CHAPTER 3

TL1 Command Descriptions

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

This chapter provides specific information on TL1 commands and autonomous messages for the Cisco ONS 15454 and Cisco ONS 15327, Release 4.1 and 4.5, including:

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

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

3.1 TL1 Commands by Category

Table 3-1 TL1 Commands by Category

Category	Command or Autonomous Message	
BLSR	DLT-BLSR ED-BLSR ENT-BLSR EX-SW-<OCN_BLSR>	REPT EVT RING RTRV-BLSR RTRV-COND-RING
Cross Connections	DLT-CRS-<STS_PATH> DLT-CRS-<VT_PATH> ED-CRS-<STS_PATH> ED-CRS-<VT_PATH> ENT-CRS-<STS_PATH>	ENT-CRS-<VT_PATH> RTRV-CRS RTRV-CRS-<STS_PATH> RTRV-CRS-<VT_PATH>

Table 3-1 TL1 Commands by Category (continued)

Category	Command or Autonomous Message	
DWDM (Cisco ONS 15454 only)	DLT-FFP-CLNT DLT-LNK-<MOD2O> DLT-OSC DLT-WLEN ED-CLNT ED-DWDM ED-FFP-CLNT ED-FFP-OCH ED-LNK-<MOD2O> ED-OCH ED-OMS ED-OSC ED-OTS ED-TRC-CLNT ED-TRC-OCH ED-WDMANS ED-WLEN ENT-FFP-CLNT ENT-LNK-<MOD2O> ENT-OSC ENT-WLEN OPR-AONS OPR-LASER-OTS OPR-LNK	OPR-PROTNSW-CLNT OPR-PROTNSW-OCH RLS-LASER-OTS RLS-PROTNSW-CLNT RLS-PROTNSW-OCH RTRV-ALMTH-<MOD2> RTRV-CLNT RTRV-DWDM RTRV-FFP-CLNT RTRV-FFP-OCH RTRV-LNK RTRV-LNK-<MOD2O> RTRV-NE-WDMANS RTRV-OCH RTRV-OMS RTRV-OSC RTRV-OTS RTRV-PROTNSW-CLNT RTRV-PROTNSW-OCH RTRV-TRC-CLNT RTRV-TRC-OCH RTRV-WDMANS RTRV-WLEN SET-ALMTH-<MOD2>
Environment Alarms and Controls	OPR-ACO-ALL OPR-EXT-CONT REPT ALM ENV REPT EVT ENV RLS-EXT-CONT RTRV-ALM-ENV	RTRV-ATTR-CONT RTRV-ATTR-ENV RTRV-COND-ENV RTRV-EXT-CONT SET-ATTR-CONT SET-ATTR-ENV
Equipment	ALW-SWDX-EQPT ALW-SWTOPROTN-EQPT ALW-SWTOWKG-EQPT DLT-EQPT ED-EQPT ENT-EQPT INH-SWDX-EQPT INH-SWTOPROTN-EQPT INH-SWTOWKG-EQPT	REPT ALM EQPT REPT EVT EQPT RTRV-ALM-EQPT RTRV-COND-EQPT RTRV-EQPT SW-DX-EQPT SW-TOPROTN-EQPT SW-TOWKG-EQPT
Fault	REPT ALM <MOD2ALM> REPT ALM COM REPT ALM RING REPT EVT <MOD2ALM> REPT EVT COM	RTRV-ALM-<MOD2ALM> RTRV-ALM-ALL RTRV-ALM-RING RTRV-COND-<MOD2ALM> RTRV-COND-ALL
File Transfer (R4.5 only)	APPLY COPY-RFILE REPT EVT FXFR	

Table 3-1 TL1 Commands by Category (continued)

