of the endpoints. Access identifier from the "25.15 FACILITY" section on page 25-35 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 25-35 (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 25-35 (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 25-35 (STS and VT). Defaults to STS-<FROMSLOT>-<FROMPORT>-N, where <FROMSLOT> and <FROMPORT> are the slot and port of the <FROM> AID and N is the value of OCn (for example, with OC-48, n=48). **Note** For bulk rolling only

<RMODE>	Indicates the mode of the rolling operation. The parameter type is RMODE (roll mode).
• AUTO	Automatic. When a valid signal is available, the roll with an AUTO mode will automatically delete the previous end-point.
• MAN	Manual. Enter the corresponding delete roll/bulkroll command to delete the previous end-point.
<CMDMDE>	Command execution mode. Defaults to NORM. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that could make the command fail.

12.4 ENT-CRS-<PATH>

(Cisco ONS 15454 and Cisco 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 existing connection is one-way and the new one will be one-way in the other direction.
- This command does not support creating multiple STS cross-connections.
- The path protection STS cross-connection can be created by using “&” in the AID fields of this command.
  - The following command is used to create a one-way selector or two-way selector and bridge with F1, F2 as from points and T1 as the to point:

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

    ENT-CRS-{STS_PATH}:[<TID>]:F1,T1&T2:<CTAG>::[<CCT>];

- The following command is used to create a one-way subtending path protection connection or two-way subtending path protection connection with F1, F2 as the from points and T1, T2 as the to points:

  ENT-CRS-{STS_PATH}:[<TID>]:F1&F2,T1&T2:<CTAG>::[<CCT>];

- The following command is used to create a two-way selector and bridge with F1,F2 (F1 is the working side, F2 is the protect side) as the from points and S1, S2 (S1 is the working side, S2 is the protect side) as the selector points:

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

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

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

  where:

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

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

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

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

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

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

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

  where:

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

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

  C: Traffic to and from Ring Y

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

- All A&B AIDs in the TL1 cross-connection command are in the WorkingAID&ProtectAID format.
- To establish a cross-connection on a two-fiber protection path or on a four-fiber protection channel, the protection channel access (PCA) connection type (1WAYPCA or 2WAYPCA) is required.
- If you send a PCA cross-connection type on the non-PCA AIDs, the IIAC error message is returned.
- If you send a non-PCA cross-connection type on the PCA AIDs, the IIAC error message is returned.
- The facility AID is only valid on slots with a G1K-4 card installed.
- The virtual facility AID (VFAC) is only valid on slots holding an ML-Series card.
- Both DRITYPE and DRINODE have been optional fields since Release 5.0 to support the BLSR-DRI feature. DRITYPE is applied only if the CCT is drop-and-continue (1WAYDC or 2WAYDC), and defaults to path protection for the DRI. DRINODE must be specified only if at least one end of the connection is on the BLSR, and defaults to NA.
- The DS3XM-12 card allows portless STS1/VT1.5 cross-connection provisioning on the DS3XM-12 PORTLESS ports (port number > = 12).
- CKTID is a string of ASCII characters. The maximum length of CKTID is 48. If the CKTID is EMPTY or NULL the field will not appear.

- STS18c and STS36c cross-connects are only supported on the FC_MR-4 card and optical cards.
- LO CCAT is not applicable for ML-100T-8 and CE-100T-8 cards.
- LO VCAT is not applicable for the ML-100T-8 card on the ONS 15310-CL.
- STS18C and STS36C cross-connects are not supported on 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 that will be created.
• 1WAY	A unidirectional connection from a source tributary to a destination tributary.
• 1WAYDC	Path Protection multicast drop with one-way continue.
• 1WAYEN	Path Protection multicast end node with one-way continue.
• 1WAYMON	A bidirectional connection between the two tributaries. **Note** 1WAYMON is not supported with TL1. However, it is still supported from the Cisco Transport Controller (CTC). Using CTC, you can create 1WAYMON cross-connects that can be retrieved through TL1.
• 1WAYPCA	A unidirectional connection from a source tributary to a destination tributary on the protection path/fiber.
• 2WAY	A bidirectional connection between the two tributaries.
• 2WAYDC	A bidirectional drop-and-continue connection applicable only to path protection traditional and integrated DRIs.
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber.
• DIAG	Diagnostic cross-connect. Supports BERT (BLSR PCA diagnostic cross-connect).

<DRITYPE>	DRI connection type. Applied only if the CCT is a drop-and-continue connection type (1WAYDC or 2WAYDC). Defaults to path protection. The parameter type is DRITYPE (DRI type).
• BLSR	BLSR DRI type
• Path Protection	Path Protection DRI type
• Path Protection-BLSR	Path Protection-BLSR type
<DRINODE>	Dual ring interconnect node. The parameter type is DRINODE (DRI node).
• INT	Intermediate DRI node
• NA	The node is not a DRI node.
• PRI	Primary DRI node
• SEC	Secondary DRI node
<CKTID>	Cross-connect ID. Defaults to blank or none. CKTID is a string.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that could make the command fail.
<PST>	Primary state. Defaults to IS. The parameter type is primary state (PST), which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. Defaults to AINS. The parameter type is SST, which provides additional information pertaining to PST and primary state qualifier (PSTQ).
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

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 NE. It also automatically enters all facilities supported by the card and assigns default values to all facility and path attributes. The ENT-EQPT command is also used to preprovision an NE configured in multishelf mode.

Usage Guidelines

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

This command creates a 1:1 protection group. If the command has the optional parameters for creating a protection group and the protection group cannot be created due to an error condition, provisioning of the equipment fails. 1:1 protection involves the odd slot protecting the even slot. The work-protect pair is 2-1, 4-3, 6-5, 16-17, 14-15, 12-13. The DS1, DS3, DS3XM, DS3N, DS3E, EC1 and other electrical cards support 1:1 protection. The value of PROTID is the protecting slot and has a “Slot-x” format.

The PROTID slot must be provisioned first.

To create 1:1 with the ENT-EQPT command, do not provision a working card first.

The following is an example for a 1:1 protection group:

ENT-EQPT:[<TID>]:SLOT-1:<CTAG>::DS1;

ENT-EQPT:[<TID>]:SLOT-2:<CTAG>::DS1:PROTID=SLOT-1,PRTYPE=1-1,RVTM=5.0, RVRTV=Y;

The ENT-EQPT command creates a 1:N protection group or adds a new card to an existing 1:N protection group. Multiple working AIDs can be entered in a protection group. 1:N protection is always revertive. For 1:N protection, the protect slot can only be Slot 3 or Slot 15. For a protect card in Slot 3, the working cards can be in any of the slots on Bank A. Slot 15 is for protection in Bank B. A DSXN (DS1N or DS3N) card must be provisioned in the protect slot. 1:1 protection cannot be upgraded to 1:N protection.

The following is an example of provisioning a 1:N protection group with the ENT-EQPT command:

ENT-EQPT:[<TID>]:SLOT-3:<CTAG>::DS1N;

ENT-EQPT:[<TID>]:SLOT-2&SLOT-1:<CTAG>::DS1:PROTID=SLOT-3,PRTYPE=1-N;

The following is an example of provisioning a 1:N protection group with the ED-EQPT command:

ENT-EQPT:[<TID>]:SLOT-1&SLOT-2:<CTAG>::DS1;

ENT-EQPT:[<TID>]:SLOT-3:<CTAG>::DS1N;

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

Note The ENT-EQPT command provisions a new card and adds it to the protection group. The ED-EQPT command adds the already provisioned cards to the protection group.

If the provisioning fails for some AIDs, PRTL responses will indicate failed AIDs. If the provisioning fails for all the AIDs, a DENY response occurs. CMPLD and PRTL responses for protection group queries indicate that the protection group has been successfully created for the AID(s) query.

The following is an example for 1:N protection. The RVRTV parameter is not valid for 1:N protection.

ENT-EQPT:[<TID]>:SLOT-2:<CTAG>:::PROTID=SLOT-3,PRTYPE=1-N,RVTM=5.0;

Both ENT-EQPT and ED-EQPT commands can provision all working AIDs (1-5) together for 1:N by using listed AIDs. The protect AID should already be provisioned for either command because protection group parameters are not supported for the protect AID.

The ENT-EQPT command provisions a card successfully in an empty slot if the equipment type is compatible with the slot number. This command can have the optional parameters in the “f” block to provision a card as a working card. It has the effect of adding the protection behavior at the time of provisioning itself. For the protection provisioning to succeed, the protect card should have already been provisioned. Trying to execute ENT-EQPT to provision a protection group on an already provisioned card will result in an error.

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

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

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

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

Note

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

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

- AID sent to a non-working slot; the working cards must be in even slots for 1:1 protection, and working cards must be in the same bank and not in Slot 3 or Slot 15 for 1:N protection.
- An invalid AID was chosen for the protection slot.
- The working AID is already in a protection group.
- The AID is a protect AID.
- The protect card has a circuit.
- The equipment type does not match the allowed AID.
- The slot is already provisioned.
- The protect slot is not provisioned.

- Multiple working AIDs were sent for 1:1 protection.
- The CARDMODE provisioning is allowed on the DS3XM-12 and ML-Series cards. Provisioning for the DS3XM-12 is based on the cross-connect type and DS3XM-12 location. The following error conditions apply:
  - The DS3XM-12 card in the lower speed input/output (I/O) slot with the XCVT card only allows the DS3XM-12-STS12 CARDMODE. Other cases allow the CARDMODE to be DS3XM-12-STS48.
  - The NE defaults to the highest available backplane rate/mode for the DS3XM-12 card if you do not specify the CARDMODE in the ENT-EQPT command.
  - The ML100T-8 card will be provisioned to MAPPER mode by default.
- The 1:N (1 <= N <= 7) protection group is allowed on the DS3XM-12 card 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 need to have the portless provisioning only, while the Slot 2 and Slot 4 cards can be either portless or ported provisioning.

CMDMDE provisioning behaves as follows:

- If the command mode (CMDMDE) is set to NORM during the creation of a 1:1 or 1:N protection group, all cards must be physically plugged in and in the service state (IS). If the cards are not physically plugged in and are not in ready state, the command is denied with an appropriate error message. CMDMDE=FRCD will override the default behavior and allow creation of protection group regardless of the physical presence and ready state of cards.
- If the command mode is set to NORM during the removal of a card in a 1:1 or 1:N protection group, there must be no cross-connects (for example, services) present on the card. CMDMDE=FRCD will override the default behavior and allow deletion of protection group regardless of presence of cross-connects on the card.

- RETIME provisioning is allowed only on the DS1/E1-56 (ONS 15454) and DS1-84-DS3-EC1-3 (ONS 15310-MA SONET) cards.
- Input parameters <PEERID>,<REGENNAME>,<PEERNAME>,<SHELFROLE>, <NEWSHELFID>,<FRPROLE>, and, <FRPSTATE> are not supported on Cisco ONS 15310-MA SONET.
- 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. A protection group can be deleted by deleting the protect card (DLT-EQPT). Trying to delete the working card will result in the Equipment In Use (SPLD) error.

Category Equipment

Security

Provisioning

Input Format

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

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,FRPROLE=MASTER,FRPSTATE=Y:

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-33.
<AIDTYPE>	(Optional) The type of facility, link or other addressable entity targeted by the message. The parameter type is EQUIPMENT_TYPE (equipment type).
• 10DME-C	MXP_MR_10DME_C card
• 10DME-L	MXP_MR_10DME_L card
• 10GEXP-TXP	10GE-XP behaves as 2 separate Transpoders, where client 1 is associated to trunk 3 and client 2 is associated to trunk 4
• 10GEXP-L2ETH	10GE-XP behaves as a L2 Ethernet Switch
• 32DMX	(ONS 15454) 32-channel demultiplexer for C band
• 32DM X-L	(ONS 15454) 32-channel demultiplexer 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 for C band
• 32WSS-L	(ONS 15454) 32-channel wavelength selective switch for L band
• 4MD-xx.x	(ONS 15454) Optical multiplexer/demultiplexer with 4 channels
• AD-1B-xx.x	(ONS 15454) Optical add/drop multiplexer (OADM) 1 band filter
• AD-1C-xx.x	(ONS 15454) OADM 1 channel filter
• AD-2C-xx.x	(ONS 15454) OADM 2 channel filter
• AD-4B-xx.x	(ONS 15454) OADM 4 band filter
• AD-4C-xx.x	(ONS 15454) OADM 4 channel filter
• AIC	(ONS 15454) AIC card
• AIC-I	(ONS 15454) AIC-I card

• ALM-PWR	Alarm Power
• BP	The backplane of the NE
• CRFT-TMG	Craft Timing
• 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 15310-MA SONET) Eight port 100T card
• CE-MR-6	(ONS 15310-MA SONET) CE-MR-6 data card
• CTX2500	(ONS 15310-MA SONET) CTX2500 card
• CXC	(ONS 15600) Cross Connect card
• DS1	(ONS 15454) DS1 card
• DS1-E1-56	(ONS 15454) DS1-E1-56 card
• DS1-28-DS3-EC1-3	(ONS 15310-MA SONET) DS1-28-DS3-EC1-3 card
• DS1-84-DS3-EC1-3	(ONS 15310-MA SONET) DS1-84-DS3-EC1-3 card
• DS1I	(ONS 15454) DS1I card
• DS1N	(ONS 15454) DS1N card
• DS3	(ONS 15454) DS3 card
• DS3-EC1-48	(ONS 15454) DS3-EC1-48 card
• DS3E	(ONS 15454) DS3E card
• DS31	(ONS 15454) DS31 card
• DS3IN	(ONS 15454) DS3IN card
• DS3N	(ONS 15454) DS3N card
• DS3NE	(ONS 15454) DS3NE card
• DS3XM	(ONS 15454) DS3XM card
• DS3XM-12	(ONS 15454) DS3XM-12 card
• E1	(ONS 15454) E1 card
• E1000T	(ONS 15454) E1000T card
• E100T	(ONS 15454) E100T card
• E1000-2	(ONS 15454) E1000-2 card
• E1000-2-G	(ONS 15454) E1000-2-G card
• EC1	(ONS 15454) EC1 card
• EC1N	(ONS 15454) EC1N card
• FC-MR-4	(ONS 15454) FC_MR-4 card
• FILLER-CARD	(ONS 15454) Blank Filler card
• FMEC-SMZ-E1	FMEC card corresponding to E1 card
• FMEC-SMZ-E3	FMEC card corresponding to E3 card
• FMEC_DB	FMEC card
• FMEC_DB_DS1I	FMEC card
• FTA	The fan tray of the NE
• FTA1	The fan tray 1 of the NE
• FTA2	The fan tray 2 of the NE
• G1000-4	(ONS 15454) Four port G1000 card

• G1K-4	Four-port G1000 card
• MIC-A/P	MIC-A/P card
• MIC-C/T/P	MIC-C/T/P card
• MD-4	(ONS 15454) Optical Multiplexer/Demultiplexer with 4 channels
• ML1000-2	(ONS 15454) Daytona 2-port GigE
• ML100T-8	(ONS 15310-MA SONET) Exige/Elise mapper card
• ML100T-12	(ONS 15454) Daytona 12-port FSTE
• ML100X-8	(ONS 15454) 8-port 100T card with optical interface
• MMU	(ONS 15454) Multiring/mesh upgrade unit
• MRC-12	(ONS 15454) Humvee - 12-port multirate optical card
• MS-ISC-100T	(ONS 15454) Fast Ethernet switch card used for internal shelves connection
• MXP-2.5G-10E	(ONS 15454) Monviso 10G (4 * 2.5G) muxponder card with enhanced FEC
• MXP-2.5G-10G	(ONS 15454) Skane 10G (4 * 2.5G) muxponder card
• MXP-MR-10DME	10 Gbit/Sec. Datamux with enhanced FEC
• MXP-MR-2.5G	(ONS 15454) Bernina multirate 2.5G muxponder unprotected
• MXPP-MR-2.5G	(ONS 15454) Bernina multirate 2.5G muxponder protected
• OC3	(ONS 15454, ONS 15327) OC-3 card
• OC3-8	(ONS 15454) Eight port OC-3 card
• OC12	(ONS 15454) OC-12 card
• OC12-4	(ONS 15454) Four port OC-12 card
• OC48	(ONS 15454, 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-E	(ONS 15454) Optical booster unit for E-Band
• 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 15310-MA SONET) Pluggable port module with one SFP port
• SHELF	Shelf entity
• TCC	(ONS 15454) TCC card

• TCC2	TCC2 card
• TCC2P	TCC2P 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
• XC	(ONS 15454) XC card
• XC10G	(ONS 15454) XC10G card
• XCVT	(ONS 15454) XCVT card
• XC-VXC-10G	(ONS 15454) XC-VXC-10G card
• XC-VXL-10G	(ONS 15454) XC-VXL-10G card
• XC-VXL-2.5G	(ONS 15454) XC-VXL-2.5G card
<PROTID>	Identifies valid protection slots for the electrical cards.
• NULL	Indicates there is no protection group. Used when trying to delete a protection group.
• SLOT-1	The No.1 slot of an NE.
• SLOT-2	The No.2 slot of an NE. (ONS 15310-MA)
• SLOT-3	The No.3 slot of an NE.
• SLOT-5	The No.5 slot of an NE.
• SLOT-6	The No.6 slot of an NE. (ONS 15310-MA)
• SLOT-13	The No.13 slot of an NE.
• SLOT-15	The No.15 slot of an NE.
• SLOT-17	The No.17 slot of an NE.
<PRTYPE>	Identifies the protection group type values.
• 1-1	1 to 1 protection
• 1-N	1 to N protection

<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. Only applies to SNCP. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. RVTM is not allowed to be set while RVRTV is N. Only applies to SNCP. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<CARDMODE>	Defines the card mode.
• AMPL-BST	The optical amplifier is working as an optical booster.
• AMPL-PRE	The optical amplifier is working as an optical preamplifier.
• CEMR-AUTO	Auto allocation of back-end channels for CE-MR-6 (Cisco ONS 15310-MA SONET only) cards.
• CEMR-MANUAL	Manual allocation of back-end channels for CE-MR-6 (Cisco ONS 15310-MA SONET only) cards.
• DS1E1-DS1ONLY	DS1 mode on DS1E1 card
• DS1E1-E1ONLY	E1 mode on DS1E1 card
• DS3XM-12-STS12	Indicates the DS3XM-12 card in the STS12 back plane rate mode
• DS3XM-12-STS48	Indicates the DS3XM-12 card in the STS48 back plane rate mode
• DWDM-LINE	Line terminating mode
• DWDM-SECTION	Section terminating mode
• DWDM-TRANS-AIS	Transparent mode AIS
• DWDM-TRANS-SQUELCH	Transparent mode SQUELCH
• FCMR-DISTEXTN	FC_MR-4 card with distance extension support
• FCMR-LINERATE	FC_MR-4 card without distance extension support
• GEXP-10x1Gx2-MXP	GE-XP behaves as a double Muxponder having ten 1 Gbps client facilities with one trunk. The first 10 GIGE clients are associated to the first trunk (21), while GIGE facilities from 11 to 20 are associated to trunk 22.
• GEXP-20x1G-MXP	GE-XP behaves as a single Muxponder having ten 1 Gbps client facilities with one trunk. Only the first 10 GIGE clients are associated to the first trunk (21) while the other facilities are unused.
• GEXP-L2ETH	GE-XP behaves as an L2 Ethernet Switch.
• 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

• ML-IEEE-RPR	Ml-Series card in DOS FPGA THAT supports Resilient Packet Ring (RPR)
• MXPMR10DME-4GFC	4-Gbps Fibre Channel/FICON mode for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on Ports 1 and 5
• MXPMR10DME-4GFC-FCGEISC	4-Gbps Fibre Channel/FICON supported on Port 1 and Fibre Channel, GIGE, and ISC modes for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on Ports 5 to 8
• MXPMR10DME-FCGEISC	Fibre Channel, GIGE, and ISC modes for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on all eight ports
• MXPMR10DME-FCGEISC-4GFC	Fibre Channel, GIGE, and ISC modes for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on Ports 1 to 4 and 4-Gbps Fibre Channel/FICON supported on Port 5
• MXPMR10G-FCGEISC	Fibre Channel, GIGE, and ISC modes for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on all eight ports
• MXPMR10G-4GFC	4-Gbps Fibre Channel/FICON mode for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on Ports 1 and 5
• MXPMR10G-FCGEISC-4GFC	Fibre Channel, GIGE, and ISC modes for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on Ports 1 to 4 and 4-Gbps Fibre Channel/FICON supported on Port 5
• MXPMR10G-4GFC-FCGEISC	4-Gbps Fibre Channel/FICON supported on Port 1 and Fibre Channel, GIGE, and ISC modes for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on Ports 5 to 8.
• 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
• UNKNOWN	Unknown equipment type
<PEERID>	Indicates the regeneration peer slot. Applicable only to DWDM-Flavored cards which support regeneration group. User should set PEERID=NULL for removing Regeneration Group. PEERID is the AID EQPT.
<REGENNAME>	Indicates the name of a regeneration group. Applicable only to DWDM-Flavored cards which support regeneration group. regenname is a String. The default value is "NULL".

<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.
<TRANSMODE>	TRANSMODE is of type CMDMDE.
<RETIME>	(Optional) Indicates the RETIME function for all the facilities on this card. Applicable only to the DS1/E1-56 (ONS 15454) and DS1-84-DS3-EC1-3 (ONS 15310-MA) cards. The parameter type is ON_OFF, which disables or enables an attribute.
• N	No
• Y	Yes
<SHELFROLE>	(Optional) SHELFROLE is the role of the shelf in the context of the node. SHELFROLE is of type SHELF_ROLE. When it is omitted it defaults to SC.
<FRPROLE>	Indicates the fast ring protection enable mode for GE-XP/10GE-XP units involved in a protection scheme.
• MASTER	Role is of card master of the ring.
• SLAVE	Role is of card slave of the ring.
<FRPSTATE>	Indicates the fast ring protection enable state.
• DISABLED	Disabled protection
• ENABLED	Enabled protection
• FORCED	Forced protection

Note On the Cisco ONS 15310-MA, CARDMODES CEMR-AUTO and CEMR-MANUAL are supported.

Note Input parameters <PEERID>,<REGENNAME>,<PEERNAME>,<SHELFROLE>,<NEWSHELFID>, <FRPROLE>, and, <FRPSTATE> are not supported on the Cisco ONS 15310-MA.

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 25-35.
<DST>	Destination access identifier from the "25.15 FACILITY" section on page 25-35.
<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. The identifier is a string that can have a maximum length of 32 characters.
<RVRTV>	Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. Defaults to 5.0 minutes. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.

<PSDIRN>	Protection switch operation. Identifies the switching mode. Defaults to UNI. **Note** TXP_MR_10G and MXP_2.5G_10G cards do not support bidirectional switching. Parameter type is UNI_BI (unidirectional and bidirectional switch operations).
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching

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 OC-3, OC-12, OC-48, or OC-192 (ENT-FFP-<OCN_TYPE>) command creates 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. For example, protection groups cannot be created between Port 1 of Slot 5 and Port 4 of Slot 5 (assuming that Slot 5 contains a MRC-12 card).
  - Both the cards in the protection group must be placed in the same type of slot. Both MRC-12 cards must be in drop slots (Slots 1 to 4, 14 to 17) or both cards must be in trunk slots (Slots 5 to 6, 12 to 13). You cannot create a protection group between an MRC-12 card in a drop slot and another MRC-12 card in a trunk slot.
- The following 1+1 protection group rules apply to the OC192-XFP cards:
  - A 1+1 protection group can be created between two OC192-XFP cards in trunk slots (Slots 5 to 6, 12 to 13).
  - A 1+1 protection group can be created between an OC192-XFP card and an OC192LR/STM64LH card in trunk slots (Slots 5 to 6, 12 to 13).

- The PROTTYPE parameter is only applicable to optical DWDM cards.

Category

Protection

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

<WORK>	Working port from the "25.15 FACILITY" section on page 25-35.
<PROTECT>	Protection port from the "25.15 FACILITY" section on page 25-35.
<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 protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. Defaults to 5.0 minutes. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	Protection switch operation. Identifies the switch mode. The parameter type is UNI_BI (unidirectional and bidirectional switch operations)
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching

<OPOTYPE>	1+1 protection type. Can be either standard or optimized 1+1 protection. The parameter type is ONE_PLUS_ONE (1+1 protection type).
• Optimized	Optimized 1+1. **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-LMP-CTRL

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter Link Management Protocol Control Channel (ENT-LMP-CTRL) command creates an LMP control channel.

Usage Guidelines

This command is only available on nodes where the LMP is available and has been enabled.

Category

LMP

Security

Provisioning

Input Format

ENT-LMP-CTRL:[<TID>]:<SRC>:<CTAG>:::[LOCALPORT=<LOCALPORT>], [REMOTENE=<REMOTENE>],REMOTEIP=<REMOTEIP>,[HELLO=<HELLO>], [HELLOMIN=<HELLOMIN>],[HELLOMAX=<HELLOMAX>],[DEAD=<DEAD>], [DEADMIN=<DEADMIN>], [DEADMAX=<DEADMAX>]:[<PST>][,<SST>];

Input Example

ENT-LMP-CTRL:PETALUMA:CTRL-123:704:::LOCALPORT=FAC-1-1-1, REMOTENE=15.15.15.115,REMOTEIP=126.0.0.1,HELLO=500, HELLOMIN=300,HELLOMAX=5000,DEAD=12000,DEADMIN=2000, DEADMAX=20000:OOS,DSBLD;

Input Parameters

<SRC>	The LMP control channel AID value
• CTRL-ALL	Specifies all the control channels
• CTRL-{1-4}	Specifies an individual control channel
<LOCALPORT>	LOCALPORT is the pathway that the LMP control channel will use to send and receive messages.
<REMOTENE>	Remote IP address used by the far-end LMP control channel
<REMOTEIP>	Remote IP address with which the LMP control channel sends and receives messages
<HELLO>	The time interval in which the LMP protocol sends HELLO messages
<HELLOMIN>	Minimum hello time within which the LMP control channels can send out HELLO messages to the remote node
<HELLOMAX>	The maximum amount of time that the LMP control channel can wait between HELLO messages
<DEAD>	Time interval an LMP control channel will wait for a HELLO message from the remote side before listing the control channel as down
<DEADMIN>	The minimum amount of time that an LMP control channel can wait before listing the control channel status as down

<DEADMAX>	The maximum amount of time that the LMP control channel can wait before listing the control channel as down
<PST>	Primary state. This parameter indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. This parameter provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

12.9 ENT-LMP-DLINK

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter Link Management Protocol Data Link (ENT-LMP-DLINK) command creates an LMP data link.

Usage Guidelines

This command can only be used on nodes where the LMP protocol is available and enabled.

Category

LMP

Security

Provisioning

Input Format

ENT-LMP-DLINK:[<TID>]:<SRC>:<CTAG>:::[LINKTYPE=<LINKTYPE>],TELINK=<TELINK>, REMOTEID=<REMOTEID>;

Input Example

ENT-LMP-DLINK:PETALUMA:FAC-14-1-1:704:::LINKTYPE=PORT,TELINK=TLNK-45, REMOTEID=646631;

Input Parameters

<SRC>	Access identifier from the "25.15 FACILITY" section on page 25-35.
<LINKTYPE>	The type of LMP data link

• PORT	Port data link
• COMPONENT	Component data link
<TELINK>	Maps LMP data links to LMP TE links
<REMOTEID>	The remote LMP data link ID

12.10 ENT-LMP-TLINK

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter Link Management Protocol Traffic Engineering Link (ENT-LMP-TLINK) command creates an LMP Traffic Engineering (TE) link.

Usage Guidelines

This command can only be used on nodes where LMP is available and enabled.

Category

LMP

Security

Provisioning

Input Format

ENT-LMP-TLINK:[<TID>]:<SRC>:<CTAG>:::REMOTEID=<REMOTEID>, REMOTETE=<REMOTETELINK>, [MUXCAP=<MUXCAP>]:[<PST>[,<SST>]];

Input Example

ENT-LMP-TLINK:PETALUMA:TLINK-123:704:::REMOTEID=15.15.15.115,REMOTETE=123, MUXCAP=LAMBDA:OOS,DSBLD;

Input Parameters

<SRC>	LMP TE link AID values
• TLINK-ALL	Specifies all the TE links.
• TLINK-{1-256}	Specifies an individual TE link.
<REMOTEID>	Remote node ID associated with the LMP TE link
<REMOTETE>	Remote ID used by the far-end LMP TE Link
<MUXCAP>	The muxponder capability of the LMP TE link
• PKTSWITCH1	Packet Switching 1
• PKTSWITCH2	Packet Switching 2
• PKTSWITCH3	Packet Switching 3
• PKTSWITCH4	Packet Switching 4
• LAYER2	Layer 2 switching
• TDM	Time-division multiplexing (TDM) switching
• LAMBDA	Lambda switching
• FIBER	Fiber switching

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

12.11 ENT-LNK

(ONS 15454) The Enter Optical Link (ENT-LNK) command creates an optical link between two optical connection points.

The optical links can be established between:

- Two optical transport sections (OTSs)
- Two optical multiplexing sections (OMSs) with the same band
- Two optical channels (OCHs) with the same wavelength

Usage Guidelines

The created optical link must be between points belonging to the same ring direction. An optical link between two OMSs or between two OCHs can be HITLESS if the connection is between two points from one drop point to a consecutive add point in the logical link. When this command is used to create an optical link between two OCH ports, where the first port belongs to an OCH filter and the second port is an OCH trunk, the second port should be tuned to the same wavelength of the OCH filter if it has not been set yet.

Category

DWDM

Security

Provisioning

Input Format

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

Input Example

ENT-LNK:PENNGROVE:BAND-6-1-TX,BAND-13-1-RX:114::::OOS,AINS;

ENT-LNK:PENNGROVE:LINE-6-1-TX,LINE-13-1-RX:114::::OOS,AINS;

ENT-LNK:PENNGROVE:CHAN-6-2,CHAN-13-1-RX:114::::OOS,AINS;

ENT-LNK:PENNGROVE:CHAN-6-3-1,CHAN-13-1-RX:114::::OOS,AINS;

ENT-LNK:PENNGROVE:CHAN-6-19-1,CHAN-13-1-RX:114::::OOS,AINS;

Input Parameters

<FROM>	Identifier at one end of the optical link from the "25.8 CHANNEL" section on page 25-20.
<TO>	Identifier at the other end of the optical link from the "25.8 CHANNEL" section on page 25-20.
<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

12.12 ENT-LNKTERM

(Cisco ONS 15454, 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 non-support of SONET by the link.

Usage Guidelines

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

- For a SONET port:
  - A Section DCC (SDCC) termination must be provisioned. If it is the protect facility in a 1+1 protection group, the corresponding working facility must have an SDCC termination provisioned.

  - If the port is part of a BLSR, the SDCC must be provisioned on all of the working ports of the BLSR.
- For a TXP/MXP trunk port, either ITU-T G.709 must be enabled or the payload type must be non-SONET/SDH.
- For a TXP/MXP client port, a card must be operating in the transparent termination mode.
- For a DWDM OCH port:
  - If the OC-N interface is part of a 1+1 protection group, a separate PP termination can be provisioned on the other (working/protect) interface also.
  - If the client interface is part of a Y-cable protection group, a separate PP termination can be provisioned on the other (working/protect) interface also.
  - If the MXP/TXP trunk interface is part of a splitter protection group, a separate PP termination can be provisioned on the other (working/protect) interface also.
  - If REMOTENODE is specified as an IP address (or a node name that can be resolved by the gateway network element [GNE]) that is different from the local node's IP address/name, this termination is intended to be a part of an internode provisionable patchcord.
  - All endpoints of the provisionable patchcord need to be provisioned correctly (on the local and/or remote node) for it to show as UP in OSPF.
  - Misconfigured or partially configured provisionable patchcords will not cause alarms or events to be generated at either end of the link.
  - No two provisionable patchcord terminations on a node can be configured to have the same remote node PP termination information (for example, the combination of values for REMOTENODE and REMOTELNKTERMAID attributes for a PP termination must be unique on a single node).
  - All provisionable patchcord terminations on one physical interface must have their remote terminations on a single remote node.
  - The command does not accept multiple and ALL style AIDs.

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 25-42. 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 25-20.
<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.

12.13 ENT-NNI-ETH

(Cisco ONS 15454) The Enter Network-to-Network Interface Ethernet (ENT-NNI-ETH) command adds a new network-to-network interface service provider VLAN ID to the NNI interface of an L2 Ethernet port.

Usage Guidelines

- The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use a retrieve command to obtain the current value.
- If the AID is invalid, an IIAC error message is returned.
- The ALL AID is invalid for this command.
- The L2 Ethernet port must be present when this command is executed.
- The command will be denied if the service provider VLAN ID is present.

Category

Ethernet

Security

Provisioning

Input Format

ENT-NNI-ETH:[<TID>]:<AID>:<CTAG>::<SVLANID>[::];

Input Example

ENT-NNI-ETH:PETALUMA:ETH-1-1-1:1::1010;

Input Parameters

<AID>	Ethernet AIDs are used to access the L2 Ethernet ports. Access identifier from the "25.15 FACILITY" section on page 25-35.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

12.14 ENT-OCHCC

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

Usage Guidelines

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

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 25-35.
<CKTID>	Cross-connect ID. The default is Blank or None. It is a string of ASCII characters. The maximum length is 48. If CKTID is empty or null the CKTID field will not appear.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.

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

12.15 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. Use a retrieve command to obtain the current value.

Category

DWDM

Security

Provisioning

Input Format

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

Input Example

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

ENT-OCHNC:VA454-22:LINEWL-1-3-TX-1530.33&CHAN-4-1-TX,
CHAN-4-1-RX&LINEWL-1-3-RX-1530.33:116::2WAYDCN:
CKTID="DCN CIRCUIT",CMDMDE=FRCD:OOS,DSBLD;

ENT-OCHNC:VA454-22:LINEWL-1-9-TX-1530.33,LINEWL-1-11-RX-1530.33:116::DIAG:
WLOPWR=1.0,VOAATTN=1.0;

Input Parameters

<SRC>	Source access identifier from the "25.8 CHANNEL" section on page 25-20. In 2-way wavelength connection sources both directions need to be indicated.
<DST>	Destination access identifier from the "25.18 LINEWL" section on page 25-40. In 2-way wavelength connection sources both directions need to be indicated.
<WCT>	Wavelength connection type. The parameter type is WCT. The default is 1WAY.
• 1WAY	A unidirectional wavelength connection for one specified ring direction.
• 2WAY	A bidirectional wavelength connection for both the ring directions.
• DIAG	A unidirectional maintenance wavelength connection inside 40-WXC-C cards.
• 2WAYDCN	A bidirectional wavelength connection for both the ring directions that is also used to carry the data communication channels.
<CKTID>	Cross-connect ID. The default is Blank or None. It is a string of ASCII characters. The maximum length is 48. If CKTID is empty or null the CKTID field will not appear.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state in which the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that may make the command fail.
<WLOPWR>	The value of calibrated output power that the VOA is going to set as a result of its attenuation. WLOPWR is a float.
<VOAATTN>	The value of calibrated attenuation for the VOA expressed in dBm. The range is 0.0 to +30.0. VOAATTN is a float.
<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

12.16 ENT-QNQ-ETH

(Cisco ONS 15454) The Enter QinQ Ethernet (ENT-QNQ-ETH) command enters a new IEEE 802.1Q tunneling (QinQ) relationship between the CE-VLAN and S-VLAN for Gigabit Ethernet uniport provisioning associated to an L2 Ethernet port.

Usage Guidelines

- The default values for all optional parameters are NE default values, but these values may not be the current value for a parameter. Use a retrieve command to obtain the current value.
- If the AID is invalid, an IIAC error message is returned.
- The ALL AID is invalid for this command.
- The L2 Ethernet port must be defined before executing this command or the command will be denied.
- The command will be denied if the CE-VLAN-ID and S-VLAN-ID relationship is defined before the L2 Ethernet port is defined.

Category

Ethernet

Security

Provisioning

Input Format

ENT-QNQ-ETH:[<TID>]:<AID>:<CTAG>::<FIRSTCEVLANID>,<LASTCEVLANID>,<SVLANID>:[RULE=<RULE>][:];

Input Example

ENT-QNQ-ETH:PETALUMA:ETH-1-1-1:1::10,11,100:RULE=ADD;

Input Parameters

<AID>	Ethernet AIDs are used to access the L2 Ethernet ports. Access identifier from the "25.15 FACILITY" section on page 25-35.
<FIRSTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<LASTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<RULE>	Used to represent the rules allowed for the VLAN tagging operations. The default value is ADD.
• ADD	The S-VLAN tag is added to the CE-VLAN tag.
• XLTE	The S-VLAN tag replaces the CE-VLAN tag (single Q).

12.17 ENT-RMONTH-<MOD2_RMON>

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Enter Remote Monitoring Threshold for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 4FGC, 4GFICON, FSTE, G1000, GIGE, ETH, GFPOS, GIGE, ISCCOMPAT, 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 25-35. AID for the facility that manages the data statistics.
<MONTYPE>	Monitored type. Type of RMON 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 - Path Detected
• HP-NPJC-PGEN	High-Order Path Negative Pointer Justification Count - Path Generated
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count Seconds - Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds - Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count - Path Detected
• HP-PPJC-PGEN	High-Order Path Positive Pointer Justification Count - Path Generated
• HP-SEPI	The number of Severely Errored Period Intensity events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte

• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload cyclic redundancy check (CRC) errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in microA
• LBCL-MAX	Maximum Laser Bias current in microA
• LBCL-MIN	Minimum Laser Bias current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order Positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets

• NPJC-PDET	Negative Pointer Justification Count- Path Detected
• NPJC-PGEN	Negative Pointer Justification Count- Path Generated
• OPR-AVG	Average Receive Power in tenths of a microW
• OPR-MAX	Maximum Receive Power in tenths of a microW
• OPR-MIN	Minimum Receive Power in tenths of a microW
• OPRN	Normalized Optical Receive Power for OC3-8 card
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in tenths of a microW
• OPT-MAX	Maximum Transmit Power in tenths of a microW
• OPT-MIN	Minimum Transmit Power in tenths of a microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in tenths of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in tenths of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in tenths of a dBm
• PPJC-PDET	Positive Pointer Justification Count - Path Detected
• PPJC-PGEN	Positive Pointer Justification Count - Path Generated
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage

• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<INTVL>	The interval in seconds over which the data is sampled and compared with the rising and falling threshold. A valid value is any integer larger than or equal to 10 (seconds).
<RISE>	The rising threshold for the sampled statistic. A valid value is any integer.
<FALL>	The falling threshold. A valid value is any integer smaller than the rising threshold.
<SAMPLE>	The method of calculating the threshold comparison value. The parameter type is SAMPLE_TYPE, which describes how the data will be calculated during the sampling period.
• ABSOLUTE	Comparing directly
• DELTA	Comparing with the current value of the selected variable subtracted by the last sample
<STARTUP>	Dictates whether an event will generate if the first valid sample is greater than or equal to the rising threshold, less than or equal to the falling threshold, or both. The parameter type is STARTUP_TYPE, which indicates whether an event will be generated when the first valid sample is crossing the rising or falling threshold.
• FALLING	Generates the event when the sample is smaller than or equal to the falling threshold.
• RISING	Generates the event when the sample is greater than or equal to the rising threshold.
• RISING-OR-FALLING	Generates the event when the sample is crossing the rising threshold or the falling threshold.

12.18 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 25-44, which is one of the termination points (legs) of the existing cross-connection. If the existing cross-connection is one-way, then this termination point (leg) should be the FROM-AID termination point. Otherwise, FROM is not significant. FROM and TO should be entered as they are entered in the ENT-CRS command. You can issue the RTRV-CRS command and use the response for FROM and TO parameters.
<TO>	Destination AID from the "25.25 STS" section on page 25-44 which is one of the termination points (legs) of the existing cross-connection. If the existing cross-connection is one-way, then this termination point (leg) should be the TO-AID termination point. Otherwise, the TO is not significant. FROM and TO should be entered as they are entered in the ENT-CRS command. You can issue the RTRV-CRS command and use the response for FROM and TO parameters.
<RFROM>	The termination point of the existing cross-connect that is to be rolled. The termination point is an AID from the "25.25 STS" section on page 25-44.

<RTO>	The termination point that will become a leg of the new cross-connection. the termination point is an AID from the "25.25 STS" section on page 25-44.
<RMODE>	Indicates the mode of the rolling operation. The parameter type is RMODE (roll mode).
• AUTO	Automatic. When a valid signal is available, the roll that has the AUTO mode will automatically delete the previous end-point.
• MAN	Manual. Enter the corresponding delete roll/bulkroll command to delete the previous end-point.
<FORCE>	Forces a valid signal on the path. FORCE can only go from Y to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.

12.19 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. The valid range is from 1 to 32,797.

12.20 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.

12.21 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 (GNE) to create an entry in the TADRMAP table that maps the target identifiers (TIDs) of the subtending NEs to their addresses. The operating systems (OSs) will address the subtending NEs using the TID in TL1 messages and a GNE will address these NEs by mapping the TID to an IP address or NSAP. The TADRMAP table, which resides in the GNE, correlates a TID and an address. The command requires that at least one IPADDR or NSAP be specified. The PORT and ENCODING parameters are only used with IP address mappings.

Usage Guidelines None

Category System

Security Provisioning

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

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

Input Parameters

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

12.22 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 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 25-39.
<COMMUNITY>	Community associated with the trap destination. Community name is a string with up to 32 characters.
<TRAPPORT>	UDP port number associated with the trap destination. The UDP port number default is 162. TRAPPORT is an integer.
<TRAPVER>	SNMP version number. Defaults to SNMPv1. The parameter type is SNMP_VERSION (SNMP Version).
• SNMPV1	(Default) SNMP Version 1
• SNMPV2	SNMP Version 2

12.23 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.

12.24 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.

12.25 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 use the ENT-USER-SECU command. Each user created by the Superuser has one of these four privilege levels:

1. Retrieve [RTRV]: Users with this security level can retrieve information from the node, but cannot modify anything. The default idle time for a Retrieve user is unlimited.
2. Maintenance [MAINT]: Users with this security level can retrieve information from the node and perform limited maintenance operations such as card resets, Manual/Force/Lockout on cross-connects or in protection groups, and BLSR maintenance. The default idle time for a Maintenance user is 60 minutes.

3. Provisioning [PROV]: Users with this security level can perform all maintenance actions, and all provisioning actions except those restricted to Superusers. The default idle time for a Provisioning user is 30 minutes.
4. Superuser [SUPER]: Users with this security level can perform all provisioning user actions, plus creating and deleting user security profiles, setting basic system parameters such as time, date, node name, and IP address, and doing database backup and restoration. The default idle time for a Superuser is 15 minutes.

Usage Guidelines

- Passwords are masked for the following security commands: ACT-USER, ED-PID, ENT-USER-SECU, and ED-USER-SECU. Access to a TL1 session by any means will have the password masked. The CTC Request History and Message Log will also show the masked commands. When a password-masked command is reissued by double-clicking the command from CTC Request History, the password will still be masked in the CTC Request History and Message Log. The actual password that was previously issued will be sent to the NE. To use a former command as a template only, single-click the command in CTC Request History. The command will be placed in the Command Request text box, where you can edit the appropriate fields prior to reissuing it.
- The user ID can be any combination of up to 10 alphanumeric characters.
- The password ID 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 (Cannot Login) error message.
- The TL1 password security is enforced as follows:
  - The PID cannot be the same as or contain the UID. For example, if the userid is CISCO25 the password cannot be CISCO25#.
  - The PID must have one nonalphabetic and one special (+, %, or #) character.
  - PID toggling is not permitted; for example, if the current password is CISCO25#, the new password cannot be CISCO25#.

Category

Security

Security

Superuser

Input Format

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

Input Example

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

Input Parameters

<UID>	User identifier. The minimum UID size is 6 and the maximum size is 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

12.26 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 link capacity adjustment scheme (LCAS) support (NONE). VCG on the ML-100T-8 card supports up to three members at a subrate of STS1 and 64 members at a subrate of VT1.

On the ONS 15310-CL and ONS 15310-MA, the CE-100T-8 card supports a maximum of STS6 bandwidth; for example, two virtual concatenated (VCAT) circuits with three STS1 members or six VCAT circuits 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 25-35. ML1000-2 and ML100T-12 cards use the VFAC AID. The FC_MR-4 card uses the FAC AID.
<TYPE>	The type of entity or member cross-connect being provisioned. Null indicates not applicable. TYPE can be a Common Language Equipment Identification (CLEI) code or another value. ML1000-2 and ML100T-12 cards support STS1, STS3c, and STS12c. The FC_MR-4 card supports STS3c only. The parameter type is MOD_PATH (STS/VT path modifier).
• STS1	STS1 path
• STS12C	STS12C path
• STS18C	STS18C path
• STS192	STS192C path
• STS24C	STS24C path
• STS36C	STS36C path
• STS3C	STS3C path
• STS48C	STS48C path
• STS6C	STS6C path
• STS9C	STS9C path
• VT1	VT1 path
• VT2	VT2 path
<TXCOUNT>	Number of members in the transmit (Tx) direction. For ML1000-2 and ML100T-12 cards, the only valid value is 2. For the FC_MR-4 card the only valid value is 8. TXCOUNT is an integer.
<CCT>	Type of connection (one-way or two-way). CCT is the cross-connect type for the VCG member cross-connects. It must be the same for all the member cross-connects of a VCG. The parameter type is CCT, which is the type of cross-connect to be created.
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	Path Protection multicast drop with one-way continue
• 1WAYEN	Path Protection multicast end node with one-way continue
• 1WAYMON	A bidirectional connection between the two tributaries **Note** 1WAYMON is not supported with TL1. However, it is still supported from CTC. Using CTC, you can create 1WAYMON cross-connects that can be retrieved through TL1.
• 1WAYPCA	A unidirectional connection from a source tributary to a destination tributary on the protection path/fiber
• 2WAY	A bidirectional connection between the two tributaries
• 2WAYDC	A bidirectional drop-and-continue connection applicable only to traditional path protection configurations and integrated DRIs
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber

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

12.27 ENT-VLAN

(Cisco ONS 15454) The Enter Virtual VLAN (ENT-VLAN) command adds a new VLAN entry to the VLAN database. The VLAN database is a collection of VLANs used in an NE.

Usage Guidelines

- If the AID is invalid, an IIAC error message is returned.
- The ALL AID is invalid for this command.
- The VLAN with the specified AID must be present in the node or the command will be denied.

Category

Ethernet

Security

Provisioning

Input Format

ENT-VLAN:[<TID>]:<AID>:<CTAG>:::[NAME=<NAME>],[PROTN=<PROTN>];

Input Example

ENT-VLAN:ROCKS:VLAN-4096:1:::NAME=MYVLAN,PROTN=N;

Input Parameters

<AID>	The AID is used to access the VLAN.
• VLAN-ALL	All AIDs for the VLAN.
• VLAN-{0-4096}	Single AID for the VLAN. VLAN ID 0 is reserved for untagged VLAN.
<NAME>	(Optional) Indicates the name of the VLAN.
<PROTN>	Indicates the VLAN protection feature. This is an optional parameter indicating if the VLAN being created/modified is protected.
• N	Not protected (Default)
• Y	Protected

12.28 ENT-WDMSIDE

(Cisco ONS 15454) The Enter Wavelength Division Multiplexing Side (ENT-WDMSIDE) command adds a new WDM Node Side and defines its attributes.

Usage Guidelines

- The LINEIN and LINEOUT attributes are mandatory and they specify the input and output lines of the node.
- If the AID is invalid, an IIAC error message is returned.
- The ALL AID is invalid for this command.

Category

DWDM

Security

Maintenance

Input Format

ENT-WDMSIDE:[<TID>]:<AID>:<CTAG>:::LINEIN=<LINEIN>,LINEOUT=<LINEOUT>[:];

Input Example

ENT-WDMSIDE:TEXAS:WDMSIDE-A:114:::LINEIN=LINE-1-3-RX,LINEOUT=LINE-1-3-TX;

Input Parameters

<AID>	The AID is used to access the WDM side of a DWDM node.
• WDMSIDE-{A,B,C,D,E,F,G,H}	DWDM side identifier
<LINEIN>	Used to access the Optical Transport Section (OTS) layer of the ONS cards.
• LINE[-{1-8}]-{1-6,12-17}-{1-3}-ALL	All the lines (COM=1, OSC=2, LINE=3) in OPT-BST, OPT-BST-E, OPT-BST-L, and OPT-AMP-17-C cards where the format is LINE-[SHELF]-[SLOT]-[PORT]-ALL.

• LINE[-{1-8}]-{1-6,12-17}-{1-3}-{RX,TX}	The receive/transmit lines (COM=1, OSC=2, LINE=3) in OPT-BST, OPT-BST-E, OPT-BST-L, and OPT-AMP-17-C cards where the format is LINE-[SHELF]-[SLOT]-[PORT]-[DIRN].
<LINEOUT>	Used to access Optical Transport Section (OTS) layer of Optical Network units.
• LINE[-{1-8}]-{1-6,12-17}-{1-3}-ALL	All the lines (COM=1, OSC=2, LINE=3) in OPT-BST, OPT-BST-E, OPT-BST-L, and OPT-AMP-17-C cards where the format is LINE-[SHELF]-[SLOT]-[PORT]-ALL.
• LINE[-{1-8}]-{1-6,12-17}-{1-3}-{RX,TX}	The receive/transmit lines (COM=1, OSC=2, LINE=3) in OPT-BST, OPT-BST-E, OPT-BST-L, and OPT-AMP-17-C cards where the format is LINE-[SHELF]-[SLOT]-[PORT]-[DIRN].

CHAPTER 13

EX Commands

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

13.1 EX-SW-<OCN_BLSR>

(Cisco ONS 15454 and 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 25-35. 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

INH Commands

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

14.1 INH-CONSOLE-PORT

(Cisco ONS 15454, ONS 15310-CL, and 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 25-33.

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.

Note 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.

Note 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.

Usage Guidelines

- 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.
- This command applies to XCVT, XC10G, XC-VXC-10G equipment units.
- 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 25-33. 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 CTX2500) 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 optical (OC-N) cards. A command on an optical card will return an IIAC (Input, Invalid Access Identifier) error message. For optical 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 25-33. 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 CTX2500) 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 optical (OC-N) cards. A command on an optical card will return an IIAC (Input, Invalid Access Identifier) error message. For optical 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 25-33. 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, Cisco ONS 15310-CL, Cisco ONS 15310-MA, and Cisco 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, ETH, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, 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 Severely Errored Period Intensity events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors

• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload cyclic redundancy check (CRC) errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	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

- This command cannot be executed if the network is in a Bidirectional Line Switched Ring (BLSR).
- 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 25-33.	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. The PH parameter is supported on the CE-100T-8 and CE-MR-10 cards on the ONS 15454.	Y	Y	Y
<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, Cisco ONS 15310-CL, Cisco ONS 15310-MA, and Cisco 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-1:123;

OPR-ACO-ALL:CISCO::123;

Input Parameters		
	<AID>	The node or shelf access identifier from the "25.24 SHELF" section on page 25-44. If this parameter is omitted, the node or the first shelf of the node becomes the AID.

16.2 OPR-ALS

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Operate Automatic Laser Shutdown (OPR-ALS) command is used to restart the laser of an OC-N facility and for all of the facilities that support the ALS feature.

Usage Guidelines None

Category Ports

Security Maintenance

Input Format OPR-ALS:[<TID>]:<AID>:<CTAG>[::::];

Input Example OPR-ALS:CISCO:FAC-1-1:100;

Input Parameters		
	<AID>	Access identifier from the "25.2 AidUnionId" section on page 25-12.

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>]:<AID>:<CTAG>[::::];

Input Example OPR-APC:15454:WDMSIDE-A:123::;

Input Parameters

<AID>	Access identifier from the "25.32 WDMANS" section on page 25-54. The AID must not be null.

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:
  - MNTRY: Momentary duration
  - CONTS: Continuous duration
- In an automatic state, the contact could be opened or closed depending on the provisioned trigger.
- RLS-EXT-CONT changes the state to automatic. Therefore, issuing an OPR-EXT-CONT command when the control is manually open and then issuing a RLS-EXT-CONT command will not revert the state back to Manual Open.
- A NULL value for the duration parameter defaults to MNTRY in this release.
- RLS-EXT-CONT is not allowed during the MNTRY duration. It is allowed for the CONTS duration. The length of the MNTRY duration is 2 seconds 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 25-32. The AID must not be null.
<CONTTYPE>	Environmental control type. A null value is equivalent to ALL. The parameter type is CONTTYPE (the environmental control types).
• AIRCOND	Air conditioning
• AUDIBLE	Audible (ONS 15310-MA only)
• ENGINE	Engine
• FAN	Fan
• GEN	Generator
• HEAT	Heat
• LIGHT	Light
• MISC	Miscellaneous
• SPKLR	Sprinkler
<DURATION>	Identifies the duration. A NULL value for the duration parameter defaults to CONTS(Continuous).
• CONTS	Continuous duration

16.5 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

16.6 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, DS3I, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, ETH, 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.
- 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 the FEAC loopback is also applied, then the facility loopback is released first 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 on one side (for example, the east side) of the two-fiber BLSR is required before operating a facility (or terminal) line loopback on the same side (that is, the east side) of the ring.
  - A span lockout on one protection side (for example, the east side) of the four-fiber BLSR is required before operating a facility (or terminal) line loopback on the same side working line (that is, the east side) of the ring.
- FEAC loopbacks on the DS-1 interface of a DS3XM card can be applied only if a Virtual Tributary (VT) connection has been created on the DS-1. An attempt to operate or release FEAC loopbacks in the absence of a VT connection will cause an error message.
- The FEAC line is supported only with the FEND value of the LOCN parameter on DS-1/ T3 of the DS3XM-12 card.

- Only the following MOD2 fields are supported in this release: DS1 EC1, G1000, FSTE, OC12, OC192, OC3, OC48, OCH, T1, T3, STS1, STS12C, STS192C, STS24C, STS3C, STS36C, STS48C, STS6C, STS9C, E1, 1GFC, 2GFC, 4GFC, 10GFC, 1GFICON, 2GFICON, 4GFICON, GIGE, 10GIGE, ESCON, STS18C, DV6000, ETRCLO, ISCCOMPAT, ISC3PEER1G, ISC3PEER2R, PASSTHRU, ISC3PEER2G.

Note LINE and PAYLOAD values are applicable only with the FEND location value. PAYLOAD loopback can be applied by specifying the loopback type as PAYLOAD and the location as FEND.

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 BAND, CHANNEL, DS1, FACILITY, LINE, STS, and VT.
<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 loopback 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.

16.7 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.

- Manual Switch of Protection Line (to Working Line). If the AID identifies the protection line in a 1+1 protection group, then service will be transferred from the protection line to the working line, unless a request of equal or higher priority is in effect.
- Manual Switch of Working Line (to Protection Line). If the AID identifies a working line, service will be switched from the working line to the protection line unless a request of equal or higher priority is in effect.
- Force Switch of Protection Line (to Working Line). If the AID identifies the protection line, service will be transferred from the protection line to the working line unless a request of equal or higher priority is in effect.
- Force Switch of Working Line (to Protection Line). If the AID identifies a working line, service will be transferred from the working line to the protection line unless a request of equal or higher priority is in effect. A lockout of protection and a signal fail of protection have higher priority than a Force switch command.
- Lockout of Protection Line. If the AID identifies the protection line, this switch command will prevent the working line from switching to protection line. If the working line is already in protection, then the protection line will be switched back to its original working line.
- Lockout of Working Line. If the AID identifies the working line, this switch command will prevent the working line from switching to protection line. If the working line is already in protection, then the working line will be switched back from the protection line to its original working line.

If the command is used against preprovisioned cards, the SROF (Protection Switching Failed) error is returned.

Category

DWDM

Security

Maintenance

Input Format

OPR-PROTNSW-<MOD2DWDMPAYLOAD>:[<TID>]:<SRC>:<CTAG>::<SC>[:];

Input Example

OPR-PROTNSW-HDTV:CISCO:FAC-1-1-1:100::FRCD;

Input Parameters

<SRC>	Access identifier from the "25.15 FACILITY" section on page 25-35.
<SC>	Switch command that is to be initiated on the paths. The parameter type is SW.
• APS-CLEAR	APS-CLEAR switch state. It is a read-only switch state and is not allowed in the OPR-PROTNSW-xxx commands.
• CLEAR	CLEAR switch state. CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.

16.8 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 in a 1+1 protection group, then service will be transferred from the protection line to the working line, unless a request of equal or higher priority is in effect.
- Manual Switch of Working Line (to Protection Line). If the AID identifies a working line, then service will be switched from the working line to the protection line unless a request of equal or higher priority is in effect.
- Force Switch of Protection Line (to Working Line). If the AID identifies the protection line, then (only in the 1+1 architecture) service will be transferred from the protection line to the working line unless a request of equal or higher priority is in effect.
- Force Switch of Working Line (to Protection Line). If the AID identifies a working line, then service will be transferred from the working line to the protection line unless a request of equal or higher priority is in effect. A lockout of protection and a signal fail of protection have higher priority than a Force switch command.
- Lockout of Protection Line. If the AID identifies the protection line, this switch command will prevent the working line from switching to protection line. If the working line is already in protection, then the protection line will be switched back to its original working line.
- Lockout of Working Line. If the AID identifies the working line, this switch command will prevent the working line from switching to the protection line. If the working line is already in protection, then the working line will be switched back from protection line to its original working line.

The following actions will return error messages:

- This command cannot be used for the common control cards (TCC2/TCC2P or XCVT/XC10G). A query on a common control card will generate an IIAC (Input, Invalid Access Identifier) error message. For common control card switching, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
- Sending this command to electrical cards will return an IIAC error message. For electrical card switching, use the ALW-SWTOPROTN/SWTOWKG-EQPT and INH-SWTOPROTN/SWTOWKG-EQPT commands.
- Sending this command to query on a card that is not in a protection group will return the SNVS (Status, Not in Valid State) error message.
- Sending this command to a working card that is failed or missing will return the SROF error message.
- Sending this command to a protect card that is failed or missing will return the SROF error message.
- Protection for preprovisioned cards will not succeed.
- Sending this command to a card that is already in protection with a higher priority will return the SSRD (Status, Switch Request Denied) error message.
- Sending this command to an OCN line with a switching mode that is already in process will return a SAMS (Already in the Maintenance State) error message.
- Sending this command with the EXERCISE or APS_CLEAR switch operations will return an error SROF (Invalid Protection Switch Operation) because these operations are not valid according to Telcordia GR-833-CORE. The EX-SW-<OCN_BLSR> is the correct command to perform the EXERCISE switch over the BLSR line.
- Protection switch will be denied if signal degrade/signal fail (SD/SF) is already present on the switching path. If SD/SF is generated on the switching path after the switch is performed, the switch will be overwritten by the APS_CLEAR state. The switch will not be overwritten despite an SD or SF condition if the switch is a Lockout of Protection or a Force switch, because these switches have a higher priority than SD and SF.

Note

- To get the protection switching state (Manual, Force, and lockout), use the RTRV-COND-ALL or RTRV-ALM-ALL commands.
- If the far end of the same span has a higher protection switching state (for example, the near end is in the Manual protection state and the far end is in the Force protection state) the near-end protection switching state will be preemptive and will have an APS_CLEAR switching state. The RTRV-PROTNSW-OCN command is used to retrieve the current switching state of a SONET line.
- Sending the following Manual ring switch requests on both east and west sides/spans of a two-fiber or four-fiber BLSR in less than 30 to 45 seconds will cause the system to execute only one (WEST) side BLSR query and preempt the other (EAST) side query.
  - A single TL1 command with both side/span AIDs (in the list AID format) of the same two-fiber or four-fiber ring.
  - The separated (via TL1, CTC, or TL1 and CTC user interfaces) queries on both sides/spans of the same two-fiber or four-fiber ring.

  There will be no event messages for the preempted side, whose switching state will be in the APS-CLEAR state.
- DIRN is an optional parameter. A NULL value defaults to BTH for BLSR protection, BTH for 1+1 bidirectional protection, and RCV for 1+1 unidirectional protection.

DIRN follows these rules: TRMT will always fail for all protection groups. For two-fiber and four-fiber BLSR protection groups, both the RCV and TRMT directions will fail.

- DIRN is applicable for both 1+1 and BLSR protection groups. For example, OPR-PROTNSW can be performed on a BLSR span/ring as follows:

  OPR-PROTNSW-OC48::FAC-5-1:A::LOCKOUT,SPAN:BTH;

- A Lockout of Protection command is required before putting the span of either a two-fiber or four-fiber BLSR line in loopback.
  - A span lockout on one side (for example, the east side) of the two-fiber BLSR is required before operating a facility (or terminal) line loopback on the same side (for example, the east side) of the ring.
  - A span lockout on one protection side (for example, the east side) of the four-fiber BLSR is required before operating a facility (or terminal) line loopback on the same side Working line (for example, the east side) of the ring.
- A span lockout on the working port is not supported in ONS 15454 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 25-35. Identifies the facility in the NE to which the switch request is directed.
<SC>	Switch command that is to be initiated on the paths. The parameter type is SW.
• APS-CLEAR	APS-CLEAR switch state. It is a read-only switch state and is not allowed in the OPR-PROTNSW-xxx commands.
• CLEAR	CLEAR switch state. The CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. The EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.

<SWITCHTYPE>	BLSR switch type. The parameter type is SWITCH_TYPE (switch type).
• RING	BLSR ring switch type
• SPAN	BLSR span switch type
<DIRN>	The direction relative to the entity defined in the AID field. The direction of the switching. DIRN defaults to RCV. The parameter type is DIRECTION (transmit and receive directions).
• BTH	Both transmit and receive directions
• RCV	Receive direction only
• TRMT	Transmit direction only

16.9 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 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 the working or protect AID only.
- If you send this command on the drop AID, a DENY (Invalid AID, should use working/protect AID) message will be returned.
- To retrieve the protection switching state (Manual, Force, lockout), use the RTRV-COND-ALL or RTRV-ALM-ALL commands.
- Telcordia GR-1400 does not allow the LOCKOUT_OF_WORKING command on the path protection WORKING path/AID. When sending this command on the path protection WORKING path, a SROF (Invalid Protection Switch Operation) is returned.
- If sending this command with EXERCISE or APS_CLEAR switch operations, an SROF error will be returned because these operations are not valid according to Telcordia GR-833-CORE.
- A protection switch will be denied if an SD or SF condition is already present on the switching path. If an SD or SF is generated on the switching path after the switch is performed, the switch will be overwritten by the APS_CLEAR state. The switch is not overwritten if it is a lockout of protection or a Force switch, because these switch types have a higher priority than SD/SF conditions.

Category

Protection

Security

Maintenance

Input Format

OPR-PROTNSW-<PATH>:[<TID>]:<SRC>:<CTAG>::<SC>[:];

Input Example

OPR-PROTNSW-STS1:CISCO:STS-2-1-1:123::MAN;

Input Parameters

<SRC>	Source access identifier from the "25.10 CrossConnectId" section on page 25-22.
<SC>	The switch command that is to be initiated on the paths. The parameter type is SW, which is the type of switch.
• APS-CLEAR	APS-CLEAR switch state. It is a read-only switch state and is not allowed in the OPR-PROTNSW-xxx commands.
• CLEAR	CLEAR switch state. The CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. The EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.

16.10 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 25-20. Indicates the trunk port.
<SW>	Switch operation. The parameter type is SW, which is the type of switch.
• APS-CLEAR	APS-CLEAR switch state. It is a read-only switch state and is not allowed in the OPR-PROTNSW-xxx commands.
• CLEAR	CLEAR switch state. The CLEAR switch state is not allowed in the OPR-PROTNSW-xxx commands.
• EXERCISE	EXERCISE switch state. The EXERCISE switch state is not allowed in the OPR-PROTNSW-xxx commands.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• LOCKOUT	Locks the facility out of switching. The system cannot switch to this facility to carry service.
• MAN	Requests a manual switch of the facility.

16.11 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 25-54.

16.12 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 where you want to switch should be of the same quality as the active reference source; otherwise, the command will fail.

If you want to switch to a reference of lower quality, use the Force switch option.

The Operate Synchronization Switches are released by the RLS-SYNCNSW command or are overridden by a synchronization reference failure.

After the switch is effective, the MANSWTOPRI (Manual Switch to Primary or Secondary Reference) minor alarm will be raised.

Category Synchronization

Security Maintenance

Input Format OPR-SYNCNSW:[<TID>]:[<AID>]:<CTAG>::<SWITCHTO>,[<SC>];

Input Example OPR-SYNCNSW:CISCO:SYNC-NE:3::PRI,MAN;

Input Parameters

<AID>	Access identifier from the "25.28 SYNC_REF" section on page 25-50. The default is SYNC-NE.
<SWITCHTO>	Access identifier from the "25.29 SYNCSW" section on page 25-51. Identifies the new synchronization reference that will be used.
<SC>	Switch command to be initiated on the paths. Only MAN and FRCD switches are allowed for this command. The parameter type is SW, which is the type of switch.
• FRCD	Forces a switch unless another FRCD or LOCKOUT is in effect.
• MAN	Requests a manual switch of the facility.

16.13 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 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>[:::MODE=<MODE>],[AGINGMARGIN=<AGINGMARGIN>][:];

Input Example

OPR-WDMANS:PENNGROVE::114;

OPR-WDMANS:PENNGROVE::114:::MODE=CALC,AGINMARGIN=-1.0;

Input Parameters

<MODE>	Indicates which mode should operate the WDMANS command.
<AGINMARGIN>	(Optional) Indicates the Agin margin optimal value to be used to calculate the WDMANS parameter without MetroPlanner. It is a float value expressed in dBm.

CHAPTER 17

REPT Messages

This chapter provides report (REPT) messages for the Cisco ONS 15454, Cisco ONS 15310-CL, Cisco ONS 15310-MA, and Cisco 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, ETH, FSTE, G1000, GFPOS, GIGE, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STM1, STM4, STM16, STM64, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, UDCDCC, UDCF, VC3, VC4, VC4-2c, VC4-3c, VC4-4c, VC4-8c,VC4-16c,VC4-64c, VC12, VCG, VT1, VT2, or WLEN (REPT ALM <MOD2ALM>) message reports an alarm condition against a facility, an RPR interface, 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>],[<LOCN>],[<DIRN>]:[<DESC>],[<AIDDET>]"
;
SID DATE TIME
** ATAG REPT ALM <MOD2ALM>
   "<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],[<OCRTM>],[<LOCN>],
   [<DIRN>]:[<DESC>],[<AIDDET>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM 1GFC
   "FAC-2-1:MJ,LOS,SA,08-01,14-25-59,,:\"LOSS OF SIGNAL\",OC12"
;
```

Output Parameters

<AID>	Access identifier from the "25.17 LINE" section on page 25-39.
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<CONDTYPE>	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 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
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description.
<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
• 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
• 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
• OC12-4	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-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
• 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-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

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>],[<LOCN>],
   [<DIRN>]:[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM BITS
   "BITS-1:MJ,SYNC,SA,08-01,14-25-59,,:\"LOSS OF TIMING\""
;
```

Output Parameters

<AID>	Access identifier from the "25.6 BITS" section on page 25-18.
<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 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.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions

• RCV	Receive direction only
<DESC>	(Optional) Condition description.

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>],[<LOCN>],
   [<DIRN>]:[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM COM
   "COM:MJ,FAN,NSA,08-01,14-25-59,,:\"FAN FAILURE\""
;
```

Output Parameters

<AID>	(Optional) Access identifier. Identifies the entity to which the command pertains. Indicates an alarm without AID. AID is a string.
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.

<CONDTYPE>	The condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, 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.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description.

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 25-32. Identifies an environmental input.
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is a two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<ALMTYPE>	Abbreviated code identifying the alarm. The parameter type is ENV_ALM, which is the environmental alarm types.
• AIRCOMPR	Air compressor failure
• AIRCOND	Air conditioning failure
• AIRDRYR	Air dryer failure
• BATDSCHRG	Battery discharging
• BATTERY	Battery failure
• CLFAN	Cooling fan failure
• CPMAJOR	Centralized power major failure
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail
• HATCH	Controlled Environment Vault (CEV) hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water

• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnect bypass
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure
<OCRDAT>	(Optional) Date.
<OCRTM>	(Optional) Time.

<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description.

17.5 REPT ALM LMP

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Report Alarm Link Management Protocol (REPT ALM LMP) is the autonomous message which is used to report the LMP-FAIL alarms for the control channels and traffic engineering (TE) links.

Usage Guidelines

None

Category

Fault

Security

Retrieve

Output Format

```
   SID DATE TIME** ATAG REPT ALM LMP
"[<AID>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],[<OCRTM>],[<LOCN>],
  [<DIRN>]:[<DESC>]"
;
```

Output Example

```
   va454-5 1998-06-20 14:30:00
A  814.812 REPT ALM LMP
     "CTRL-1:MJ,LMP-FAIL,NSA,08-01,14-25-59,,\"LMP Failure\","
;
```

Output Parameters

<AID>	The LMP control channel AID values.
• CTRL-ALL	Specifies all the control channels.
• CTRL-{1-4}	Specifies an individual control channel.
<NTFCNCDE>	The two-character notification code associated with an autonomous message.

• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The condition is not reported.
<CONDTYPE>	The condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, 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.
<SRVEFF>	Indicates the effect of the alarm on service.
• NSA	The condition is non-service affecting.
• SA	The condition is service affecting.
<OCRDAT>	(Optional) Date (YYYY-MM-DD)
<OCRTM>	(Optional) Time (HH:MM:SS)
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	The condition description.

17.6 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>],[<LOCN>],
   [<DIRN>],:[<DESC>],[<AIDDET>]"
;
```

Output Example

```
  TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM EQPT
   "SLOT-7:MJ,CONTR,NSA,08-01,14-25-59,NEND,RCV:\"CONTROLLER FAILURE\",TSC"
;
```

Output Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-33. 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 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.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions

• RCV	Receive direction only
<DESC>	(Optional) Condition description.
<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-channel demultiplexer for L-band
• 32WSS-L	32-channel wavelength switch selector unit for L-band
• AD-1B	Optical Add/Drop Multiplexer (OADM) 1 Band Filter
• AD-1C	OADM 1 Channel Filter
• AD-2C	OADM 2 Channel Filter
• AD-4B	OADM 4 Band Filter
• AD-4C	OADM 4 Channel Filter
• AICI	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

• 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
• 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
• OC12-4	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-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
• 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-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

17.7 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.

17.8 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>],[<LOCN>],
   [<DIRN>]:[<DESC>],[<EQPTTYPE>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
** 100.100 REPT ALM SYNCN
   "SYNC-NE:MJ,MAN,SA,08-01,14-25-59,,:\"MANUAL SWITCH\",TCC"
;
```

Output Parameters

<AID>	Access identifier from the "25.28 SYNC_REF" section on page 25-50. 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 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
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description.
<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
• 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
• 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
• OC12-4	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-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
• 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-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

17.9 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

17.10 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, ETH, FSTE, G1000, GFPOS, GIGE, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STM1,STM4,STM16,STM64, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, UDCDCC, UDCF, VC3, VC4, VC4-2c,

VC4-3c, VC4-4c, VC4-8c, VC4-16c,VC4-64c, VC12, VCG, VT1, VT2, WLEN, or RPRIF (REPT EVT <MOD2ALM>) message reports the occurrence of a nonalarmed event. In Software Release 5.0 and later, REPT EVT <MOD2ALM> can report the remote monitoring (RMON)-managed threshold crossing alarm.

Usage Guidelines

See Table 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>],[<DIRN>],[<MONVAL>],[<THLEV>],[<TMPER>]:[<DESC>],[<AIDDET>]"
;

Output Example

TID-000 1998-06-20 14:30:00
A 100.100 REPT EVT 1GFC
"FAC-5-1:WKSWPR,TC,,,FEND,,12,13,15-MIN:\"WORKING SWITCH TO PROTECTION\",OC48"
;

Output Parameters

<AID>	Access identifier 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 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.

<DIRN>	Direction relative to the entity identified by the AID. Direction of PM relative to the entity identified by the AID. The parameter type is DIRECTION (transmit and receive directions).
• BTH	Both transmit and receive directions
• RCV	Receive direction only
• TRMT	Transmit direction only
<MONVAL>	(Optional) Monitored value. Value to which the register identified by MONTYPE 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
• 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
• 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
• OC12-4	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-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
• 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-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

17.11 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>],,,[<LOCN>],[<DIRN>],,,:[<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 25-18.
<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 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. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description.

17.12 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>],,,,,,[<LOCN>],[<DIRN>]:[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
A 100.100 REPT EVT COM
   "COM:CLDRESTART,TC,,,,,,,:\"COLD RESTART\","
;
```

Output Parameters

<AID>	(Optional) Access identifier. Identifies the entity to which the command pertains. AID is a string.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, 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
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description.

17.13 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>],,,,,,[<LOCN>],[<DIRN>]:[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
A 100.100 REPT EVT ENV
   "ENV-IN-2:OPENDR,TC,,,,,,,:\"OPEN DOOR\""
;
```

Output Parameters

<AID>	Access identifier from the "25.13 ENV" section on page 25-32. Identifies an environmental input.
<ALMTYPE>	Abbreviated code identifying the alarm. The parameter type is ENV_ALM (environmental alarm types).
• AIRCOMPR	Air compressor failure
• AIRCOND	Air conditioning failure
• AIRDRYR	Air dryer failure
• BATDSCHRG	Battery discharging
• BATTERY	Battery failure
• CLFAN	Cooling fan failure
• CPMAJOR	Centralized power major failure
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail
• HATCH	CEV hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion

• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnect bypass
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure
<CONDEFF>	The effect of the event on the condition of the NE. The parameter type is COND_EFF, which is the state of the condition upon the affected unit.
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition

<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description.

17.14 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>],,,,,,[<LOCN>],[<DIRN>]:[<DESC>],[<AIDDET>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
A 100.100 REPT EVT EQPT
   "SLOT-7:PLUGIN,TC,,,,,,,:\"EQUIPMENT PLUG-IN\",TCC"
;
```

Output Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-33. 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 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
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description.
<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
• 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
• 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
• OC12-4	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-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
• 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-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

17.15 REPT EVT FXFR

(Cisco ONS 15454, 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.

17.16 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 25-33. 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

17.17 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>],,,[<LOCN>],[<DIRN>],,,:<SECURITY>:<DNFIELD1>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
A  100.100 REPT EVT SECU
   "COM:LOGIN-FAILURE-PSWD,TC,,,,,,,:\"SECURITY:
   INVALID LOGIN - PASSWORD - SEE AUDIT LOG\""
;
```

Output Parameters

<AID>	Access identifier. Identifies an entity with the condition. Defaults to COM. AID is a string.
<DNFIELD>	String
<CONDEFF>	The effect of the event on the condition of the NE. The parameter type is COND_EFF, which is the state of the condition upon the affected unit.
• CL	Standing condition cleared
• SC	Standing condition raised
• TC	Transient condition
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<SECURITY>	SECURITY is a string.
<DNFIELD1>	DNFIELD1 is a string.

17.18 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.

17.19 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>],,,,,,[<LOCN>],[<DIRN>]:[<DESC>],[<AIDDET>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
A  100.100 REPT EVT SYNCN
   "SYNC-NE:SWTOINT,SC,,,,,,,:\"SWITCH TO INTERNAL CLOCK\",TCC"
;
```

Output Parameters

<AID>	Access identifier from the "25.28 SYNC_REF" section on page 25-50. 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 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

<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description.
<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
• 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
• 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
• OC12-4	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-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
• 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-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

17.20 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, ETH, FSTE, G1000, GFPOS, GIGE, HDTV, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, 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.

Note Autonomous performance monitoring (Auto PM) report will have all PM paths reported without any filtering. If a particular parameter is not applicable to that card or circuit, then the value of MONVAL and VLDTY will be NA.

Category

Performance

Security

Retrieve

Output Format

```
   SID DATE TIME
A  ATAG REPT PM <MOD2>
   "<AID>:<MONTYPE>,<MONVAL>,<VLDTY>,<LOCN>,<DIRN>,<TMPER>,<MONDAT>,
   <MONTM>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
A  100  REPT PM 10GFC
   "FAC-3-1:CVL,10,PRTL,NEND,BTH,15-MIN,05-25,14-46"
;
```

Output Parameters

<AID>	Access identifier 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, Path Detected
• HP-NPJC-PGEN	High-Order Path, Negative Pointer Justification Count, Path Generated
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count, Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload cyclic redundancy check (CRC) errors

• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in microA
• LBCL-MAX	Maximum Laser Bias current in microA
• LBCL-MIN	Minimum Laser Bias current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds—A
• LP-ESB	Low-Order Path Errored Seconds—B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in tenths of a microW
• OPR-MAX	Maximum Receive Power in tenths of a microW
• OPR-MIN	Minimum Receive Power in tenths of a microW
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in tenths of a microW
• OPT-MAX	Maximum Transmit Power in tenths of a microW
• OPT-MIN	Minimum Transmit Power in tenths of a microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card

• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• 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.

17.21 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 25-33 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 25-33 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, Cisco ONS 15310-CL, Cisco ONS 15310-MA, and Cisco 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 an 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 25-32. Identifies the external control being released.

18.2 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, ETH, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, and STS9C (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.

18.3 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 25-35.

18.4 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:

  RLS-PROTNSW-OC48::FAC-5-1:A::BTH;

  This command instructs the NE to release a line protection switch request between a working line and a protection line

Category Protection

Security Maintenance

Input Format RLS-PROTNSW-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[::<DIRECTION>];

Input Example RLS-PROTNSW-OC48:PETALUMA:FAC-6-1:209::BTH;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-35. 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

18.5 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 25-22.

18.6 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 25-20.

18.7 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 25-50 Defaults to SYNC-NE.

CHAPTER 19

RMV Commands

This chapter provides remove (RMV) commands for the Cisco ONS 15454, Cisco ONS 15310-CL, Cisco ONS 15310-MA, and Cisco 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, ETH, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, 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 25-33.

CHAPTER 20

RST Commands

This chapter provides restore (RST) commands for the Cisco ONS 15454, Cisco ONS 15310-CL, Cisco ONS 15310-MA, and Cisco 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, ETH, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, 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 as In-Service (IS).

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 IS state from the Maintenance (MT) state.

Usage Guidelines

This command is only applicable to equipment that is in transition from the Maintenance state to the In-Service state.

Category

Equipment

Security

Maintenance

Input Format

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

Input Example

RST-EQPT:CISCO:SLOT-1:1;

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-33.

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, Cisco ONS 15310-CL, Cisco ONS 15310-MA, and Cisco ONS 15600.

21.1 RTRV-<MOD1FCPAYLOAD>

(Cisco ONS 15454) The Retrieve 1GFC, 2GFC, 4 GFC, or 10GFC (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 25-35.

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 25-35.
<ROLE>	(Optional) The port role in Y-cable protection (WORK or PROT). The parameter type is SIDE, which is the role played by the unit in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	(Optional) A port status in Y-cable protection (ACT or STBY). The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<LINKRATE>	The actual rate running on the Fibre Channel port. It can differ from the payload type provisioned. The parameter type is LINKRATE, which is the link rate on a Fibre Channel port.
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• UNKNOWN	The rate is unknown.
• UNPLUGGED	The 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 primary state (PST) and primary state qualifier (PSTQ).
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SST>	(Optional) Secondary state of the entity. The parameter type is secondary state (SST), which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.2 RTRV-<MOD1FICONPAYLOAD>

(Cisco ONS 15454) The Retrieve 1GFICON, 2GFICON, or 4GFICON (RTRV-<MOD1FICONPAYLOAD>) command returns Fibre Channel-specific settings for ports that have been configured to carry FICON traffic using the ENT-FICON command.

Usage Guidelines

The MXPP_MR_2.5G card only supports the GFP-T frame type.

See Table 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 25-35.

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 25-35.
<ROLE>	(Optional) The port role in Y-cable protection (WORK or PROT). The parameter type is SIDE, which is the role that the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	(Optional) A port status in Y-cable protection (ACT or STBY). The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<LINKRATE>	The actual rate running on the Fibre Channel port. It can differ from the payload type provisioned. The parameter type is LINKRATE, which is the link rate on a Fibre Channel port.
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• UNKNOWN	The rate is unknown.
• UNPLUGGED	The SFP is not plugged into the Fibre Channel port so the link rate cannot be detected.
<LINKSTATE>	Link state. The parameter type is DIRN, which specifies the discriminating level for the requested monitored parameter.
• DN	Monitored parameter with values equal to or greater than the level of LEV will be reported.
• UP	Monitored parameter with values equal or less than the value of LEV will be reported.
<LINKRCVRY>	Link recovery. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<DISTEXTN>	(Optional) Distance extension. The parameter type is DISTANCE_EXTENSION (distance extension).
• B2B	Buffer to buffer flow control
• NONE	No distance extension
<LINKCREDITS>	(Optional) Number of link credits. LINKCREDITS is an integer.
<MFS>	(Optional) Maximum frame size. MFS is an integer.
<ENCAP>	(Optional) Frame encapsulation type. The parameter type is ENCAP (frame encapsulation type).
• GFP_F	GFP frame mode
• GFP_T	GFP transparent mode
• HDLC	HDLC frame mode

• HDLC_LEX	HDLC LAN extension frame mode
• HDLC_X86	HDLC X.86 frame mode
<NAME>	(Optional) Identifies the port name. NAME is a string.
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer.
<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 PST and PSTQ.
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SST>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.3 RTRV-<MOD2DWDMPAYLOAD>

(Cisco ONS 15454) The Retrieve D1VIDEO, DV6000, ETRCLO, HDTV, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G and 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 25-35.

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 25-12
<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 payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity 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 PST and PSTQ.

• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SST>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.4 RTRV-<MOD_RING>

(Cisco ONS 15454 and 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 does 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 25-17. 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 25-17. 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>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	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 25-35.
<WESTWORK>	West working facility. AID from the "25.15 FACILITY" section on page 25-35.
<EASTPROT>	East protecting facility. AID from the "25.15 FACILITY" section on page 25-35.
<WESTPROT>	West protecting facility. AID from the "25.15 FACILITY" section on page 25-35.

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.

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 25-35.