Category	Command or Autonomous Message	
IOS	COPY-IOSCFG REPT EVT IOSCFG	
Log	ALW-MSG-DBCHG INH-MSG-DBCHG	REPT DBCHG RTRV-LOG
Network	RTRV-MAP-NETWORK RTRV-NE-IPMAP	
Paths (R4.5 only)	ED-<STS_PATH> ED-<VT_PATH> RTRV-<STS_PATH> RTRV-<VT_PATH>	
Performance	ALW-PMREPT-ALL INH-PMREPT-ALL INIT-REG-<MOD2> REPT PM <MOD2> RTRV-PM-<MOD2> RTRV-PMMODE-<STS_PATH>	RTRV-PMSCHED-<MOD2> RTRV-PMSCHED-ALL RTRV-TH-<MOD2> SCHED-PMREPT-<MOD2> SET-PMMODE-<STS_PATH> SET-TH-<MOD2>
Ports	ED-<OCN_TYPE> ED-DS1 ED-EC1 ED-G1000 ED-T1 ED-T3 INIT-REG-G1000 RMV-<MOD2_IO> RST-<MOD2_IO>	RTRV-<OCN_TYPE> RTRV-DS1 RTRV-EC1 RTRV-FSTE RTRV-G1000 RTRV-GIGE RTRV-POS RTRV-T1 RTRV-T3
Security	ACT-USER ALW-MSG-SECU CANC CANC-USER CLR-COND-SECU DLT-USER-SECU ED-PID	ED-USER-SECU ENT-USER-SECU INH-MSG-SECU REPT ALM SECU REPT EVT SECU REPT EVT SESSION RTRV-USER-SECU
SONET Line Protection	DLT-FFP-<OCN_TYPE> ED-FFP-<OCN_TYPE> ENT-FFP-<OCN_TYPE> OPR-PROTNSW-<OCN_TYPE>	RLS-PROTNSW-<OCN_TYPE> RTRV-FFP-<OCN_TYPE> RTRV-PROTNSW-<OCN_TYPE>
Software Download (R4.1 only)	APPLY COPY-RFILE REPT EVT FXFR	
STS and VT Paths (R4.1 only)	ED-<STS_PATH> ED-<VT_PATH>	RTRV-<STS_PATH> RTRV-<VT_PATH>

Table 3-1 TL1 Commands by Category (continued)

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

3.2 TL1 Commands by Card (Cisco ONS 15454)

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

Card	Applicable Commands	
G1000-4	DLT-CRS-VT1 DLT-CRS-<STS_PATH> DLT-EQPT ED-CRS-<STS_PATH> ED-G1000 ED-<STS_PATH> ENT-CRS-<STS_PATH> ENT-EQPT INIT-REG-G1000 INIT-SYS OPR-LPBK-<MOD2_IO> REPT ALM EQPT REPT ALM <MOD2ALM> REPT DBCHG REPT EVT EQPT REPT EVT <MOD2ALM> RLS-LPBK-<MOD2_IO>	RLS-PROTNSW-<STS_PATH> RMV-<MOD_PORT> RST-<MOD_PORT> RTRV-ALM-ALL RTRV-ALM-EQPT RTRV-ALM-<MOD2ALM> RTRV-COND-ALL RTRV-COND-EQPT RTRV-COND-<MOD2ALM> RTRV-CRS RTRV-CRS-<STS_PATH> RTRV-EQPT RTRV-G1000 RTRV-INV RTRV-PROTNSW-<STS_PATH> RTRV-PTHTRC-<STS_PATH> RTRV-<STS_PATH>
ML1000-2, ML100T-12	COPY-IOSCFG DLT-CRS-VT1 DLT-CRS-<STS_PATH> DLT-EQPT ED-CRS-<STS_PATH> ED-<STS_PATH> ENT-CRS-<STS_PATH> ENT-EQPT INIT-SYS REPT ALM EQPT REPT ALM <MOD2ALM> REPT ALM <MOD2ALM> REPT DBCHG REPT EVT EQPT REPT EVT IOSCFG REPT EVT <MOD2ALM> RMV-<MOD_PORT>	RST-<MOD_PORT> RTRV-ALM-ALL RTRV-ALM-EQPT RTRV-ALM-<MOD2ALM> RTRV-COND-ALL RTRV-COND-EQPT RTRV-COND-<MOD2ALM> RTRV-CRS RTRV-CRS-<STS_PATH> RTRV-EQPT RTRV-FSTE RTRV-GIGE RTRV-INV RTRV-POS RTRV-PROTNSW-<STS_PATH> RTRV-PTHTRC-<STS_PATH> RTRV-<STS_PATH>