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=SINGLESHELF,WVLEN=1310.00,RINGID=43,
   BLSRTYPE=WESTWORK,MUX=E2,UNIC=Y,
   SOAKLEFT=\"12-25\",SSMRCV=STU,OSPF=Y,LDCC=Y,NAME=\"OCN PORT\",LBCL=10.0,
   OPT=10.0,OPR=10.0,EXPTRC=\"AAA\",TRC=\"AAA\",TRCMODE=MAN,
   TRCFORMAT=16-BYTE,ADMSSM=PRS,SENDDUSFF=N,AISONLPBK=AIS_ON_LPBK_ALL,
   FREQ=1550,LOSSB=LR-1,FOREIGNFEND=Y,
   FOREIGNIPADDRESS=10.92.63.44,:OOS-AU,AINS"
;
```

Output Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-35.
<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.
• SINGLESHELF	The NE contains only one shelf and the AID representation does not consider the shelf identifier for command requests/response and autonomous reports.
• MULTISHELF	The AID representation considers the shelf identifier for command requests/response and autonomous reports. This means the NE has more than one shelf configured or the user wants to use the new AID style.
• MULTISHELFETH	The AID representation considers the shelf identifier for command requests/response and autonomous reports. This means the NE has more than one shelf configured or the user wants to use the new AID style. The shelves are connected by means of an external Ethernet switch.
<WVLEN>	(Optional) An OC-N port wavelength in nanometers. For example, WVLEN=1310.00 means it operates at 1310 nm in the DWDM application. WVLEN is a float.
<RINGID>	(Optional) The BLSR RINGID with which the port is connected. RINGID ranges from 0 to 9999. RINGID is an integer.
<BLSRTYPE>	(Optional) The BLSR type with which the port is connected. The parameter type is BLSR_TYPE, which is the BLSR type of an OC-N port.
• EASTPROT	The OC-N port is an east protecting port.
• EASTWORK	The OC-N port is an east working port.
• WESTPROT	The OC-N port is an west protecting port.
• WESTWORK	The OC-N port is an west working port.
<MUX>	(Optional) BLSR extension byte. The parameter type is MUX_TYPE, which is the BLSR extension byte.
• E2	E2 byte (orderwire)
• F1	F1 byte (user)
• K3	K3 byte
• Z2	Z2 byte
<UNIC>	(Optional) Indicates if the port connects to the UCP. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer.

<SOAKLEFT>	(Optional) Time remaining for the transition from OOS-AINS to IS measured in 1-minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. Rules for <SOAKLEFT> are as follows: • When the port is in OOS, OOS_MT, or IS state, the parameter will not appear. • When the port is in OOS_AINS but the countdown has not started due to a fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in OOS_AINS state and the countdown has started, the value will be shown in HH-MM format.
<SSMRCV>	(Optional) Displays the quality of the individual port. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not Use For Synchronization
• PRS	Primary Reference Source, Stratum 1 Traceable
• RES	Reserved For Network Synchronization Use
• SMC	SONET Minimum Clock Traceable
• ST2	Stratum 2 Traceable
• ST3	Stratum 3 Traceable
• ST3E	Stratum 3E Traceable
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<OSPF>	(Optional) The Open Shortest Path First protocol. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<LDCC>	(Optional) The Line DCC connection on the port. The parameter type is EXT_RING, which indicates if the ring supports the extended K1/K2/K3 protocol.
• N	The ring does not support the extended K1/K2/K3 protocol.
• Y	The ring does support the extended K1/K2/K3 protocol.
<NAME>	(Optional) Port Name. NAME is a string.
<LBCL>	(Optional) Displays the current value of the laser current. LBCL is a float.
<OPT>	(Optional) Displays the current value of the transmitted optical power. OPT is only displayed for DWDM cards. OPT is a float.
<OPR>	(Optional) Received optical power. OPR is a float.
<EXPTRC>	(Optional) Expected path trace content. EXPTRC is a string.
<TRC>	(Optional) Path trace message to be transmitted. TRC is a string.
<TRCMODE>	(Optional) Path trace mode. Applicable only to STS-level Paths in SONET. Defaults to the OFF mode. The parameter type is TRCMODE (trace mode).

• AUTO	Use the previously received path trace string as the expected string. Not applicable to MXP/TXP cards.
• AUTO-NO-AIS	Use the previously received path trace string as the expected string and do not turn on alarm indication signal (AIS) and remote defect indication (RDI) if TIM-P is detected.
• MAN	Use the provisioned expected string as the expected string.
• MAN-NO-AIS	Use the provisioned expected string as the expected string and do not turn on AIS and RDI if TIM-P is detected.
• OFF	Turn off path trace capability. Nothing will be reported.
<TRCFORMAT>	(Optional) Trace message size. The parameter type is TRCFORMAT (trace format).
• 1-BYTE	1-byte trace message
• 16-BYTE	16-byte trace message
• 64-BYTE	64-byte trace message
• Y	Enable an attribute.
<ADMSSM>	(Optional) SSM selectable value. Only displayed when SSM is disabled. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not Use For Synchronization
• PRS	Primary Reference Source, Stratum 1 Traceable
• RES	Reserved For Network Synchronization Use
• SMC	SONET Minimum Clock Traceable
• ST2	Stratum 2 Traceable
• ST3	Stratum 3 Traceable
• ST3E	Stratum 3E Traceable
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<SENDDUSFF>	(Optional) Indicates that the facility will send the DUS value in 0xff bits pattern as the synchronization status message for that facility. Defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<AISONLPBK>	(Optional) AIS on loopback. The parameter type is AIS_ON_LPBK, which indicates whether AIS is sent on a loopback.
• AIS_ONLPBK_FACILITY	AIS is sent on facility loopbacks.
• AIS_ON_LPBK_ALL	AIS is sent on all loopbacks.
• AIS_ON_LPBK_OFF	AIS is not sent on loopbacks.
• AIS_ON_LPBK_TERMINAL	AIS is sent on terminal loopbacks.
<FREQ>	(Optional) Parameter type is OPTICAL_WLEN (optical wavelength).

• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 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 PST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management

• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

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 25-26.
<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 25-26.
<LEVEL>	(Optional) The rate of the cross-connect. Indicates the rate of the cross-connected channel. Applicable only to the STS path in SONET. The parameter type is PATH, which is the modifier for path commands.
• STS1	Synchronous transport signal/module level 1 (51.84 Mbps)
• STS3C	Synchronous transport signal/module level 3 concatenated (155.52 Mbps)
• STS6C	Synchronous transport signal/module level 6 (311.04 Mbps)
• STS9C	Synchronous transport signal/module level 9 concatenated (466.56 Mbps)
• STS12C	Synchronous transport signal/module level 12 concatenated (622.08 Mbps)
• STS18C	Synchronous transport signal/module level 18 concatenated (933.12 Mbps)

• STS24C	Synchronous transport signal/module level 24 concatenated (1244.16 Mbps)
• STS36C	Synchronous transport signal/module level 36 concatenated (1866.24 Mbps)
• STS48C	Synchronous transport signal/module level 48 concatenated (2488.32 Mbps)
• STS192C	Synchronous transport signal/module level 192 concatenated (9953.28 Mbps)
<SFBER>	(Optional) An STS path signal failure threshold that only applies to path protection. Applicable only to STS-level paths in SONET. Defaults to 1E-4. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	(Optional) An STS path signal degrade threshold that only applies to path protection. Applicable only to STS-level paths in SONET. Defaults 1E-6. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.
<RVRTV>	Revertive mode. Only applies to path protection. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. Only applies to path protection. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<SWPDIP>	(Optional) Switch on PDI-P. Applicable only to STS-level paths in SONET. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<HOLDOFFTIMER>	(Optional) Hold off timer. HOLDOFFTIMER is an integer.

<EXPTRC>	(Optional) Expected path trace content. Indicates the expected path trace message (J1) contents. EXPTRC is any 64-character ASCII string, including the terminating CR (carriage return) and LF (line feed). Applicable to STS-level paths in SONET. Defaults to NULL when a path protection path is created. 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 path 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 DS4 North American (NA)
• 0X13	Mapping for ATM
• 0X14	Mapping for DQDB
• 0X15	Asynchronous Mapping for FDDI
• 0X16	HDLC-Over-SONET Mapping
• 0XE1	VT-structured STS-1 SPE with 1VTx payload defect
• 0XE2	VT-structured STS-1 SPE with 2VTx payload defects
• 0XE3	VT-structured STS-1 SPE with 3VTx payload defects
• 0XE4	VT-structured STS-1 SPE with 4VTx payload defects
• 0XE5	VT-structured STS-1 SPE with 5VTx payload defects
• 0XE6	VT-structured STS-1 SPE with 6VTx payload defects
• 0XE7	VT-structured STS-1 SPE with 7VTx payload defects
• 0XE8	VT-structured STS-1 SPE with 8VTx payload defects
• 0XE9	VT-structured STS-1 SPE with 9VTx payload defects
• 0XEA	VT-structured STS-1 SPE with 10VTx payload defects
• 0XEB	VT-structured STS-1 SPE with 11VTx payload defects
• 0XEC	VT-structured STS-1 SPE with 12VTx payload defects
• 0XED	VT-structured STS-1 SPE with 13VTx payload defects
• 0XEE	VT-structured STS-1 SPE with 14VTx payload defects
• 0XEF	VT-structured STS-1 SPE with 15VTx payload defects
• 0XF0	VT-structured STS-1 SPE with 16VTx payload defects
• 0XF1	VT-structured STS-1 SPE with 17VTx payload defects
• 0XF2	VT-structured STS-1 SPE with 18VTx payload defects
• 0XF3	VT-structured STS-1 SPE with 19VTx payload defects
• 0XF4	VT-structured STS-1 SPE with 20VTx payload defects
• 0XF5	VT-structured STS-1 SPE with 21VTx payload defects
• 0XF6	VT-structured STS-1 SPE with 22VTx payload defects
• 0XF7	VT-structured STS-1 SPE with 23VTx payload defects

• 0XF8	VT-structured STS-1 SPE with 24VTx payload defects
• 0XF9	VT-structured STS-1 SPE with 25VTx payload defects
• 0XFA	VT-structured STS-1 SPE with 26VTx payload defects
• 0XFB	VT-structured STS-1 SPE with 27VTx payload defects
• 0XFC	VT-structured STS-1 SPE with 28VTx payload defects
• 0XFE	O.181 Test Signal (TSS1 to TSS3) Mapping
• 0XFF	Reserved, however, C2 is 0XFF if an AIS-L is being generated by an optical card or cross-connect downstream.
<BLSRPTHSTATE>	(Optional) The BLSR path state only if the port is on the BLSR. Applicable only to STS-level paths in SONET (STSn). The parameter type is BLSR_PTH_STATE, which is the BLSR path state only if the port is on the BLSR.
• PCAPTHACT	Indicates the BLSR is not switched and its PCA path is in the active state.
• PCAPTHSTB	Indicates the BLSR is switched and its PCA path is in the standby state.
• PROTPTHACT	Indicates the BLSR is switched and its protection path is in the active state.
• WKGPTHACT	Indicates the BLSR is not switched and its working path is in the active state.
• WKGPTHSTB	Indicates the BLSR is switched and its working path is in the standby state.
<PST_PSTQ>	Administrative state in the PST_PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the PST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

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 25-35.

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 25-35.
<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 SST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.8 RTRV-ALM-<MOD2ALM>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Alarm for (10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 4GFC, 4GFICON, DS1, DS3I, E1, E100, E1000, E3, E4, EC1, ETH, FSTE, G1000, GFPOS, GIGE, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OC12, OC192, OC3, OC48, OCH, OMS, OTS, OTU2, POS, RPRIF, STM1, STM4, STM16, STM64, STM1E, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, UDCDCC, UDCF, VC3,VC4,VC4-2c,VC4-3c,VC4-4c,VC4-16c,VC4-64c, VC11, VC12, VC3, VCG, VT1, VT2, or WLEN (RTRV-ALM-<MOD2ALM>) command retrieves and sends the current status of alarm conditions. The alarm condition or severity to be retrieved can be specified by using the input parameters as a filter.

Usage Guidelines

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>][<LOCN>],[<DIRN>][,];

Input Example RTRV-ALM-OC12:ELDRIDGE:FAC-5-1:225::MN,SD,SA,NEND,RCV;

Input Parameters

<AID>	Access identifier from the "25.2 AidUnionId" section on page 25-12.
<NTFCNCDE>	Two-letter notification code. A null value is equivalent to ALL. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15310-CL, ONS 15310-MA, 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, NA conditions, and 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.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<OCRDAT>],
   [<OCRTM>],[<LOCN>],[<DIRN>]:[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-5-1,OC12:MJ,SD,SA,09-05,12-30-20,NEND,RCV:\"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 payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 1GISC3	1-Gigabit ISC3 compatible
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 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	Gigabit Ethernet port alarm
• ISC3PEER1G	1-Gigabit ISC3 Peer
• ISC3PEER2G	2-Gigabit ISC3 Peer
• ISC3PEER2R	1-Gigabit or 2-Gigabit ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1-Gigabit ISC1, ISC2, and ISC3 compatibility
• ML1000-2	(ONS 15454) ML-Series two port Gigabit Ethernet card
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm

• OCH	Optical channel
• OCHTERM	OCH termination
• 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	UDC-DCC alarm
• UDCF	UCD-F alarm
• VCG	Virtual concatenation group alarm
• VT1	VT1 alarm
• VT2	VT2 alarm
• WLEN	Wavelength path provisioning
<NTFCNCDE>	Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<CONDTYPE>	Condition type for an alarm or a reported event. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15310-CL, ONS 15310-MA, 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, NA conditions, and 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, MM-DD.
<OCRTM>	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
<LOCN>	Location associated with a particular command in reference to the entity identified by the AID. A null value defaults to NEND. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) A condition description. DESC is a string.

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, T1, T3, OCN, EC1, STSN, VT1, DS1, E100, E1000, G1000, ML-Series, TXP, and MXP alarms. To retrieve all the NE alarms, issue all of the following commands:

RTRV-ALM-ALL
RTRV-ALM-BITS
RTRV-ALM-ENV
RTRV-ALM-SYNCN

Category

Fault

Security

Retrieve

Input Format

RTRV-ALM-ALL:[<TID>]:[<AID>]:<CTAG>::[<NTFCNCDE>],[<CONDITION>],[<SRVEFF>],[<LOCN>],[<DIRN>],[,];

Input Example

RTRV-ALM-ALL:COTATI:ALL:229::MN,PWRRESTART,NSA,NEND,RCV;

Input Parameters

<AID>	Access identifier from the "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.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
<CONDITION>	The type of alarm condition. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15310-CL, ONS 15310-MA, 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, NA conditions, and 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.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
  "[<AID>],[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<LOCN>],[<DIRN>]:
[<DESC>],[<AIDDET>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
 "SLOT-2,EQPT:MN,PWRRESTART,NSA,08-01,14-25-59,NEND,RCV:\"POWER FAIL RESTART\",
DS1-14"
;
```

Output Parameters

<AID>	(Optional) Access identifier from the "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 payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• BITS	Building integrated timing supply (BITS) alarm
• CLNT	Client facility for muxponder (MXP) and transponder (TXP) cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3i-N-12 alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	Gigabit Ethernet port alarm
• ISC3PEER1G	1-Gigabit ISC3 Peer
• ISC3PEER2G	2-Gigabit ISC3 Peer
• ISC3PEER2R	1-Gigabit or 2-Gigabit ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1-Gigabit ISC1, ISC2, and ISC3 compatibility
• ML1000-2	(ONS 15454) ML-Series two port Gigabit Ethernet card
• 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
<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 15310-CL, ONS 15310-MA, 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, NA conditions, and 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.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<OCRDAT>	(Optional) Date when the specific event or violation occurred, MM-DD.

<OCRTM>	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
<DESC>	(Optional) A condition description. DESC is a string.
<AIDDET>	(Optional) AIDDET uses the same addressing rules as the AID, but specifies AID type and additional details about the entity being managed. The supplementary equipment identification.

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>],[<LOCN>],[<DIRN>];

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 25-18.
<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 15310-CL, ONS 15310-MA 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, NA conditions, and 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.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,[<LOCN>],[<DIRN>]:
[<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 25-18.
<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 payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 4GFC	4-Gigabit Fibre Channel payload

• 4GFICON	4-Gigabit fiber connectivity payload
• 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	Gigabit Ethernet port alarm
• ISC3PEER1G	1-Gigabit ISC3 Peer
• ISC3PEER2G	2-Gigabit ISC3 Peer
• ISC3PEER2R	1-Gigabit or 2-Gigabit ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1-Gigabit ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS port alarm
• STS1	STS1 alarm
• STS3C	STS3c alarm
• STS6C	STS6c alarm
• STS9C	STS9c alarm
• STS18C	STS18c alarm
• STS12C	STS12c alarm
• STS24C	STS24c alarm
• STS36C	STS36c alarm
• STS48C	STS48c alarm
• STS192C	STS192c alarm
• SYNCN	SYNCN alarm
• T1	T1 alarm
• T3	T3 alarm
• TCC	TCC alarm
• VT1	VT1 alarm

• VT2	VT2 alarm
<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 15310-CL, ONS 15310-MA, 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, NA conditions, and 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.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) A condition description. DESC is a string.

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 25-32. **Note** For RTRV-ALM-ENV, only ENV-IN-{1-4} is a valid AID for ONS 15454. ENV-OUT-{1,6} is not a valid AID for RTRV-ALM-ENV.
<NTFCNCDE>	Two-letter notification code. A null value is equivalent to ALL. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<ALMTYPE>	The alarm type for the environmental alarm. A null value is equivalent to ALL. The parameter type is ENV_ALM, which is the environmental alarm types.
• AIRCOMPR	Air compressor failure
• AIRCOND	Air conditioning failure
• AIRDRYR	Air dryer failure
• BATDSCHRG	Battery discharging
• BATTERY	Battery failure
• CLFAN	Cooling fan failure
• CPMAJOR	Centralized power major failure
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail

• HATCH	Controlled Environment Vault (CEV) hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnected bypass
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:<NTFCNCDE>,<ALMTYPE>,[<OCRDAT>],[<OCRTM>],[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "ENV-IN-1:MJ,OPENDR,08-01,14-25-59,\"OPEN DOOR\""
;
```

Output Parameters

<AID>	Access identifier from the "25.13 ENV" section on page 25-32.
<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 15310-CL, 15310-MA 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, NA conditions, and 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 when the specific event or violation occurred, MM-DD.
OCRTM	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
DESC	(Optional) A condition description. DESC is a string.

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>],[<LOCN>],[<DIRN>];

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 25-33.
<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 15310-CL, ONS 15310-MA 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, NA conditions, and 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.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "[<AID>],[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,
   [<OCRDAT>],[<OCRTM>],[<LOCN>],[<DIRN>]:[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "SLOT-7,EQPT:MJ,HITEMP,NSA,08-01,14-25-59,,:\"HI TEMPERATURE\","
;
```

Output Parameters

<AID>	(Optional) Access identifier from the "25.14 EQPT" section on page 25-33.
<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 payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload

• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	Gigabit Ethernet port alarm
• ISC3PEER1G	1-Gigabit ISC3 Peer
• ISC3PEER2G	2-Gigabit ISC3 Peer
• ISC3PEER2R	1-Gigabit or 2-Gigabit ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1-Gigabit ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS port alarm
• STS1	STS1 alarm
• STS3C	STS3c alarm
• STS6C	STS6c alarm
• STS9C	STS9c alarm
• STS18C	STS18c alarm
• STS12C	STS12c alarm
• STS24C	STS24c alarm
• STS36C	STS36c alarm
• STS48C	STS48c alarm
• STS192C	STS192c alarm
• SYNCN	SYNCN alarm
• T1	T1 alarm
• T3	T3 alarm
• TCC	TCC alarm

• VT1	VT1 alarm
• VT2	VT2 alarm
<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 15310-CL, ONS 15310-MA 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, NA conditions, and 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.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<OCRDAT>	(Optional) Date when the specific event or violation occurred, MM-DD.
<OCRTM>	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
<DESC>	(Optional) A condition description. DESC is a string.

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>],[<LOCN>],[<DIRN>];

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 25-50.
<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 15310-CL, ONS 15310-MA 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, NA conditions, and 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.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.

<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,
   [<OCRDAT>],[<OCRTM>],[<LOCN>],[<DIRN>]:[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "SYNC-NE,SYNCN:CR,FAILTOSW,SA,08-01,
   14-25-59,,:\"FAILURE TO SWITCH TO PROTECTION\","
;
```

Output Parameters

<AID>	Access identifier from the "25.26 SYN" section on page 25-49.
<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 payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	Gigabit Ethernet port alarm
• ISC3PEER1G	1-Gigabit ISC3 Peer
• ISC3PEER2G	2-Gigabit ISC3 Peer

• ISC3PEER2R	1-Gigabit or 2-Gigabit ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1-Gigabit ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS port alarm
• STS1	STS1 alarm
• STS3C	STS3c alarm
• STS6C	STS6c alarm
• STS9C	STS9c alarm
• STS18C	STS18c alarm
• STS12C	STS12c alarm
• STS24C	STS24c alarm
• STS36C	STS36c alarm
• STS48C	STS48c alarm
• STS192C	STS192c alarm
• SYNCN	SYNCN alarm
• T1	T1 alarm
• T3	T3 alarm
• TCC	TCC alarm
• VT1	VT1 alarm
• VT2	VT2 alarm
<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 15310-CL, ONS 15310-MA 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, NA conditions, and 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.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<OCRDAT>	(Optional) Date when the specific event or violation occurred, MM-DD.
<OCRTM>	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
<DESC>	(Optional) A condition description. DESC is a string.

21.14 RTRV-ALMTH-<MOD2>

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Alarm Threshold for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, D1VIDEO, DS1, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, ETH, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, 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.
<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 microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPR-LOW	Receive power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-HIGH	Transmit power in one tenth of a microwatt. Measured value (–40.0 dBm, +30.0 dBm).
• OPT-LOW	Transmit power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPWR-HDEG	Optical Power—High Degrade Threshold
• OPWR-HFAIL	Optical Power—High Failure Threshold
• OPWR-LDEG	Optical Power—Low Degrade Threshold
• OPWR-LFAIL	Optical Power—Low Failure Threshold
• 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 payload
• 10GFICON	10-Gigabit fiber connectivity payload
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 1GISC3	1-Gigabit ISC3 compatible
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 2GISC3	2-Gigabit ISC3 compatible
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• D1VIDEO	D1 video
• DS1	DS1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETR_CLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over POS. Virtual ports partitioned using GFP's multiplexing capability.
• GIGE	Gigabit Ethernet
• HDTV	HDTV
• ISC3PEER1G	1-Gigabit ISC3 Peer
• ISC3PEER2G	2-Gigabit ISC3 Peer
• ISC3PEER2R	1-Gigabit or 2-Gigabit ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1-Gigabit ISC1, ISC2, and ISC3 compatibility
• OC3	OC-3 facility
• OC12	OC-12 facility
• OC48	OC-48 facility
• OC192	OC-192 facility
• OCH	Optical Channel
• OCHCC	OCH client connection
• OCHNC	OCH network connection
• OCHTERM	OCH termination
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• 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 microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPR-LOW	Receive power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-HIGH	Transmit power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-LOW	Transmit power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPWR-HDEG	Optical Power—High Degrade Threshold
• OPWR-HFAIL	Optical Power—High Failure Threshold
• OPWR-LDEG	Optical Power—Low Degrade Threshold
• OPWR-LFAIL	Optical Power—Low Failure Threshold
• 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, ONS 15600) 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 25-44. If omitted it addresses the node or first shelf of the node.
<CONDTYPE>	Must not be null. The parameter type is ALM_THR, which is the alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, 4MD-xx.x, 32MUX-O, 32DMX-O, AD-1C-xx.x, AD-2C-xx.x, AD-4C-xx.x, AD-1B-xx.x, and AD-4B-xx.x cards.
• BATV-EHIGH	Battery Voltage—Extremely High
• BATV-ELOW	Battery Voltage—Extremely Low
• BATV-HIGH	Battery Voltage—High
• BATV-LOW	Battery Voltage—Low
• GAIN-HDEG	Gain not reached—High Degrade Threshold
• GAIN-HFAIL	Gain not reached—High Failure Threshold
• GAIN-LDEG	Gain not reached—Low Degrade Threshold
• GAIN-LFAIL	Gain not reached—Low Failure Threshold
• LBCL-HIGH	Laser Bias Current in microA as one tenth of a percent. High Warning Threshold, Low Warning Threshold Measured value (0.0 percent, 100.0 percent)

• OPR-HIGH	Receive power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPR-LOW	Receive power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-HIGH	Transmit power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-LOW	Transmit power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPWR-HDEG	Optical Power—High Degrade Threshold
• OPWR-HFAIL	Optical Power—High Failure Threshold
• OPWR-LDEG	Optical Power—Low Degrade Threshold
• OPWR-LFAIL	Optical Power—Low Failure Threshold
• 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 25-44. If omitted, it addresses the node or the first shelf of the node.
<MOD2B>	Alarm type. The parameter type is MOD2B, which is the alarm type.
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm

• DS1	DS1 alarm
• DS3I	DS3I alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	Gigabit Ethernet port alarm
• ISC3PEER1G	1-Gigabit ISC3 Peer
• ISC3PEER2G	2-Gigabit ISC3 Peer
• ISC3PEER2R	1-Gigabit or 2-Gigabit ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1-Gigabit ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS port alarm
• STS1	STS1 alarm
• STS3C	STS3c alarm
• STS6C	STS6c alarm
• STS9C	STS9c alarm
• STS18C	STS18c alarm
• STS12C	STS12c alarm
• STS24C	STS24c alarm
• STS36C	STS36c alarm
• STS48C	STS48c alarm
• STS192C	STS192c alarm
• SYNCN	SYNCN alarm
• T1	T1 alarm
• T3	T3 alarm
• TCC	TCC alarm
• VT1	VT1 alarm
• VT2	VT2 alarm
<CONDTYPE>	Parameter type is ALM_THR, which is the alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, 4MD-xx.x, 32MUX-O, 32DMX-O, AD-1C-xx.x, AD-2C-xx.x, AD-4C-xx.x, AD-1B-xx.x, and AD-4B-xx.x cards.

• BATV-EHIGH	Battery Voltage—Extremely High
• BATV-ELOW	Battery Voltage—Extremely Low
• BATV-HIGH	Battery Voltage—High
• BATV-LOW	Battery Voltage—Low
• GAIN-HDEG	Gain not reached—High Degrade Threshold
• GAIN-HFAIL	Gain not reached—High Failure Threshold
• GAIN-LDEG	Gain not reached—Low Degrade Threshold
• GAIN-LFAIL	Gain not reached—Low Failure Threshold
• LBCL-HIGH	Laser Bias Current in microA as one tenth of a percent. High Warning Threshold, Low Warning Threshold. Measured value (0.0 percent, 100.0 percent).
• OPR-HIGH	Receive power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPR-LOW	Receive power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-HIGH	Transmit power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPT-LOW	Transmit power in one tenth of a microwatt. Measured value (–0.0 dBm, +30.0 dBm).
• OPWR-HDEG	Optical Power—High Degrade Threshold
• OPWR-HFAIL	Optical Power—High Failure Threshold
• OPWR-LDEG	Optical Power—Low Degrade Threshold
• OPWR-LFAIL	Optical Power—Low Failure Threshold
• 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, ONS 15600) 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 25-12.

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 25-12.
<AIDTYPE>	Type of access identifier.The parameter type is MOD2, which is the line/path modifier.
• 10GFC	10-Gigabit Fibre Channel payload
• 10GFICON	10-Gigabit fiber connectivity payload
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 1GISC3	1-Gigabit ISC3 compatible
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 2GISC3	2-Gigabit ISC3 compatible
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• D1VIDEO	D1 video
• DS1	DS1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• EC1	EC1 facility

• ESCON	ESCON
• ETRCLO	ETR_CLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over POS. Virtual ports partitioned using GFP's multiplexing capability.
• GIGE	Gigabit Ethernet
• HDTV	HDTV
• ISC3PEER1G	1-Gigabit ISC3 Peer
• ISC3PEER2G	2-Gigabit ISC3 Peer
• ISC3PEER2R	1-Gigabit or 2-Gigabit ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1-Gigabit ISC1, ISC2, and ISC3 compatibility
• OC3	OC-3 facility
• OC12	OC-12 facility
• OC48	OC-48 facility
• OC192	OC-192 facility
• OCH	Optical Channel
• OCHCC	OCH client connection
• OCHNC	OCH network connection
• OCHTERM	OCH termination
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• 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 Amplifier Power Control (RTRV-APC) command retrieves the APC application attributes.

Usage Guidelines None

Category DWDM

Security Maintenance

Input Format RTRV-APC:[<TID>]::<CTAG>;

Input Example RTRV-APC:PENNGROVE:WDMSIDE-A:114;

Input Parameters None that require description

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "::[APCENABLE=<APCENABLE>],[APCSTATE=<APCSTATE>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "::APCENABLE=Y,APCSTATE=WORKING"
;
```

Output Parameters

<WDMSIDE>	The AID is used to access the WDM side of an MSTP node.
• WDMSIDE-{UNKNOWN,A,B,C,D,E,F,G,H}	MSTP side identifier
<APCENABLE>	(Optional) Enable or disable the APC application. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<APCSTATE>	(Optional) Indicates the status of the APC application. The parameter type is APC_STATE (APC status).
• DISABLE	The APC is disabled by the user and is not working.
• FORCED-DISABLE	The APC has been internally disabled by the node and is not working.
• WORKING	The APC is enabled by the user and is working.

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 25-32. Identifies the external control for which attributes are being set.
<CONTTYPE>	Environmental control type. A null value is equivalent to ALL. The parameter type is CONTTYPE, which is the environmental control type.
• AUDIBLE	ONS 15310-MA only
• AIRCOND	Air conditioning

• ENGINE	Engine
• FAN	Fan
• GEN	Generator
• HEAT	Heat
• LIGHT	Light
• MISC	Miscellaneous
• SPKLR	Sprinkler

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:[<CONTTYPE>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "ENV-OUT-2:AIRCOND"
;
```

Output Parameters

<AID>	Access identifier from the "25.13 ENV" section on page 25-32. Identifies the external control for which attributes are being set.
<CONTTYPE>	Environmental control type. A null value is equivalent to ALL. The parameter type is CONTTYPE, which is the environmental control type.
• AIRCOND	Air conditioning
• 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 25-32.
<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 25-32.
<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 when the specific event or violation occurred, MM-DD.
<OCRTM>	Time when the specific event or violation occurred, HH-MM-SS.
<TASKID>	Task ID. TASKID is a string.
<TXSTATUS>	Parameter type is TX_STATUS, which indicates the status of the transferred file.

• COMPLD	The file transmission is completed.
• IP	The file transmission is in process.
• START	The file transmission is started.
<DESCRIPTION>	Description of event. Description format varies depending on the event and can include parameters used during the event. DESCRIPTION is a string.

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 25-32.
<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 25-32.
<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 25-18.

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 25-18
<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 25-35.

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 25-35 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 25-26 (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 25-26 (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.

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 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 4GFC, 4GFICON, DS1, DS3I, E1, E100, E1000, E3, E4, EC1, ETH, FSTE, G1000, ETH, GFPOS, GIGE, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OC12, OC192, OC3, OC48, OCH, OMS, OTS, OTU2, POS, RPRIF, STM1, STM4, STM16, STM64, STM1E, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, UDCDCC, UDCF, VC11, VC12, VC3, VC4, VC4-2c,VC4-3c, VC4-4c, VC4-8c, VC4-16c, VC4-64c, VCG, VT1, VT2, WLEN, or RPRIF (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>],[<LOCN>],[<DIRN>];

Input Example

RTRV-COND-RPRIF:DXT:RPRIF-2-0:229::FORCE-REQ;

Input Parameters

<AID>	Access identifier from the "25.1 ALL" section on page 25-1.
<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 15310-CL, ONS 15310-MA 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, NA conditions, and NR conditions. See Chapter 26, "Conditions" for a list of conditions.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,[<AIDTYPE>]:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>],[<OCRDAT>],
   [<OCRTM>],<LOCN>,<DIRECTION>,[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "RPRIF-2-0,T3:MJ,FORCE-REQ,SA,01-01,16-00-20,NEND,RCV,\"FORCED SWITCH
REQUEST\""
;
```

Output Parameters

<AID>	Access identifier from the "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 payload

• 1GFICON	1-Gigabit fiber connectivity payload
• 1GISC3	1-Gigabit ISC3 compatible
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 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	Gigabit Ethernet port alarm
• ISC3PEER1G	1-Gigabit ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OCHTERM	OCH termination
• 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	UDC-DCC alarm
• UDCF	UCD-F alarm
• VCG	Virtual concatenation group alarm
• VT1	VT1 alarm
• VT2	VT2 alarm
• WLEN	Wavelength path provisioning
<NTFCNCDE>	(Optional) Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<TYPEREP>	The condition itself. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15310-CL, ONS 15310-MA, 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, NA conditions, and 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, MM-DD.
<OCRTM>	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRECTION>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description. DESC is a string.

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>],[<LOCN>],[<DIRN>];

Input Example

RTRV-COND-ALL:DXT:ALL:229::FORCE-REQ;

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 15310-CL, ONS 15310-MA 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, NA conditions, and NR conditions. See Chapter 26, “Conditions” for a list of conditions.

<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,[<AIDTYPE>]:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>],[<OCRDAT>],
   [<OCRTM>],<LOCN>,<DIRECTION>,[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "RPRIF-2-0,T3:MJ,FORCE-REQ,SA,01-01,16-00-20,NEND,RCV,\"FORCED SWITCH
REQUEST\""
;
```

Output Parameters

<AID>	Access identifier from the "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 payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm

• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	Gigabit Ethernet port alarm
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• 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
<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 15310-CL, ONS 15310-MA, 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, NA conditions, and 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, MM-DD.
<OCRTM>	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRECTION>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description. DESC is a string.

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>],[<LOCN>],[<DIRN>];

Input Example

RTRV-COND-BITS:TID:BITS-1:229::LOS;

Input Parameters

<AID>	Access identifier from the "25.6 BITS" section on page 25-18.
<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 15310-CL, ONS 15310-MA 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, NA conditions, and NR conditions. See Chapter 26, "Conditions" for a list of conditions.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,[<AIDTYPE>]:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>],[<OCRDAT>],
   [<OCRTM>],[<LOCN>],[<DIRN>],[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "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 25-18 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 payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload

• 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	Gigabit Ethernet port alarm
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• 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

<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 15310-CL, ONS 15310-MA, 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, NA conditions, and 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, MM-DD.
<OCRTM>	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description. DESC is a string.

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>],[<LOCN>],[<DIRN>];

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 25-32. **Note** For RTRV-ALM-ENV, only ENV-IN-{1-4} is a valid AID for ONS 15454. ENV-OUT-{1,6} is not a valid AID for RTRV-ALM-ENV.
<NTFCNCDE>	Two-letter notification code. A null value is equivalent to ALL. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<ALMTYPE>	The alarm type for the environmental alarm. A null value is equivalent to ALL. The parameter type is ENV_ALM, which is the environmental alarm type.
• AIRCOMPR	Air compressor failure
• AIRCOND	Air conditioning failure
• AIRDRYR	Air dryer failure
• BATDSCHRG	Battery discharging
• BATTERY	Battery failure
• CLFAN	Cooling fan failure
• CPMAJOR	Centralized power major failure
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood

• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail
• HATCH	CEV hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnect bypass
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• RINGGENMJ	Ringing generator major
• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature

• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:<NTFCNCDE>,<ALMTYPE>,[<OCRDAT>],[<OCRTM>],[<LOCN>],[<DIRN>],
[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "ENV-IN-1:MJ,OPENDR,01-01,16-02-15,,,,\"OPEN DOOR\""
;
```

Output Parameters

<AID>	Access identifier from the "25.13 ENV" section on page 25-32.
<NTFCNCDE>	(Optional) Two-letter notification code. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<ALMTYPE>	The alarm type for the environmental alarm. The parameter type is ENV_ALM, which is the environmental alarm type.
• AIRCOMPR	Air compressor failure
• AIRCOND	Air conditioning failure
• AIRDRYR	Air dryer failure
• BATDSCHRG	Battery discharging
• BATTERY	Battery failure
• CLFAN	Cooling fan failure

• CPMAJOR	Centralized power major failure
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail
• HATCH	CEV hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnect bypass
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage
• RINGGENMJ	Ringing generator major

• RINGGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure
<OCRDAT>	(Optional) Date when the specific event or violation occurred, MM-DD.
<OCRTM>	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description. DESC is a string.

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>],[<LOCN>],[<DIRN>];

Input Example

RTRV-COND-EQPT:TID:SLOT-1:229::LOS;

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-33 that has an alarm condition.
<TYPEREQ>	The type of condition to be retrieved. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15310-CL, ONS 15310-MA 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, NA conditions, and NR conditions. See Chapter 26, "Conditions" for a list of conditions.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,[<AIDTYPE>]:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>],[<OCRDAT>],
   [<OCRTM>],[<LOCN>],[<DIRN>],[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "SLOT-1,EQPT:CR,LOS,SA,01-01,16-02-15,NEND,RCV,\"LOS OF SIGNAL\""
;
```

Output Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-33 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 payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 4GFC	4-Gigabit Fibre Channel payload

• 4GFICON	4-Gigabit fiber connectivity payload
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	Gigabit Ethernet port alarm
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• 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
<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 15310-CL, ONS 15310-MA, 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, NA conditions, and 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, MM-DD.
<OCRTM>	(Optional) Time when the specific event or violation occurred.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
<DESC>	(Optional) Condition description. DESC is a string.

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>],[<LOCN>],[<DIRN>];

Input Example RTRV-COND-SYNCN:TID:SYNC-NE:229::LOS;

Input Parameters

<AID>	Access identifier from the "25.28 SYNC_REF" section on page 25-50 that has an alarm condition.
<TYPEREQ>	The type of condition to be retrieved. A null value is equivalent to ALL. The parameter type is CONDITION, which is any problem detected on an ONS 15454, ONS 15310-CL, ONS 15310-MA 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, NA conditions, and NR conditions. See Chapter 26, "Conditions" for a list of conditions.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,[<AIDTYPE>]:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>],[<OCRDAT>],
   [<OCRTM>],[<LOCN>],[<DIRN>],[<DESC>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "SYNC-NE,SYNCN:MJ,FRNGSYNC,SA,01-01,16-02-15,,,
   \"FREE RUNNING SYNCHRONIZATION MODE\""
;
```

Output Parameters

<AID>	Access identifier from the "25.26 SYN" section on page 25-49 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 payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	Gigabit Ethernet port alarm
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• 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
<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 15310-CL, ONS 15310-MA, 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, NA conditions, and 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, MM-DD.
<OCRTM>	(Optional) Time when the specific event or violation occurred, HH-MM-SS.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRN>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions

• RCV	Receive direction only
<DESC>	(Optional) Condition description. DESC is a string.

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 25-33.

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-COS-ETH

(Cisco ONS 15454) The Retrieve Cost of Service Ethernet (RTRV-COS-ETH) command retrieves the egress parameters of a CoS table associated to an L2 Ethernet port.

Usage Guidelines

None

Category

Ethernet

Security

Provisioning

Input Format

RTRV-COS-ETH:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-COS-ETH:TID:ETH-1-1-1:CTAG;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "25.15 FACILITY" section on page 25-35.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[QOSENABLED=<QOSENABLED>],[BW0=<BWO>],
[WEIGHT0=<WEIGHT0>],[BW1=<BW1>],[WEIGHT1=<WEIGHT1>],[BW2=<BW2>],
[WEIGHT2=<WEIGHT2>],[BW3=<BW3>],[WEIGHT3=<WEIGHT3>],[BW4=<BW4>],
[WEIGHT4=<WEIGHT4>],[BW5=<BW5>],[WEIGHT5=<WEIGHT5>],[BW6=<BW6>],
[WEIGHT6=<WEIGHT6>],[BW7=<BW7>],[WEIGHT7=<WEIGHT7>][:]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"ETH-5-1-1::QOSENABLED=Y,BW0=10,WEIGHT0=0,BW1=20,WEIGHT1=2,BW2=40,
WEIGHT2=4,BW3=60,WEIGHT3=6,BW4=70,WEIGHT4=8,BW5=80,WEIGHT5=10,BW6=85,
WEIGHT6=12,BW7=100,WEIGHT7=15:"
;

Output Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "25.15 FACILITY" section on page 25-35.
<QOSENABLED>	Used to enable or disable the egress quality of service (QoS) policy of an L2 Ethernet port.

• N	Disable the service
• Y	Enable the service
<BW0>	Bandwidth percentage, a value between 0 and 100
<WEIGHT0>	Value represents the weighted round-robin (WRR) weight associated to the CoS values. It is an integer value ranging between 0 and 15.
<BW1>	Bandwidth percentage, a value between 0 and 100
<WEIGHT1>	Value represents the WRR weight associated to the CoS values. It is an integer value ranging between 0 and 15.
<BW2>	Bandwidth percentage, a value between 0 and 100
<WEIGHT2>	Value represents the WRR weight associated to the CoS values. It is an integer value ranging between 0 and 15.
<BW3>	Bandwidth percentage, a value between 0 and 100
<WEIGHT3>	Value represents the WRR weight associated to the CoS values. It is an integer value ranging between 0 and 15.
<BW4>	Bandwidth percentage, a value between 0 and 100
<WEIGHT4>	Value represents the WRR weight associated to the CoS values. It is an integer value ranging between 0 and 15.
<BW5>	Bandwidth percentage, a value between 0 and 100
<WEIGHT5>	Value represents the WRR weight associated to the CoS values. It is an integer value ranging between 0 and 15.
<BW6>	Bandwidth percentage, a value between 0 and 100
<WEIGHT6>	Value represents the WRR weight associated to the CoS values. It is an integer value ranging between 0 and 15.
<BW7>	Bandwidth percentage, a value between 0 and 100
<WEIGHT7>	Value represents the WRR weight associated to the CoS values. It is an integer value ranging between 0 and 15.

21.33 RTRV-CRS

(Cisco ONS 15454 and Cisco 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 25-26 that can be EQPT, Facility, STS, VT, or ALL. The ALL AID defaults to NE, which means it reports all the existing cross-connections on the NE. A null value is equivalent to ALL.
<CRSTYPE>	The cross-connection type. Defaults to all existing cross-connections. A null value is equivalent to ALL. The parameter type is PATH, which is the modifier for path commands.
• STS1	Synchronous transport signal/module level 1 (51.84 Mbps)
• STS3C	Synchronous transport signal/module level 3 concatenated (155.52 Mbps)
• STS6C	Synchronous transport signal/module level 6 (311.04 Mbps)
• STS9C	Synchronous transport signal/module level 9 concatenated (466.56 Mbps)
• STS12C	Synchronous transport signal/module level 12 concatenated (622.08 Mbps)
• STS18C	Synchronous transport signal/module level 18 concatenated (933.12 Mbps)
• STS24C	Synchronous transport signal/module level 24 concatenated (1244.16 Mbps)
• STS36C	Synchronous transport signal/module level 36 concatenated (1866.24 Mbps)
• STS48C	Synchronous transport signal/module level 48 concatenated (2488.32 Mbps)
• STS192C	Synchronous transport signal/module level 192 concatenated (9953.28 Mbps)
• VT1	Virtual Tributary 1
• VT2	Virtual Tributary 2

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<SRC>,<DST>:<CCT>,<CRSTYPE>:[DRITYPE=<DRITYPE>],[DRINODE=<SYNCSW>],
   [CKTID=<CKTID>]:<PST_PSTQ>,[<SSTQ>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "STS-5-1-2&STS-6-1-2,STS-12-1-2&STS-13-1-2:1WAYDC,STS1:DRITYPE=BLSR,
   DRINODE=PRI,CKTID=CKTID:OOS-AU,AINS"
;
```

Output Parameters

<SRC>	Source access identifier from the "25.10 CrossConnectId" section on page 25-22. 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 25-22. DST is listable.
<CCT>	Type of connection. Used for specifying one or two-way connections. The parameter type is CCT, which is the type of cross-connect to be created.
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	Path Protection multicast drop with one-way continue
• 1WAYEN	Path Protection multicast end node with one-way continue
• 1WAYMON	A bidirectional connection between the two tributaries **Note** In ONS 15454 Software Release 3.0 and later, 1WAYMON is not supported with TL1. However, it is still supported from Cisco Transport Controller (CTC). Using CTC, you can create 1WAYMON cross-connects that can be retrieved with TL1.
• 1WAYPCA	A unidirectional connection from a source tributary to a destination tributary on the protection path/fiber
• 2WAY	A bidirectional connection between the two tributaries
• 2WAYDC	A bidirectional drop and continue connection applicable only to path protection traditional and integrated DRIs
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber
• DIAG	Diagnostics cross-connect. Supports BERT (BLSR PCA diagnostics cross-connect).
<CRSTYPE>	The cross-connection type. The parameter type is CRS_TYPE, which is the cross-connection type.
• STS	Indicates all the STS cross-connections
• STS1	STS1 cross-connect
• STS3C	STS3c cross-connect
• STS6C	STS6c cross-connect

• STS9C	STS9c cross-connect
• STS12C	STS12c cross-connect
• STS18C	STS18c cross-connect
• STS24C	STS24c cross-connect
• STS36C	STS36c cross-connect
• STS48C	STS48c cross-connect
• STS192C	STS192c cross-connect
• VT	Indicates all the VT1 cross-connections
• VT1	VT1 cross-connect
• VT2	VT2 cross-connect
<DRITYPE>	(Optional) The DRI connection type. It is applied only if the cross-connection is a drop-and-continue connection type (1WAYDC or 2WAYDC), and defaults to path protection for the DRI configuration. The parameter type is DRITYPE (DRI type).
• BLRS	BLSR DRI type
• Path Protection	Path Protection DRI type
• Path Protection-BLSR	Path Protection-BLSR hand-off DRI type
<DRINODE>	(Optional) Synchronization switch AID from the "25.29 SYNCSW" section on page 25-51.
<CKTID>	(Optional) Circuit identification parameter that contains a common language ID or other alias of the circuit being provisioned. It cannot contain blank spaces. CKTID is a string.
<PST_PSTQ>	Primary state and primary state qualifier separated by a colon. The parameter type is PST_PSTQ, which is the service state of the entity described by the PST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) One or more secondary states separated by "&", in alphabetical order. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.34 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 path protection STS cross-connection can be retrieved by using "&" in the AID fields of this command.
  - To retrieve a 1-way selector or 2-way selector and bridge cross-connection with:

    from points: F1, F2

    to points: T1

    the output will be:

    1-way

    "F1&F2,T1:CCT,STS3C"

    2-way

    If retrieved on point F1 or F2, the output format is the same as the 1-way output.

    If retrieved on point T1, the output will be:

    "T1,F1&F2:CCT,STS3C"
  - To retrieve a 1-way bridge or 2-way selector and bridge cross-connection with:

    from point: F1

    to points: T1, T2

    the output will be:

    1-way

    "F1,T1&T2:CCT,STS3C"

    2-way

    "T1&T2,F1:CCT,STS3C"
  - To retrieve a 1-way subtending path protection connection or 2-way subtending path protection cross-connection with:

    from point: F1, F2

    to points: T1, T2

    the output will be:

    1-way:

    "F1&F2,T1&T2:CCT,STS3C"

    2-way:

    If retrieved on point F1 or F2, the output format is the same as the 1-way output.

If retrieved on point T1 or T2, the output will be:

"T1&T2,F1&F2:CCT,STS3C"

- To retrieve a 2-way selector and bridge cross-connection with:

  ENT-CRS-<PATH>::F1&F2,S1&S2:<CTAG>::2WAY;

  from points: F1, F2 (F1 is the working side, F2 is the protect side)

  selector: S1, S2 (S1 is the working side, S2 is the protect side)

  the output will be:

  If retrieved on point F1 or F2, the output will be:

  "F1&F2,S1&S2:CCT,STS3C"

  If retrieved on selector S1 or S2, the output will be:

  "S1&S2,F1&F2:CCT,STS3C"

- To retrieve a path protection IDRI cross-connect with:

  from points: F1, F2

  to points: T1, T2

  the output will be:

  "F1&F2,T1&T2:CCT,STS3C"

- To retrieve a path protection DRI cross-connect with:

  from points: F1, F2

  to points: T1

  the output will be:

  "F1&F2,T1:CCT,STS3C"

- All A&B AIDs in the TL1 cross-connection command are in the format of WorkingAID&ProtectAID.
- STS_PATH does not include STS for the RTRV-CRS command because STS is not a standard designator as defined by Telcordia GR-833, Section A-2.
- Both the 1WAYPCA and 2WAYPCA is used to specify a PCA cross-connection.
- The facility AID is only valid on slots with a G1K-4 card.
- The virtual facility AID (VFAC) is only valid on slots holding the ML-Series card.
- Both DRITYPE and DRINODE optional fields are available to support BLSR-DRI. DRITYPE is applied only if the cross-connect is a drop-and-continue connection (1WAYDC or 2WAYDC), and defaults to path protection for the DRI. DRINODE must be specified only if at least one end of the connection is on the BLSR, and defaults to NA.
- The DS3XM-12 card allows portless STS1/VT1.5 cross-connection provisioning on the PORTLESS ports.

Category Cross Connections

Security

Retrieve

Input Format

RTRV-CRS-<PATH>:[<TID>]:<SRC>:<CTAG>[::::];

Input Example

RTRV-CRS-STS3C:KENWOOD:STS-6-1-1:223;

Input Parameters

<SRC>	Source access identifier from the "25.11 CrossConnectId1" section on page 25-26.

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 25-22. 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 25-22. DST is listable.
<CCT>	Type of connection. Used for specifying one or two-way connections. The parameter type is CCT, which is the type of cross-connect to be created.
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	Path Protection multicast drop with one-way continue
• 1WAYEN	Path Protection multicast end node with one-way continue
• 1WAYMON	A bidirectional connection between the two tributaries **Note** With ONS 15454 Software R3.0 and later, 1WAYMON is not supported with TL1. However, it is still supported from CTC. Using CTC, you can create 1WAYMON cross-connects and can be retrieved by TL1.
• 1WAYPCA	A unidirectional connection from a source tributary to a destination tributary on the protection path/fiber
• 2WAY	A bidirectional connection between the two tributaries

• 2WAYDC	A bidirectional drop and continue connection applicable only to path protection traditional and integrated dual-ring interconnects
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber
• DIAG	Diagnostics cross-connect. Supports BERT (BLSR PCA diagnostics cross-connect)
<MOD>	The connection path bandwidth. The parameter type is MOD2, which is the line/path modifier.
• 10GFC	10-Gigabit Fibre Channel payload
• 10GIGE	10-Gigabit Ethernet
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• D1VIDEO	D1 Video
• DS1	DS1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETR_CLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over POS. Virtual ports partitioned using GFP's multiplexing capability.
• GIGE	Gigabit Ethernet
• HDTV	HDTV
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 facility
• OC12	OC12 facility
• OC48	OC48 facility
• OC192	OC192 facility
• OCH	Optical channel
• OCHCC	OCH client connection
• OCHNC	OCH network connection
• OCHTERM	OCH termination
• OMS	Optical Multiplex Section

• OTS	Optical Transport Section
• POS	POS port
• STS1	STS1 path
• STS3C	STS3c path
• STS6C	STS6c path
• STS9C	STS9c path
• STS18C	STS18c path
• STS12C	STS12c path
• STS24C	STS24c path
• STS36C	STS36c path
• STS48C	STS48c path
• STS192C	STS192c path
• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 path
• VT2	VT2 path
<DRITYPE>	(Optional) The DRI connection type. It is applied only if the cross-connection is a drop-and-continue connection type (1WAYDC or 2WAYDC), and defaults to path protection for the DRI configuration. The parameter type is DRITYPE (DRI type).
• BLRS	BLSR DRI type
• Path Protection	Path Protection DRI type
• Path Protection-BLSR	Path Protection-BLSR hand-off DRI type
<SYNCSW>	(Optional) Synchronization switch AID from the "25.29 SYNCSW" section on page 25-51.
<CKTID>	(Optional) A string of ASCII characters. Maximum length is 48. CKTID is a string.
<PST_PSTQ>	Primary state and primary state qualifier separated by a colon. The parameter type is PST_PSTQ, which is the service state of the entity described by the PST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) One or more secondary states separated by "&", in alphabetical order. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group

• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.35 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.

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 if a password change is required when a new user establishes a session to the NE for the first time. (For example, "Require password change on 1st login"). Default is NO. The parameter type is YES_NO, which indicates whether the user's password is about to expire, the user is logged into the NE or the user is locked out of the NE.
• NO	Password change is not required.
• YES	Password change is required.
<POLD>	Number of prior passwords that cannot be reused (for example, "Prevent reusing last X passwords"). Default is 1. POLD ranges from 0 to 10. POLD is an integer.
<PINT>	Number of days that must pass before a password can be changed. If PINT is 0, the policy is turned off. Default is off. PINT ranges from 20 to 95 days. PINT is an integer.
<LOGIN>	Number of times a user can log into an NE. LOGIN is either SINGLE or MULTIPLE. If LOGIN is SINGLE, a user can only log into an NE one time with any given userid, regardless of the method of login (for example, CTC, TL1, etc.). Default is MULTIPLE. The parameter type is USER_LOGINS, which is the number of times a user can log into the same NE with the same user ID.
• MULTIPLE	A user can log into the same NE many times.

• SINGLE	A user can log into the NE only once (includes both CTC and TL1 sessions).
<PRIVLVL>	Parameter type is PRIVILEGE, which is the security level.
• MAINT	Maintenance security level. Unlimited idle time.
• PROV	Provision security level. 60 minutes of idle time.
• RTRV	Retrieve security level. 30 minutes of idle time.
• SUPER	Superuser security level. 15 minutes of idle time.
<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.

21.36 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 25-32.

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 25-32.
<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.

21.37 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 25-35.

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 25-35.
<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) Port Name. NAME is a string.
<EXPTRC>	(Optional) EXPTRC is a string.
<TRC>	(Optional) TRC is a string.
<TRCMODE>	(Optional) Trace mode. The parameter type is TRCMODE.
• AUTO	Use the previously received path trace string as the expected string. Not applicable to MXP/TXP cards.
• AUTO-NO-AIS	Use the previously received path trace string as the expected string and do not turn on AIS and RDI if TIM-P is detected.
• MAN	Use the provisioned expected string as the expected string.
• MAN-NO-AIS	Use the provisioned expected string as the expected string and do not turn on AIS and RDI if TIM-P is detected.
• OFF	Turn off path trace capability. Nothing will be reported.
<TRCFORMAT>	(Optional) Trace message size. The parameter type is TRCFORMAT (trace format).
• 1-BYTE	1-byte trace message
• 16-BYTE	16-byte trace message
• 64-BYTE	64-byte trace message

• Y	Enable an attribute.
<AISONLPBK>	(Optional) AIS on loopback. The parameter type is AIS_ON_LPBK, which indicates if an AIS is sent on a loopback.
• AIS_ONLPBK_FACILITY	AIS is sent on facility loopbacks.
• AIS_ON_LPBK_ALL	AIS is sent on all loopbacks.
• AIS_ON_LPBK_OFF	AIS is not sent on loopbacks.
• AIS_ON_LPBK_TERMINAL	AIS is sent on terminal loopbacks.
<PST_PSTQ>	Administrative state in the PST_PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the SST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.38 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 a card or shelf.

Usage Guidelines

This command returns the PRTYPE, PROTID, RVTM, and RVRTV parameters for a card inside a protection group according to the following scenarios:

- A working AID/card within a 1:1 protection group will return PRTYPE, PROTID, RVTM, and RVRTV.
- A protection/AID card within a 1:1 protection group will return PRTYPE, RVTM, and RVRTV.
- A working AID/card within a 1:N protection group will return PRTYPE, PROTID, RVTM, and RVRTV=Y.
- A protection AID/card of a 1:1 protection group will return PRTYPE, RVTM, and RVRTV=Y.
- An unprotected AID/card will return the AID type, equip (equip/unequip), status (act/standby), and state (IS/OOS) values.

- Preprovisioned cards (without being plugged in) will display OOS,AINS for PST and SST. After the card is plugged in and has gone through its initialization sequence, the card automatically goes to IS state (PST).
- The CARDMODE parameter is displayed for ML-Series Ethernet, FC_MR-4, DS1/E1-56, and DWDM xponder cards.
- The RETIME parameter is only displayed for the DS1/E1-56 (ONS 15454) and DS1-84-DS3-EC1-3 (ONS 15310-MA SONET) cards.
- The TRANSMODE parameter is only displayed for the DS1/E1-56 card.

Error conditions:

- The NE will generate an error when the equipment is not provisioned.

Category

Equipment

Security

Retrieve

Input Format

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

Input Example

RTRV-EQPT:MIRABEL:SLOT-12:230;

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-33.

Output Format

SID DATE TIME
M CTAG COMPLD

"<AID>:<AIDTYPE>,<EQUIP>,<EQUIP>,,[<STATUS>]:[CARDNAME=<CARDNAME>],CARDMODE=<CARDMODE>],:[<PSTPSTQ>,<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 25-33.
<AIDTYPE>	The type of facility, link, or other addressable entity targeted by the message. The parameter type is EQUIPMENT-TYPE (equipment type).
• 10DME-C	MXP_MR_10DME_C card
• 10DME-L	MXP_MR_10DME_L card
• 10GEXP-TXP	10GE-XP behaves as 2 separate Transpoders, where client 1 is associated to trunk 3 and client 2 is associated to trunk 4
• 10GEXP-L2ETH	10GE-XP behaves as a L2 Ethernet Switch
• 32DMX	(ONS 15454) 32-channel demultiplexer for C band
• 32DM X-L	(ONS 15454) 32-channel demultiplexer 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 for C band
• 32WSS-L	(ONS 15454) 32-channel wavelength selective switch for L band
• 4MD-xx.x	(ONS 15454) Optical multiplexer/demultiplexer with 4 channels
• AD-1B-xx.x	(ONS 15454) Optical add/drop multiplexer (OADM) 1 band filter
• AD-1C-xx.x	(ONS 15454) OADM 1 channel filter
• AD-2C-xx.x	(ONS 15454) OADM 2 channel filter
• AD-4B-xx.x	(ONS 15454) OADM 4 band filter
• AD-4C-xx.x	(ONS 15454) OADM 4 channel filter
• AIC	(ONS 15454) AIC card
• AIC-I	(ONS 15454) AIC-I card
• ALM-PWR	Alarm Power
• BP	The backplane of the NE
• CRFT-TMG	Craft Timing
• 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 15310-MA SONET) Eight port 100T card
• CE-MR-6	(ONS 15310-MA SONET) CE-MR-6 data card
• CTX2500	(ONS 15310-MA SONET) CTX2500 card
• CXC	(ONS 15600) Cross Connect card
• DS1	(ONS 15454) DS1 card
• DS1-E1-56	(ONS 15454) DS1-E1-56 card
• DS1-28-DS3-EC1-3	(ONS 15310-MA SONET) DS1-28-DS3-EC1-3 card
• DS1-84-DS3-EC1-3	(ONS 15310-MA SONET) DS1-84-DS3-EC1-3 card
• DS1I	(ONS 15454) DS1I card
• DS1N	(ONS 15454) DS1N card
• DS3	(ONS 15454) DS3 card
• DS3-EC1-48	(ONS 15454) DS3-EC1-48 card
• DS3E	(ONS 15454) DS3E card

• DS31	(ONS 15454) DS31 card
• DS3IN	(ONS 15454) DS3IN card
• DS3N	(ONS 15454) DS3N card
• DS3NE	(ONS 15454) DS3NE card
• DS3XM	(ONS 15454) DS3XM card
• DS3XM-12	(ONS 15454) DS3XM-12 card
• E1	(ONS 15454) E1 card
• E1000T	(ONS 15454) E1000T card
• E100T	(ONS 15454) E100T card
• E1000-2	(ONS 15454) E1000-2 card
• E1000-2-G	(ONS 15454) E1000-2-G card
• EC1	(ONS 15454) EC1 card
• EC1N	(ONS 15454) EC1N card
• FC-MR-4	(ONS 15454) FC_MR-4 card
• FILLER-CARD	(ONS 15454) Blank Filler card
• FMEC-SMZ-E1	FMEC card corresponding to E1 card
• FMEC-SMZ-E3	FMEC card corresponding to E3 card
• FMEC_DB	FMEC card
• FMEC_DB_DS1I	FMEC card
• FTA	The fan tray of the NE
• FTA1	The fan tray 1 of the NE
• FTA2	The fan tray 2 of the NE
• G1000-4	(ONS 15454) Four port G1000 card
• G1K-4	Four-port G1000 card
• MIC-A/P	MIC-A/P card
• MIC-C/T/P	MIC-C/T/P card
• MD-4	(ONS 15454) Optical Multiplexer/Demultiplexer with 4 channels
• ML1000-2	(ONS 15454) Daytona 2-port GigE
• ML100T-8	(ONS 15310-MA SONET) Exige/Elise mapper card
• ML100T-12	(ONS 15454) Daytona 12-port FSTE
• ML100X-8	(ONS 15454) 8-port 100T card with optical interface
• MMU	(ONS 15454) Multiring/mesh upgrade unit
• MRC-12	(ONS 15454) Humvee - 12-port multirate optical card
• MS-ISC-100T	(ONS 15454) Fast Ethernet switch card used for internal shelves connection
• MXP-2.5G-10E	(ONS 15454) Monviso 10G (4 * 2.5G) muxponder card with enhanced FEC
• MXP-2.5G-10G	(ONS 15454) Skane 10G (4 * 2.5G) muxponder card
• MXP-MR-10DME	10 Gbit/Sec. Datamux with enhanced FEC
• MXP-MR-2.5G	(ONS 15454) Bernina multirate 2.5G muxponder unprotected
• MXPP-MR-2.5G	(ONS 15454) Bernina multirate 2.5G muxponder protected
• OC3	(ONS 15454, ONS 15327) OC-3 card

• OC3-8	(ONS 15454) Eight port OC-3 card
• OC12	(ONS 15454) OC-12 card
• OC12-4	(ONS 15454) Four port OC-12 card
• OC48	(ONS 15454, 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-E	(ONS 15454) Optical booster unit for E-Band
• 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 15310-MA SONET) Pluggable port module with one SFP port
• SHELF	Shelf entity
• TCC	(ONS 15454) TCC card
• TCC2	TCC2 card
• TCC2P	TCC2P 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
• XC	(ONS 15454) XC card
• XC10G	(ONS 15454) XC10G card
• XCVT	(ONS 15454) XCVT card
• XC-VXC-10G	(ONS 15454) XC-VXC-10G card
• XC-VXL-10G	(ONS 15454) XC-VXL-10G card

• XC-VXL-2.5G	(ONS 15454) XC-VXL-2.5G card
<EQUIP>	Indicates if the equipment is physically present. The parameter type is EQUIP, which is the presence of a plug-in unit.
• EQUIP	The unit is equipped—present.
• UNEQUIP	The unit is unequipped—absent.
<ROLE>	Identifies the port role in a Y-cable protection scheme. The parameter type is SIDE, which is the role the unit is playing in the protection group.
• PROT	The entity is a protection unit in the protection group.
• WORK	The entity is a working unit in the protection group.
<STATUS>	(Optional) Indicates a status. SONET card status is shown on its card level. The parameter type is STATUS.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit on the shelf.
<PROTID>	(Optional) Protection group name. PROTID is a string.
<PRTYPE>	Identifies the protection group type values.
• 1-1	1 to 1 protection
• 1-N	1 to N protection
<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. Only applies to SNCP. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. RVTM is not allowed to be set while RVRTV is N. Only applies to SNCP. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<CARDNAME>	(Optional) The card name of the card, PIM, or PPM equipment. CARDNAME is a string.
<IOSCFG>	(Optional) Displays the information about startup IOS config file for the ML series card. A example of this field is "TL1,11.22.33.44//DIR/IOS.CONF,2002/1/1 9:1:1 EST". The following information is included in this field: 1) Where the config file is from: TL1, or CTC/CTM/CLI/TCC; 2) The host(IP address)/directory/file name, if the config file is downloaded from the network; 3) When the startup config file is created (by copying from the network, for example). This field only applies to ML series card. IOSCFG is a string.
<CARDMODE>	(Optional) Card mode. The parameter type is CARDMODE, 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 preamplifier.
• CEMR-AUTO	Auto allocation of back-end channels for CE-MR-6 (Cisco ONS 15310-MA SONET only) cards.
• CEMR-MANUAL	Manual allocation of back-end channels for CE-MR-6 (Cisco ONS 15310-MA SONET only) cards.
• DS1E1-DS1ONLY	DS1 mode on DS1E1 card
• DS1E1-E1ONLY	E1 mode on DS1E1 card
• DS3XM-12-STS12	Indicates the DS3XM-12 card in the STS12 back plane rate mode
• DS3XM-12-STS48	Indicates the DS3XM-12 card in the STS48 back plane rate mode
• DWDM-LINE	Line terminating mode
• DWDM-SECTION	Section terminating mode
• DWDM-TRANS-AIS	Transparent mode AIS
• DWDM-TRANS-SQUELCH	Transparent mode SQUELCH
• FCMR-DISTEXTN	FC_MR-4 card with distance extension support
• FCMR-LINERATE	FC_MR-4 card without distance extension support
• GEXP-10x1Gx2-MXP	GE-XP behaves as a double Muxponder having ten 1 Gbps client facilities with one trunk. The first 10 GIGE clients are associated to the first trunk (21), while GIGE facilities from 11 to 20 are associated to trunk 22.
• GEXP-20x1G-MXP	GE-XP behaves as a single Muxponder having ten 1 Gbps client facilities with one trunk. Only the first 10 GIGE clients are associated to the first trunk (21) while the other facilities are unused.
• GEXP-L2ETH	GE-XP behaves as an L2 Ethernet Switch.
• 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
• ML-IEEE-RPR	Ml-Series card in DOS FPGA THAT supports Resilient Packet Ring (RPR)
• MXPMR10DME-4GFC	4-Gbps Fibre Channel/FICON mode for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on Ports 1 and 5
• MXPMR10DME-4GFC-FCGEISC	4-Gbps Fibre Channel/FICON supported on Port 1 and Fibre Channel, GIGE, and ISC modes for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on Ports 5 to 8
• MXPMR10DME-FCGEISC	Fibre Channel, GIGE, and ISC modes for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on all eight ports
• MXPMR10DME-FCGEISC-4GFC	Fibre Channel, GIGE, and ISC modes for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on Ports 1 to 4 and 4-Gbps Fibre Channel/FICON supported on Port 5

• MXPMR10G-FCGEISC	Fibre Channel, GIGE, and ISC modes for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on all eight ports
• MXPMR10G-4GFC	4-Gbps Fibre Channel/FICON mode for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on Ports 1 and 5
• MXPMR10G-FCGEISC-4GFC	Fibre Channel, GIGE, and ISC modes for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on Ports 1 to 4 and 4-Gbps Fibre Channel/FICON supported on Port 5
• MXPMR10G-4GFC-FCGEISC	4-Gbps Fibre Channel/FICON supported on Port 1 and Fibre Channel, GIGE, and ISC modes for the Cisco ONS 15454 MXP_MR_10DME_C and MXP_MR_10DME_L cards supported on Ports 5 to 8.
• 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
• UNKNOWN	Unknown equipment type
<PST_PSTQ>	Administrative state in the PST_PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the PST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	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

21.39 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 25-35.

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 25-35.
<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

21.40 RTRV-ETH

(Cisco ONS 15454) The Retrieve Ethernet (RTRV-ETH) command retrieves the front-end port information of an Ethernet card.

Usage Guidelines

The default values for all optional parameters are NE default values, but these values might not be the current value for a parameter. Use a retrieve command to obtain the current value.

Note This command is available in Software Release 8.0.1 and all subsequent releases. It is not available in R8.0.0.

Category

Ethernet

Security

Provisioning

Input Format

RTRV-ETH:[<TID>]:<AID>:<CTAG>[:::];

Input Example

RTRV-ETH:TID:FAC-1-1:CTAG;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "25.15 FACILITY" section on page 25-35.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[LINKSTATE=<LINKSTATE>],[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::LINKSTATE=DOWN,LINKSTATE=DOWN,FLOWCTRL=SYMMETRIC,
DUPLEX=AUTO,SPEED=AUTO,FLOW=Y,EXPDUPLEX=AUTO,EXPSPEED=10_MBPS,
VLANCOS=1175,IPTOS=368,OPTICS=1000-BASE-LX,NAME=\"ETH
PORT\",SOAK=32,SOAKLEFT=\"12-25\":OOS-AU,AINS"
;
```

Output Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "25.15 FACILITY" section on page 25-35.
<LINKSTATE>	Link state. The parameter type is UP_DOWN, which indicates an up or down value.
• DOWN	Down
• UP	Up
<FLOWCTRL>	Flow control. The parameter is FLOW, which indicates the type of flow control that has been negotiated for an Ethernet port. Defaults to NONE.
• ASYMMETRIC	Asymmetric flow control
• ASYMMETRIC_LOCAL	Asymmetric local flow control
• NONE	No flow control
• PASSTHRU	Pass-through flow control
• SYMMETRIC	Symmetric flow control
<DUPLEX>	The parameter is ETHER_DUPLEX, which indicates duplex mode. Defaults to AUTO.
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode
<SPEED>	The parameter type is ETHER_SPEED which indicates Ethernet speed. Defaults to AUTO.
• 100_MBPS	100 Megabits per seconds
• 10_GBPS	10 Gigabits per second
• 10_MBPS	10 Megabits per second
• 1_GBPS	1 Gigabit per second
• AUTO	Automatic
<FLOW>	(Optional) Flow. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<EXPDUPLEX>	(Optional) Ethernet duplex mode. The parameter type is ETHER_DUPLEX, which is the duplex mode.
• AUTO	Auto mode
• FULL	Full mode
• HALF	Half mode

<EXPSPEED>	(Optional) Expected speed. Due to the auto-negotiation feature, actual speed may differ from expected speed. The parameter type is ETHER_SPEED, which is the Ethernet speed.
• 100_MBPS	100 Megabits per second
• 10_GBPS	10 Gigabits per second
• 10_MBPS	10 Megabits per second
• 1_GBPS	1 Gigabit per second
• AUTO	Auto
<VLANCOS>	(Optional) Priority queing threshold based on VLAN class of service for incoming Ethernet packets. VLANCOS is an integer.
<IPTOS>	(Optional) Priority queing threshold based on IP type of service for incoming Ethernet packets. IPTOS is an integer.
<OPTICS>	(Optional) Optics. The parameter type is OPTICS, which is the type of Gigabit Ethernet optics being used.
• 1000_BASE_CX	1000BaseCX
• 1000_BASE_LX	1000BaseLX
• 1000_BASE_SX	1000BaseSX
• 1000_BASE_ZX	1000BaseZX
• CWDM_1470	CWDM 1470
• CWDM_1490	CWDM 1490
• CWDM_1510	CWDM 1510
• CWDM_1530	CWDM 1530
• CWDM_1550	CWDM 1550
• CWDM_1570	CWDM 1570
• CWDM_1590	CWDM 1590
• CWDM_1610	CWDM 1610
• ITU_100G_1530_33	ITU-100G 1530.33
• ITU_100G_1531_12	ITU-100G 1531.12
• ITU_100G_1531_90	ITU-100G 1531.90
• ITU_100G_1532_68	ITU-100G 1532.68
• ITU_100G_1534_25	ITU-100G 1534.25
• ITU_100G_1535_04	ITU-100G 1535.04
• ITU_100G_1535_82	ITU-100G 1535.82
• ITU_100G_1536_61	ITU-100G 1536.61
• ITU_100G_1538_19	ITU-100G 1538.19
• ITU_100G_1538_98	ITU-100G 1538.98
• ITU_100G_1539_77	ITU-100G 1539.77
• ITU_100G_1540_56	ITU-100G 1540.56
• ITU_100G_1542_14	ITU-100G 1542.14
• ITU_100G_1542_94	ITU-100G 1542.94
• ITU_100G_1543_73	ITU-100G 1543.73
• ITU_100G_1544_53	ITU-100G 1544.53

• ITU_100G_1546_12	ITU-100G 1546.12
• ITU_100G_1546_92	ITU-100G 1546.92
• ITU_100G_1547_72	ITU-100G 1547.72
• ITU_100G_1548_51	ITU-100G 1548.51
• ITU_100G_1550_12	ITU-100G 1550.12
• ITU_100G_1550_92	ITU-100G 1550.92
• ITU_100G_1551_72	ITU-100G 1551.72
• ITU_100G_1552_52	ITU-100G 1552.52
• ITU_100G_1554_13	ITU-100G 1554.13
• ITU_100G_1554_94	ITU-100G 1554.94
• ITU_100G_1555_75	ITU-100G 1555.75
• ITU_100G_1556_55	ITU-100G 156.55
• ITU_100G_1558_17	ITU-100G 1558.17
• ITU_100G_1558_98	ITU-100G 1558.98
• ITU_100G_1559_79	ITU-100G 1559.79
• ITU_100G_1560_61	ITU-100G 1560.61
• UNKNOWN	Unknown Optical Type
• UNPLUGGED	Unplugged
<NAME>	(Optional) Name. NAME is a string.
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer.
<SOAKLEFT>	(Optional) Time remaining for the transition from Locked-AutomaticInService to Unlocked measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. Rules for SOAKLEFT are as follows: • When the port is in Locked;Locked,Maintenance; or Unlocked state, the parameter is not displayed. • When the port is in Locked,AutomaticInService state but the countdown has not started due to a fault signal, the value will be SOAKLEFT=NOT-STARTED. • When the port is in Locked,AutomaticInService state and the countdown has started, the value will be shown in HH-MM format.
<PSTPSTQ>	Primary state. The parameter type is PST_PSTQ, which is the service state of the entity described by the PST and the PSTQ.
• Unlocked-Enabled	In service and normal
• Unlocked-Disabled	Out of service and autonomous
• Locked-Disabled	Out of service, autonomous and management
• Locked-Enabled	Out of service and management
<SSTQ>	(Optional) Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AutomaticInService	Automatic in service
• Disabled	Disabled

• Loopback	Loopback
• MismatchofEquipmentAlarm	Mismatch of equipment and attributes
• Maintenance	Maintenance mode

21.41 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 25-32. The only valid AID for RTRV-EXT-CONT is ENV-OUT-{1-2}.
<CONTTYPE>	Environmental control type. A null value is equivalent to ALL. The parameter type is CONTTYPE, which is the environmental control type.
• AIRCOND	Air conditioning
• 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 25-32. 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	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.

21.42 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 25-35.

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 25-35.
<PAYLOAD>	(Optional) Payload type of the facility. The parameter type is PAYLOAD, which identifies payload type.
• 10GFC	10-Gigabit Fibre Channel payload
• 10GIGE	10-Gigabit Ethernet
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 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 PST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state. SSTQ is a string.

21.43 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 25-35.

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 25-35.
<PROTECT>	The protected port access identifier from the “25.15 FACILITY” section on page 25-35.
<PROTTYPE>	(Optional) Protection group type. PROTTYPE is a string.
<LEVEL>	Optical rate the protection group was defined against. The parameter type is OCN_TYPE, which is the modifier used to differentiate various levels of OC-N.
• OC12	Optical Carrier level 12 (622 Mbps)
• OC192	Optical Carrier level 192 (10 Gbps)
• OC3	Optical Carrier level 3 (155 Mbps)
• OC48	Optical Carrier level 48 (2.4 Gbps)
<PROTID>	(Optional) Protection group name. PROTID is a string.
<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Defaults to N, non-revertive.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	(Optional) Protection switch operation. Direction of reversion. The parameter type is UNI_BI, which is the unidirectional and bidirectional switch operations.
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching
<VRGRDTM>	(Optional) Verification guard timer. Only applies to optimized 1+1. The parameter type is VERIFICATION_GUARD_TIMER, which is the optimized 1+1 verification guard timer.

• 0.5	500 ms
• 1.0	1 second
<DTGRDTM>	(Optional) Detection guard timer. Only applies to optimized 1+1. The parameter type is DETECTION_GUARD_TIMER, which is the optimized 1+1 detection guard timer.
• 0.0	0 seconds
• 0.05	50 ms
• 0.1	100 ms
• 0.5	500 ms
• 1.0	1 second
• 2.0	2 seconds
• 3.0	3 seconds
• 4.0	4 seconds
• 5.0	5 seconds
<RCGRDTM>	(Optional) Recovery guard timer. Only applies to optimized 1+1. The parameter type is RECOVERY_GUARD_TIMER, which is the optimized 1+1 recovery guard timer.
• 0.0	0 seconds
• 0.05	50 ms
• 0.1	100 ms
• 0.5	500 ms
• 1.0	1 second
• 2.0	2 seconds
• 3.0	3 seconds
• 4.0	4 seconds
• 5.0	5 seconds
• 6.0	6 seconds
• 7.0	7 seconds
• 8.0	8 seconds
• 9.0	9 seconds
• 10.0	10 seconds
<OPOTYPE>	(Optional) 1+1 protection type. The parameter type is ONE_PLUS_ONE, which is the 1+1 protection type.
• OPTIMIZED	Optimized 1+1
• STANDARD	Standard 1+1

21.44 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 25-35.

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 25-35.
<AIDUNIONID1>	Access identifier from the "25.15 FACILITY" section on page 25-35.
<PROTTYPE>	(Optional) The type of facility protection. The parameter type is PROTTYPE, which is the protection type for DWDM client facilities.
• Y-CABLE	Y-cable protection for the client ports on TXP_MR_10G, MXP_2.5G_10G, TXP_MR_2.5G, and TXPP_MR_2.5G cards.
<PROTID>	(Optional) Y-cable protection group identifier. PROTID is a string.

<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. Defaults to 5.0 minutes. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	(Optional) Protection switch operation. Identifies the switching mode. Defaults to UNI. The parameter type is UNI_BI, which is the unidirectional and bidirectional switch operations.
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching

21.45 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 25-35.

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 25-35. Identifies the working port.
<PROTECT>	Access identifier from the "25.15 FACILITY" section on page 25-35. Identifies the protection port.
<PROTTYPE>	(Optional) Protection group type. Applicable only to DWDM cards. The parameter type is PROTTYPE, which is the protection type for DWDM client facilities.
• Y-CABLE	Y-cable protection for the client ports on TXP_MR_10G, MXP_2.5G_10G, TXP_MR_2.5G, and TXPP_MR_2.5G cards.
<PROTID>	(Optional) Free-form text string name given to the 1+1 protection group. PROTID is a string.
<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Defaults to N, non-revertive.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. Defaults to 5.0 minutes. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	(Optional) Protection switch operation. Identifies the switching mode. Defaults to UNI. The parameter type is TRANS_MODE, which is the G1000 transponder mode.
• BI	Bidirectional
• NONE	Not in transponder mode
• UNI	Unidirectional

<VRGRDTM>	(Optional) Verification guard timer. Only applies to optimized 1+1. The parameter type is VERIFICATION_GUARD_TIMER, which is the optimized 1+1 verification guard timer.
• 0.5	500 ms
• 1.0	1 second
<DTGRDTM>	(Optional) Detection guard timer. Only applies to optimized 1+1. The parameter type is DETECTION_GUARD_TIMER, which is the optimized 1+1 detection guard timer.
• 0.0	0 seconds
• 0.05	50 ms
• 0.1	100 ms
• 0.5	500 ms
• 1.0	1 second
• 2.0	2 seconds
• 3.0	3 seconds
• 4.0	4 seconds
• 5.0	5 seconds
<RCGRDTM>	(Optional) Recovery guard timer. Only applies to optimized 1+1. The parameter type is RECOVERY_GUARD_TIMER, which is the optimized 1+1 recovery guard timer.
• 0.0	0 seconds
• 0.05	50 ms
• 0.1	100 ms
• 0.5	500 ms
• 1.0	1 second
• 2.0	2 seconds
• 3.0	3 seconds
• 4.0	4 seconds
• 5.0	5 seconds
• 6.0	6 seconds
• 7.0	7 seconds
• 8.0	8 seconds
• 9.0	9 seconds
• 10.0	10 seconds
<OPOTYPE>	(Optional) 1+1 protection type. The parameter type is ONE_PLUS_ONE, which is the 1+1 protection type.
• OPTIMIZED	Optimized 1+1
• STANDARD	Standard 1+1

21.46 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 25-20.

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 25-20.
<PROTECT>	The protected port access identifier from the "25.8 CHANNEL" section on page 25-20.
<PROTTYPE>	(Optional) Protection group type. PROTTYPE is a string.
<PROTID>	(Optional) Protection group name. PROTID is a string.

<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Defaults to N. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	(Optional) Protection switch operation. Direction of reversion. The parameter type is UNI_BI, which is the unidirectional and bidirectional switch operations.
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching

21.47 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.

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 25-35.

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 25-35.
<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) Expected speed. Due to the auto-negotiation feature, actual speed may differ from expected speed. The parameter type is ETHER_SPEED, which is the Ethernet speed.
• 100_MBPS	100 Mbps
• 10_GBPS	10 Gbps
• 10_MBPS	10 Mbps
• 1_GBPS	1 Gbps
• AUTO	Auto
<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) Gigabit Interface Converter (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	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) Facility name. NAME is a string.
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer.

<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 PST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state. 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

21.48 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 25-35.

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 25-35.
<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 25-35.
<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) Facility name. NAME is a string.
<SOAK>	(Optional) OOS-AINS to IS transition soak time as measured in 15-minute intervals. SOAK is an integer.
<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 PST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous

• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.49 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 25-35. **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 ONS 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 25-35.
<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.

21.50 RTRV-GIGE

(Cisco ONS 15454, ONS 15600) The Retrieve Gigabit (GIGE, 10GIGE) 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 25-35.

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 25-35.
<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) Facility 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

21.51 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 25-35. 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 25-35. 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

21.52 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

21.53 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 nodes, the inventory parameters are retrieved by using RTRV-INV command with the BP AID. Because there is more that one shelf, the SHELFID is specified in the BP AID.

Usage Guidelines None

Category System

Security Retrieve

Input Format RTRV-INV:[<TID>]:<AID>:<CTAG>[::::];

Input Example RTRV-INV:OCCIDENTAL:SLOT-15:301;

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-33 or ALL.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>,<AIDTYPE>::[PLUGTYPE=<PLUGTYPE>],[PN=<PN>],[HWREV=<HWREV>],
 [FWREV=<FWREV>],[SN=<SN>],[CLEI=<CLEI>],[TWL=<TWL>],
[PLUGINVENDORID=<PLUGINVENDORID>],[PLUGINPN=<PLUGINPN>],
[PLUGINHWREV=<PLUGINWREV>],  [PLUGINFWREV=<PLUGINFWREV>],
[PLUGINSN=<PLUGINSN>],[ILOSSREF=<ILOSSREF>],[PID=<PID>],[VID=<VID>],
[FPGA=<FPGA>],[MODULETYPE=<MODULETYPE>]";
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   “SLOT-15,OC3-IR-4::PLUGTYPE=SX-IR-SW-SN,PN=87-31-00002,HWREV=004K,
FWREV=76-99-00009-004A,SN=013510,CLEI=NOCLEI,TWL1=1546.12,TWL2=1546.92,
TWL3=1547.72,TWL4=1548.51,PLUGINVENDORID=012345,PLUGINPN=ABCDE,
PLUGINHWREV=ABCDE,PLUGINFWREV=01-02-03,PLUGINSN=01234,ILOSSREF=1.0,
PID=CISCO_ONS15454,VID=V01,FPGA=F451,MODULETYPE=101”
;
```

Output Parameters

<AID>	Access identifier from the “25.14 EQPT” section on page 25-33
<AIDTYPE>	Specifies the type of (AID) facility, link or other addressable entity targeted by the message. AIDTYPE is a string.
<PLUGTYPE>	(Optional) Describes the type of plug-in. PLUGTYPE is a string.
<PN>	(Optional) Hardware part number. PN is a string.
<HWREV>	(Optional) Hardware revision. HWREV is a string.
<FWREV>	(Optional) Firmware revision. It is also known as Bootrom revision. FWREV is a string.
<SN>	(Optional) Serial number. SN is a string.
<CLEI>	(Optional) Common language equipment identifier code for the equipment. CLEI is a string.
<TWL1>	(Optional) Tunable wavelength 1.
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 1529.55	Wavelength 1529.55
• 1529.94	Wavelength 1529.94
• 1530	Wavelength 1530
• 1530.33	Wavelength 1530.33
• 1530.73	Wavelength 1530.73
• 1531.12	Wavelength 1531.12
• 1531.51	Wavelength 1531.51
• 1531.90	Wavelength 1531.90

• 1532.29	Wavelength 1532.29
• 1532.68	Wavelength 1532.68
• 1533.07	Wavelength 1533.07
• 1533.47	Wavelength 1533.47
• 1533.86	Wavelength 1533.86
• 1534.25	Wavelength 1534.25
• 1534.64	Wavelength 1534.64
• 1535.04	Wavelength 1535.04
• 1535.43	Wavelength 1535.43
• 1535.82	Wavelength 1535.82
• 1536.22	Wavelength 1536.22
• 1536.61	Wavelength 1536.61
• 1537	Wavelength 1537
• 1537.40	Wavelength 1537.40
• 1537.79	Wavelength 1537.79
• 1538.19	Wavelength 1538.19
• 1538.58	Wavelength 1538.58
• 1538.98	Wavelength 1538.98
• 1539.37	Wavelength 1539.37
• 1539.77	Wavelength 1539.77
• 1540.16	Wavelength 1540.16
• 1540.56	Wavelength 1540.56
• 1540.95	Wavelength 1540.95
• 1541.35	Wavelength 1541.35
• 1541.75	Wavelength 1541.75
• 1542.14	Wavelength 1542.14
• 1542.35	Wavelength 1542.35
• 1542.54	Wavelength 1542.54
• 1542.94	Wavelength 1542.94
• 1543.33	Wavelength 1543.33
• 1543.73	Wavelength 1543.73
• 1544.13	Wavelength 1544.13
• 1544.53	Wavelength 1544.53
• 1544.92	Wavelength 1544.92
• 1545.32	Wavelength 1545.32
• 1545.72	Wavelength 1545.72
• 1546.12	Wavelength 1546.12
• 1546.52	Wavelength 1546.52
• 1546.92	Wavelength 1546.92
• 1547.32	Wavelength 1547.32
• 1547.72	Wavelength 1547.72

• 1548.12	Wavelength 1548.12
• 1548.51	Wavelength 1548.51
• 1548.92	Wavelength 1548.92
• 1549.32	Wavelength 1549.32
• 1549.71	Wavelength 1549.71
• 1550	Wavelength 1500
• 1550.12	Wavelength 1550.12
• 1550.52	Wavelength 1550.52
• 1550.92	Wavelength 1550.92
• 1551.32	Wavelength 1551.32
• 1551.72	Wavelength 1551.72
• 1552.12	Wavelength 1552.12
• 1552.52	Wavelength 1552.52
• 1552.93	Wavelength 1552.93
• 1553.33	Wavelength 1553.33
• 1553.73	Wavelength 1553.73
• 1554.13	Wavelength 1554.13
• 1554.13	Wavelength 1554.13
• 1554.94	Wavelength 1554.94
• 1555.34	Wavelength 1555.34
• 1555.75	Wavelength 1555.75
• 1556.15	Wavelength 1556.15
• 1556.55	Wavelength 1556.55
• 1556.96	Wavelength 1556.96
• 1557.36	Wavelength 1557.36
• 1557.77	Wavelength 1557.77
• 1558.17	Wavelength 1558.17
• 1558.58	Wavelength 1558.58
• 1558.98	Wavelength 1558.98
• 1559.39	Wavelength 1559.39
• 1559.79	Wavelength 1559.79
• 1560.20	Wavelength 1560.20
• 1560.61	Wavelength 1560.61
• 1561.01	Wavelength 1561.01
• 1561.42	Wavelength 1561.42
• 1561.83	Wavelength 1561.83
• 1570	Wavelength 1570
• 1570.83	Wavelength 1570.83
• 1571.24	Wavelength 1571.24
• 1571.65	Wavelength 1571.65
• 1572.06	Wavelength 1572.06

• 1572.48	Wavelength 1572.48
• 1572.89	Wavelength 1572.89
• 1573.30	Wavelength 1573.30
• 1573.71	Wavelength 1573.71
• 1574.13	Wavelength 1574.13
• 1574.54	Wavelength 1574.54
• 1574.95	Wavelength 1574.95
• 1575.37	Wavelength 1575.37
• 1575.78	Wavelength 1575.78
• 1576.20	Wavelength 1576.20
• 1576.61	Wavelength 1576.61
• 1577.03	Wavelength 1577.03
• 1577.44	Wavelength 1577.44
• 1577.86	Wavelength 1577.86
• 1578.27	Wavelength 1578.27
• 1578.69	Wavelength 1578.69
• 1579.10	Wavelength 1579.10
• 1579.52	Wavelength 1579.52
• 1579.93	Wavelength 1579.93
• 1580.35	Wavelength 1580.35
• 1580.77	Wavelength 1580.77
• 1581.18	Wavelength 1581.18
• 1581.60	Wavelength 1581.60
• 1582.02	Wavelength 1582.02
• 1582.44	Wavelength 1582.44
• 1582.85	Wavelength 1582.85
• 1583.27	Wavelength 1583.27
• 1583.69	Wavelength 1583.69
• 1584.11	Wavelength 1584.11
• 1584.53	Wavelength 1584.53
• 1584.95	Wavelength 1584.95
• 1585.36	Wavelength 1585.36
• 1585.78	Wavelength 1585.78
• 1586.20	Wavelength 1586.20
• 1586.62	Wavelength 1586.62
• 1587.04	Wavelength 1587.04
• 1587.46	Wavelength 1587.46
• 1587.88	Wavelength 1587.88
• 1588.30	Wavelength 1588.30
• 1588.73	Wavelength 1588.73
• 1589.15	Wavelength 1589.15

• 1589.57	Wavelength 1589.57
• 1589.99	Wavelength 1589.99
• 1590	Wavelength 1590
• 1590.41	Wavelength 1590.41
• 1590.83	Wavelength 1590.83
• 1591.26	Wavelength 1591.26
• 1591.68	Wavelength 1591.68
• 1592.10	Wavelength 1592.10
• 1592.52	Wavelength 1592.52
• 1592.95	Wavelength 1592.95
• 1593.37	Wavelength 1593.37
• 1593.79	Wavelength 1593.79
• 1594.22	Wavelength 1594.22
• 1594.64	Wavelength 1594.64
• 1595.06	Wavelength 1595.06
• 1595.49	Wavelength 1595.49
• 1596.34	Wavelength 1596.34
• 1596.76	Wavelength 1596.76
• 1597.19	Wavelength 1597.19
• 1597.62	Wavelength 1597.62
• 1598.04	Wavelength 1598.04
• 1598.47	Wavelength 1598.47
• 1598.89	Wavelength 1598.89
• 1599.32	Wavelength 1599.32
• 1599.75	Wavelength 1599.75
• 1600.06	Wavelength 1600.06
• 1601.03	Wavelength 1601.03
• 1601.46	Wavelength 1601.46
• 1601.88	Wavelength 1601.88
• 1602.31	Wavelength 1602.31
• 1602.74	Wavelength 1602.74
• 1603.17	Wavelength 1603.17
• 1603.60	Wavelength 1603.60
• 1604.03	Wavelength 1604.03
• 1610	Wavelength 1610
• USE-TWL1	Use Tunable Wavelength 1
<PLUGINVENDORID>	(Optional) Plugin vendor ID. Integer.
<PLUGINPN>	(Optional) Third-party plug-in module HW part number. Applicable only to optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexer and demultiplexer cards, and OADM cards. PLUGINPN is a string.

<PLUGINHWREV>	(Optional) Third-party plug-in module hardware revision. Applicable only to optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexer and demultiplexer cards, and OADM cards. PLUGINHWREV is a string.
<PLUGINFWREV>	(Optional) Third-party plug-in module firmware. Applicable only to optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexer and demultiplexer cards, and OADM cards. PLUGINFWREV is a string.
<PLUGINSN>	(Optional) Third-party plug-in module serial number. Applicable only to optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexer and demultiplexer cards, and OADM cards. PLUGINSW is a string.
<ILOSSREF>	(Optional) The insertion loss reference calculated by the unit as worst insertion loss of all the unit. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes
<PID>	(Optional) Product ID of the module. PID is a string.
<VID>	(Optional) Vendor ID. VID is a string.
<FPGA>	(Optional) FPGA version. FPGA is a string.
<MODULETYPE>	(Optional) Describes the type of embedded plugin module. String.

Note If the SFP contains manufacturing information or data that is not compliant with Telcordia GR-831 (Appendix A), the system automatically adds quotes (\"\") around the invalid characters in the TL1 response. TL1 is Telcordia GR-831 compliant after Software Release 7.0.4.

21.54 RTRV-L2-ETH

(Cisco ONS 15454) The Retrieve Layer 2 Ethernet (RTRV-L2-ETH) command retrieves the Layer 2 port information of the Ethernet card.

Usage Guidelines None

Category Ethernet

Security Retrieve

Input Format RTRV-L2-ETH:[<TID>]:<AID>:<CTAG>[:::];

Input Example

RTRV-L2-ETH:PETALUMA:FAC-1-1:CTAG;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "25.15 FACILITY" section on page 25-35.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[NIMODE=<TYPE>],[MACLEARNING=<MACLEARNING>],[
INGRESSCOS=<INGRESSCOS>],[ETHERCETYPE=<ETHERCETYPE>],
[ETHERSTYPE=<ETHERSTYPE>],[ALWMACADDR=<ALWMACADDR>],
[INHMACADDR=<INHMACADDR>],[BPDU=<BPDU>],[ACTBRIDGESTATE=<ACTBRIDGESTATE>],[BRIDGESTATE=<BRIDGESTATE>],[QNQMODE=<QNQMODE>],
[TRNSPSVLAN=<TRNSPSVLAN>],[NAME=<NAME>]:[<PST>[,<SST>]]
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"ETH-1-1-1::NIMODE=NNI,MACLEARNING=Y,INGRESSCOS=8,ETHERCETYPE=8100,
ETHERSTYPE=8100,ALWMACADDR=aa-bb-cc-dd-ee-ff&zz-yy-ww-tt-ss-rr,,BPDU=Y,
BRIDGESTATE=DISABLED,,QNQMODE=TRANSPARENT,TRNSPSVLAN=4096,
NAME="Ethernet":OOS-AU,AINS"
;

Output Parameters

<ETHERNET>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "25.15 FACILITY" section on page 25-35.
<NIMODE>	Identifies the Ethernet network interface mode.
• NNI	(Default) Network-network interface mode
• UNI	User-network interface mode
<MACLEARNING>	MAC address learning mode. This activates MAC address learning on the interface to avoid packet broadcasting.
• Y	Enables MAC learning
• N	Disable MAC learning
<INGRESSCOS>	Identifies the CoS value set in the service provider VLAN (S-VLAN) tag.
<ETHERCETYPE>	Identifies a customer specific Ethernet type. If the customer uses a non-standard Ethernet type, the incoming packets will be accepted only if the customer VLAN (CE-VLAN) Ethernet type matches this parameter.
<ETHERSTYPE>	Identifies a customer specific Ethernet type. If the customer uses a non-standard Ethernet type, the incoming packets will be accepted only if the CE-VLAN Ethernet type matches this parameter.

<ALWMACADDR>	Identifies the allowed MAC addresses filtered out by the L2 Ethernet port. Every single MAC address is in the format of aa-bb-cc-dd-ee-ff, where every digit is in a hexadecimal form.
<INHMACADDR>	Identifies the inhibited MAC addresses filtered out by the L2 Ethernet port. Every single MAC address is in the format of aa-bb-cc-dd-ee-ff, where every digit is in a hexadecimal form.
<BPDU>	Bridge Protocol Data Unit (BPDU) management mode; Drop/Passthrough BPDU tagged packets.
• Y	Enables the BPDU tag.
• N	Disables the BPDU tag.
<BRIDGESTATE>	Defines if the traffic is blocked on the port.
• UNKNOWN	Unknown state
• DISABLED	Disabled state
• BLOCKING	Blocking state
• LISTENING	Listening state
• LEARNING	Learning state
• FORWARDING	Forwarding state
• BROKEN	Broken state
<ACTBRIDGESTATE>	Defines if the traffic is blocked on the port.
• UNKNOWN	Unknown state
• DISABLED	Disabled state
• BLOCKING	Blocking state
• LISTENING	Listening state
• LEARNING	Learning state
• FORWARDING	Forwarding state
• BROKEN	Broken state
<QNQMODE>	This is used to represent the IEEE 802.1Q tunneling (QinQ) mode operations.
• SELECTIVE	The S-VLAN tag is added only on specified CE-VLANs. The other packets are dropped.
• TRANSPARENT	The S-VLAN tag is always added where all packets having the S-VLAN-ID identified by the TRNSPSVLAN parameter are allowed.
<TRNSPSVLAN>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<NAME>	(Optional) Facility name. NAME is a string.

<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

21.55 RTRV-LMP

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Link Management Protocol (RTRV-LMP) command retrieves the global LMP protocol attributes.

Usage Guidelines This command is only available on platforms that support the LMP protocol.

Category LMP

Security Provisioning

Input Format RTRV-LMP:[<TID>]::<CTAG>;

Input Example RTRV-LMP:PETALUMA::704;

Input Parameters None.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "::ENABLE=<ENABLE>,[WDM=<WDM>],[ROLE=<ROLE>],[NODEID=<NODEID>],
[OPSTATE=<OPSTATE>]"
;
```

Output Example

```
  TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "::ENABLE=Y,WDM=Y,ROLE=PEER,NODEID=198.133.219.25,OPSTATE=UP"
;
```

Output Parameters

<ENABLE>	LMP protocol status
• Y	Protocol is enabled.
• N	Protocol is disabled.
<WDM>	Determines if the LMP WDM extensions are in effect.
• Y	The LMP WDM extensions are in effect.
• N	The LMP WDM extensions are not in effect.
<ROLE>	The role the LMP protocol is configured to play.
• OLS	The LMP protocol is configured to respond as a Optical Line System.
• PEER	The LMP protocol is configured to respond as a peer node.
<NODEID>	LMP Node ID. NODEID is a stable IP address that is always reachable if there is any connectivity to it. The default LMP node ID value is the IP address of the node.
<OPSTATE>	Indicates the operational status of the LMP protocol stack.
• UP	LMP protocol is active.
• DOWN	LMP protocol is not active.