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

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

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

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

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

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

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

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

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

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

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

Card	Applicable Commands	
E100T, E1000T	DLT-EQPT	RTRV-ALM-ALL
	ENT-EQPT	RTRV-ALM-EQPT
	INIT-SYS	RTRV-ALM-<MOD2ALM>
	REPT ALM EQPT	RTRV-COND-ALL
	REPT ALM <MOD2ALM>	RTRV-COND-EQPT
	REPT DBCHG	RTRV-COND-<MOD2ALM>
	REPT EVT EQPT	RTRV-EQPT
	REPT EVT <MOD2ALM>	RTRV-INV
TCC	ALW-MSG-SECU	REPT EVT SESSION
	APPLY	REPT EVT SYNCN
	COPY-RFILE	REPT EVT <MOD2ALM>
	DLT-EQPT	RLS-SYNCNSW
	ED-BITS	RTRV-ALM-ALL
	ED-NE-GEN	RTRV-ALM-BITS
	ED-NE-SYNCN	RTRV-ALM-EQPT
	ED-SYNCN	RTRV-ALM-SYNCN
	ENT-EQPT	RTRV-ALM-<MOD2ALM>
	INH-MSG-SECU	RTRV-BITS
	INIT-SYS	RTRV-COND-ALL
	OPR-SYNCNSW	RTRV-COND-BITS
	REPT ALM BITS	RTRV-COND-EQPT
	REPT ALM EQPT	RTRV-COND-SYNCN
	REPT ALM SYNCN	RTRV-COND-<MOD2ALM>
	REPT ALM <MOD2ALM>	RTRV-EQPT
	REPT DBCHG	RTRV-INV
	REPT EVT BITS	RTRV-NE-GEN
	REPT EVT FXFR	RTRV-NE-SYNCN
	REPT EVT EQPT	RTRV-SYNCN
TCC2	ALW-MSG-SECU	REPT DBCHG
	APPLY	REPT EVT FXFR
	COPY-RFILE	REPT EVT SESSION
	INH-MSG-SECU	

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

Card	Applicable Commands	
XC, XCVT, XC192	ALW-SWDX-EQPT	REPT SW
	DLT-EQPT	RTRV-ALM-ALL
	ENT-EQPT	RTRV-ALM-EQPT
	INH-SWDX-EQPT	RTRV-ALM-<MOD2ALM>
	INIT-SYS	RTRV-COND-ALL
	REPT ALM EQPT	RTRV-COND-EQPT
	REPT ALM <MOD2ALM>	RTRV-COND-<MOD2ALM>
	REPT DBCHG	RTRV-EQPT
	REPT EVT EQPT	RTRV-INV
	REPT EVT <MOD2ALM>	SW-DX-EQPT
XCVXL	REPT DBCHG	
AIC, AIC-I	DLT-EQPT	RTRV-ALM-ENV
	ENT-EQPT	RTRV-ALM-EQPT
	INIT-SYS	RTRV-ALM-<MOD2ALM>
	OPR-ACO-ALL	RTRV-ATTR-CONT
	OPR-EXT-CONT	RTRV-ATTR-ENV
	REPT ALM ENV	RTRV-COND-ALL
	REPT ALM EQPT	RTRV-COND-ENV
	REPT ALM <MOD2ALM>	RTRV-COND-EQPT
	REPT DBCHG	RTRV-COND-<MOD2ALM>
	REPT EVT ENV	RTRV-EQPT
	REPT EVT EQPT	RTRV-EXT-CONT
	REPT EVT <MOD2ALM>	RTRV-INV
	RLS-EXT-CONT	SET-ATTR-CONT
	RTRV-ALM-ALL	SET-ATTR-ENV