21.56 RTRV-LMP-CTRL

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Link Management Protocol Control Channel (RTRV-LMP-CTRL) command retrieves the attributes of an LMP control channel.

Usage Guidelines This command is only available on platforms that support the LMP protocol.

Category LMP

Security

Provisioning

Input Format

RTRV-LMP-CTRL:[<TID>]:<SRC>:<CTAG>;

Input Example

RTRV-LMP-CTRL:PETALUMA:CC-123:704;

Input Parameters

<SRC>	The LMP control channel AID.
• CTRL-ALL	Specifies all the control channels.
• CTRL-{1-4}	Specifies an individual control channel.

Output Format

```
  SID DATE TIME
M  CTAG COMPLD
"<AID>::REMOTEID=<REMOTEID>,LOCALPORT=<LOCALPORT>,REMOTEIP=<REMOTEIP>,
[HELLO=<HELLO>],[HELLOMIN=<HELLOMIN>],[HELLOMAX=<HELLOMAX>],
[DEAD=<DEAD>],[DEADMIN=<DEADMIN>],[DEADMAX=<DEADMAX>],
[OPSTATE=<OPSTATE>]:[<PST>[,<SST>]]
;
```

Output Example

```
  TID-000 1998-06-20 14:30:0
M  001 COMPLD
  "CTRL-2::REMOTEID=15.15.15.115,LOCALPORT=FAC-1-1-1,REMOTEIP=126.0.0.1,HELLO=50,
HELLOMIN=300,HELLOMAX=5000,DEAD=12000,DEADMIN=2000,DEADMAX=20000,
OPSTATE=UP:OOS,DSBLD"
;
```

Output Parameters

<REMOTEID>	Distinguishes the LMP control channel messages that are using the same local port to send messages.
<LOCALPORT>	The pathway that the LMP control channel will use to send and receive messages.
<REMOTEIP>	Remote IP address with which the LMP control channel sends and receives messages.
<HELLO>	The time interval within which the LMP protocol sends HELLO messages.
<HELLOMIN>	Minimum hello time the LMP control channels can send out HELLO messages to the remote node.
<HELLOMAX>	The maximum amount of time the LMP control channel can wait between HELLO messages.
<DEAD>	Time interval an LMP control channel will wait for a HELLO message from the remote side before listing the control channel as down.
<DEADMIN>	The minimum amount of time that an LMP control channel can wait before listing the control channel status as down.

<DEADMAX>	The maximum amount of time that an LMP control channel can wait before listing the control channel status as down.
<OPSTATE>	Indicates the operational status of the LMP protocol stack.
• UP	The control channel is communicating with its counterpart on the remote node.
• DOWN	The control channel is not communicating with its counterpart on the remote node.
• GOING DOWN	The LMP stack sets the ControlChannelDown bit in all the messages it sends. This is mainly because of administrative action.
• GOING UP	The control channel is in the process of transitioning to the UP state.
• CFG-SND	The control channel is in the parameter negotiation state. In this state, the node periodically sends a Config message, and is expecting the other side to reply with either a ConfigAck or ConfigNack message. The control channel Finite State Machine (FSM) does not transition into the ACTIVE state until the remote side positively acknowledges the parameters.
• CFG-RCV	The control channel is in the parameter negotiation state. In this state, the node is waiting for acceptable configuration parameters from the remote side. After these parameters are received and acknowledged, the FSM can transition to the ACTIVE state response.
• ACTIVE	In this state, the node periodically sends a Hello message and is waiting to receive a valid Hello message. After a valid Hello message is received, it can transition to the UP state.
• ACT-FAILED	Activation of the control channel failed.
• UNKNOWN	Unknown or unexpected state.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In Service
• OOS	Out of Service
<SST>	Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.57 RTRV-LMP-TLINK

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Link Management Protocol (RTRV-LMP-TLINK) command retrieves the attributes of an LMP Traffic Engineering (TE) link.

Usage Guidelines

This command is limited to nodes where the LMP protocol is supported and has been enabled.

Category

LMP

Security

Provisioning

Input Format

RTRV-LMP-TLINK:[<TID>]:<SRC>:<CTAG>;

Input Example

RTRV-LMP-TLINK:PETALUMA:TLINK-123:704;

Input Parameters

<SRC>	LMP TE link AID values.
• TLINK-ALL	Specifies all the TE links.
• TLINK-{1-256}	Specifies an individual TE link.

Output Format

SID DATE TIME
M CTAG COMPLD
"<SRC>::[REMOTEID=<REMOTEID>],[DWDM=<DWDM>],[REMOTETE=<REMOTETE>],
[MUXCAP=<MUXCAP>],[OPSTATE=<OPSTATE>]:[<PST>[,<SST>]]"
;

Output Example

TID-000 1998-06-20 14:30:0
M CTAG COMPLD
"TLINK-2::REMOTEID=15.15.15.115,DWDM=Y,REMOTETE=3,MUXCAP=LAMBDA,
OPSTATE=UP:IS"
;

Output Parameters

<SRC>	LMP TE link AID values.
• TLINK-ALL	Specifies all the TE links.
• TLINK-{1-256}	Specifies an individual TE link.
<REMOTEID>	Remote node ID associated with the LMP TE link.
<DWDM>	Indicates whether or not the LMP TE link supports DWDM.

• Y	The LMP TE link supports DWDM.
• N	The LMP TE link does not support DWDM.
<REMOTETE>	Remote ID used by the far-end LMP TE link.
<MUXCAP>	The muxponder capability of the LMP TE link.
• PKTSWITCH1	Packet Switching 1
• PKTSWITCH2	Packet Switching 2
• PKTSWITCH3	Packet Switching 3
• PKTSWITCH4	Packet Switching 4
• LAYER2	Layer 2 switching
• TDM	Time-division multiplexing (TDM) switching
• LAMBDA	Lambda switching
• FIBER	Fiber switching
<OPSTATE>	Indicates the operational status of a TE link.
• DEGRADED	In this state, all LMP control channels are down, but the TE link still includes some data links that are allocated to user traffic.
• INIT	Data links have been allocated to the TE link, but the configuration has not yet been synchronized with the LMP neighbor. A LinkSummary message is periodically transmitted to the LMP neighbor.
• UP	The TE link is communicating with its counterpart on the remote node.
• DOWN	The TE link is not communicating with its counterpart on the remote node.
• UNKNOWN	Unknown or unexpected state.
<PST>	Primary state. This parameter indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. This parameter provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.58 RTRV-LMP-DLINK

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Link Management Protocol (RTRV-LMP-DLINK) command retrieves the attributes of an LMP data link.

Usage Guidelines

This command is only applicable on a node where the LMP protocol is supported and enabled.

Category

LMP

Security

Provisioning

Input Format

RTRVD-LMP-DLINK:[<TID>]:<SRC>:<CTAG>;

Input Example

RTRV-LMP-DLINK:PETALUMA:FAC-14-1-1:704;

Input Parameters

<SRC>	Access identifier from the "25.15 FACILITY" section on page 25-35.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
"<AID>::[LINKTYPE=<LINKTYPE>],[REMOTEID=<REMOTEID>],[TELINK=<TELINK>],
[OPSTATE=<OPSTATE>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "FAC-14-1-1::LINKTYPE=PORT,REMOTEID=45,TELINK=TLINK-4,OPSTATE=UP-ALLOC"
;
```

Output Parameters

<SRC>	Access identifier from the "25.15 FACILITY" section on page 25-35.
<LINKTYPE>	The type of LMP data link.
• PORT	Port data link.
• COMPONENT	Component data link.
<REMOTEID>	The remote LMP data link ID.
<TELINK>	Used to map LMP data links to LMP TE links.
<OPSTATE>	Indicates the operational status of an LMP data link.
• TESTING	The data link is being tested. An LMP test message is periodically sent through the link.
• DOWN	The data link is not communicating with its counterpart on the remote node.

• UP-ALLOC	The link is up and has been allocated for data traffic.
• UP-FREE	The link has been successfully tested and is now put in the pool of resources (in-service). The link has not yet been allocated to data traffic.

21.59 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>]:<PSTPSTQ>,[<SST>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "BAND-6-1-TX,BAND-13-1-RX::OLNKT=HITLESS,CTYPE=PROV,
RDIRN=W_E, BAND=1530.32-1532.68,WLEN=1530.32:OOS-AU,AINS"
;
```

Output Parameters

<FROM>	Access identifier from the "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 the unit.
<WLEN>	(Optional) Optical wavelength for this optical link. WLEN is present only when there is a link between two OCH entities. The parameter type is OPTICAL_WLEN (optical wavelength).
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 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 SST and PSTQ.
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SST>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.60 RTRV-LNKTERM

(Cisco ONS 15454, 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 25-42.

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 25-42.
<PORT>	Access identifier from the "25.2 AidUnionId" section on page 25-12.
<REMOTENODE>	(Optional) Remote node. REMOTENODE is a string.
<REMOTELNKTERMID>	(Optional) Remote link term ID. REMOTELNKTERMID is a string.

21.61 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.

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 15310-CL, ONS 15310-MA, 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, NA conditions, and NR conditions. See Chapter 26, "Conditions" for a list of conditions.
<OCRTIME>	(Optional) Time when the specific event or violation occurred, HH-MM-SS. Time when alarm was triggered.
<OCRDAT>	(Optional) Date when the specific event or violation occurred, MM-DD. Date when alarm was triggered.
<ALMDESCR>	Alarm description. ALMDESCR is a string.

21.62 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
• ONS15454	ONS 15454

• ONS15600	ONS 15600
• UNKNOWN	Unknown product type

21.63 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 25-20. 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 25-20.
<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.
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• ISC3PEER1G	1 Gbps ISC3 peer
• ISC3PEER2G	2 Gbps ISC3 peer
• ISC3PEER2R	1 Gbps ISC1, ISC2, and ISC3 compatibility
• ISCCOMPAT	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• 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.
<MODIFTM>	(Optional) The last time when the APC application modified this port. The format of MODIFTM is HH-MM, where HH (hour of day) ranges from 0 to 23 and MM (minute of hour) ranges from 0 to 59.
<CHECKDAT>	(Optional) The last date when the APC application controlled and validated this port. The format of CHECKDAT is MM-DD, where MM (month of year) ranges from 1 to 12 and DD (day of month) ranges from 1 to 31.
<CHECKTM>	(Optional) The last time when the APC application controlled and validated this port. The format of CHECKTM is HH-MM, where HH (hour of day) ranges from 0 to 23 and MM (minute of hour) ranges from 0 to 59.

21.64 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>],
   [PROXYSRV=<PROXYSRV>],[FIREWALL=<FIREWALL>],[AUTOPM=<AUTOPM>],
   [SERIALPORTECHO=<SERIALPORTECHO>"
;
```

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,PROXYSRV=N,FIREWALL=N,AUTOPM=NO,SERIALPORTECHO=Y"
;
```

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) Facility name. NAME is a string.
<SWVER>	(Optional) Software version. SWVER is a string.
<LOAD>	(Optional) Load. LOAD is a string.
<PROTSWVER>	(Optional) Protect software version. PROTSWVER is a string.
<PROTLOAD>	(Optional) Protect load. PROTLOAD is a string.
<DEFDESC>	(Optional) Provides a default description for the NE. DEFDESC is a string.

<PLATFORM>	(Optional) Platform. PLATFORM is a string.
<SECUMODE>	(Optional) Security mode of the NE. The parameter type is NE_SECURE_MODE, which is the security mode of the NE.
• 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
<PROXYSRV>	(Optional) Indicates if the proxy server is enabled or disabled.
• Y	Proxy server is enabled.
• N	Proxy server is disabled.
<FIREWALL>	(Optional) Indicates if the firewall is enabled or disabled.
• Y	Firewall is enabled.
• N	Firewall is disabled.
<AUTOPM>	(Optional) AUTOPM is a flag to indicate if autonomous PM reporting to TL1 clients is enabled or disabled.
• Y	Auto PM reporting is enabled.
• N	Auto PM reporting is disabled.
<SERIALPORTECHO>	(Optional) Indicates if the echo is turned on for TL1 serial port sessions.
• Y	Echo is turned on.
• N	Echo is turned off.

21.65 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 25-35. 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 25-35. Port of an NE carrying the DCC connection.
<IPADDR>	Node IP address. IPADDR is a string.
<NODENAME>	Network element name. NODENAME is a string.

21.66 RTRV-NE-PATH

(Cisco ONS 15454, ONS 15310-CL, and 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.

21.67 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;

Input Parameters

<AID>	The node or shelf access identifier from the "25.24 SHELF" section on page 25-44. If omitted it addresses the node or first shelf of the node.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "[<AID>]::[TMMD=<TMMD>],[SSMGEN=<SSMGEN>],[QRES=<QRES>],
   [RVRTV=<RVRTV>],[RVTM=<RVTM>],[SYSTMN=<SYSTMN>]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "SHELF-2::TMMD=LINE,SSMGEN=GEN1,QRES=ABOVE-G811,RVRTV=Y,RVTM=8.0,
SYSTMN=SONET"
;
```

Output Parameters

<AID>	The node or shelf access identifier from the "25.24 SHELF" section on page 25-44. 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 protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<SYSTMN>	(ONS 15454 only) Identifies the system timing standard used by the node.
• SONET	SONET timing standard
• SDH	SDH timing standard

21.68 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 payload
• 10GFICON	10-Gigabit fiber connectivity payload
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 1GISC3	1-Gigabit ISC3 compatible
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 2GISC3	2-Gigabit ISC3 compatible
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• D1VIDEO	D1 video
• DS1	DS1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETR_CLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over POS. Virtual ports partitioned using GFP's multiplexing capability.
• GIGE	Gigabit Ethernet
• HDTV	HDTV
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility

• OC3	OC-3 facility
• OC12	OC-12 facility
• OC48	OC-48 facility
• OC192	OC-192 facility
• OCH	Optical Channel
• OCHCC	OCH client connection
• OCHNC	OCH network connection
• OCHTERM	OCH termination
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• 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.

21.69 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
• ONS15454	ONS 15454
• 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.

21.70 RTRV-NNI-ETH

(Cisco ONS 15454) The Retrieve Network-to-Network Interface Ethernet (RTRV-NNI-ETH) command retrieves the NNI selective S-VLAN-ID table associated to an L2 Ethernet port.

Usage Guidelines

This command accepts the ALL AID.

Category

Ethernet

Security

Retrieve

Input Format

RTRV-NNI-ETH:[<TID>]:<AID>:<CTAG>::[<SVLANID>][::];

Input Example

RTRV-NNI-ETH:TID:ETH-1-1-1:CTAG::110;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "25.15 FACILITY" section on page 25-35.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:<S_VLAN_ID>[::]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001 COMPLD
   "ETH-1-1-1:110::"
;
```

Output Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "25.15 FACILITY" section on page 25-35.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

21.71 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 25-20.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:,,[<ROLE>],[<STATUS>]:[EXPWLEN=<EXPWLEN>],[LOSSB=<LOSSB>],
[NAME=<PORTNAME>],[GCC=<GCC>],[GCCRATE=<GCCRATE>],[DWRAP=<DWRAP>],
[FEC=<FEC>],[PAYLOADMAP=<PAYLOADMAP>],[OSFBER=<OSFBER>],
[OSDBER=<OSDBER>],[SOAK=<SOAK>],[SOAKLEFT=<SOAKLEFT>],[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:EXPWLEN=1530.33,LOSSB=DWDM,NAME="NYPORT",GCC=Y,GCC
RATE=192K,DWRAP=Y,FEC=STD,PAYLOADMAP=ASYNCH,OSFBER=1E-4,OSDBER=1E-5,
SOAK=52,SOAKLEFT=12-25,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 25-20.
<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.
<EXPWLEN>	(Optional) Optical wavelength for this port. Applicable only to the following types of cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexer and demultiplexer cards, and optical add/drop multiplexing (OADM) cards. The parameter type is OPTICAL_WLEN, which is the optical wavelength.
• 1310	Wavelength 1310
• 1470	Wavelength 1470
• 1490	Wavelength 1490
• 1510	Wavelength 1510
• 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
<PORTNAME>	(Optional) Port name. PORTNAME is a string.
<GCC>	Identifies the generic communication channel (GCC) connection of the port.
• Y	GCC can be utilized.
• N	GCC cannot be utilized.
<GCCRATE>	(Optional) The data rate of the GCC traffic. The default is 192 Kbps. For MXP_2.5G_10G and TXP_MR_10G cards, this applies only to the DWDM port. The parameter type is GCCRATE, which is the data rate of the GCC traffic.
• 192K	192 Kbps
• 576K	576 Kbps

<DWRAP>	(Optional) The ITU-T G.709 monitoring digital wrapper. It is either on or off. The system default is ON. For MXP_2.5G_10G and TXP_MR_10G cards, this applies only to the DWDM port. The parameter type is ON_OFF (disable or enable an attribute). To enable ITU-T G.709 monitoring, there should be no GCC on the DWDM port and the payload (in which the card is configured) should not be UNFRAMED. To disable ITU-T G.709 monitoring, there should be no GCC on the DWDM port, the FEC should be turned to off, there should be no overhead circuit created on the DWDM port, and none of the client ports on the card should be part of a Y-cable protection group (muxponder only).
• N	Disable an attribute.
• Y	Enable an attribute.
<FEC>	(Optional) Forward error correction. It can be enabled only if ITU-T G.709 monitoring is turned ON. It is either off or enabled in standard or enhanced mode. The system default is standard FEC enabled. The FEC level PM and thresholds apply if the FEC is turned ON. The parameter type is FEC_MODE, which specifies the type of forward error correction.
• ENH	Enhanced FEC is enabled.
• OFF	FEC is disabled.
• STD	Standard FEC is enabled.
<PAYLOADMAP>	(Optional) The type of payload mapping. It can be enabled only if ITU-T G.709 monitoring is turned ON and FEC is enabled. The parameter type is PAYLOAD_MAPPING, which is the payload mapping mode.
• ASYNCH	Asynchronous mapping mode
• ODU	ODU multiplex structure mode
• SYNCH	Synchronous mapping mode
<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>	OTN SDBER. Can only be provisioned on the working port. 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.
<SOAK>	(Optional) Locked-AutomaticInService to Unlocked transition soak time as measured in 15-minute intervals. A value of 4 equals a soak time of 1 hour. The allowable range is 0 to 192 intervals (maximum of 48 hours). SOAK is an integer.

<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.
<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 PST and PSTQ.
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.72 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 25-35.

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 25-20.
<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-Gigabit Fibre Channel payload
• 10GFICON	10-Gigabit fiber connectivity payload
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 1GISC3	1-Gigabit ISC3 compatible
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 2GISC3	2-Gigabit ISC3 compatible
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• D1VIDEO	D1Video payload
• DV6000	DV6000 payload
• EC1	EC1 payload
• ESCON	ESCON payload
• ETRCLO	ETRCLO payload
• GIGE	1 G Ethernet payload
• HDTV	HDTV payload

• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• 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 PST and PSTQ.
• Unlocked-Enabled	In service and normal
• Unlocked-Disabled	Out of service and autonomous
• Locked-Disabled	Out of service, autonomous and management
• Locked-Enabled	Out of service and management

21.73 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 25-20.

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 25-20. In 2-way wavelength connection sources both directions need to be indicated.
<DST>	Destination access identifier from the "25.18 LINEWL" section on page 25-40. 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 PST and PSTQ.
• Unlocked-Enabled	In service and normal
• Unlocked-Disabled	Out of service and autonomous
• Locked-Disabled	Out of service, autonomous and management
• Locked-Enabled	Out of service and management

21.74 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 25-17.

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 25-20.
<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) Facility name. NAME is a string.
<PST_PSTQ>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by the primary state (PST) and a primary state qualifier (PSTQ).
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.75 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 25-43.

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 25-43.
<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.

21.76 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 25-39.

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 25-39.
<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	Identifies the COM channels (without OSC) that continue the signal to the next card.
• OUT-DC	Output DCU port.
• OUT-EXP	Identifies the express channel that continues the signal to the next card.
• OUT-LINE	Identifies all the channels that continue the signal to the next card.
• OUT-OSC	Identifies the OSC channel that continues 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 PST and PSTQ.
• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.77 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 that are all associated to the same wavelength.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-PATH-OCH:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-PATH-OCH:PENNGROVE:CHAN-6-2:236;

Input Parameters

<AID>	Access identifier from the "25.8 CHANNEL" section on page 25-20, "25.18 LINEWL" section on page 25-40, and "25.5 BANDWL" section on page 25-18.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[WLEN=<WLEN>],[PATH=<PATH>]:"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"CHAN-6-2::WLEN=1530.33,PATH=LINEWL-1-3-RX-1530.33&LINEWL-1-1-TX-1530.33&LINEWL-3-1-RX-1530.33&CHAN-3-1-TX&CHAN-6-2:"
;

Output Parameters

<AID>	Access identifier from the "25.8 CHANNEL" section on page 25-20, "25.18 LINEWL" section on page 25-40, and "25.5 BANDWL" section on page 25-18.
<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 25-20 or the "25.18 LINEWL" section on page 25-40.

21.78 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, ETH, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, 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.
- 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.
<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
• dot3StatsFCSErrors	A count of frames received on a particular interface that are an integral number of octets in length but do not pass the FCS check.
• dot3StatsFrameTooLong	A count of frames received on a particular interface that exceed the maximum permitted frame size.
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address

• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High-Order Path Negative Pointer Justification Count, Path Detected
• HP-NPJC-PGEN	High-Order Path, Negative Pointer Justification Count, Path Generated
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count, Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset

• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias Current in microA
• LBCL-MAX	Maximum Laser Bias Current in microA
• LBCL-MIN	Minimum Laser Bias Current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Normalized Laser Bias Current—Higher Threshold
• LBCN-LWT	Normalized Laser Bias Current—Lower Threshold
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order Positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count

• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt
• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt
• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• 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. The parameter type is DIRECTION (transmit and receive directions).
• RCV	Receive direction only.
• TRMT	Transmit direction only.
<TMPER>	Accumulation time period for performance counters. If TMPER is 1-DAY, MONTM is not applicable (null), and is treated as null. A null value defaults to 15-MIN. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24-hours. For SONET PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.

• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.
<DATE>	The beginning date of the PM or storage register period specified in TMPER. The format of DATE is MM-DD, where MM (month of year) ranges from 1 to 12 and DD (day of month) ranges from 1 to 31. A null value defaults to current date.
<TIME>	The beginning time of day of the PM or storage register period specified in TMPER. The format of TIME is HH-MM, where HH (hour of day) ranges from 0 to 23 and MM (minute of hour) ranges from 0 to 59. A null value defaults to current time.

Output Format

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

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "FAC-2-1,DS1-14:CVL,21,COMPL,NEND,RCV,15-MIN,04-11,12-45"
;
```

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 payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm

• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	Gigabit Ethernet port alarm
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• 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
<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
• dot3StatsFCSErrors	A count of frames received on a particular interface that are an integral number of octets in length but do not pass the FCS check.
• dot3StatsFrameTooLong	A count of frames received on a particular interface that exceed the maximum permitted frame size.
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line

• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High-Order Path Negative Pointer Justification Count, Path Detected
• HP-NPJC-PGEN	High-Order Path, Negative Pointer Justification Count, Path Generated
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count seconds, Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors

• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias Current in microA
• LBCL-MAX	Maximum Laser Bias Current in microA
• LBCL-MIN	Minimum Laser Bias Current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Normalized Laser Bias Current—Higher Threshold
• LBCN-LWT	Normalized Laser Bias Current—Lower Threshold
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt
• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt
• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card

• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count

<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.

21.79 RTRV-PM-ALL

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Retrieve Performance Monitoring All (RTRV-PM-ALL) command retrieves the values of all the performance monitoring parameters for the specified AID. When the ALL AID is used, the response will include the PM parameters for all cards and ports in the chassis.

Usage Guidelines

- The format of MONLEV is LEV-DIRN.
- The format of MONDAT is MM-DD, where MM (month of the year) ranges from 1 to 12 and DD (day of the month) ranges from 1 to 31.
- The format for MONTM is HH-MM, where HH (hour of the day) ranges from 0 to 23 and MM (minute of the hour) ranges from 0 to 59.
- If the TMPER is 1-DAY, MONTM is not applicable (null), and is treated as null if MONTM is not null.
- A null value for MONLEV defaults to 1-UP.
- A null value for MONDAT defaults to the current date (MM-DD).
- A null value for MONTM defaults to the current time (HH-MM).
- Unless otherwise stated, DS-1 cards are the only cards that support both the RCV and TRMT directions. All other cards only support the RCV direction.
- After BLSR switching, the working path is switched out, the traffic goes through the protection path, and the IPPM can be retrieved from the protection STS path.
- If there is a STS PCA on the protection path, during the BLSR switching, the PCA path is preemptive; sending this command on the protection path after a BLSR switch, the command returns the PMs from the protection path, not from the PCA path.
- Some MOD2 entities; for example, OCH, CLNT, and Optical (OCn), support negative MONTYPE values. By default, this command defaults to 0–UP (return MONTYPEs where the MONVAL is 0 or higher). To retrieve the negative values, you must issue 0–DN in the MONLEV field. The rules are as follows:
  - Client port only–Laser and SONET PMs are applicable and will appear. If the card payload is in SONET mode, then SONET PMs will appear, provided the MONLEV criteria is met.
  - Trunk port Laser PMs are always available. Laser PMs are only for near end. If ITU-T G.709 is enabled, then the OTN PMs will appear. If ITU-T G.709 and FEC are enabled, then the FEC PMs will appear. If the card payload is in SONET mode, then SONET PMs will appear. All PM MONVALUEs should pass the MONLEV filter criteria.
- For DWDM cards, the MONLEV filter criteria will not support a floating point. It will be returned and interpreted as an integer.
- If the DS-1 mode of the DS3XM-12 card is FDL, the DS-1 path can retrieve FDL/T.403 FEND PM counts up to 32 15-minute intervals in the RTRV-PM-DS1 command.
- BTH is not supported for the direction. A null value for direction should take care of TRMT and RCV.
- RTRV-PM-ALL command can also be used to retrieve the RMON managed PM data.

Category

Performance

Security

Retrieve

Input Format

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

Input Example

RTRV-PM-ALL:TID:FAC-2-1:123::CVL,10-UP,NEND,RCV,15-MIN,04-11,12-45;

Input Parameters

<AID>	The DS1 AID is used access DS1 frame layer of the DS3XM. Format is DS1-[SLOT]-[DS3PORT]-[DS1PORT].
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• CLNT	Client facility
• DS1	DS1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETR_CLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over POS. Virtual ports partitioned using GFP's multiplexing capability.
• GIGE	Gigabit Ethernet
• HDTV	HDTV
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 facility
• OC12	OC12 facility
• OC48	OC48 facility
• OC192	OC192 facility
• OCH	Optical channel
• OCHCC	OCH client connection
• OCHNC	OCH network connection
• OCHTERM	OCH termination
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section

• POS	POS port
• STS1	STS1 path
• STS3C	STS3c path
• STS6C	STS6c path
• STS9C	STS9c path
• STS18C	STS18c path
• STS12C	STS12c path
• STS24C	STS24c path
• STS36C	STS36c path
• STS48C	STS48c path
• STS192C	STS192c path
• T1	T1/DS1 facility/line
• T3	T3/DS1 facility/line
• VT1	VT1 path
• VT2	VT2 path
<MONTYPE>	Monitoring type. A null value defaults to all montypes applicable to the modifier. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• BBE-PM	OTN—Background Block Errors—Path Monitor Point
• BBE-SM	OTN—Background Block Errors—Section Monitor Point
• BBER-PM	OTN—Background Block Error Ratio—Path Monitor Point expressed as one tenth of a percentage
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path
• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point

• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High-Order Path Negative Pointer Justification Count, Path Detected
• HP-NPJC-PGEN	High-Order Path Negative Pointer Justification Count, Path Generated
• HP-OI	High-Order Path, Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count Seconds, Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time

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

• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt
• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt
• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)

• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<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>	The DS1 AID is used access DS1 frame layer of the DS3XM. Format is DS1-[SLOT]-[DS3PORT]-[DS1PORT].
<AIDTYPE>	(Optional) Type of facility, link, or other addressable entity targeted by the message. The parameter type is MOD2B, which is the alarm type.
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm

• DS3I	DS3I alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	Gigabit Ethernet port alarm
• ISC3PEER1G	1-Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• 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
<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, Path Detected
• HP-NPJC-PGEN	High Order Path, Negative Pointer Justification Count, Path Generated
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count Seconds, Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets

• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias Current in microA
• LBCL-MAX	Maximum Laser Bias Current in microA
• LBCL-MIN	Minimum Laser Bias Current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Normalized Laser Bias Current—Higher Threshold
• LBCN-LWT	Normalized Laser Bias Current—Lower Threshold
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt

• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt
• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point

• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<MONVAL>	The value to which the register identified by MONTYPE is to be initialized to or the measured value of a monitored parameter. The value is in the form of numeric counts or rates. MONVAL is a string.
<VLDTY>	(Optional) Indicates whether the information for the specified time period was accumulated over the entire time period or some portion thereof. Validity indicator for the reported PM data. The parameter type is VALIDITY, which is the response validity.
• COMPL	Complete response
• PRTL	Partial response
<LOCN>	(Optional) Location associated with a particular command. The parameter type is LOCATION, which is the location where the action is to take place
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<DIRECTION>	The PM count retrieval direction. The parameter type is DIRECTION, which is the transmit and receive directions.
• BTH	Both transmit and receive directions
• RCV	Receive direction only
• TRMT	Transmit direction only
<TMPER>	(Optional) Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24-hours. For SONET PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.
• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.

<MONDAT>	(Optional) The beginning date of the PM or storage register period specified in TMPER. The format of MONDAT is MM-DD, where MM (month of year) ranges from 1 to 12 and DD (day of month) ranges from 1 to 31. MONDAT is a string.
<MONTM>	(Optional) The beginning time of day of the PM or storage register period specified in TMPER. The format of MONTM is HH-MM, where HH (hour of day) ranges from 0 to 23 and MM (minute of hour) ranges from 0 to 59. MONTM is a string.

21.80 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.
- 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 25-22.
<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 25-22.
<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.

21.81 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

- 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 25-22.
<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 25-26.
<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.

21.82 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, ETH, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, 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.

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 payload
• 10GIGE	10-Gigabit Ethernet
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• D1VIDEO	D1 Video
• DS1	DS1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETR_CLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over POS. Virtual ports partitioned using GFP's multiplexing capability.
• GIGE	Gigabit Ethernet
• HDTV	HDTV
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 facility
• OC12	OC12 facility
• OC48	OC48 facility
• OC192	OC192 facility
• OCH	Optical channel
• OCHCC	OCH client connection
• OCHNC	OCH network connection
• OCHTERM	OCH termination
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• POS	POS port
• STS1	STS1 path
• STS3C	STS3c path

• STS6C	STS6c path
• STS9C	STS9c path
• STS18C	STS18c path
• STS12C	STS12c path
• STS24C	STS24c path
• STS36C	STS36c path
• STS48C	STS48c path
• STS192C	STS192c path
• T1	T1/DS1 facility/line
• T3	T1/DS1 facility/line
• VT1	VT1 path
• VT2	VT2 path
<REPTINVL>	Reporting interval. How often a report is to be generated and sent to the appropriate NE. REPTINVL is a string.
<REPTDAT>	Report date. Date for the next report. REPTDAT is a string.
<REPTTM>	Report time. The time of day for the next PM report. REPTTM is a string. **Note** PM schedule processing is performed every 5 minutes. Therefore, specifying a REPTINVL of 5-MIN or less would be processed at the earliest every 5 minutes.
<NUMINVL>	(Optional) The remaining number of intervals over which the PM will be reported. NUMINVL is an integer.
<LOCN>	Location associated with a particular command. Identifies the location from which the PM mode will be retrieved. The parameter type is LOCATION, which is the location where the action is to take place.
• FEND	Action occurs on the far end of the facility.
• NEND	Action occurs on the near end of the facility.
<TMPER>	(Optional) Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.
• 1-DAY	Performance parameter accumulation interval length; every 24 hours. For SONET PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available.
• 1-HR	Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.
• 1-MIN	Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.
• 15-MIN	Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.

• RAW-DATA	Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.
<TMOFST>	(Optional) Time offset between reporting/diagnostics/exercises; from the end of the last complete accumulation time period to the beginning of the accumulation time period specified by TMPER. TMOFST is a string.
<INHMODE>	(Optional) Indicates whether a function is inhibited by an INH command. Indicates whether the reporting of PM data is inhibited (by the INH-PMREPT-ALL command) or is allowed (by the ALW-PMREPT-ALL command). The parameter type is INH_MODE, which indicates whether the function is inhibited.
• ALW	Function is allowed.
• INH	Function is inhibited.

21.83 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 payload
• 10GIGE	10-Gigabit Ethernet
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• 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 POS. Virtual ports partitioned using GFP's multiplexing capability.
• GIGE	Gigabit Ethernet
• HDTV	HDTV
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC3	OC-3 facility
• OC12	OC-12 facility
• OC48	OC-48 facility
• OC192	OC-192 facility
• OCH	Optical channel
• OCHCC	OCH client connection
• OCHNC	OCH network connection
• OCHTERM	OCH termination

• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• 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.

21.84 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.
- For the ML-Series card, the EDGE, RPRSPAN, JUMBO, ADMINSTATE, ENCAP, and NAME parameters are valid when the card mode is ML-IEEE-RPR. Other parameters, including PST and SST, are not valid in this mode.
- This command is supported for the ASAP card, but ADMINSTATE information will not appear.
- Because the back-end port is virtual, the Virtual Facility (VFAC) AID should be used when issuing the command.

Category

Ports

Security

Retrieve

Input Format

RTRV-POS:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-POS:TID:VFAC-1-1:CTAG;

Input Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-35.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[ADMINSTATE=<ADMINSTATE>],[JUMBO=<MTU>],[ENCAP=<ENCAP>],
[RPRSPAN=<RPRSPAN>],[EDGE=<EDGE>],[NAME=<NAME>]:";
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"VFAC-1-1::ADMINSTATE=DOWN,JUMBO=N,ENCAP=RPR-GFP-F,RPRSPAN=EAST,
EDGE=Y,NAME=\"RPR\":"
;

Output Parameters

<AID>	Access identifier from the "25.15 FACILITY" section on page 25-35.
<ADMINSTATE>	(Optional) Administration type. The parameter type is UP_DOWN (up or down).
• DOWN	Down
• UP	Up
<ENCAP>	Frame encapsulation
• RPR-GFP-F	RPR-over-GFP frame mode
<JUMBO>	Jumbo frame values
• Y	Yes
• N	No
<RPRSPAN>	RPR span values
• EAST	East direction
• WEST	West direction
<EDGE>	RPR edge values
• Y	Yes
• N	No
<NAME>	Port name, facility name, or VCAT group name

21.85 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 25-35.

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 25-35.
<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.

21.86 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 25-35.

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 25-35.
<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.

21.87 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 path protection STS path specified in the AID. Because Telcordia GR-1400 does not allow LOCKOUT_OF_WORKING on the path protection WORKING path/AID, the "AID:LOCKOUT,LOCKOUTOFWK" does not appear in this protection switch retrieval result.

Usage Guidelines

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

Note RTRV-PROTNSW-VT1 accepts STS-1 AID when STS-1 cross connection is made using the DS1 card. This will allow the user to retrieve all the VT1 conditions/alarms that are raised by DS-1 card when STS-1 cross connect is created.

Category

Protection

Security

Retrieve

Input Format

RTRV-PROTNSW-<PATH>:[<TID>]:<SRC>:<CTAG>[::::];

Input Example

RTRV-PROTNSW-STS1:CISCO:STS-5-1-1:123;

Input Parameters

<SRC>	Source access identifier from the "25.10 CrossConnectId" section on page 25-22.

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 25-22.
<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.

21.88 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 25-20.

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 25-20.
<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.

21.89 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.

21.90 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 25-22.
<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.

21.91 RTRV-QNQ-ETH

(Cisco ONS 15454) The Retrieve QinQ Ethernet (RTRV-QNQ-ETH) command retrieves the IEEE 802.1Q tunneling (QinQ) relationship between the CE-VLAN and the S-VLAN for Gigabit Ethernet uniport provisioning associated to an L2 Ethernet port.

Usage Guidelines

None

Category

Ethernet

Security

Retrieve

Input Format

RTRV-QNQ-ETH:[<TID>]:<AID>:<CTAG>::<FIRSTCEVLANID>,<LASTCEVLANID>, <SVLANID>[:];

Input Example

RTRV-QNQ-ETH:PETALUMA:ETH-1-1-1:236::110,110,1208;

Input Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "25.15 FACILITY" section on page 25-35.
<FIRSTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The Access identifier from the "25.15 FACILITY" section on page 25-35. Value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<LASTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>:<FIRSTCEVLANID>,<LASTCEVLANID>,<SVLANID>:RULE=<RULE>[:]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "ETH-1-1-1:110,111,1208:RULE=XLTE:"
;
```

Output Parameters

<AID>	Ethernet AIDs are used to access L2 Ethernet ports. Access identifier from the "25.15 FACILITY" section on page 25-35.
<FIRSTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<LASTCEVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<SVLANID>	VLAN identifier. A VLAN ID is a number between 1 and 4096. The value 0 is reserved for untagged VLANs. This identifier is used for customer VLAN IDs and service provider VLAN IDs.
<RULE>	Used to represent the Rules allowed for VLAN tagging operations. Default is ADD.
• ADD	The S-VLAN tag is added to the CE-VLAN tag.
• XLTE	The S-VLAN tag substitutes the CE-VLAN tag (single Q).

21.92 RTRV-RMONTH-<MOD2_RMON>

(Cisco ONS 15454, ONS 15310-CL, and ONS 15310-MA) The Retrieve Remote Monitoring Threshold for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 4GFC, 4GFICON, FSTE, G1000, ETH, GFPOS, GIGE, ISCCOMPAT, ISC3PEER1G, ISC3PEER2G, OCH, 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 25-35. AID for the facility that the data statistic is managed by.
<MONTYPE>	Monitored type. Type of RMON monitored data statistic. A null value is equivalent to ALL. The parameter type is ALL_MONTYPE, which is the monitoring type list.
• AISSP	Alarm Indication Signal Seconds—Path
• ALL	All possible values
• BBE-PM	OTN—Background Block Errors—Path Monitor Point
• BBE-SM	OTN—Background Block Errors—Section Monitor Point
• BBER-PM	OTN—Background Block Error Ratio—Path Monitor Point expressed as one tenth of a percentage.
• BBER-SM	OTN—Background Block Error Ratio—Section Monitor Point expressed as one tenth of a percentage.
• BIEC	FEC—Bit Errors Corrected
• CGV	8B10B—Code Group Violations
• CSSP	Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations—CP-Bit Path
• CVL	Coding Violations—Line
• CVP	Coding Violations—Path

• CVS	Coding Violations—Section
• CVV	Coding Violations—Section
• DCG	8B10B—Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds—CP—Bit Path
• ESL	Errored Seconds—Line
• ESNPFE	Errored Second—Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds—Path
• ES-PM	OTN—Errored Seconds—Path Monitor Point
• ES-SM	OTN—Errored Seconds—Section Monitor Point
• ESR	Errored Second—Ratio
• ESR-PM	Errored Seconds Ratio—Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio—Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds—Section
• ESV	Errored Seconds—VT Path
• dot3StatsFCSErrors	A count of frames received on a particular interface that are an integral number of octets in length but do not pass the FCS check.
• dot3StatsFrameTooLong	A count of frames received on a particular interface that exceed the maximum permitted frame size.
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518 octets
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio

• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High-Order Path Negative Pointer Justification Count, Path Detected
• HP-NPJC-PGEN	High-Order Path, Negative Pointer Justification Count, Path Generated
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count Seconds, Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors
• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias Current in microA

• LBCL-MAX	Maximum Laser Bias Current in microA
• LBCL-MIN	Minimum Laser Bias Current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Normalized Laser Bias Current—Higher Threshold
• LBCN-LWT	Normalized Laser Bias Current—Lower Threshold
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order Positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt
• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt
• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm

• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• 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 25-35.
<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 payload
• 10GIGE	10-Gigabit Ethernet
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload

• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 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

• dot3StatsFCSErrors	A count of frames received on a particular interface that are an integral number of octets in length but do not pass the FCS check.
• dot3StatsFrameTooLong	A count of frames received on a particular interface that exceed the maximum permitted frame size.
• etherStatsBroadcastPkts	The total number of good packets received that were directed to a multicast address
• etherStatsCollisions	Number of transmit packets that are collisions
• etherStatsCRCAlignErrors	The total number of packets received that have a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
• etherStatsDropEvents	Number of received frames dropped at the port level
• etherStatsFragments	The total number of packets received that were less than 64 octets
• etherStatsJabbers	The total number of packets received that are longer than 1518
• etherStatsOctets	The total number of octets of data
• etherStatsOversizePkts	The total number of packets received that are longer than 1518 octets
• etherStatsPkts	The total number of packets (including bad packets, broadcast packets, and multicast packets) received
• etherStatsUndersizePkts	The total number of packets received that are less than 64 octets
• FCP	Failure Count—Line
• FC-PM	OTN—Failure Count—Path Monitor Point
• FC-SM	OTN—Failure Count—Section Monitor Point
• HP-AR	Availability Ratio
• HP-BBE	High-Order Path Background Block Error
• HP-BBER	High-Order Path Background Block Error Ratio
• HP-EB	High-Order Path Errored Block
• HP-ES	High-Order Path Errored Second
• HP-ESA	High-Order Path Errored Seconds—A
• HP-ESB	High-Order Path Errored Seconds—B
• HP-ESR	High-Order Path Errored Second Ratio
• HP-FC	High-Order Path Failure Count
• HP-NPJC-PDET	High-Order Path Negative Pointer Justification Count, Path Detected
• HP-NPJC-PGEN	High-Order Path, Negative Pointer Justification Count, Path Generated
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds

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

• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt
• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt
• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path

• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<INTVL>	The interval in seconds over which the data is sampled and compared with the rising and falling threshold. A valid value is any integer larger than or equal to 10 (seconds).
<INDEX>	The index for the threshold created by the system in the RMON threshold table. INDEX is an integer.
<RISE>	The rising threshold for the sampled statistic. A valid value is any integer.
<FALL>	The falling threshold. A valid value is any integer smaller than the rising threshold. AID is an integer
<SAMPLE>	The method of calculating the value to be compared to the thresholds. The parameter type is SAMPLE_TYPE, which describes how the data will be calculated during the sampling period
• ABSOLUTE	Comparing directly
• DELTA	Comparing with the current value of the selected variable subtracted from the last sample
<STARTUP>	Dictates whether an event will generate if the first valid sample is greater than or equal to the rising threshold, less than or equal to the falling threshold, or both. The parameter type is STARTUP_TYPE, which indicates whether an event will be generated when the first valid sample is crossing the rising or falling threshold.
• FALLING	Generates the event when the sample is smaller than or equal to the falling threshold.
• RISING	Generates the event when the sample is greater than or equal to the rising threshold.
• RISING-OR-FALLING	Generates the event when the sample is crossing the rising threshold or the falling threshold.

21.93 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 25-26 (except VCM and FACILITY). Roll path (STS or VT).

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<FROM>,<TO>:RFROM=<RFROM>,RTO=<RTO>,[RMODE=<RMODE>],
   VLDSIG=<VLDSIG>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "STS-1-1-1,STS-2-1-1:RFROM=STS-2-1-1,RTO=STS-3-1-1,RMODE=AUTO,VLDSIG=N"
;
```

Output Parameters

<FROM>	One of the termination points (legs) of the existing cross-connection. AID from the "25.11 CrossConnectId1" section on page 25-26 (except VCM and FACILITY).
<TO>	One of the termination points (legs) of the existing cross-connection. AID from the "25.11 CrossConnectId1" section on page 25-26 (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 25-26 (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 25-26 (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.

21.94 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.

21.95 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.

21.96 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 25-54.

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 25-54.
<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.

21.97 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 25-12.

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 25-12.
<LEVEL>	(Optional) The rate of the cross-connect. Applicable only to STS paths in SONET. The parameter type is STS_PATH, which is the modifier for some STS commands.
• STS1	Synchronous Transport Signal level 1 (51 Mbps)
• STS12C	Synchronous Transport Signal level 12 Concatenated (622 Mbps)
• STS18C	Synchronous Transport Signal level 18 Concatenated (933 Mbps)
• STS192C	Synchronous Transport Signal level 192 (9952 Mbps)
• STS24C	Synchronous Transport Signal level 24 Concatenated (1240 Mbps)
• STS36C	Synchronous Transport Signal level 36 Concatenated (1866 Mbps)
• STS3C	Synchronous Transport Signal level 3 Concatenated (155 Mbps)
• STS48C	Synchronous Transport Signal level 48 Concatenated (2488 Mbps)
• STS6C	Synchronous Transport Signal level 3 Concatenated (310 Mbps)
• STS9C	Synchronous Transport Signal level 9 Concatenated (465 Mbps)
<SFBER>	(Optional) An STS path SFBER that applies only to path protection and only to STS-level paths in SONET. Defaults to 1E-4. The parameter type is SF_BER, which is the threshold for declaring signal failure on a facility or path.
• 1E-3	SFBER is 1E-3.
• 1E-4	SFBER is 1E-4.
• 1E-5	SFBER is 1E-5.
<SDBER>	(Optional) An STS path SDBER that applies only to path protection and only to STS-level paths in SONET. Defaults to 1E-6. The parameter type is SD_BER, which is the threshold for declaring signal degrade on a facility or path.
• 1E-5	SDBER is 1E-5.
• 1E-6	SDBER is 1E-6.
• 1E-7	SDBER is 1E-7.
• 1E-8	SDBER is 1E-8.
• 1E-9	SDBER is 1E-9.

<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. Only applies to path protection. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. RVTM is not allowed to be set while RVRTV is N. Only applies to path protection. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<SWPDIP>	(Optional) Switch on PDI-P. Applicable only to STS-level paths in SONET (STSn). The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<HOLDOFFTIMER>	(Optional) Hold off timer. HOLDOFFTIMER is an integer.
<EXPTRC>	(Optional) Expected path trace content. A 64-character ASCII string including the terminating CR (carriage return) and LF (line feed). Indicates the expected path trace message (J1) contents. Applicable only to STS-Level Paths in SONET. Defaults to null when path protection path is created.
<TRC>	(Optional) The path trace message to be transmitted. The trace byte (J1) continuously transmits a 64-byte, fixed length ASCII string, one byte at a time. A null value defaults to the NE transmitting 62 null characters (hex 00) and CR and LF. A null value defaults to the NE transmitting null characters (Hex 00). Applicable to STS-level paths in SONET (STSn). TRC is a string.
<INCTRC>	(Optional) Identifies the incoming path trace message contents. Can be any combination of 64-characters. Applicable only to STS-level paths in SONET. Defaults to null when a path protection path is created. INCTRC is a string.
<TRCMODE>	(Optional) Path trace mode. Applicable only to STS-level Paths in SONET (STSn). Defaults to the OFF mode. The parameter type is TRCMODE (trace mode).
• AUTO	Use the previously received path trace string as the expected string. Not applicable to MXP/TXP cards.
• AUTO-NO-AIS	Use the previously received path trace string as the expected string and do not turn on AIS and RDI if TIM-P is detected.
• MAN	Use the provisioned expected string as the expected string.
• MAN-NO-AIS	Use the provisioned expected string as the expected string and do not turn on AIS and RDI if TIM-P is detected.
• OFF	Turn off path trace capability. Nothing will be reported.
<TACC>	(Optional) Indicates whether the digroup being provisioned is to be used as a test access digroup. Default is N. TACC is an integer.

<TAPTYPE>	(Optional) TAP type. The parameter type is TAPTYPE, which is the test access point type.
• DUAL	Dual FAD
• SINGLE	Single FAD
<UPSRPTHSTATE>	(Optional) Indicates whether a given AID is the working or standby path of a path protection cross-connect. The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<C>	(Optional) The C2 byte hex code. Applicable only to STS-level paths in SONET (STSn). The parameter type is C2_BYTE, which is the C2 byte hex code.
• 0X00	Unequipped
• 0X01	Equipped-Non-Specific payload
• 0X02	VT-Structured STS-1 SPE
• 0X03	Locked VT Mode
• 0X04	Asynchronous Mapping for DS3
• 0X12	Asynchronous Mapping for DS4NA
• 0X13	Mapping for ATM
• 0X14	Mapping for DQDB
• 0X15	Asynchronous Mapping for FDDI
• 0X16	HDLC-Over-SONET Mapping
• 0XE1	VT-structured STS-1 SPE with 1VTx payload defect
• 0XE2	VT-structured STS-1 SPE with 2VTx payload defects
• 0XE3	VT-structured STS-1 SPE with 3VTx payload defects
• 0XE4	VT-structured STS-1 SPE with 4VTx payload defects
• 0XE5	VT-structured STS-1 SPE with 5VTx payload defects
• 0XE6	VT-structured STS-1 SPE with 6VTx payload defects
• 0XE7	VT-structured STS-1 SPE with 7VTx payload defects
• 0XE8	VT-structured STS-1 SPE with 8VTx payload defects
• 0XE9	VT-structured STS-1 SPE with 9VTx payload defects
• 0XEA	VT-structured STS-1 SPE with 10VTx payload defects
• 0XEB	VT-structured STS-1 SPE with 11VTx payload defects
• 0XEC	VT-structured STS-1 SPE with 12VTx payload defects
• 0XED	VT-structured STS-1 SPE with 13VTx payload defects
• 0XEE	VT-structured STS-1 SPE with 14VTx payload defects
• 0XEF	VT-structured STS-1 SPE with 15VTx payload defects
• 0XF0	VT-structured STS-1 SPE with 16VTx payload defects
• 0XF1	VT-structured STS-1 SPE with 17VTx payload defects
• 0XF2	VT-structured STS-1 SPE with 18VTx payload defects
• 0XF3	VT-structured STS-1 SPE with 19VTx payload defects

• 0XF4	VT-structured STS-1 SPE with 20VTx payload defects
• 0XF5	VT-structured STS-1 SPE with 21VTx payload defects
• 0XF6	VT-structured STS-1 SPE with 22VTx payload defects
• 0XF7	VT-structured STS-1 SPE with 23VTx payload defects
• 0XF8	VT-structured STS-1 SPE with 24VTx payload defects
• 0XF9	VT-structured STS-1 SPE with 25VTx payload defects
• 0XFA	VT-structured STS-1 SPE with 26VTx payload defects
• 0XFB	VT-structured STS-1 SPE with 27VTx payload defects
• 0XFC	VT-structured STS-1 SPE with 28VTx payload defects
• 0XFE	O.181 Test Signal (TSS1 to TSS3) Mapping
• 0XFF	Reserved, however, C2 is 0XFF if AIS-L is being generated by an optical card or cross-connect downstream.
<BLSRPTHSTATE>	(Optional) The BLSR path state only if the port is on the BLSR. Applicable only to STS-level paths in SONET (STSn). The parameter type is BLSR_PTH_STATE, which is the BLSR path state only if the port is on the BLSR.
• PCAPTHACT	Indicates the BLSR is not switched and its PCA path is in the active state.
• PCAPTHSTB	Indicates the BLSR is switched and its PCA path is in the standby state.
• PROTPTHACT	Indicates the BLSR is switched and its protection path is in the active state.
• WKGPTHACT	Indicates the BLSR is not switched and its working path is in the active state.
• WKGPTHSTB	Indicates the BLSR is switched and its working path is in the standby state.
<PST_PSTQ>	Administrative state in the PST_PSTQ format. The parameter type is PST_PSTQ, which is the service state of the entity described by the SST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.98 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 25-50.

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 25-50.
<REF>	Rank of synchronization reference. Access identifier from the "25.29 SYNCSW" section on page 25-51.
<REFVAL>	Value of a synchronization reference. "25.27 SYN_SRC" section on page 25-49.

<QREF>	(Optional) Indicates whether the working or protect card (in a protection group) provides timing. This parameter has no significance if the reference source is BITS or INTERNAL and is left blank. The parameter type is SYNC_CLOCK_REF_QUALITY_LEVEL, which is the clock source quality level for SONET.
• DUS	Do Not Use For Synchronization
• PRS	Primary Reference Source, Stratum 1 Traceable
• RES	Reserved For Network Synchronization Use
• SMC	SONET Minimum Clock Traceable
• SSM-FAILED	Incoming timing signal cannot be used for synchronization as it has an alarm like LOS, LOF, AIS-L.
• ST2	Stratum 2 Traceable
• ST3	Stratum 3 Traceable
• ST3E	Stratum 3E Traceable
• ST4	Stratum 4 Traceable
• STU	Synchronized, Traceability Unknown
• TNC	Transit Node Clock (2nd Generation Only)
<STATUS>	(Optional) Status. The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<PROTECTSTATUS>	(Optional) Applicable to 1+1. Designates the role of the entity in the protection group. Either it is the working or the protect entity. 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.

21.99 RTRV-T1

(Cisco ONS 15454, ONS 15310-CL, and ONS 15310-MA) The Retrieve T1 Facility (RTRV-T1) command retrieves the DS-1 facilities configuration.

Usage Guidelines

- The parameters SYNCMAP, ADMSSM, VTMAP, INHFELPBK, AND PROVIDESYNC are only displayed on the DS1/E1-56 card (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 25-35.

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=D4,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 25-35.
<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	(Default) 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. 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. 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. 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 PST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state. 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

21.100 RTRV-T3

(Cisco ONS 15454, ONS 15310-CL, and ONS 15310-MA) The Retrieve T3 (RTRV-T3) command retrieves the facility properties of a DS3 or a DS3XM card.

Usage Guidelines

- CTC can set the FMT attribute of a DS3NE line to AUTOPROVISION, to set the framing based on the incoming framing. This would result in the FMT field being blanked out for a few seconds or blanked out forever for a preprovisioned DS3NE card on CTC.
- The autoprovision is not considered a valid DS3 framing type. It is used only to trigger an autosense and subsequent autoprovisioning of a valid DS3 framing type (unframed, M23, C-BIT).
- TL1 does not have the autoprovision mode according to Telcordia GR-199. TL1 maps/returns the autoprovision to be unframed.
- For the DS3XM-12 card, the DS3/T3 configurable attributes (PM, TH, alarm, etc.) only apply on the ported ports (1 to 12) and the DS3-mapped (even) portless ports in xxx-xxx-T3 commands. If you attempt to provision or retrieve DS3/T3 attributes on the VT-mapped (odd) portless port in xxx-xxx-T3 commands, an error message will be returned.
- For the DS3XM-12 card, if the administrative state is already set for a portless port the state setting operation over its associated ported port is an invalid operation.

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 25-35.

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 25-35.
<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 PST and PSTQ.
• IS-NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state. 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

21.101 RTRV-TACC

(Cisco ONS 15454, 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.

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 25-22. 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 25-22. 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 25-22. 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 25-22. The F path of the cross-connect.

21.102 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 When MODE is NSAP, TID name of the NODE can be specified to trigger TARP.

Category System

Security Retrieve

Input Format RTRV-TADRMAP:[<TID>]:[<AID>]:<CTAG>[:::MODE=<MODE>];

Input Example

RTRV-TADRMAP:CISCO:AIP:100:::MODE=PROV;

Additional input examples:

1. To retrieve another node's NSAP (TID=NODE-1) while using a TL1 session on the local node (TID=NODE-2), follow this input example:

   RTRV-TADRMAP:NODE-2:NODE-1:1:::MODE=NSAP;

   Output example:

   NODE-2 2006-01-26 14:47:30

   M 1 COMPLD

   "TIDNAME=NODE-1,NSAP=TARP request has been initiated. Check again later."

   ;

   RTRV-TADRMAP:NODE-2::123;

   NODE-2 2006-01-26 14:47:38

   M 123 COMPLD

   "TIDNAME=NODE-2,IPADDR=10.92.24.146,"

   "TIDNAME=NODE-1,NSAP=39840F80000000000000000000010010CFCE5A0200"

   ;

2. To retrieve the NSAP address of a node (TID=NODE-2) itself, follow this input example:

   RTRV-TADRMAP:NODE-2:NODE-2:1:::MODE=NSAP;

   Output example:

   NODE-2 2006-01-26 14:48:07

   M 1 COMPLD

   "TIDNAME=NODE-2,NSAP=39840F80000000000000000000001000BFCF8A88500"

   ;

3. To retrieve the local TARP data cache (TDC) of a node (no AID required) follow this input example:

   RTRV-TADRMAP:NODE-2::123:::MODE=NSAP;

   Output example:

   NODE-2 2006-01-26 13:47:38

   M 123 COMPLD

   "TIDNAME=FOREIGN-NODE-1,NSAP=39840F80000000000000000000001000075DE520800"

   "TIDNAME=FOREIGN-NODE-2,NSAP=39840F80000000000000000000001000075D07A4A00"

   "TIDNAME=NODE-1,NSAP=39840F80000000000000000000010010CFCE5A0200"

;

Input Parameters

<AID>	AID is a target identifier from the "25.1 ALL" section on page 25-1. AID is a string. If AID is not null, MODE must be NSAP.
<MODE>	Must not be null. The parameter type is MODE, which determines the category of addresses to return.
• ALL	Discovered and provisioned addresses

• DISC	Discovered addresses
• IP	IP addresses
• NSAP	NSAP addresses
• PROV	Provisioned

Output Format

```
  SID DATE TIME
M  CTAG COMPLD
  “[TID=<TID>],[IP ADDRESS =<IPADDRESS>],[NSAP=<NSAP>]”
;
```

Output Example

```
  TID-000 1998-06-20 14:30:00
M  001  COMPLD
  “TID=RANGERS1,IP ADDRESS = 64.101.245.5,
  NSAP=39840FFFFFFFOOOODDDDAA01D00F0400000700”
;
```

Output Parameters

<TID>	(Optional) Target identifier. TID is a string.
<IPADDRESS>	(Optional) IP address. IPADDRESS is a string.
<NSAP>	(Optional) NSAP address. NSAP is a string.

21.103 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, ETH, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, ILK, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, 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 might be displayed or handled.
- Laser and Alarm thresholds are always available. Laser and alarm thresholds are only for near end. If ITU-T G.709 is enabled, then the OTN thresholds will appear. If ITU-T G.709 is enabled and FEC is enabled, then the FEC thresholds will appear. If the card payload is in SONET mode, then SONET thresholds will appear. The Transceiver Voltage Montypes (XCVR) are not applicable, though it is displayed or handled.

- Refer to the *Cisco ONS 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.
<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	Normalized Laser Bias Current—Higher Threshold
• LBCN-LWT	Normalized Laser Bias Current—Lower Threshold

• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt
• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt
• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring

• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<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.
<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 payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• E100	E100 alarm
• E1000	E1000 alarm

• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FSTE	Fast Ethernet Port alarm
• G1000	G1000 alarm
• GIGE	Gigabit Ethernet port alarm
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• 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
<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 Seconds, Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload CRC errors

• ifOutUcastPkts	Number of unicast packets transmitted
• IOS	8B10B- Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias Current in microA
• LBCL-MAX	Maximum Laser Bias Current in microA
• LBCL-MIN	Minimum Laser Bias Current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Normalized Laser Bias Current—Higher Threshold
• LBCN-LWT	Normalized Laser Bias Current—Lower Threshold
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt
• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt
• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card

• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count

<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.

21.104 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 Seconds, Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected
• HP-PPJC-PGEN	High-Order Path, Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time
• HP-SES	High-Order Path Severely Errored Seconds

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

• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt
• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt
• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second—Path

• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<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 25-12.
<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 payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• BITS	BITS alarm
• CLNT	Client facility for MXP/TXP cards
• COM	Common alarm
• DS1	DS1 alarm
• DS3I	DS3I alarm
• E100	E100 alarm
• E1000	E1000 alarm
• EC1	EC1 alarm
• ENV	ENV alarm
• EQPT	EQPT alarm
• FC	Fibre Channel alarm
• FSTE	FSTE alarm
• G1000	G1000 alarm
• GIGE	GIGE alarm
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC3	OC3 alarm
• OC12	OC12 alarm
• OC48	OC48 alarm
• OC192	OC192 alarm
• OCH	Optical channel
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• 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
<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, Path Detected
• HP-NPJC-PGEN	High-Order Path Negative Pointer Justification Count, Path Generated
• HP-OI	Outage Intensity
• HP-PJCDIFF	High-Order Path Pointer Justification Count Difference
• HP-PJCS-PDET	High-Order Path Pointer Justification Count Seconds, Path Detected
• HP-PJCS-PGEN	High-Order Path Pointer Justification Count Seconds, Path Generated
• HP-PPJC-PDET	High-Order Path Positive Pointer Justification Count, Path Detected
• HP-PPJC-PGEN	High-Order Path Positive Pointer Justification Count, Path Generated
• HP-SEPI	The number of SEP events in available time

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

• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count, Path Detected
• NPJC-PGEN	Negative Pointer Justification Count, Path Generated
• OPR-AVG	Average Receive Power in one tenth of a microwatt
• OPR-MAX	Maximum Receive Power in one tenth of a microwatt
• OPR-MIN	Minimum Receive Power in one tenth of a microwatt
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microwatt
• OPT-MAX	Maximum Transmit Power in one tenth of a microwatt
• OPT-MIN	Minimum Transmit Power in one tenth of a microwatt
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	Positive Pointer Justification Count, Path Detected
• PPJC-PGEN	Positive Pointer Justification Count, Path Generated
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count—Ring
• PSC-S	Protection Switching Count—Span
• PSC-W	Protection Switching Count—Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration—Ring
• PSD-S	Protection Switching Duration—Span
• PSD-W	Protection Switching Duration—Working
• SASCPP	Severely Errored Framing/AIS Second—CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second—CP-Bit Path
• SESL	Severely Errored Second—Line
• SESNPFE	Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)

• SESP	Severely Errored Second—Path
• SES-PM	OTN—Severely Errored Second—Path
• SESR-PM	OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second—Section
• SES-SM	OTN—Severely Errored Second—Section Monitor Point
• SESV	Severely Errored Second—VT Path
• UASCPP	Unavailable Second—CP-Bit Path
• UASL	Unavailable Second—Line
• UASNPFE	Unavailable Second—Network Path (DS3XM-12 DS1 PM count)
• UASP	Unavailable Second—Path
• UAS-PM	OTN—Unavailable Second—Path Monitor Point
• UAS-SM	OTN—Unavailable Second—Section Monitor Point
• UASV	Unavailable Second—VT Path
• UNC-WORDS	FEC—Uncorrectable Words
• VPC	Valid Packet Count
<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.

21.105 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. TMTYPE is a String

21.106 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 25-39. 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 25-39.
<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

21.107 RTRV-TRC-<OCN_BLSR>

(Cisco ONS 15454 and 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 25-35.

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 25-44.
<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.

21.108 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.
- On the DWDM port, the J0 Section trace, the TTI Path, Section trace monitoring point traces are allowed.
- The J0 Section trace is allowed only if the payload for the card is set to SONET.
- The J0 Section trace is allowed only if the card termination mode is not transparent.
- The TTI Path, Section trace is allowed only if the ITU-T G.709 (DWRAP) is enabled.

Depending on the settings, the following filtering applies:

- If no TRCLEVEL is provided, all TRCLEVELs are reported as applicable.
- If TRCLEVEL is provided and no MSGTYPE is provided, all applicable MSGTYPEs for the given level are displayed.

- If no MSGTYPE is provided, all MSGTYPEs are reported as applicable.
- If a MSGTYPE is provided with out a TRCLEVEL, then the given MSGTYPE for all TRCLEVELs are displayed.

Category

DWDM

Security

Retrieve

Input Format

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

Input Example

RTRV-TRC-OCH:CISCO:CHAN-2-2:100::EXPTRC,TTI-PM;

Input Parameters

<SRC>	Access identifier from the "25.8 CHANNEL" section on page 25-20.
<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 25-20.
<MOD>	Indicates an OCH AID type. The parameter type is MOD2, which is the line/path modifier.
• 10GFC	10-Gigabit Fibre Channel payload
• 10GFICON	10-Gigabit fiber connectivity payload
• 1GFC	1-Gigabit Fibre Channel payload
• 1GFICON	1-Gigabit fiber connectivity payload
• 1GISC3	1-Gigabit ISC3 compatible
• 2GFC	2-Gigabit Fibre Channel payload
• 2GFICON	2-Gigabit fiber connectivity payload
• 2GISC3	2-Gigabit ISC3 compatible
• 4GFC	4-Gigabit Fibre Channel payload
• 4GFICON	4-Gigabit fiber connectivity payload
• D1VIDEO	D1 video
• DS1	DS1 line of a DS3XM card
• DS3I	DS3I line
• DV6000	DV6000
• EC1	EC1 facility
• ESCON	ESCON
• ETRCLO	ETRCLO
• FSTE	FSTE facility
• G1000	G1000 facility
• GFPOS	GFP over POS. Virtual ports partitioned using GFP's multiplexing capability.
• GIGE	Gigabit Ethernet
• HDTV	HDTV
• ISC3PEER1G	1 Gbps ISC3 Peer
• ISC3PEER2G	2 Gbps ISC3 Peer
• ISC3PEER2R	1 Gbps or 2 Gbps ISC3 peer used in transparent (2R) mode
• ISCCOMPAT	1 Gbps ISC1, ISC2, and ISC3 compatibility
• OC3	OC-3 facility
• OC12	OC-12 facility
• OC48	OC-48 facility
• OC192	OC-192 facility
• OCH	Optical Channel
• OCHCC	OCH client connection
• OCHNC	OCH network connection
• OCHTERM	OCH termination
• OMS	Optical Multiplex Section
• OTS	Optical Transport Section
• 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 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.

21.109 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.

21.110 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.

21.111 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

21.112 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 25-35. ML1000-2 and ML100T-12 cards use the VFAC AID. The FC_MR-4 card uses the FAC AID.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<SRC>::TYPE=<TYPE>,TXCOUNT=<TXCOUNT>,CCT=<CCT>,[LCAS=<LCAS>],
   [BUFFERS=<BUFFERS>],[NAME=<NAME>]:<PST>"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   "FAC-1-1::TYPE=STS3C,TXCOUNT=8,CCT=2WAY,LCAS=LCAS,BUFFERS=DEFAULT,
   NAME="VCG2":IS"
;
```

Output Parameters

<SRC>	Source access identifier from the "25.15 FACILITY" section on page 25-35. ML1000-2 and ML100T-12 cards use the VFAC AID. The FC_MR-4 card uses the FAC AID.
<TYPE>	The type of the entity being provisioned. Null indicates not applicable. TYPE can be a CLEI code or another value. The type of member cross-connect. ML1000-2 and ML100T-12 cards support STS1, STS3c, and STS12c. The FC_MR-4 card supports STS3c only. The parameter type is MOD_PATH, which is the STS/VT path modifier.
• STS1	STS1 path
• STS12C	STS12c path
• STS18C	STS18c path
• STS192	STS192c path
• STS24C	STS24c path
• STS36C	STS36c path
• STS3C	STS3c path
• STS48C	STS48c path
• STS6C	STS6c path
• STS9C	STS9c path
• VT1	VT1 path
• VT2	VT2 path
<TXCOUNT>	Number of VCG members in the transmit (Tx) direction. For ML1000-2 and ML100T-12 cards, the only valid value is 2. For the FC_MR-4 card, the only valid value is 8. TXCOUNT is an integer.

<CCT>	Type of connection; one-way or two-way. Cross-connect type for the VCG member cross-connects. The parameter type is CCT, which is the type of cross-connect to be created.
• 1WAY	A unidirectional connection from a source tributary to a destination tributary
• 1WAYDC	Path Protection multicast drop with one-way continue
• 1WAYEN	Path Protection multicast end node with one-way continue
• 1WAYMON	A bidirectional connection between the two tributaries **Note** 1WAYMON is not supported with TL1. However, it is still supported from CTC. Using CTC, you can create 1WAYMON cross-connects that can be retrieved by TL1.
• 1WAYPCA	A unidirectional connection from a source tributary to a destination tributary on the protection path/fiber
• 2WAY	A bidirectional connection between the two tributaries
• 2WAYDC	A bidirectional drop and continue connection applicable only to path protection traditional and integrated dual-ring interconnects
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber
• DIAG	Diagnostics cross-connect. Supports BERT (BLSR PCA diagnostics cross-connect).
<LCAS>	(Optional) Link capacity adjustment scheme. The parameter type is LCAS, which is the link capacity adjustment scheme mode for the VCG created.
• LCAS	LCAS is enabled.
• NONE	No LCAS.
• SW-LCAS	Supports the temporary removal of a VCG member during the member failure. Only supported by the ML1000-2 and ML100T-12 cards.
<BUFFERS>	(Optional) Buffer type. The default value is DEFAULT. The FC_MR-4 card supports DEFAULT and EXPANDED buffers. Other data cards support DEFAULT buffers only. The parameter type is BUFFER_TYPE, which is the buffer type (used in VCAT).
• DEFAULT	Default buffer value
• EXPANDED	Expanded buffer value
<NAME>	(Optional) Name of the VCAT group. NAME is a string.
<PST>	(Optional) Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In Service
• OOS	Out of Service

21.113 RTRV-VLAN

(Cisco ONS 15454) The Retrieve Virtual LAN (RTRV-VLAN) command retrieves a virtual LAN entry from the VLAN database. The VLAN database is a collection of VLANs used in an NE.

Usage Guidelines

- If the AID is invalid, an IIAC (Invalid AID) error message is returned.

Category

Ethernet

Security

Retrieve

Input Format

RTRV-VLAN:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-VLAN:ROCKS:VLAN-4096:1;

Input Parameters

<AID>	The AID is used to access the VLAN.
• VLAN-{0-4096}	The AID for a single VLAN. The value 0 is reserved for untagged VLANs.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   “<AID>::[NAME=<NAME>],[PROTN=<PROTN>]:”
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
   “VLAN-4096::NAME="MYVLAN",PROTN=Y:”
;
```

Output Parameters

<AID>	Aid is used to access the VLAN.
• VLAN-{0-4096}	The AID for a single VLAN. The value 0 is reserved for untagged VLANs.
<NAME>	Indicates the VLAN name.
<PROTN>	Indicates the VLAN protection (enabled or disabled).
• Y	VLAN protection is enabled.
• N	(Default) VLAN protection is disabled.

21.114 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 25-12.

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 25-12.
<LEVEL>	(Optional) The rate of the cross-connect. Indicates the rate of the cross-connected channel. Applicable only to VT1 path in SONET. The parameter type is VT_PATH, which is the modifier for some VT commands.
• VT1	Virtual Tributary 1
• VT2	Virtual Tributary 2

<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. Only applies to path protection. Defaults to empty because RVRTV is N when a path protection path is created. The parameter type is REVERTIVE_TIME.
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<HOLDOFFTIMER>	(Optional) Hold off timer. HOLDOFFTIMER is an integer.
<TACC>	(Optional) Test access. Indicates whether the digroup being provisioned is to be used as a test access digroup. Defaults to N.
<TAPTYPE>	(Optional) TAP type. The parameter type is TAPTYPE, which is the test access point type.
• DUAL	Dual FAD
• SINGLE	Single FAD
<UPSRPTHSTATE>	(Optional) Indicates whether a given AID is the working or standby path of a path protection cross-connect. The parameter type is STATUS, which is the status of the unit in the protection pair.
• ACT	The entity is the active unit in the shelf.
• NA	Status is unavailable.
• STBY	The entity is the standby unit in the shelf.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity.
• IS	In Service
• OOS	Out of Service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

21.115 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

<WDMSIDE>	The AID is used to access the WDM side on an DWDM node.
• WDMSIDE-{UNKNOWN,A,B,C,D,E,F,G,H}	DWDM side identifier
<WDMNODE>	The AID is used to access the WDM node on an DWDM node.
• WDMNODE	DWDM side identifier

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>::[POWERIN=<POWERIN>],[POWERINFLG=<POWERINFLG>]],
[POWEROUT=<POWEROUT>],[POWEROUTFLG=<POWEROUTFLG>],
[POWEREXP=<POWEREXP>],[POWEREXPFLG=<POWEREXPFLG>],
[NTWTYPE=<NTWTYPE>],[OPTICALTYPE=<OPTICALTYPE>],
[NEPLAUNCH=<NEPLAUNCH>],[FEPLAUNCH=<FEPLAUNCH>],
[LASTRUNDAT=<LASTRUNDAT>],[LASTRUNTM=<LASTRUNTM>],
[LASTCALCDAT=<LASTCALCDAT>],[LASTCALCTM=<LASTCALCTM>][:]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"WDMNODE::NTWTYPE=METRO-CORE,OPTICALTYPE=OADM,NEPLAUNCH=10.0,
FEPLAUNCH=10.0,PPMESH=4-DEGREE,DITHER=10.0,LASTRUNDAT=01-01-01,
LASTRUNTM=10-55-00,LASTCALCDAT=01-01-01,LASTCALCTM=10-55-00:"
;

Output Parameters

<WDMSIDE>	The AID is used to access the WDM side on an DWDM node.
• WDMSIDE-{UNKNOWN,A, B,C,D,E,F,G,H}	DWDM side identifier
<WDMNODE>	The AID is used to access the WDM node on an DWDM node.
• WDMNODE	DWDM side identifier
<POWERIN>	(Optional) Input power for an OADM section of an OADM NE. POWERIN is a float.
<POWERINFLG>	Status flag indicating the state of the WDMANS parameter.
<POWEROUT>	(Optional) Output power for an OADM or multiplex/demultiplex section of HUB, TERMINAL, or OADM nodes. POWEROUT is a float.
<POWEROUTFLG>	Status flag indicating the state of the WDMANS parameter.
<POWEREXP>	(Optional) Express power for a multiplex/demultiplex section of a HUB or TERMINAL NE. POWEREXP is a float.
<POWEREXPFLG>	Status flag indicating the state of the WDMANS parameter.
<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.
<NEPLAUNCH>	Near-end launch power calculated by the node when the user ran the calculation of WDMANS parameters.
<FEPLAUNCH>	Far-end launch power received by the node when user ran the calculation of WDMANS parameters.
<PPMESH>	Defines the degree of the node having the WXC cards.
<DITHER>	It is a number that uniquely identifies a node having at least a WXC card inside the DWDM network.

<LASTRUNDAT>	(Optional) The last date when the WDMANS application calculated the parameters. The format is MM-DD, where MM (month of year) ranges from 1 to 12 and DD (day of month) ranges from 1 to 31.
<LASTRUNTM>	(Optional) The last time when the WDMANS application calculated the parameters. The format is HH-MM, where HH (hour of day) ranges from 1 to 23 and MM (minute of hour) ranges from 0 to 59.
<LASTCALCDAT>	(Optional) The last date when the WDMANS application was run automatically or by user request. The format is MM-DD, where MM (month of year) ranges from 1 to 12 and DD (day of month) ranges from 1 to 31.
<LASTCALSTM>	(Optional) The last time when the WDMANS application was run automatically or by user request. The format is HH-MM, where HH (hour of day) ranges from 1 to 23 and MM (minute of hour) ranges from 0 to 59.

21.116 RTRV-WDMSIDE

(Cisco ONS 15454) The Retrieve Wavelength Division Multiplexing Side (RTRV-WDMSIDE) command retrieves the WDM side and defines its attributes.

Usage Guidelines

None

Category

DWDM

Security

Maintenance

Input Format

RTRV-WDMSIDE:[<TID>]:<AID>:<CTAG>[::::];

Input Example

RTRV-WDMSIDE:PENNGROVE:WDMSIDE-A:114;

Input Parameters

<AID>	The AID is used to access the WDM side of an DWDM node. This is applicable to WDMANS and APC applications of the NE.
• WDMSIDE-{A,B,C,D,E,F,G,H}	DWDM side identifier.

Output Format

```
   SID DATE TIME
M  CTAG COMPLD
   "<AID>::LINEIN=<LINEIN>,LINEOUT=<LINEOUT>,[OCS=<OSC>][:]"
;
```

Output Example

```
   TID-000 1998-06-20 14:30:00
M  001  COMPLD
  “WDMSIDE-A::LINEIN=LINE-1-3-RX,LINEOUT=LINE-1-3-TX,OSC=FAC-8-1”
;
```

Output Parameters

<AID>	The AID is used to access the WDM side of an DWDM node. This is applicable to WDMANS and APC applications of the NE.
• WDMSIDE-{A,B,C,D,E,F,G,H}	DWDM side identifier.
<LINEIN>	(Optional) Used to access the OTS layer of optical network units.
• ALL	Indicates all the OTSs of the NE. The ALL AID is applicable only for retrieve commands.
• LINE[-{1-8}]-{1-6,12-17}-{1-3}-ALL	All the lines (COM=1, OSC=2, LINE=3) in OPT-BST, OPT-BST-E, OPT-BST-L, OPT-AMP-17-C, and OPT-AMP-23-C cards where the format is LINE-[SHELF]-[SLOT]-[PORT]-ALL.
• LINE[-{1-8}]-{1-6,12-17}-{1-3}-{RX,TX}	The receive/transmit lines (COM=1, OSC=2, LINE=3) in OPT-BST, OPT-BST-E, OPT-BST-L, OPT-AMP-17-C, and OPT-AMP-23-C cards where the format is LINE-[SHELF]-[SLOT]-[PORT]-[DIRN].
<LINEOUT>	(Optional) Used to access the OTS layer of optical network units.
• ALL	Indicates all the OTSs of the NE. The ALL AID is applicable for retrieve-only commands.
• LINE[-{1-8}]-{1-6,12-17}-{1-3}-ALL	All the lines (COM=1, OSC=2, LINE=3) in OPT-BST, OPT-BST-E, OPT-BST-L, OPT-AMP-17-C, and OPT-AMP-23-C cards where the format is LINE-[SHELF]-[SLOT]-[PORT]-ALL.
• LINE[-{1-8}]-{1-6,12-17}-{1-3}-{RX,TX}	The receive/transmit lines (COM=1, OSC=2, LINE=3) in OPT-BST, OPT-BST-E, OPT-BST-L, OPT-AMP-17-C, and OPT-AMP-23-C cards where the format is LINE-[SHELF]-[SLOT]-[PORT]-[DIRN].
<OSC>	Facility AID from the “25.15 FACILITY” section on page 25-35 .

21.117 RTRV-WLEN

(Cisco ONS 15454) The Retrieve Wavelength (RTRV-WLEN) command retrieves the wavelength provisioning information.

Usage Guidelines

None

Category

DWDM

Security

Retrieve

Input Format

RTRV-WLEN:[<TID>]:<AID>:<CTAG>;

Input Example

RTRV-WLEN:PENNGROVE:WLEN-A-ADD-1530.33:114;

Input Parameters

<AID>	Access identifier from the "25.33 WLEN" section on page 25-54.

Output Format

SID DATE TIME
M CTAG COMPLD
"<AID>:<CCT>:[SIZE=<SIZE>],[CKTID=<CKTID>],[TOSIDE=<TOSIDE>],[SRC=<SRC>],[DST=<DST>]:<PST_PSTQ>,[<SSTQ>]"
;

Output Example

TID-000 1998-06-20 14:30:00
M 001 COMPLD
"WLEN-A-ADD-1530.33:1WAY:SIZE=MULTI-RATE,CKTID=CKTID,SRC=CHAN-4-1-RX,
DST=LINEWL-1-3-TX-1530.33:OOS-AU,AINS"
;

Output Parameters

<AID>	Access identifier from the "25.33 WLEN" section on page 25-54.
<CCT>	Identifies the wavelength connection types.
• 1WAY	A unidirectional wavelength connection for one specified ring direction.
• 2WAY	A bidirectional wavelength connection for both the ring directions
<SIZE>	Identifies the DWDM circuit size used on a wavelength.
<CKTID>	(Optional) Circuit identification parameter that contains the a common language ID or other alias of the circuit being provisioned. It cannot contain blank spaces. CKTID is a string.
<TOSIDE>	The AID is used to access the WDM side of a DWDM node.
• WDMSIDE-{A,B,C,D,E,F,G,H}	DWDM side identifier.
<SRC>	Source access identifier from the "25.18 LINEWL" section on page 25-40.
<DST>	Destination AID of the cross-connection from the "25.18 LINEWL" section on page 25-40.
<PST_PSTQ>	Primary state of the entity. The parameter type is PST_PSTQ, which is the service state of the entity described by primary state (PST) and primary state qualifier (PSTQ).

• IS_NR	In Service and Normal
• OOS-AU	Out of Service and Autonomous
• OOS-AUMA	Out of Service and Autonomous Management
• OOS-MA	Out of Service and Management
<SSTQ>	(Optional) Secondary state of the entity. The parameter type is secondary state (SST), which provides additional information pertaining to PST and PSTQ.
• AINS	Automatic In-Service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of Equipment
• MT	Maintenance
• OOG	Out of Group
• SWDL	Software Download
• UAS	Unassigned
• UEQ	Unequipped

CHAPTER 22

SCHED Commands

This chapter provides schedule (SCHED) commands for the Cisco ONS 15454, Cisco ONS 15310-CL, Cisco ONS 15310-MA, and Cisco 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, ETH, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, 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.

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, 12-HR, and 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, Cisco ONS 15310-CL, Cisco ONS 15310-MA, and Cisco ONS 15600.

23.1 SET-ALMTH-<MOD2>

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Set Alarm Threshold for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, D1VIDEO, DS1, DV6000, EC1, ESCON, ETRCLO, ETH, GIGE, HDTV, ISC1, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OC12, OC192, OC3, OC48, OCH, OMS, OTS, T1, or T3 (SET-ALMTH-<MOD2>) command sets the alarm thresholds on the following cards/ports/channels: MXP_2.5G_10G, TXP_MR_10G, optical service channel (OSC), optical amplifier, dispersion compensation unit (DCU), multiplexer, demultiplexer, and optical add/drop multiplexing (OADM).

Usage Guidelines This command is used to set the alarm thresholds on a facilities, ports, channels, for example. Not all MOD2 types are supported.

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::SHELF-2:1::BATV-HIGH,-53.5;

SET-ALMTH-EQPT:::1::BATV-HIGH,-53.5;

Input Parameters

<AID>	The node or shelf access identifier from the "25.24 SHELF" section on page 25-44. 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 25-32. 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 25-32. Must not be null.
<NTFCNCDE>	Two-letter notification code. Must not be null. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message.
• CL	The condition causing the alarm has cleared.
• CR	A critical alarm.
• MJ	A major alarm.
• MN	A minor alarm.
• NA	The condition is not alarmed.
• NR	The alarm is not reported.
<ALMTYPE>	The alarm type for the environmental alarm. Must not be null. The parameter type is ENV_ALM, which is the environmental alarm type.
• AIRCOMPR	Air compressor failure
• AIRCOND	Air conditioning failure
• AIRDRYR	Air dryer failure
• BATDSCHRG	Battery discharging
• BATTERY	Battery failure

• CLFAN	Cooling fan failure
• CPMAJOR	Centralized power major failure
• CPMINOR	Centralized power minor failure
• ENGINE	Engine failure
• ENGOPRG	Engine operating
• ENGTRANS	Standby engine transfer
• EXPLGS	Explosive gas
• FIRDETR	Fire detector failure
• FIRE	Fire
• FLOOD	Flood
• FUELLEAK	Fuel leak
• FUSE	Fuse failure
• GASALARM	Explosive gas, toxic gas, ventilation fail, or gas monitor fail
• HATCH	Controlled Environment Vault (CEV) hatch fail
• GEN	Generator failure
• HIAIR	High airflow
• HIHUM	High humidity
• HITEMP	High temperature
• HIWTR	High water
• INTRUDER	Intrusion
• LEVELCON	Level converter
• LVDADSL	Secondary ADSL low voltage disconnect
• LVDBYPAS	Low voltage disconnected bypass
• LWBATVG	Low battery voltage
• LWFUEL	Low fuel
• LWHUM	Low humidity
• LWPRES	Low cable pressure
• LWTEMP	Low temperature
• LWWTR	Low water
• MISC	Miscellaneous
• OPENDR	Open door
• POWER	Commercial power failure
• PUMP	Pump failure
• PWR-48	48 V power supply failure
• PWR-139	–139 V power converter
• PWR-190	–190 V power converter
• PWRMJ	Power supply major
• PWRMN	Power supply minor
• RECT	Rectifier failure
• RECTHI	Rectifier high voltage
• RECTLO	Rectifier low voltage

• RINGGENMJ	Ringing generator major
• RINGENMN	Ringing generator minor
• RTACADSL	AC or AC/rectifier power fail ADSL equipment
• RTACCRIT	AC or AC/rectifier power fail DCL equipment critical site
• RTACPWR	AC or AC/rectifier power fail DCL equipment
• RTACPWRENG	Commercial AC fail, site equipped with standby engine
• RTBAYPWR	AC power loss distributed power RT bay
• RTRVENG	Retrieve standby engine, commercial AC restored
• SMOKE	Smoke
• TEMP	High-low temperature
• TOXICGAS	Toxic gas
• TREPEATER	T-repeater shelf
• VENTN	Ventilation system failure
>ALMMSG>	Alarm message. ALMMSG is a string. Must not be null.

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 25-22.
<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 25-26. 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, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, 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 High-Order Path Severely Errored Period Intensity events in available time
• HP-SES	High-Order Path Severely Errored Seconds
• HP-SESR	High-Order Path Severely Errored Second Ratio
• HP-UAS	High-Order Path Unavailable Seconds
• ifInBroadcastPkts	Number of broadcast packets received since the last counter reset
• ifInDiscards	The number of inbound packets
• ifInErrorBytePktss	Receive Error Byte
• ifInErrors	The number of inbound packets (or transmission units) that contained errors
• ifInFramingErrorPkts	Receive Framing Error
• ifInJunkInterPkts	Receive Interpacket Junk
• ifInMulticastPkts	Number of multicast packets received since the last counter reset
• ifInOctets	Number of bytes transmitted since the last counter reset
• ifInUcastPkts	Number of unicast packets received since the last counter reset
• ifOutBroadcastPkts	Number of broadcast packets transmitted
• ifOutDiscards	The number of outbound packets
• ifOutErrors	The number of outbound packets (or transmission units) that could not be transmitted because of errors
• ifOutMulticastPkts	Number of multicast packets transmitted
• ifOutPayloadCrcErrors	Received payload cyclic redundancy check (CRC) errors
• ifOutUcastPkts	Number of unicast packets transmitted

• IOS	8B10B—Idle Ordered Sets
• IPC	Invalid Packet Count
• LBCL-AVG	Average Laser Bias current in microA
• LBCL-MAX	Maximum Laser Bias current in microA
• LBCL-MIN	Minimum Laser Bias current in microA
• LBCN	Normalized Laser Bias Current for OC3-8
• LBCN-HWT	Laser Bias Current
• LBCN-LWT	Laser Bias Current
• LOSSL	Loss of Signal Seconds—Line
• LP-BBE	Low-Order Path Background Block Error
• LP-BBER	Low-Order Path Background Block Error Ratio
• LP-EB	Low-Order Path Errored Block
• LP-ES	Low-Order Path Errored Second
• LP-ESA	Low-Order Path Errored Seconds-A
• LP-ESB	Low-Order Path Errored Seconds-B
• LP-ESR	Low-Order Path Errored Second Ratio
• LP-FC	Low-Order Path Failure Count
• LP-NPJC-DET	Low-Order Negative Pointer Justification Count, Detected
• LP-NPJC-GEN	Low Order Negative Pointer Justification Count, Generated
• LP-PPJC-DET	Low-Order Positive Pointer Justification Count, Detected
• LP-PPJC-GEN	Low-Order positive Pointer Justification Count, Generated
• LP-SEP	Low-Order Path Severely Errored Period
• LP-SEPI	Low-Order Path Severely Errored Period Intensity
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B—Non Idle Ordered Sets
• NPJC-PDET	PPJC-PDET:Negative Pointer Justification
• NPJC-PGEN	PPJC-PGEN:Negative Pointer Justification
• OPR-AVG	Average Receive Power in one tenth of a microW
• OPR-MAX	Maximum Receive Power in one tenth of a microW
• OPR-MIN	Minimum Receive Power in one tenth of a microW
• OPRN	Normalized Optical Receive Power for OC3-8
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in one tenth of a microW
• OPT-MAX	Maximum Transmit Power in one tenth of a microW
• OPT-MIN	Minimum Transmit Power in one tenth of a microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN

• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power—Average Interval Value in one tenth of a dBm
• OPWR-MAX	Optical Power—Maximum Interval Value in one tenth of a dBm
• OPWR-MIN	Optical Power—Minimum Interval Value in one tenth of a dBm
• PPJC-PDET	PPJC-PDET:Positive Pointer Justification
• PPJC-PGEN	PPJC-PGEN:Positive Pointer Justification
• 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 Cisco ONS 15310-MA.

Note SW commands do not apply to 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::NORM;

Input Parameters

<AID>	Access identifier from the "25.14 EQPT" section on page 25-33. Identifies the equipment unit in the network element (NE) that is to be switched with its mate.

<MODE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied. (FRCD is not supported in this command).
• NORM	Execute the command normally. Do not override any conditions that could make the command fail.

24.2 SW-TOPROTN-EQPT

(Cisco ONS 15454 and 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 25-33. 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 25-43. 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 and 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 25-43. Specifies the working unit which will have traffic switched to protection.
<MODE>	Mode with which the command is to be implemented.The parameter will only support the NORM value. A null value defaults to NORM. Sending the FRCD value for will generate the same switching behavior as sending the NORM value. 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, Cisco ONS 15310-CL, Cisco ONS 15310-MA, and Cisco 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 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	
RPRIF	ALL	PPM[-{1-8}]-{1-4,11-14}-{1-4}-{1-4}
	RPRIF-{1-6,12-17}-0	RPRIF-<SLOT>-<RPR INTERFACE>. Currently, only interface 0 is supported.
RFILE	RFILE-DB	
	RFILE-LOG	
	RFILE-PKG	
	RFILE-COMPDB	
SHELF	SHELF-ALL	
	SHELF-{1-8}	

Table 25-1 ALL (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 25-1 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	WDMSIDE-{UNKNOWN,A,B,C,D,E,F,G,H}	
	WDMNODE	
WLEN	WLEN-{E,W}-{ADD,DROP,EXP}-{1530.33,1531.12,1531.90,1532.68,1534.25,1535.04,1535.82,1536.61,1538.19,1538.98,1539.77,1540.56,1542.14,1542.94,1543.73,1544.53,1546.12,1546.92,1547.72,1548.51,1550.12,1550.92,1551.72,1552.52,1554.13,1554.94,1555.75,1556.55,1558.17,1558.98,1559.79,1560.61}	

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.

Table 25-6 BITS (continued)

Pattern	Description
BITS[<SHELFID>]-ALL	BITS shelf ID of both BITS-1 and BITS-2 in the RTRV-BITS command.
BITS[<SHELFID>]-{1,2}	Individual BITS AID. **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 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].
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].
CHAN-[{1-8}-]{1-6,12-17}-{1-32}-{RX,TX,PT}	OCH is the termination point of OCHNC connections and it is also used to report alarms and conditions eventually notified by the node connection anomalies. Because the end points of an OCHNC connection can be both at the OCH filter level and at the node LINE OTS single wavelength level, this logical termination is useful to represent univocally a wavelength termination independently by the physical port it is contained in. The format is CHAN-[SHELF]-[SLOT]-[PORT]-[PORTDIRECTION].

Table 25-8 CHANNEL (continued)

Value	Description
CHAN-[{1-8}-]{1-6,12-17}-{1-32}-ALL	OCH is the termination point of OCHNC connections and it is also used to report alarms and conditions eventually notified by the node connection anomalies. Because the end points of an OCHNC connection can be both at the OCH filter level and at the node LINE OTS single wavelength level, this logical termination is useful to represent univocally a wavelength termination independently by the physical port it is contained in. The format is CHAN-[SHELF]-[SLOT]-[PORT]-[PORTDIRECTION]-[WAVELENGTH (in the form of 15xx.yy)].
CHAN[-{1-8}]-{1-6,12-17}-{19}-{1}	A single channel of an ADM-10G card. ADM-10G uses CHAN-[SHELF]-SLOT-19 for one DWDM Facility. Format is CHAN-[SHELF]-[SLOT]-[PPM]-[PORT].
CHAN[-{1-8}]-{1-6,12-17}-{17,18}-{1}	The DWDM interlinks between two peer ADM-10G cards. ADM-10G uses CHAN-[SHELF]-SLOT-{17,18} for the two DWDM interlinks Facilities. Format is CHAN-[SHELF]-[SLOT]-[PPM]-[PORT].

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	
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	
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}-{1-28}	DS1 AIDs for the DS3XM-12 card STS48 backplane rate. The format is DS1-[SLOT]-[DS3PORT]-[DS1PORT]. Ports 1–12 are always available and odd ports after 12 are available. **Note** The DS3XM-12 even DS3Ports (after 12) are valid DS3XM-12 DS1 AIDs, which are applied on DS3XM-12 TCA autonomous events (REPT EVT DS1) only. **Note** The DS3XM-12 even DS3Ports (after 12) are not valid DS3XM-12 DS1 AIDs for all DS3XM-12 DS1 provisioning/retrieval non-TCA event commands.
DS1-{1-6,12-17}-{1-12,13,15,17, 19,21,23}-{1-28}	DS1 AIDs for DS3XM-12 card STS48 backplane rate. The format is DS1-[SLOT]-[DS3PORT]-[DS1PORT]. Ports 1–12 are always available and odd ports after 12 are available **Note** The DS3XM-12 even DS3Ports (after 12) are valid DS3XM-12 DS1 AIDs, which are applied on DS3XM-12 TCA autonomous events (REPT EVT DS1) only. **Note** The DS3XM-12 even DS3Ports (after 12) are not valid DS3XM-12 DS1 AIDs for all DS3XM-12 DS1 provisioning/retrieval non-TCA event commands.
DS1-{1-6,12-17}-{1-6}-{1-28}	DS1 AIDs for DS3XM-6 cards. Format is DS1-[SLOT]-[DS3PORT]-[DS1PORT].

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 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}]-{1-16}	(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 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 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.
BIC-ALL	AIDs for the backplane interface connectors (BICs), BIC-A and BIC-B. These AIDs are valid only for the RTRV-ALM-EQPT and RTRV-COND-EQPT commands.
BIC-[-{1-8}]-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.

Table 25-14 EQPT (continued)

Pattern	Description
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, RTRV-ALM, RTRV-COND, RTRV-ALM-EQPT, and RTRV-COND-EQPT 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, RTRV-ALM, RTRV-COND, RTRV-ALM-EQPT, and RTRV-COND-EQPT 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-{1-6,12-17}-{1-4}	Pluggable Port Module for MRC-2.5G-4.Format is PPM-[SLOT]-[PPM]. It is not applied on CHG-EQPT, and RMV/RST/ED-EQPT commands.
PPM-{1-6,12-17}-{1-12}	Pluggable Port Module for MRC-2.5G-12. Format is PPM-[SLOT]-[PPM]. It is not applied on CHG-EQPT, and RMV/RST/ED-EQPT commands.
PPM[-{1-8}]-{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[-{1-8}]-{1-6,12-17}-{1-22}	PPM AID for XP-GE Cards. Format of AID is PPM-[SHELF]-[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.

Table 25-14 EQPT (continued)

Pattern	Description
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.
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

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 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].
ETH-{1,2,5,6}-{1-6}	(ONS 15454) Facility AIDs for front end ports of CE-MR-6 (GT3) card on 15310MA, where format is ETH-[SLOT]-[PORT]. Port numbering is 1-based.
ETH-{1}-{1-6}	Facility AIDs for front end ports on CE-MR-6 (GT3) card on (15310CL). Format is ETH-[SLOT]-[PORT]. Port numbering is 1-based.
ETH[-{1-8}]-{1-5,12-16}-{1-22}-1	Facility AID for GE-XP card. Format is FAC-[SHELF]-[SLOT]-[PPM]-[PORT]
ETH[-{1-8}]-{1-6,12-17}-{1-4}-1	Facility AID for 10GE-XP card. Format is FAC-[SHELF]-[SLOT]-[PPM]-[PORT]
FAC-{1-6,12-17}-{1-10}	(ONS 15454) Facility AID for CE-MR-10 (454) cards that can plug into Slots 1-6 and 12-17 and there are 10 Facility ports, where format is FAC-[SLOT]-[PORT]
FAC[-{1-8}]-{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}]-{1-5,12-16}-{1-20}-1	Facility AID for GE-XP card, where format is: FAC-[SHELF]-[SLOT]-[PPM]-[PORT]
FAC[-{1-8}]-{1-6,12-17}-{1-2}-1	Facility AID for 10GE-XP card, where format is: FAC-[SHELF]-[SLOT]-[PPM]-[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].

Table 25-15 FACILITY (continued)

Pattern	Description
FAC-{1-6,12-17}-{0-11}	(ONS 15454 only) 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.
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}]-{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}]-{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}-{1-6}	(ONS 15310 MA) Facility AID for cards that can plug into slots 1,2,5,6 where there are 6 Virtual Facility ports. Format is VFAC-[SLOT]-[PORT]
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-{1-6,12-17}-{1-10}	(ONS 15454) Virtual Facility AID for CE-MR-10 cards that can plug into Slots 1-6 and 12-17 and there are 10 Virtual Facility ports. Format is VFAC-[SLOT]-[PORT]
VFAC-{1}-{1-6	Virtual Facility AID for CE-MR-6 (310CL) cards that can plug into Slot 1and there are 6 Virtual Facility ports. Format is VFAC-[SLOT]-[PORT]
VFAC[-{1-8}]-{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}]-{1-5,12-16}-{21-22}-1	Facility AID for the trunk "higher layer" of GE-XP card in the format of:VFAC-[SHELF]-[SLOT]-[PPM]-[PORT]
VFAC[-{1-8}]-{1-6,12-17}-{3-4}-1	Facility AID for the trunk "higher layer" of 10GE-XP card in the format of:VFAC-[SHELF]-[SLOT]-[PPM]-[PORT]
VFAC[-{1-8}]-{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.

Table 25-15 FACILITY (continued)

Pattern	Description
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 for 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	

Table 25-17 LINE (continued)

Values	Description
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	
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[-{1-8}]-{1-6,12-17}-{1}-{RX,TX}-ALL	The Optical Channel representing single wavelength inside OTS facility in a 32-DMX-O, 32-DMX, 32-DMX-L, 32-MUX-O, 40-DMX-C, 40-MUX-C cards. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-ALL.
LINEWL[-{1-8}]-{1-6,12-17}-{1}-{RX,TX}-<wlen>	The Optical Channel representing single wavelength inside OTS facility in a 32-DMX-O, 32-DMX, 32-DMX-L, 32-MUX-O, 40-DMX-C, 40-MUX-C cards. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-[WLEN].
LINEWL[-{1-8}]-{1-6,12-17}-{1-3}-{RX,TX}-ALL	The Optical Channel representing single wavelength inside OTS facility in a 32-WSS, 40-WSS-C cards. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-ALL.
LINEWL[-{1-8}]-{1-6,12-17}-{1-3}-{RX,TX}-<WLEN>	The Optical Channel representing single wavelength inside OTS facility in a 32-WSS, 40-WSS-C cards. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-[WLEN].
LINEWL[-{1-8}]-{1-6,12-17}-{1-2}-{RX,TX}-ALL	All the Optical Channel representing single wavelength inside OTS facility in a AD-1B, AD-4B, AD-1C, AD-2C, AD-4C units. The format is LINE-[SHELF]-[SLOT]-[PORT]-[DIRN]-ALL
LINEWL[-{1-8}]-{1-6,12-17}-{1-2}-{RX,TX}-<WLEN>	The Optical Channel representing single wavelength inside OTS facility in a AD-1B, AD-4B, AD-1C, AD-2C, AD-4C units. The format is LINE-[SHELF]-[SLOT]-[PORT]-[DIRN]-[WLEN]
LINEWL[-{1-8}]-{1-6,12-17}-{1}-{RX,TX}-ALL	All the Optical Channel representing single wavelength inside OTS (COM) facility in a OPT-PRE units. The format is LINE-[SHELF]-[SLOT]-[PORT]-[DIRN]-ALL
LINEWL[-{1-8}]-{1-6,12-17}-{1}-{RX,TX}-<WLEN>	The Optical Channel representing single wavelength inside OTS (COM) facility in a OPT-PRE units.The format is LINE-[SHELF]-[SLOT]-[PORT]-[DIRN]-[WLEN]
LINEWL[-{1-8}]-{1-6,12-17}-{1,3}-{RX,TX}-ALL	The Optical Channel representing single wavelength inside OTS (COM=1, LINE=3) facility in a OPT-BST, OPT-BST-E, OPT-BST-L, OPT-AMP-L, OPT-AMP-17-C and OPT-AMP-23-C cards. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-ALL.
LINEWL[-{1-8}]-{1-6,12-17}-{1,3}-{RX,TX}-<WLEN>	The Optical Channel representing single wavelength inside OTS (COM=1, LINE=3) facility in a OPT-BST, OPT-BST-E, OPT-BST-L, OPT-AMP-L, OPT-AMP-17-C and OPT-AMP-23-C cards. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-[WLEN].
LINEWL[-{1-8}]-{1-6,12-17}-{1-2}-{RX,TX}-ALL	The Optical Channel representing single wavelength inside OTS (COM=1, LINE=2) facility in a OSC-CSM cards. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-ALL.
LINEWL[-{1-8}]-{1-6,12-17}-{1-2}-{RX,TX}-<WLEN>	The Optical Channel representing single wavelength inside OTS (COM=1, LINE=2) facility in a OSC-CSM cards. The format is LINEWL-[SHELF]-[SLOT]-[PORT]-[DIRN]-[WLEN].

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 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.
RFILE-PKG	Transferring a software package.
RFILE-COMPDB	Transferring the provisioning and system database.

25.24 SHELF

(ONS 15454, 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.
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].

Table 25-25 STS (continued)

Pattern	Description
STS-{1-4,11-14}-{1-4}-{1,4}-{1}	StS3c AID for the ASAP card with an OC3 port provisioned. STS12C AID for the ASAP card with an OC12 port provisioned. STS48C AID for the ASAP card with OC48 port provisioned. Format of AID is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,13,25,37}	STS12C AID for the ASAP card with an OC48 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,25}	STS24C AID for the ASAP card with an OC48 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,13,16, 25,28,37,40}	STS9C AID for the ASAP card with an OC48 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7,10,13,16,19, 22,25,28,31,34,37,40,43,46}	STS3C AID for the ASAP card with an OC48 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4,7}	STS6C AID for the ASAP card with an OC12 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1,4}	STS9C AID for the ASAP card with an OC12 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-12}	STS1 AID for the ASAP card with an OC12 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-3}	STS1 AID for the ASAP card with an OC3 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1,4}-{1}-{1-48}	STS1 AID for the ASAP card with an OC48 port provisioned. Format is STS-[SLOT]-[PIM]-[PPM]-[PORT]-[STS].
STS-{1-4,11-14}-{1-4}-{1-192}	(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].

Table 25-25 STS (continued)

Pattern	Description
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-{1-6,12-17}-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].
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].

Table 25-25 STS (continued)

Pattern	Description
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.
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.

Table 25-25 STS (continued)

Pattern	Description
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].
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[-{1-8}]-ALL	ALL synchronization AID (values 1 to 8 is the shelf ID).
SYNC[-{1-8}]-NE	NE synchronization AID (values 1 to 8 is the shelf ID).
SYNC[-{1-8}]-{BITS1,BITS2}	BITS synchronization AID (values 1 to 8 is the shelf ID).

25.27 SYN_SRC

Synchronization source

Table 25-27 SYN_SRC

Pattern	Description
BITS-1	(ONS 15454, ONS 15310-CL, ONS 15310-MA, ONS 15600) Synchronization source is BITS-1. Format is BITS-[PORT].
BITS-2	(ONS 15454, 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-{1-6,12-17}-{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 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-{1-6,12-17}-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

Table 25-31 VT (continued)

Pattern	Description
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
VT1-{5,6,12,13}-1-{1-48}-{1-7}-{1-4}	(ONS 15454 only) OC48 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
WDMSIDE-{UNKNOWN,A,B,C,D, E,F,G,H}	Automatic optical node setup identifier
WDMNODE	Automatic optical node setup identifier

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, 1555.75,1556.55,1558.17,1558.98,1559.79,1560.61,1577.44,1577.86,1578.27,1578.69,1579.10,1579.52, 1579.93,1580.35,1580.77,1581.18,1581.60,1582.02,1582.44,1582.85,1583.27,1583.69,1584.11,1584.53, 1584.95,1585.36,1585.78,1586.20,1586.62,1587.04,1587.46,1587.88,1588.30,1588.73,1589.15,1589.57, 1589.99,1590.41,1590.83,1591.26,1591.68,1592.10,1592.52,1592.95,1593.37,1593.79}	Wavelength identifier

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
OPT-AMP-17C	COM-RX	1	LINE-shelf-slot-1-RX
	COM-TX	2	LINE-shelf-slot-1-TX
	OSC-RX	3	LINE-shelf-slot-2-RX
	OSC-TX	4	LINE-shelf-slot-2-TX
	LINE-RX	5	LINE-shelf-slot-3-RX
	LINE-TX	6	LINE-shelf-slot-3-TX

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
40 WXC	EXP-i-RX	1..8	LINE-shelf-slot-i-RX (i=1..8)
	EXP-TX	11	LINE-shelf-slot-10-TX
	ADD-RX	9	LINE-shelf-slot-9-RX
	DROP-TX	10	LINE-shelf-slot-9-TX
	COM-RX	12	LINE-shelf-slot-11-RX
	COM-TX	13	LINE-shelf-slot-11-TX
32 DMX	CHAN TX	1-32	CHAN-shelf-slot-i-TX (i=1..32)
	COM-RX	33	LINE-shelf-slot-1-RX
OPT-PRE	COM-RX	1	LINE-shelf-slot-1-RX
	COM-TX	2	LINE-shelf-slot-1-TX
	DC-RX	3	LINE-shelf-slot-2-RX
	DC-TX	4	LINE-shelf-slot-2-TX
40 DMX	CHAN TX	1 - 40	CHAN-shelf-slot-i-TX (i=1..40)
	COM RX	41	LINE-shelf-slot-1-RX
4 MD	CHAN-RX	1	CHAN-shelf-slot-1-RX
	CHAN-TX	2	CHAN-shelf-slot-1-TX
	CHAN-RX	3	CHAN-shelf-slot-2-RX
	CHAN-TX	4	CHAN-shelf-slot-2-TX
	CHAN-RX	5	CHAN-shelf-slot-3-RX
	CHAN-TX	6	CHAN-shelf-slot-3-TX
	CHAN-RX	7	CHAN-shelf-slot-4-RX
	CHAN-TX	8	CHAN-shelf-slot-4-TX
	COM-RX	9	LINE-shelf-slot-1-RX
	COM-TX	10	LINE-shelf-slot-1-TX
40 MUX	CHAN-RX	1-40	CHAN-shelf-slot-i-RX (i=1..40)
	COM-TX	41	LINE-shelf-slot-1-TX
32 DMX L	CHAN TX	1 - 32	CHAN-shelf-slot-i-TX (i=1..32)
	COM RX	33	LINE-shelf-slot-1-RX

Table 25-34 CTC Port Numbers and TL1 Aids

Equipment	CTC Port Name	CTC Port Number	TL1 Aid
32 WSS L	ADD-RX	1-32	CHAN-shelf-slot-i-RX (i=1..32)
	PT	33-64	CHAN-shelf-slot-i-PT (i=1..32)
	DROP-TX	69	LINE-shelf-slot-3-TX
	EXP-RX	66	LINE-shelf-slot-2-RX
	EXP-TX	65	LINE-shelf-slot-2-TX
	COM-RX	68	LINE-shelf-slot-1-RX
	COM-TX	67	LINE-shelf-slot-1-TX
OPT-BST	COM-RX	1	LINE-shelf-slot-1-RX
	COM-TX	2	LINE-shelf-slot-1-TX
	OSC-RX	3	LINE-shelf-slot-2-RX
	OSC-TX	4	LINE-shelf-slot-2-TX
	LINE-RX	5	LINE-shelf-slot-3-RX
	LINE-TX	6	LINE-shelf-slot-3-TX
OPT-BST E	COM-RX	1	LINE-shelf-slot-1-RX
	COM-TX	2	LINE-shelf-slot-1-TX
	OSC-RX	3	LINE-shelf-slot-2-RX
	OSC-TX	4	LINE-shelf-slot-2-TX
	LINE-RX	5	LINE-shelf-slot-3-RX
	LINE-TX	6	LINE-shelf-slot-3-TX
OPT-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

Table 25-34 CTC Port Numbers and TL1 Aids

Equipment	CTC Port Name	CTC Port Number	TL1 Aid
AD 1B	BAND-RX	1	BAND-shelf-slot-1-RX
	BAND-TX	2	BAND-shelf-slot-1-TX
	EXP-RX	3	LINE-shelf-slot-1-RX
	EXP-TX	4	LINE-shelf-slot-1-TX
	COM-RX	5	LINE-shelf-slot-2-RX
	COM-TX	6	LINE-shelf-slot-2-TX
AD 1C	CHAN-RX	1	CHAN-shelf-slot-1-RX
	CHAN-TX	2	CHAN-shelf-slot-1-TX
	EXP-RX	3	LINE-shelf-slot-1-RX
	EXP-TX	4	LINE-shelf-slot-1-TX
	COM-RX	5	LINE-shelf-slot-2-RX
	COM-TX	6	LINE-shelf-slot-2-TX
AD 2C	CHAN-RX	1	CHAN-shelf-slot-1-RX
	CHAN-TX	2	CHAN-shelf-slot-1-TX
	CHAN-RX	3	CHAN-shelf-slot-2-RX
	CHAN-TX	4	CHAN-shelf-slot-2-TX
	EXP-RX	5	LINE-shelf-slot-1-RX
	EXP-TX	6	LINE-shelf-slot-1-TX
	COM-RX	7	LINE-shelf-slot-2-RX
	COM-TX	8	LINE-shelf-slot-2-TX
AD 4C	CHAN-RX	1	CHAN-shelf-slot-1-RX
	CHAN-TX	2	CHAN-shelf-slot-1-TX
	CHAN-RX	3	CHAN-shelf-slot-2-RX
	CHAN-TX	4	CHAN-shelf-slot-2-TX
	CHAN-RX	5	CHAN-shelf-slot-3-RX
	CHAN-TX	6	CHAN-shelf-slot-3-TX
	CHAN-RX	7	CHAN-shelf-slot-4-RX
	CHAN-TX	8	CHAN-shelf-slot-4-TX
	EXP-RX	9	LINE-shelf-slot-1-RX
	EXP-TX	10	LINE-shelf-slot-1-TX
	COM-RX	11	LINE-shelf-slot-2-RX
	COM-TX	12	LINE-shelf-slot-2-TX

Table 25-34 CTC Port Numbers and TL1 Aids

Equipment	CTC Port Name	CTC Port Number	TL1 Aid
32 WSS	ADD-RX	1-32	CHAN-shelf-slot-i-RX (i=1..32)
	PT	33-64	CHAN-shelf-slot-i-PT (i=1..32)
	DROP-TX	69	LINE-shelf-slot-3-TX
	EXP-RX	66	LINE-shelf-slot-2-RX
	RXP-TX	65	LINE-shelf-slot-2-TX
	COM-RX	68	LINE-shelf-slot-1-RX
	COM-TX	67	LINE-shelf-slot-1-TX
40 WSS CO	ADD-RX	1-40	CHAN-shelf-slot-i-RX (i=1..32)
	PT	41-80	CHAN-shelf-slot-i-PT (i=1..32)
	DROP-TX	85	LINE-shelf-slot-3-TX
	EXP-RX	82	LINE-shelf-slot-2-RX
	RXP-TX	81	LINE-shelf-slot-2-TX
	COM-RX	84	LINE-shelf-slot-1-RX
	COM-TX	83	LINE-shelf-slot-1-TX
32 DMXO	CHAN-TX	1-32	CHAN-shelf-slot-i-TX (i=1..32)
	COM-RX	33	LINE-shelf-slot-1-RX
32 MUXO	CHAN RX	1-32	CHAN-shelf-slot-i-RX (i=1..32)
	COM TX	33	LINE-shelf-slot-1-TX

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, Cisco ONS 15310-CL, Cisco ONS 15310-MA, and Cisco ONS 15600.

Conditions include any problem detected on an ONS 15454, 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 Far End Alarm and Control (FEAC) Command
LPBKDS1FEAC-CMD	DS1 Loopback Command Sent To Far End
LPBKDS3FEAC	DS3 Loopback Due To FEAC Command
LPBKDS3FEAC-CMD	DS3 Loopback Command Sent To Far End

Table 26-1 Conditions (continued)

Condition	Description
LPBKFACILITY	Facility Loopback
LPBKTERMINAL	Terminal Loopback
LWBATVG	Low Volt
MAN-REQ	Manual Switch Request
MANRESET	Manual System Reset
MANSWTOINT	Manual Switch To Internal Clock
MANSWTOPRI	Manual Switch To Primary Reference
MANSWTOSEC	Manual Switch To Second Reference
MANSWTOTHIRD	Manual Switch To Third Reference
MANUAL-REQ-RING	Manual Switch Request On Ring
MANUAL-REQ-SPAN	Manual Switch Request On Span
MEA	Mismatch Of Equipment And Attributes
MEM-GONE	Free Memory On Card Near Zero
MEM-LOW	Free Memory On Card Very Low
MFGMEM	Manufacturing Data Memory (EEPROM Failure)
NO-CONFIG	No Startup Config
NTWTPINC	Network Topology Incomplete
OCHNC-ACTIV-FAIL	Optical Channel Activation Failure
OCHNC-DEACTIV-FAIL	Optical Channel 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

Table 26-1 Conditions (continued)

Condition	Description
OUT-OF-SYNC	8B10B Out of Sync
PDI-P	Payload Defect Indication–Path
PEER-NORESPONSE	Peer Card Not Responding
PLM-P	Payload Label Mismatch–Path
PLM-V	Signal Label Mismatch Failure–Payload Label Mismatch–VT
PORT-CODE-MISM	Pluggable Port security code mismatch
PORT-COMM-FAIL	Module Communication Failure
PORT-MISMATCH	Pluggable Port rate mismatch
PORT-MISSING	Pluggable Port missing
PRC-DUPID	Duplicate Node ID
PROTNA	Protection Unit Not Available
PTIM	Payload Type Identifier Mismatch
PWR-REDUN	Redundant Power Capability Lost
RAI	Remote Alarm Indication
RCVR-MISS	Facility Termination Equipment–Receiver Missing
RFI	Remote Failure Indication
RFI-L	Remote Failure Indication–Line
RFI-P	One-Bit Remote Failure Indication–Path
RFI-V	Remote Failure Indication–VT
RING-ID-MIS	Ring ID Mismatch
RING-MISMATCH	Far End of Fiber Is Provisioned With Different Ring ID
RING-SW-EAST	Ring Switch Is Active on the East Side
RING-SW-WEST	Ring Switch Is Active on the West Side
RSVP-HELLODOWN	RSVP Hello FSM to Neighbor Down
RUNCFG-SAVENEED	Need to Save Running 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

Table 26-1 Conditions (continued)

Condition	Description
SQM	Sequence Mismatch
SQUELCH	Ring Is Squelching Traffic
SQUELCHED	Equipment Squelched
SSM-DUS	Do Not Use For Synchronization
SSM-FAIL	Failed To Receive Synchronization Status Message
SSM-LNC	G812–Local Node Clock Traceable
SSM-OFF	Synchronization Status Messages Are Disabled On This Interface
SSM-PRC	G811–Primary Reference Clock Traceable
SSM-PRS	Stratum 1 Primary Reference Source Traceable
SSM-RES	Reserved For Network Synchronization Use
SSM-SDH-TN	G812–Transit Node Clock Traceable
SSM-SETS	G813–Synchronous Equipment Timing Source Traceable
SSM-SMC	SONET Minimum Clock Traceable
SSM-ST2	Stratum 2 Traceable
SSM-ST3	Stratum 3 Traceable
SSM-ST3E	Stratum 3E Traceable
SSM-ST4	Stratum 4 Traceable
SSM-STU	Synchronized–Traceability Unknown
SSM-TNC	Transit Node Clock Traceable
SWMTXMOD	Switching Matrix Module Failure
SWTOPRI	Switch To Primary Reference
SWTOSEC	Switch To Second Reference
SWTOTHIRD	Switch To Third Reference
SYNC-FREQ	Synchronization Reference Frequency Out Of Bounds
SYNCPRI	Primary Synchronization Reference Failure
SYNCSEC	Secondary Synchronization Reference Failure
SYNCTHIRD	Third Synchronization Reference Failure
SYSBOOT	System Reboot
TIM	TIM Section–Trace Identifier Mismatch Failure
TIM-MON	TIM Section Monitor–Trace Identifier Mismatch Failure
TIM-P	STS Path Trace Identifier Mismatch
TPTFAIL	Transport layer failure
TRMT	Transmit Failure
TRMT-MISS	Facility Termination Equipment–Transmitter Missing
TUNDERRUN	Ethernet Transmit First In First Out Underrun

Table 26-1 Conditions (continued)

Condition	Description
TX-AIS	Alarm Indication Signal in Tx
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

CHAPTER 27

Modifiers

This chapter describes the modifiers for TL1 commands and autonomous messages for the Cisco ONS 15454, Cisco ONS 15310-CL, Cisco ONS 15310-MA, and Cisco 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 15310-CL	ONS 15310-MA	ONS 15600
10GFC	Yes	No	No	—
10GIGE	Yes	No	No	—
1GFC	Yes	No	No	—
1GFICON	Yes	No	No	—
2GFC	Yes	No	No	—
2GFICON	Yes	No	No	—
D1VIDEO	Yes	No	No	—
DS1	Yes	—	—	—
DV6000	Yes	No	No	—
E100	Yes	No	No	—
E1000	Yes	No	No	—
EC1	Yes	Yes	Yes	—
FSTE	Yes	Yes	Yes	—
G1000	Yes	No	No	—
GIGE	Yes	No	No	Yes
HDTV	Yes	No	No	—
ISC1	Yes	No	No	—
OC12	Yes	Yes	Yes	Yes
OC192	Yes	No	No	Yes
OC3	Yes	Yes	Yes	Yes
OC48	Yes	No	Yes	Yes

Table 27-1 Modifier Support (continued)

Modifier	ONS 15454	ONS 15310-CL	ONS 15310-MA	ONS 15600
OCH	Yes	No	No	—
OMS	No	—	—	—
OTS	No	—	—	—
POS	Yes	Yes	Yes	Yes
STS1	Yes	Yes	Yes	Yes
STS12C	Yes	Yes	Yes	Yes
STS192C	Yes	No	No	Yes
STS24C	Yes	No	Yes	Yes
STS18C	Yes	No	No	No
STS36C	Yes	No	No	No
STS3C	Yes	Yes	Yes	Yes
STS48C	Yes	No	Yes	Yes
STS6C	Yes	Yes	Yes	Yes
STS9C	Yes	Yes	Yes	Yes
T1	Yes	Yes	Yes	—
T3	Yes	Yes	Yes	—
VT1	Yes	Yes	Yes	—

Numerics

1+1 optical protection
- creating groups 12-21
- deleting 10-7
- editing 11-71
- initiating a switch 16-8
- releasing a switch 18-4
- retrieving all groups 21-151

1:1 electrical protection. *See* electrical cards

1:N electrical protection. *See* electrical cards

15310-CL-CTX cards, editing DS1/T1 ports 11-114

A

Activate User command 1-1

activating
- software loads 3-1
- users 1-1

ACT-USER command 1-1

AID
- AidUnionId 25-12
- AidUnionId1 25-17
- ALL 25-1
- BAND 25-17
- BANDWL 25-18
- BITS 25-18
- BLSR 25-19
- CHANNEL 25-20
- COM 25-21
- CrossConnectId 25-22
- CrossConnectId1 25-26
- DS1 25-32
- ENV 25-32
- EQPT 25-33
- FACILITY 25-35
- IPADDRESS 25-39
- LINE 25-39
- LINEWL 25-40
- LNKTERM 25-42
- OSC 25-43
- PRSLOT 25-43
- RFILE 25-44
- SHELF 25-44
- STS 25-44
- SYN 25-49
- SYN_SRC 25-49
- SYNC_REF 25-50
- SYNCSW 25-51
- UDC 25-52
- VT 25-52
- WDMANS 25-54
- WLEN 25-54

AidUnionId1 AID 25-17

AidUnionId AID 25-12

AINS soak, editing 11-40

alarms
- autonomous messages 17-1
- autonomous messages, cards 17-12
- autonomous messages, security 17-16
- autonomous messages, synchronization 17-18
- BITS 17-5
- equipment without AIDs 17-7
- retrieving for BITS 21-57
- retrieving for cards 21-65
- retrieving for synchronization 21-68

retrieving log 21-202
retrieving power level thresholds 21-76
retrieving status 21-49, 21-53
retrieving threshold values 21-72
setting power monitoring thresholds 23-2
setting thresholds 23-1
setting thresholds for MXP_2.5G_10G and TXP_MR_10G cards 23-12
turning off audible alerts 16-1
ALL AID 25-1
Allow Console Port command 2-1
Allow Database Change Message command 2-2
allowing. *See* enabling
Allow Message All command 2-2
Allow Message Security command 2-3
Allow Performance Report All command 2-3
Allow Switch Duplex Equipment command 2-4
Allow Switch to Protection Equipment command 2-5
Allow Switch to Working Equipment command 2-6
Allow User Security command 2-7
ALS
See also lasers
editing 11-48
restarting laser after 16-2
retrieving attributes 21-79
ALW-CONSOLE-PORT command 2-1
ALW-MSG-ALL command 2-2
ALW-MSG-DBCHG command 2-2
ALW-MSG-SECU command 2-3
ALW-PMREPT-ALL command 2-3
ALW-SWDX-EQPT command 2-4
ALW-SWTOPROTN-EQPT command 2-5
ALW-SWTOWKG-EQPT command 2-6
ALW-USER-SECU command 2-7
ANS
calculating expected span loss verification 16-13
editing 11-127
editing expected span loss verification 11-112
retrieving attributes 21-364
retrieving expected span loss value 21-302
retrieving involved ports 21-212
starting 16-15
APC
enabling 16-2
modifying attributes 11-48
retrieving attributes 21-82
retrieving ports involved in ANS regulation 21-205
APPLY command 3-1
ASAP cards, editing GFP 11-78
audit log, retrieving 21-89
automatic laser shutdown. *See* ALS
automatic protection groups. *See* APC
autonomous messages
See also individual message names
enabling all 2-2
enabling for PMs 2-3
enabling for REPT DBCHG command 2-2
enabling security messages 2-3
inhibiting all 14-2
session timeout 4-1

B

backing up the database 8-3
BAND AID 25-17
BANDWL AID 25-18
bidirectional line switched rings. *See* BLSRs
BITS
AID 25-18
alarm messages 17-5
editing 11-49
editing synchronization reference list 11-113
nonalarmed event reports 17-28
retrieving alarms 21-57
retrieving conditions 21-103
retrieving configuration 21-91
retrieving synchronization reference list 21-309
BLSRs

BLSR AID 25-19
creating 12-2
deleting 10-2
editing 11-36
editing extension byte 11-40
exercising a switch 13-1
releasing a switch 18-4
retrieving information about 21-23
retrieving path trace information 21-348
building integrated timing supply. *See* BITS

C

calculating
expected span loss verification 16-13
optical links 16-4
VOA values 16-15
CANC command 4-1
Cancel command 4-1
Cancel User command 4-2
Cancel User Security command 4-3
CANC-USER command 4-2
CANC-USER-SECU command 4-3
cards
alarm reports 17-12
changing service state 19-2
deleting provisioning 10-6
initializing 15-7
nonalarmed event reports 17-33
provisioning 12-10
provisioning payload type 11-69
removing facilities 21-149
resetting 15-7
retrieving alarms 21-65
retrieving data and state parameters 21-135
retrieving inventory information 21-179
retrieving PM parameters for a specified type 21-238
CE-1000-4 cards
See also Ethernet
editing GFP 11-78
retrieving GFP information 21-167
CE-100T-8 cards
See also Ethernet
editing GFP 11-78
retrieving GFP information 21-167
Change Equipment command 5-3
Change Test Access Mode command 5-1
changing
See also editing
See also modifying
database, autonomous report 17-22
passwords 11-106
service state 19-1, 19-2, 20-1, 20-2
TACC mode 5-1
CHANNEL AID 25-20
CHG-ACCMD-<MOD_TACC> command 5-1
CHG-EQPT command 5-3
circuits, changing TACC mode 5-1
Cisco IOS
copying, status report of 17-38
downloading startup configuration file 8-1
uploading startup configuration file 8-1
clearing the INTRUSION-PSWD condition 6-1
Clear Security Condition command 6-1
CLR-COND-SECU command 6-1
COM AID 25-21
commands
See also individual command names
editing security 11-53
retrieving security level 21-95
conditions
autonomous messages about customer-defined 17-8, 17-11
list of available 26-1 to 26-9
retrieving 21-96, 21-100, 21-111
retrieving for BITS 21-103
retrieving for synchronization 21-114

connecting STSs or VTs to the STS specified by the TAP 7-1
Connect Test Access command 7-1
CONN-TACC-<MOD_TACC> command 7-1
console port
retrieving status 21-118
turning off 14-1
turning on 2-1
Copy Cisco IOS Configuration File command 8-1
Copy File command 8-3
copying Cisco IOS configuration file, status report of 17-38
COPY-IOSCFG command 8-1
COPY-RFILE command 8-3
creating
1+1 optical protection groups 12-21
BLSRs 12-2
cross-connects 12-6
firewall tunnels 12-45
GRE tunnels 12-43
OCHCCs 12-31
OCHNCs 12-32
optical links 12-24, 12-27
provisionable patchcord terminations 12-28
proxy tunnels 12-46
RMON thresholds 12-35
rolls 12-5, 12-41
static routes 12-42
TADRMAP table entry 12-43
users 12-46
VCGs 12-48
Y-cable protection groups 12-19
cross-connect cards
disabling loopbacks 18-2
enabling switching 2-4
inhibiting switching 14-4
switching 24-1
CrossConnectId AID 25-22
cross-connects
creating 12-6
deleting 10-4
editing 11-55
editing node attributes 11-90
retrieving 21-120
retrieving specified 21-124
CrossConnedtId1 AID 25-26
CTC
message log for masked passwords 1-1
request history for masked passwords 1-1

D

database
autonomous report of changes 17-22
backing up and restoring 8-3
date
editing 11-57
retrieving 21-345
setting for system 23-17
DCCs
creating provisionable patchcord terminations 12-28
editing 11-38
retrieving nodes connected by 21-208
DCUs, setting thresholds 23-1
Delete BLSR command 10-2
Delete Bulkroll command 10-3
Delete Cross Connection command 10-4
Delete Equipment command 10-6
Delete Ethernet Network-to-Network Interface command 10-11
Delete Facility Protection Group DWDM command 10-7
Delete Facility Protection Group OC-N command 10-7
Delete Link Management Protocol Control Channel command 10-8
Delete Link Management Protocol Data Link command 10-9
Delete OCHCC command 10-12
Delete Optical Channel Network Connection command 10-13

Delete Optical Link command 10-10
Delete Port command 10-1
Delete Provisionable Patchcord Termination command 10-10, 10-12
Delete Remote Monitoring Threshold command 10-14
Delete Roll command 10-19
Delete Route command 10-20
Delete Route GRE command 10-21
Delete Target Identifier Address Mapping command 10-21
Delete Trap Table command 10-22
Delete Tunnel Firewall command 10-23
Delete Tunnel Proxy command 10-23
Delete User Security command 10-24
Delete VCG command 10-25
Delete Virtual LAN command 10-25
Delete Wavelength Division Multiplexing Side command 10-26
deleting
1+1 optical protection group 10-7
BLSRs 10-2
bulk rolling operation 10-3
card slot provisioning 10-6
cross-connects 10-4
DWDM optical links 10-10
Ethernet network-to-network interface 10-11
firewall tunnels 10-23
GRE tunnels 10-21
LMP control channel 10-8
LMP data link 10-9
OCHCCs 10-12
OCHNCs 10-13
ports 10-1
provisionable patchcord terminations 10-10, 10-12
proxy tunnels 10-23
RMON thresholds 10-14
rolls 10-19
SNMP traps 10-22
static routes 10-20
TADRMAP table entry 10-21
TAPs 9-1
users 10-24
VCGs 10-25
virtual LAN 10-25
wavelength division multiplexing side 10-26
Y-cable protection group 10-7
demultiplexers, setting thresholds 23-1
disabling
See also inhibiting
See also turning off
EMS protocol 11-109
loopbacks 18-2
OSPF discovery 11-41
REPT ALM SECU messages 14-3
REPT DBCHG message 14-2
REPT EVT SECU messages 14-3
SHELL protocol 11-109
SNMP 11-109
TL1 11-109
user accounts 14-8
Disconnect Test Access command 9-1
DISC-TACC command 9-1
DLT 10-11
DLT-<MOD_RING> command 10-2
DLT-<MOD1PAYLOAD> command 10-1
DLT-BULKROLL-<OCN_TYPE> command 10-3
DLT-CRS-<PATH> command 10-4
DLT-EQPT command 10-6
DLT-FFP-<MOD2DWDMPAYLOAD> command 10-7
DLT-FFP-<OCN_TYPE> command 10-7
DLT-LMP-CTRL 10-8
DLT-LMP-DLINK 10-9
DLT-LMP-TLINK 10-8
DLT-LNK command 10-10
DLT-LNKTERM command 10-10
DLT-NNI-ETH 10-11
DLT-NNI-ETH command 10-11
DLT-OCHCC command 10-12
DLT-OCHNC command 10-13

DLT-OSC command 10-14
DLT-QNQ-ETH 10-12
DLT-QNQ-ETH command 10-12
DLT-RMONTH-<MOD2_RMON> command 10-14
DLT-ROLL-<MOD_PATH> command 10-19
DLT-ROUTE command 10-20
DLT-ROUTE-GRE command 10-21
DLT-TADRMAP command 10-21
DLT-TRAPTABLE command 10-22
DLT-TUNNEL-FIREWALL command 10-23
DLT-TUNNEL-PROXY command 10-23
DLT-USER-SECU command 10-24
DLT-VCG command 10-25
DLT-VLAN 10-25
DLT-VLAN command 10-25
DLT-WDMSIDE 10-26
downgrading
  activating software load during 3-1
  reverting software load during 3-1
downloading
  Cisco IOS startup configuration file 8-1
  software 8-3
  software, autonomous messages 17-37
DS1/E1-56 cards
  See also electrical cards
  editing DS1/T1 ports 11-114
DS1 AID 25-32
DS-1 cards
  See also electrical cards
  retrieving facilities configuration 21-310
DS-3 cards
  See also electrical cards
  retrieving facility properties 21-315
DS3i-N-12 cards
  See also electrical cards
  editing DS3/T3 ports 11-118
DS3XM cards
  See also electrical cards
  retrieving facility properties 21-315
  retrieving test access attributes 21-131
DWDM
  creating Y-cable protection groups 12-19
  deleting OCHCCs 10-12
  deleting OCHNCs 10-13
  deleting optical links 10-10
  deleting Y-cable protection group 10-7
  editing operating parameters 11-25
  editing TXP_MR_2.5G/TXPP_MR_2.5G card protection 11-73
  editing Y-cable protection group 11-70
  enabling APC 16-2
  retrieving client configuration parameters 21-16
  retrieving optical attributes and service states 21-217
  retrieving path trace information 21-351
  retrieving protection switching status 21-276

E

EC-1 cards
  See also electrical cards
  editing attributes 11-59
  retrieving facility status 21-132
ED-<GIGE_TYPE> command 11-1
ED-<MOD_PATH> command 11-31
ED-<MOD_RING> command 11-36
ED-<MOD1FCPAYLOAD> command 11-10
ED-<MOD1FICONPAYLOAD> command 11-18
ED-<MOD2DWDMPAYLOAD> command 11-25
ED-<OCN_TYPE> command 11-38
ED-ALS command 11-48
ED-APC command 11-48
ED-BITS command 11-49
ED-BULKROLL-<OCN_TYPE> command 11-52
ED-CMD-SECU command 11-53
ED-COS-ETH command 11-54
ED-CRS-<PATH> command 11-55
ED-DAT command 11-57
ED-DS1 command 11-57

ED-EC1 command 11-59
ED-EQPT command 11-64
ED-ETH command 11-62
ED-FAC command 11-69
ED-FFP-<MOD2DWDMPAYLOAD> command 11-70
ED-FFP-<OCN_TYPE> command 11-71
ED-FFP-OCH command 11-73
ED-FSTE command 11-74
ED-G1000 command 11-76
ED-GFP command 11-78
ED-HDLC command 11-79
Edit ALS command 11-48
Edit APC command 11-48
Edit BITS command 11-49
Edit BLSR command 11-36
Edit Bulkroll command 11-52
Edit Command Security command 11-53
Edit Cross-connect command 11-55
Edit Date and Time command 11-57
Edit Digital Facility T3 command 11-118
Edit Digital Signal Facility T1 command 11-114
Edit DS1 command 11-57
Edit DWDM command 11-25
Edit Electrical Carrier command 11-59
Edit Equipment command 11-64
Edit Ethernet command 11-1, 11-62
Edit Ethernet Cost of Service Table command 11-54
Edit ETH QinQ Table command 11-110
Edit Facility command 11-69
Edit Facility Protection Group DWDM command 11-70
Edit Facility Protection Group OC-N command 11-71
Edit Facility Protection Group Optical Channel command 11-73
Edit Fast Ethernet command 11-74
Edit Fibre Channel command 11-10
Edit FICON command 11-18
Edit G1000 command 11-76
Edit GFP command 11-78
Edit HDLC command 10-8, 11-79
editing
See also changing
See also modifying
1+1 optical protection 11-71
15310-CL-CTX card DS1/T1 port 11-114
AINS soak 11-40
ALS 11-48
ANS 11-127
BITS attributes 11-49
BLSRs 11-36
command security 11-53
cross-connects 11-55
date and time 11-57
DCCs 11-38
DS1/E1-56 card DS1/T1 port 11-114
DS3i-N-12 card DS3/T3 port 11-118
DWDM operating parameters 11-25
EC-1 card attributes 11-59
equipment slot attributes 11-64
Ethernet attributes 11-1
Ethernet commands 11-62
Ethernet cost of service table 11-54
ETH QinQ table 11-110
expected span loss verification 11-112
Fibre Channel attributes 11-10
FICON attributes 11-18
G1000 ports 11-76
GFP 11-78
HDLC attributes 10-8, 11-79
J1 path trace 11-41
Layer 2 Ethernet 11-79
LMP 11-82
LMP control channel 11-83
LMP data link 11-85
LMP TE link 11-84
node attributes 11-88
node path attributes 11-90
node timing 11-91
OCHCCs 11-100

OCHNCs 11-101
OCH service parameters 11-93
OMS facility attributes 11-103
optical attributes 11-38
optical link states 11-86
OTS 11-104
port information for Fast Ethernet cards 11-74
POS 11-107
provisional patchcord terminations 11-87
rolls 11-52
SDBER 11-98, 21-224
SSM 11-39
STS and VT paths 11-31
synchronization reference list 11-113
TACC attribute for DS1 access on a DS3XM card 11-57
trace-related OCH facilities 11-123
trap table destination entry 11-122
TXP_MR_2.5G/TXPP_MR_2.5G card protection 11-73
user security 11-124
VCGs 11-126
VLAN 11-126
wavelength division multiplexing side 11-128
wavelengths 11-42
XTC card DS1/T1 port 11-114
Y-cable protection group 11-70

Edit Layer 2 Ethernet command 11-79
Edit Link command 11-86
Edit Link Management Protocol command 11-82
Edit Link Management Protocol Control Channel command 11-83
Edit Link Management Protocol Data Link command 11-85
Edit Link Management Protocol Traffic Engineering Link command 11-84
Edit Network Element General 11-88
Edit Network Element Path command 11-90
Edit Network Element Synchronization command 11-91
Edit OCHCC command 11-100
Edit OCHNC command 11-101
Edit OC-N command 11-38
Edit Optical Channel command 11-93
Edit Optical Multiplex Section command 11-103
Edit Optical Transport Section command 11-104
Edit Password command 11-106
Edit POS command 11-107
Edit Protocol command 11-109
Edit Provisionable Patchcord Termination command 11-87
Edit Roll command 11-111
Edit Span Loss Verification WDM ANS command 11-112
Edit STS and VT Paths 11-31
Edit Synchronization command 11-113
Edit Trace OCH Facility command 11-123
Edit Trap Table 11-122
Edit User Security 11-124
Edit VCG command 11-126
Edit VLAN command 11-126
Edit Wavelength Division Multiplexing command 11-128
Edit WDM ANS command 11-127
ED-L2-ETH command 11-79
ED-LNK command 11-86
ED-LNKTERM command 11-87
ED-NE-GEN command 11-88
ED-NE-PATH command 11-90
ED-NE-SYNCN command 11-91
ED-OCHCC command 11-100
ED-OCH command 11-93
ED-OCHNC command 11-101
ED-OMS command 11-103
ED-OTS command 11-104
ED-PID command 11-106
ED-POS command 11-107
ED-PROTOCOL command 11-109
ED-QNQ-ETH command 11-110
ED-ROLL-<MOD_PATH> command 11-111
ED-SLV-WDMANS command
description 11-112

retrieving provisioned value 21-302
ED-SYNCN command 11-113
ED-T1 command 11-114
ED-T3 command 11-118
ED-TRAPTABLE command 11-122
ED-TRC-OCH command 11-123
ED-USER-SECU command 11-124
ED-VCG command 11-126
ED-VLAN command 11-126
ED-WDMANS command 11-128
ED-WDMSIDE command 11-128
electrical cards
See also DS-1 cards
See also DS-3 cards
See also EC-1 cards
See also DS1/E1-56 cards
See also DS3i-N-12 cards
disabling loopbacks 18-2
enabling loopbacks 16-5
enabling protection switching 2-5, 2-6
inhibiting protection switching 14-6
protection switching 24-2, 24-4
provisioning protection 12-10
upgrading from low density to high density 5-3
EMS protocol
disabling 11-109
enabling 11-109
retrieving status 21-283
enabling
all autonomous messages 2-2
APC 16-2
disabled user ID 2-7
EMS protocol 11-109
loopbacks 16-5
OSPF discovery 11-41
PM reporting 2-3
REPT ALM SECU messages 2-3
REPT DBCHG messages 2-2
REPT EVT SECU messages 2-3
SHELL protocol 11-109
SNMP 11-109
switching for electrical protection cards 2-5, 2-6
switching on cross-connect cards 2-4
TL1 11-109
ENT-<MOD_RING> command 12-2
ENT-<MOD1PAYLOAD> command 12-1
ENT-BULKROLL-<OCN_TYPE> command 12-5
ENT-CRS-<PATH> command 12-6
ENT-EQPT command 12-10
Enter BLSR command 12-2
Enter Bulk Roll command 12-5
Enter Cross-connect command 12-6
Enter Equipment command 12-10
Enter Facility Protection Group DWDM command 12-19
Enter Facility Protection Group OC-N command 12-21
Enter Link Management Protocol Data Link command 12-25
Enter Link Management Protocol Traffic Engineering Link command 12-26
Enter Network-to-Network Interface Ethernet command 12-30
Enter OCHCC command 12-31
Enter OCHNC command 12-32
Enter Optical Link command 12-24, 12-27
Enter Port command 12-1
Enter Provisionable Patchcord Termination command 12-28
Enter QinQ Ethernet command 12-34
Enter RMON Threshold command 12-35
Enter Roll command 12-41
Enter Route command 12-42
Enter Route GRE command 12-43
Enter TID Address Mapping 12-43
Enter Trap Table command 12-44
Enter Tunnel Firewall command 12-45
Enter Tunnel Proxy command 12-46
Enter User Security command 12-46
Enter VCG command 12-48
Enter Virtual VLAN command 12-50

Enter Wavelength Division Multiplexing Side command 12-51
ENT-FFP-<MOD2DWDMPAYLOAD> command 12-19
ENT-FFP-<OCN_TYPE> command 12-21
ENT-LNK command 12-24, 12-27
ENT-LNKTERM command 12-28
ENT-NNI-ETH command 12-30
ENT-OCHCC command 12-31
ENT-OCHNC command 12-32
ENT-OSC command 12-34
ENT-QNQ-ETH command 12-34
ENT-RMONTH-<MOD2_RMON> command 12-35
ENT-ROLL-<MOD_PATH> command 12-41
ENT-ROUTE command 12-42
ENT-ROUTE-GRE command 12-43
ENT-TADRMAP command 12-43
ENT-TRAPTABLE command 12-44
ENT-TUNNEL-FIREWALL command 12-45
ENT-TUNNEL-PROXY command 12-46
ENT-USER-SECU command 12-46
ENT-VCG command 12-48
ENT-VLAN command 12-50
ENT-WDMSIDE command 12-51
ENV AID 25-32
environmental alarms
  autonomous reports 17-8, 17-11
  nonalarmed event reports 17-30
  retrieving 21-60
  retrieving attributes 21-84
environmental conditions, retrieving 21-106
EPT DBCHG message 17-22
EQPT AID 25-33
ESCON, retrieving settings 21-142
Ethernet
  See also ML-Series Ethernet cards
  editing attributes 11-1
  editing Fast Ethernet port information 11-74
  editing POS 11-107
  retrieving back-end POS port information 21-275
  retrieving information about Fast Ethernet cards 21-159
Exercise Protection Switch command 13-1
exercising a BLSR protection switch 13-1
EX-SW-<OCN_BLSR> command 13-1
external controls
  operating 16-3
  releasing 18-1
  retrieving attributes 21-83
  retrieving states 21-148
  setting attributes 23-4, 23-5

F

FACILITY AID 25-35
Fast Ethernet cards. *See* Ethernet
FC_MR-4 cards
  disabling loopbacks 18-2
  editing Fibre Channel attributes 11-10
  editing GFP 11-78
  enabling loopbacks 16-5
  retrieving ESCON settings 21-142
  retrieving FICON settings 21-9
  retrieving GFP information 21-167
  retrieving port attributes 21-1
Fibre Channel. *See* FC_MR-4 cards
FICON
  editing attributes 11-18
  retrieving settings 21-9
firewall tunnels
  creating 12-45
  deleting 10-23
  retrieving information about 21-355
forcing
  rolls 11-111
  users off an NE 4-3
  valid signal on a roll 11-52

G

G1000-4 cards
editing ports 11-76
retrieving facilities configuration 21-163
GCCs, creating provisionable patchcord terminations 12-28
GFP
editing 11-78
retrieving information 21-167
GIGE, retrieving information 21-168
GNE, retrieving node attributes 21-204
GRE tunnels
creating 12-43
deleting 10-21
viewing list 21-301

H

HDLC
editing attributes 10-8, 11-79
retrieving attributes 21-177

I

INH-CONSOLE-PORT command 14-1
Inhibit Console Port command 14-1
Inhibit Database Change Message command 14-2
inhibiting
See also disabling
See also turning off
all autonomous messages 14-2
cross-connect switching 14-4
electrical card protection switching 14-6
protection switching 14-5
Inhibit Message All command 14-2
Inhibit Message Security command 14-3
Inhibit Performance Report All command 14-3
Inhibit Switch Duplex Equipment command 14-4
Inhibit Switch to Protection Equipment command 14-5
Inhibit Switch to Working Equipment command 14-6
Inhibit User Security command 14-8
INH-MSG-ALL command 14-2
INH-MSG-DBCHG command 14-2
INH-MSG-SECU command 14-3
INH-PMREPT-ALL command 14-3
INH-SWDX-EQPT command 14-4
INH-SWTOPROTN-EQPT command 14-5
INH-SWTOWKG-EQPT command 14-6
INH-USER-SECU command 14-8
Initialize Register command 15-1
Initialize System command 15-7
initializing
cards 15-7
performance monitoring registers 15-1
INIT-REG-<MOD2> command 15-1
INIT-SYS command 15-7
INTRUSION-PSWD condition, clearing 6-1
IP address
editing settings 11-88
IPADDRESS AID 25-39
retrieving for a node 21-204
retrieving for DCC-connected nodes 21-208
retrieving for node 21-207

J

J1 path trace. *See* path trace

L

lasers
See also ALS
restarting 16-2
LCAS, provisioning 12-48
LINE AID 25-39
LINEWL AID 25-40

LNKTERM AID 25-42
logging out
of an active session 4-2
users involuntarily 4-3
loopbacks
disabling 18-2
enabling 16-5

M

Maintenance user, description 12-46
mapping TIDs to subtending NEs 12-43
masked passwords 1-1, 11-106, 12-47
messages. *See* autonomous messages
ML-Series Ethernet cards
See also Ethernet
retrieving console port status 21-118
turning off the console port 14-1
turning on the console port 2-1
modifiers 27-1
modifying
See also changing
See also editing
APC attributes 11-48
multiplexers, setting thresholds 23-1
multishelf mode, editing 11-88
MXP_2.5G_10G cards, setting thresholds 23-1

N

NE. *See* nodes
nodes
editing attributes 11-88
editing path attributes 11-90
editing timing 11-91
mapping TIDs to subtending NEs 12-43
retrieving equipment information 21-215
retrieving general attributes 21-206
retrieving internal OCH path 21-235
retrieving IP address 21-204
retrieving path-level attributes 21-209
retrieving synchronization attributes 21-210
nonalarmed events
related to starting a session 17-40
reported for BITS 17-28
reported for cards 17-33
reported for environmental alarms 17-30
reported for equipment without AIDs 17-29
reported for RMON 17-23
reports for synchronization 17-42
security reports 17-39

O

OADM cards, setting thresholds 23-1
OCHCCs
creating 12-31
deleting 10-12
editing 11-100
OCH facilities, editing service parameters 11-93
OCHNCs
creating 12-32
deleting 10-13
editing 11-101
retrieving wavelength connection provisioning information 21-227
OMS facilities
editing attributes 11-103
retrieving parameters 21-228
Operate Alarm Cutoff All command 16-1
Operate ALS command 16-2
Operate APC command 16-2
Operate External Control command 16-3
Operate Link command 16-4
Operate Loopback command 16-5
Operate Protection Switch DWDM command 16-7
Operate Protection Switch OCH command 16-13

Operate Protection Switch OC-N command 16-8
Operate Span Loss Verification WDM ANS command 16-13
Operate Synchronization Switch command 16-14
Operate WDM ANS command 16-15
operating external controls 16-3
OPR-ACO-ALL command 16-1
OPR-ALS command 16-2
OPR-APC command 16-2
OPR-EXT-CONT command
auditing results 21-148
description 16-3
OPR-LNK command 16-4
OPR-LPBK-<MOD2> command 16-5
OPR-PROTNSW-<MOD2DWDMPAYLOAD> command 16-7
OPR-PROTNSW-<OCN_TYPE> command 16-8
OPR-PROTNSW-<PATH> command 16-11
OPR-PROTNSW-OCH command 16-13
OPR-SLV-WDMANS command 16-13
OPR-SYNCNSW command 16-14
OPR-WDMANS command 16-15
optical amplifiers, setting thresholds 23-1
optical cards
disabling loopbacks 18-2
editing attributes 11-38
enabling loopbacks 16-5
retrieving attributes 21-25
retrieving switching state 21-278
optical links
calculating 16-4
creating 12-24, 12-27
editing states 11-86
retrieving list 21-195
optical protection. *See* 1+1 optical protection
OSCs
OSC AID 25-43
setting thresholds 23-1
OSFP, enabling discovery of 11-41
OSI-over-IP 12-43
OTS
editing 11-104
retrieving parameters 21-232

P

passwords
changing 11-106
commands that mask 1-1
editing by Superuser 11-124
path trace
editing J1 11-41
editing related OCH facilities 11-123
retrieving DWDM information 21-351
retrieving information 21-348
retrieving message contents 21-284, 21-286
payload
provisioning type 11-69
retrieving type for a facility 21-149
performance monitoring
enabling autonomous messages 2-3
inhibiting reports for a session 14-3
initializing registers 15-1
retrieving all reporting schedules 21-272
retrieving BDFL parameters 21-90
retrieving mode 21-252, 21-266, 21-267
retrieving parameters for a specified card type 21-238
retrieving schedule 21-269
retrieving threshold levels 21-322
retrieving thresholds 21-334
scheduled reports 17-46
scheduling reports 22-1
setting data collection mode 23-9, 23-11
ports
deleting 10-1
editing DS1/T1 11-114
editing DS3/T3 11-118
editing Fast Ethernet information 11-74

editing G1000 11-76
involved in ANS 21-212
provisioning PPMs 12-1
provisioning UDP 12-44
retrieving 10GIGE parameters 21-43
retrieving Fibre Channel attributes 21-1
retrieving FICON settings 21-9
retrieving status for console ports 21-118
turning off console port 14-1
turning on console ports 2-1
POS
editing 11-107
retrieving back-end port information 21-275
power
retrieving ROADM optical power monitoring parameters 21-231
retrieving thresholds 21-76
setting monitoring thresholds 23-2
PPMs
provisioning 12-1
retrieving inventory information 21-179
provisionable patchcords
creating terminations 12-28
deleting terminations 10-10, 10-12
editing terminations 11-87
retrieving termination information 21-201
provisioning
cards 12-10
deleting for card slots 10-6
LCAS 12-48
payload type 11-69
signal type 11-69
SNMP trap destination 12-44
specified PPMs 12-1
UDP port 12-44
Provisioning user, description 12-47
proxy tunnels
creating 12-46
deleting 10-23
retrieving information about 21-356
PRSLOT AID 25-43

R

Release External Control command 18-1
Release Loopback command 18-2
Release Protection Switch DWDM command 18-4
Release Protection Switch OCH 18-7
Release Protection Switch OC-N command 18-4
Release Protection Switch STS or VT command 18-6
Release Synchronization Switch command 18-7
releasing
external controls 18-1
SONET line protection switch 18-4
SONET path protection switch command 18-6
timing switch 18-7
TXPP_MR_2.5G protection switch 18-7
Remove Equipment command 19-2
Remove Facility command 19-1
removing
card facilities 21-149
facility from service 19-1
Report Alarm BITS message 17-5
Report Alarm Common message 17-7
Report Alarm Environment message 17-8, 17-11
Report Alarm Equipment message 17-12
Report Alarm message 17-1
Report Alarm Security message 17-16
Report Alarm Synchronization message 17-18
Report Database Change message 17-22
Report Event BITS message 17-28
Report Event Cisco IOS Configuration File message 17-38
Report Event Common message 17-29
Report Event Environment message 17-30
Report Event Equipment message 17-33
Report Event message 17-23
Report Event Security message 17-39

Report Event Session message 17-40
Report Event Software Download message 17-37
Report Event Synchronization message 17-42
Report Performance Monitoring message 17-46
reports. *See* autonomous messages
Report Switch message 17-52
REPT ALM <MOD2ALM> message 17-1
REPT ALM BITS message 17-5
REPT ALM COM message 17-7
REPT ALM ENV message 17-8, 17-11
REPT ALM EQPT message 17-12
REPT ALM SECU message
  description 17-16
  disabling 14-3
REPT ALM SYNCN message 17-18
REPT DBCHG message
  disabling 14-2
  enabling 2-2
REPT EVT <MOD2ALM> message 17-23
REPT EVT BITS message 17-28
REPT EVT COM message 17-29
REPT EVT ENV message 17-30
REPT EVT EQPT message 17-33
REPT EVT FXFR message 17-37
REPT EVT IOSCFG message 17-38
REPT EVT SECU message
  description 17-39
  disabling 14-3
REPT EVT SESSION message 17-40
REPT EVT SYNCN message 17-42
REPT PM <MOD2> message 17-46
REPT SW message 17-52
resetting cards 15-7
restarting lasers 16-2
Restore Equipment command 20-2
Restore Facility command 20-1
restoring the database 8-3
Retrieve 10GIGE command 21-43
Retrieve Alarm All command 21-53
Retrieve Alarm BITS command 21-57
Retrieve Alarm command 21-49
Retrieve Alarm Environment command 21-60
Retrieve Alarm Equipment command 21-65
Retrieve Alarm Synchronization command 21-68
Retrieve Alarm Threshold command 21-72
Retrieve Alarm Threshold Equipment command 21-76
Retrieve ALS command 21-79
Retrieve APC command 21-82
Retrieve Attribute Control command 21-83
Retrieve Attribute Environment command 21-84
Retrieve Audit Log command 21-89
Retrieve BFDL Performance Monitoring command 21-90
Retrieve BITS command 21-91
Retrieve BLSR command 21-23
Retrieve Bulkroll command 21-94
Retrieve Command Security command 21-95
Retrieve Condition All command 21-100
Retrieve Condition BITS command 21-103
Retrieve Condition command 21-96
Retrieve Condition Equipment command 21-111
Retrieve Condition Synchronization command 21-114
Retrieve Console Port command 21-118
Retrieve Cost of Service Ethernet command 21-119
Retrieve Cross-connect command 21-120
Retrieve Cross-connect STS or VT command 21-124
Retrieve Default Security command 21-129
Retrieve DS1 command 21-131
Retrieve DWDM command 21-16
Retrieve Electrical Carrier command 21-132
Retrieve Environmental Condition command 21-106
Retrieve Equipment command 21-135
Retrieve ESCON command 21-142
Retrieve Ethernet command 21-144
Retrieve External Control command 21-148
Retrieve Facility command 21-149
Retrieve Facility Protection Group command 21-151
Retrieve Facility Protection Group DWDM command 21-153

Retrieve Facility Protection Group OCH command 21-158
Retrieve Facility Protection Group OC-N command 21-155
Retrieve Fast Ethernet command 21-159
Retrieve Fibre Channel command 21-1
Retrieve FICON command 21-9
Retrieve G1000 command 21-163
Retrieve GFP command 21-167
Retrieve Gigabit Ethernet command 21-168
Retrieve GRE command 21-301
Retrieve HDLC command 21-177
Retrieve Header command 21-178
Retrieve Inventory command 21-179
Retrieve Layer 2 Ethernet command 21-185
Retrieve Link command 21-195
Retrieve Link Management Protocol command 21-188, 21-192, 21-193
Retrieve Link Management Protocol Control Channel command 21-189
Retrieve Log command 21-202
Retrieve Map Network 21-204
Retrieve Network APC 21-205
Retrieve Network Element General command 21-206
Retrieve Network Element IP map 21-208
Retrieve Network Element Path command 21-209
Retrieve Network Element Synchronization command 21-210
Retrieve Network Element Type command 21-215
Retrieve Network Element WDM ANS command 21-212
Retrieve Network-to-Network Interface Ethernet command 21-216
Retrieve OCH command 21-217
Retrieve OCHNC command 21-227
Retrieve OC-N command 21-25
Retrieve OMS command 21-228
retrieve optical channel client connection 21-225
Retrieve Optical Monitoring Parameter command 21-231
Retrieve OTS command 21-232
Retrieve Path OCH command 21-235
Retrieve Path Trace command 21-284, 21-286
Retrieve Performance command 21-238
Retrieve Performance Mode of PM Data Collection (STS) command 21-252, 21-266
Retrieve Performance Mode of PM Data Collection (VT) 21-267
Retrieve Performance Monitoring Schedule command 21-269
Retrieve Performance Schedule All command 21-272
Retrieve POS command 21-275
Retrieve Protection Switch DWDM command 21-276
Retrieve Protection Switch OCH command 21-281
Retrieve Protection Switch OC-N command 21-278
Retrieve Protocol command 21-283
Retrieve Provisionable Patchcord Termination command 21-201
Retrieve RMON Threshold command 21-288
Retrieve Roll command 21-299
Retrieve Route command 21-300
Retrieve Span Loss Verification WDM ANS command 21-302
Retrieve STS command 21-303
Retrieve STS or VT command 21-36
Retrieve Synchronization command 21-309
Retrieve T1 Facility command 21-310
Retrieve T3 Facility command 21-315
Retrieve TACC command 21-318
Retrieve Threshold All command 21-334
Retrieve Threshold command 21-322
Retrieve TID Address Mapping 21-320
Retrieve Time of Day command 21-345
Retrieve Trace Client command 21-348
Retrieve Trace OCH command 21-351
Retrieve Trap Table command 21-347
Retrieve Tunnel Firewall command 21-355
Retrieve Tunnel Proxy command 21-356
Retrieve user, description 12-46
Retrieve User Security command 21-357
Retrieve VCG command 21-358
Retrieve Virtual LAN command 21-360
Retrieve VT command 21-361

Retrieve Wavelength command 21-367
Retrieve Wavelength Division Multiplexing Side command 21-366
Retrieve WDM ANS command 21-364
retrieving
1+1 optical protection groups 21-151
10GIGE port parameters 21-43
alarm log 21-202
alarm power level thresholds 21-76
alarm status 21-49, 21-53
alarm threshold values 21-72
all PM reporting schedules 21-272
ALS attributes 21-79
ANS attributes 21-364
APC attributes 21-82
audit log 21-89
BDFL PM parameters 21-90
BITS alarms 21-57
BITS conditions 21-103
BITS configuration 21-91
BLSR information 21-23
card alarms 21-65
card data and state parameters 21-135
card firmware number and CLEI code 21-179
command security level 21-95
cost of service Ethernet 21-119
cross-connects 21-120
current condition and state of an entity 21-96
current condition for all entities 21-100
DCC-connected nodes 21-208
default security parameter values 21-129
DS-1 facilities configuration 21-310
DS-3 facility properties 21-315
DS3XM facility properties 21-315
DWDM configuration parameters 21-16
DWDM optical attributes and service states 21-217
EC-1 card status 21-132
environmental alarm attributes 21-84
environmental alarms 21-60
environmental conditions 21-106
equipment conditions 21-111
ESCON settings 21-142
Ethernet back-end POS port information 21-275
expected span loss verification value 21-302
external control attributes 21-83
external control states 21-148
facility payload types 21-149
Fast Ethernet information 21-159
Fibre Channel port attributes 21-1
FICON settings 21-9
firewall tunnel information 21-355
G1000 facilities configuration 21-163
general NE attributes 21-206
GFP information 21-167
GIGE information 21-168
global LMP protocol attributes 21-188
HDLC attributes 21-177
inventory list 21-179
J1 path trace information 21-348
list of optical links 21-195
LMP protocol channel attributes 21-189
LMP TE link attributes 21-192
ML-Series card console port status 21-118
network-to-network interface Ethernet 21-216
node attributes accessible from the GNE 21-204
node equipment information 21-215
node synchronization attributes 21-210
OCHNC wavelength connection provisioning information 21-227
OCH path inside a node 21-235
OC-N attributes and states 21-25
OMS attributes and service states 21-228
optical facility protection group information 21-155
OTS attributes and service states 21-232
parameter threshold levels 21-322
path-level node attributes 21-209
path trace information for DWDM 21-351
performance monitoring mode 21-252, 21-266, 21-267

performance monitoring schedule 21-269
PM parameters for a specified card type 21-238
ports involved in ANS 21-212
ports involved in ANS regulation 21-205
protection switch status 21-276
protocol status 21-283
provisionable patchcord termination information 21-201
proxy tunnel information 21-356
RMON thresholds 21-288
ROADM optical power monitoring parameters 21-231
roll data 21-94, 21-299
SONET line switching states 21-278
SONET path trace message 21-284, 21-286
specified cross-connects 21-124
static routes 21-300
STS attributes 21-36
STS path attributes 21-303
synchronization alarms 21-68
synchronization conditions 21-114
synchronization reference list 21-309
system date and time 21-345
system product and version ID 21-179
TACCs 21-318
TADRMAP table contents 21-320
test access attributes on DS3XM cards 21-131
thresholds 21-334
TL1 header 21-178
trap destinations 21-347
TXP_MR_2.5G/TXPP_MR_2.5G card protection information 21-158
TXP_MR_2.5G/TXPP_MR_2.5G card switching status 21-281
user security information 21-357
VCG attributes 21-358
virtual LAN 21-360
VT attributes 21-36
VT path attributes 21-361
Y-cable protection on client facilities 21-153
reverting software loads 3-1
RFILE AID 25-44
RLS-EXT-CONT command
  auditing results 21-148
  description 18-1
RLS-LASER-OTS command 18-2
RLS-LPBK-<MOD2> command 18-2
RLS-PROTNSW-<MOD2DWDMPAYLOAD> command 18-4
RLS-PROTNSW-<OCN_TYPE> command 18-4
RLS-PROTNSW-<PATH> command 18-6
RLS-PROTNSW-OCH command 18-7
RLS-SYNCNSW command 18-7
RMON
  creating thresholds 12-35
  deleting thresholds 10-14
  retrieving thresholds 21-288
  TCA reports 17-23
RMV-<MOD2> command 19-1
RMV-EQPT command 19-2
ROADMs, retrieving optical power monitoring parameters 21-231
rolls
  bulk and line level 12-5
  deleting 10-3, 10-19
  editing 11-52
  forcing 11-111
  forcing a valid signal 11-52
  retrieving data 21-299
  retrieving parameters 21-94
  single paths 12-41
RST-<MOD2> command 20-1
RST-EQPT command 20-2
RTRV-<MOD_RING> command 21-23
RTRV-<MOD1FCPAYLOAD> command 21-1
RTRV-<MOD1FICONPAYLOAD> command 21-9
RTRV-<MOD2DWDMPAYLOAD> command 21-16
RTRV-<OCN_TYPE> command 21-25
RTRV-<PATH> command 21-36

RTRV-10GIGE command 21-43
RTRV-ALM-<MOD2ALM> command 21-49
RTRV-ALM-ALL command 21-53
RTRV-ALM-BITS command 21-57
RTRV-ALM-ENV command 21-60
RTRV-ALM-EQPT command 21-65
RTRV-ALM-SYNCN command 21-68
RTRV-ALMTH-<MOD2> command 21-72
RTRV-ALMTH-EQPT command 21-76
RTRV-ALS command 21-79
RTRV-APC command 21-82
RTRV-ATTR-CONT command 21-83
RTRV-ATTR-ENV command 21-84
RTRV-AUDIT-LOG command 21-89
RTRV-BFDLPM-<MOD2> command 21-90
RTRV-BITS command 21-91
RTRV-BULKROLL-<OCN_TYPE> command 21-94
RTRV-CMD-SECU command 21-95
RTRV-COND-<MOD2ALM> command 21-96
RTRV-COND-ALL command 21-100
RTRV-COND-BITS command 21-103
RTRV-COND-ENV command 21-106
RTRV-COND-EQPT command 21-111
RTRV-COND-SYNCN command 21-114
RTRV-CONSOLE-PORT command 21-118
RTRV-COS-ETH command 21-119
RTRV-CRS-<PATH> command 21-124
RTRV-CRS command 21-120
RTRV-DFLT-SECU command 21-129
RTRV-DS1 command 21-131
RTRV-EC1 command 21-132
RTRV-EQPT command 21-135
RTRV-ESCON command 21-142
RTRV-ETH command 21-144
RTRV-EXT-CONT command 21-148
RTRV-FAC command 21-149
RTRV-FFP-<MOD2DWDMPAYLOAD> command 21-153
RTRV-FFP-<OCN_TYPE> command 21-155
RTRV-FFP command 21-151
RTRV-FFP-OCH command 21-158
RTRV-FSTE command 21-159
RTRV-G1000 command 21-163
RTRV-GFP command 21-167
RTRV-GIGE command 21-168
RTRV-HDLC command 21-177
RTRV-HDR command 21-178
RTRV-INV command 21-179
RTRV-L2-ETH command 21-185
RTRV-LNK-<MOD2O> command 21-201
RTRV-LNK command 21-195
RTRV-LNKTERM command 21-201
RTRV-LOG command 21-202
RTRV-MAP-NETWORK command 21-204
RTRV-NE-APC command 21-205
RTRV-NE-GEN command 21-206
RTRV-NE-IPMAP command 21-208
RTRV-NE-PATH command 21-209
RTRV-NE-SYNCN command 21-210
RTRV-NETYPE command 21-215, 21-216
RTRV-NE-WDMANS command 21-212
RTRV-NNI-ETH command 21-216
RTRV-OCHCC command 21-225
RTRV-OCH command 21-217
RTRV-OCHNC command 21-227
RTRV-OMS command 21-228
RTRV-OPM command 21-231
RTRV-OSC command 21-232
RTRV-OTS command 21-232
RTRV-PATH-OCH command 21-235
RTRV-PM-<MOD2> command 21-238
RTRV-PMMODE-<STS_PATH> command 21-266
RTRV-PMMODE-<VT_PATH> command 21-267
RTRV-PMSCHED-<MOD2> command 21-269
RTRV-PMSCHED-ALL command 21-272
RTRV-POS command 21-275
RTRV-PROTNSW-<MOD2DWDMPAYLOAD> command 21-276

RTRV-PROTNSW-<OCN_TYPE> command 21-278
RTRV-PROTNSW-<PATH> command 21-279
RTRV-PROTNSW-OCH command 21-281
RTRV-PROTOCOL command 21-283
RTRV-PTHTRC-<PATH> command 21-284
RTRV-QNQ-ETH command 21-286
RTRV-RMONTH-<MOD2_RMON> command 21-288
RTRV-ROLL-<MOD_PATH> command 21-299
RTRV-ROUTE command 21-300
RTRV-ROUTE-GRE command 21-301
RTRV-SLV-WDMANS command 21-302
RTRV-STS command 21-303
RTRV-SYNC command 21-309
RTRV-T1 command 21-310
RTRV-T3 command 21-315
RTRV-TACC command 21-318
RTRV-TADRMAP command 21-320
RTRV-TH-<MOD2> command 21-322
RTRV-TH-ALL command 21-334
RTRV-TOD command 21-345
RTRV-TRAPTABLE command 21-347
RTRV-TRC-<OCN_BLSR> command 21-348
RTRV-TRC-OCH command 21-351
RTRV-TUNNEL-FIREWALL command 21-355
RTRV-TUNNEL-PROXY command 21-356
RTRV-USER-SECU command 21-357
RTRV-VCG command 21-358
RTRV-VLAN command 21-360
RTRV-VT command 21-361
RTRV-WDMANS command 21-364
RTRV-WDMSIDE command 21-366, 21-367
RTRV-WLEN command 21-367

S

SCHED-PMREPT command
- description 22-1
- retrieving all schedules 21-272
- retrieving schedule 21-269

Schedule Performance Monitoring Report command 22-1
scheduling performance monitoring reports 22-1
SDBER, editing 11-40, 11-98, 21-224
security
- alarm reports 17-16
- clearing INTRUSION-PSWD condition 6-1
- creating users 12-46
- deleting users 10-24
- disabling user accounts 14-8
- editing for commands 11-53
- editing for users 11-124
- enabling disabled user ID 2-7
- forcing a user off the NE 4-3
- report of nonalarmed events 17-39
- retrieving defaults 21-129
- retrieving level for a command 21-95
- retrieving user information 21-357
- setting default values 23-7

service states
- changing 19-1, 19-2, 20-1, 20-2
- retrieving 21-96
- retrieving for DWDM cards 21-217
- retrieving for OMS facilities 21-228
- retrieving for optical cards 21-25
- retrieving for OTS facilities 21-232

Set Alarm Threshold command 23-1
Set Alarm Threshold Equipment command 23-2
SET-ALMTH-<MOD2> command 23-1
SET-ALMTH-EQPT command 23-2
SET-ATTR-CONT command 23-4
SET-ATTR-ENV command 23-5
Set Attribute Control command 23-4
Set Attribute Environment command 23-5
Set Attribute Security Default command 23-7
SET-ATTR-SECUDFLT command 23-7
Set Performance Mode of PM Data Collection (STS) command 23-9
Set Performance Mode of PM Data Collection (VT) command 23-11

SET-PMMODE-<STS_PATH> command 23-9
SET-PMMODE-<VT_PATH> command 23-11
SET-TH-<MOD2> command 23-12
Set Threshold command 23-12
Set Time of Day command 23-17
setting
  alarm thresholds 23-1
  alarm thresholds for power level monitoring 23-2
  external control attributes 23-4, 23-5
  MXP_2.5G_10G card alarm thresholds 23-12
  PM data collection mode 23-9, 23-11
  system date 23-17
  system security default values 23-7
  system time 23-17
  TXP_MR_10G card alarm thresholds 23-12
SET-TOD command 23-17
SFBER, editing 11-40
SHELF AID 25-44
SHELL protocol
  disabling 11-109
  enabling 11-109
  retrieving status 21-283
slots
  deleting provisioning 10-6
  editing attributes 11-64
SNMP
  deleting traps 10-22
  disabling 11-109
  editing trap table destination entry 11-122
  enabling 11-109
  provisioning 12-44
  retrieving status 21-283
  retrieving trap destination 21-347
software
  activating or reverting loads 3-1
  downloading 8-3
  download message 17-37
span loss
  calculating expected verification 16-13
  retrieving expected value 21-302
SSM, editing 11-39, 11-91
starting
  ANS 16-15
  a session, nonalarmed event report 17-40
  Cisco IOS 8-1
static routes
  creating 12-42
  deleting 10-20
  retrieving 21-300
STSs
  creating cross-connects 12-6
  editing paths 11-31
  releasing protection switch 18-6
  retrieving attributes 21-36
  retrieving path attributes 21-303
  retrieving specified cross-connects 21-124
  rolling 12-41
  setting PM data collection mode 23-9
  STS AID 25-44
Superuser, description 12-47
SW-DX-EQPT command 24-1
Switch Duplex Equipment command 24-1
switching
  1+1 optical protection 16-8
  autonomous reports 17-52
  cross-connect cards 24-1
  electrical equipment 24-2, 24-4
  enabling for electrical protection cards 2-5, 2-6
  enabling on a cross-connect cards 2-4
  inhibiting for cross-connect cards 14-4
  inhibiting for electrical cards 14-6
  inhibiting protection switches 14-5
  protection on TXPP_MR_2.5G card 16-13
  releasing Y-cable protection switch 18-4
  retrieving SONET line state 21-278
  retrieving status 21-276
  timing references 16-14
  Y-cable protection 16-7

Switch to Protection Equipment command 24-2
Switch to Working Equipment command 24-4
SW-TOPROTN-EQPT command 24-2
SW-TOWKG-EQPT command 24-4
synchronization
See also timing
alarm reports 17-18
editing reference list 11-113
nonalarmed events 17-42
releasing switch 18-7
retrieving alarms 21-68
retrieving associated conditions 21-114
retrieving node attributes 21-210
retrieving reference list 21-309
switching references 16-14
SYN_SRC AID 25-49
SYN AID 25-49
SYNC_REF AID 25-50
SYNCSW AID 25-51
system reports. *See* autonomous messages

T

TACCs
See also TAPs
changing mode 5-1
editing attributes for DS3XM card DS1 access 11-57
retrieving 21-318
TADRMAP table
deleting an entry from 10-21
retrieving contents 21-320
TAPs
See also TACCs
connecting STSs or VTs to the specified STS 7-1
deleting 9-1
retrieving TACCs 21-318
testing circuits 5-1
thresholds
creating RMON 12-35
deleting RMON 10-14
retrieving 21-334
retrieving for alarms 21-72
retrieving for power alarms 21-76
retrieving RMON 21-288
setting for alarms 23-1
setting for MXP_2.5G_10G and TXP_MR_10G cards 23-12
setting for power monitoring 23-2
time
editing 11-57
retrieving 21-345
setting for system 23-17
timing
See also BITS
See also synchronization
alarms 17-18
editing for nodes 11-91
mixed mode 11-91
releasing switch 18-7
retrieving synchronization reference list 21-309
switching references 16-14
TL1
commands 1-1 to 24-5
disabling 11-109
enabling 11-109
retrieving header 21-178
retrieving status 21-283
traps. *See* SNMP
troubleshooting the TL1 link to the NE 21-178
tunnels
firewall. *See* firewall tunnels
GRE. *See* GRE tunnels
proxy. *See* proxy tunnels
turning off
See also disabling
See also inhibiting
audible alarms 16-1
ML-Series card console port 14-1

performance monitoring reports for a session 14-3
TXP_MR_10G cards, setting thresholds 23-1
TXP_MR_2.5G/TXPP_MR_2.5G cards
editing OCH protection 11-73
protection switching 16-13
releasing protection switch 18-7
retrieving protection information 21-158
retrieving switching status 21-281

U

UDC AID 25-52
UDP port, provisioning 12-44
upgrading
activating or reverting software load during 3-1
low-density electrical cards to high density 5-3
uploading the Cisco IOS startup configuration file 8-1
users
activating 1-1
changing passwords 11-106
creating 12-46
deleting 10-24
disabling accounts 14-8
enabling after ID has been disabled 2-7
forcing off an NE 4-3
logging out 4-2
retrieving security information 21-357

V

VCAT groups. *See* VCGs
VCGs
creating 12-48
deleting 10-25
editing 11-126
retrieving attributes 21-358
viewing a list of GRE tunnels 21-301
virtual concatenation groups. *See* VCGs
VOAs, computing values 16-15
VTs
creating cross-connects 12-6
editing paths 11-31
releasing protection switch 18-6
retrieving attributes 21-36
retrieving path attributes 21-361
retrieving specified cross-connects 21-124
rolling 12-41
setting PM data collection mode 23-11
VT AID 25-52

W

wavelengths
provisioning 11-42
WLEN AID 25-54
WDMANS AID 25-54

X

X33975_1H_Head1_Obt i-xxvii
X81510_1H_Head1_Obt i-xxvii
XC10G cards. *See* cross-connect cards
XCVT cards. *See* cross-connect cards
XC-VXC-10G cards. *See* cross-connect cards
XTC cards
See also cross-connect cards 11-114
editing DS1/T1 ports 11-114

Y

Y-cable protection
creating groups 12-19
deleting 10-7
editing groups 11-70
initiating a switch 16-7
releasing a switch 18-4

retrieving for client facilities 21-153