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

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

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

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

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

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

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

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

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

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

3.3 TL1 Commands by Card (ONS 15327)

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

Card	Applicable Commands	
XTC/DS1	CHG-ACCMD-<CHG-ACCMD>	RTRV-ALM-ALL
	CONN-TACC-<MOD_TACC>	RTRV-ALM-EQPT
	DISC-TACC	RTRV-ALM-<MOD2ALM>
	DLT-CRS-<STS_PATH>	RTRV-COND-ALL
	ED-CRS-<STS_PATH>	RTRV-COND-EQPT
	ED-EQPT	RTRV-COND-<MOD2ALM>
	ED-T1	RTRV-CRS
	ED-VT1	RTRV-CRS-VT1
	ED-<STS_PATH>	RTRV-CRS-<STS_PATH>
	ENT-CRS-<STS_PATH>	RTRV-EQPT
	ENT-EQPT	RTRV-INV
	INH-SWTOPROTN-EQPT	RTRV-PM-<MOD2>
	INH-SWTOWKG-EQPT	RTRV-PMSCHED-ALL
	INIT-REG-<MOD2>	RTRV-PMSCHED-<MOD2>
	INIT-SYS	RTRV-PTHTRC-<STS_PATH>
	OPR-LPBK-<MOD2_IO>	RTRV-T1
	REPT ALM EQPT	RTRV-TACC
	REPT ALM <MOD2ALM>	RTRV-TH-<MOD2>
	REPT EVT EQPT	RTRV-VT1
	REPT EVT <MOD2ALM>	RTRV-<STS_PATH>
	REPT PM	SET-PMMODE-<STS_PATH>
	RLS-LPBK-<MOD2_IO>	SET-TH-<MOD2>
	RMV-<MOD_PORT>	SW-TOPROTN-EQPT
	RST-<MOD_PORT>	SW-TOWKG-EQPT

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

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

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

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

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

Card	Applicable Commands	
E100T, E1000T	DLT-EQPT	RTRV-ALM-ALL
	ENT-EQPT	RTRV-ALM-EQPT
	INIT-SYS	RTRV-ALM-<MOD2ALM>
	REPT ALM EQPT	RTRV-COND-ALL
	REPT ALM <MOD2ALM>	RTRV-COND-EQPT
	REPT EVT EQPT	RTRV-COND-<MOD2ALM>
	REPT EVT <MOD2ALM>	RTRV-EQPT
	REPT PM (E100T)	RTRV-INV
XTC	ALW-MSG-SECU	REPT EVT SESSION
	APPLY	REPT EVT SYNCN
	CLR-COND-SECU	REPT EVT <MOD2ALM>
	COPY-RFILE	RLS-SYNCNSW
	DLT-EQPT	RTRV-ALM-ALL
	ED-BITS	RTRV-ALM-BITS
	ED-NE-GEN	RTRV-ALM-EQPT
	ED-NE-SYNCN	RTRV-ALM-SYNCN
	ED-SYNCN	RTRV-ALM-<MOD2ALM>
	ENT-EQPT	RTRV-BITS
	INH-MSG-SECU	RTRV-COND-ALL
	INIT-SYS	RTRV-COND-BITS
	OPR-ACO-ALL	RTRV-COND-EQPT
	OPR-SYNCNSW	RTRV-COND-SYNCN
	REPT ALM BITS	RTRV-COND-<MOD2ALM>
	REPT ALM EQPT	RTRV-EQPT
	REPT ALM SYNCN	RTRV-INV
	REPT ALM <MOD2ALM>	RTRV-NE-GEN
	REPT EVT BITS	RTRV-NE-SYNCN
	REPT EVT EQPT	RTRV-SYNCN
	REPT EVT FXFR	

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

Card	Applicable Commands	
G1000-2	DLT-CRS-<STS_PATH>	RMV-<MOD_PORT>
	DLT-EQPT	RST-<MOD_PORT>
	ED-CRS-<STS_PATH>	RTRV-ALM-ALL
	ED-G1000	RTRV-ALM-EQPT
	ED-<STS_PATH>	RTRV-ALM-<MOD2ALM>
	ENT-CRS-<STS_PATH>	RTRV-COND-ALL
	ENT-EQPT	RTRV-COND-EQPT
	INIT-REG-G1000	RTRV-COND-<MOD2ALM>
	INIT-SYS	RTRV-CRS
	OPR-LPBK-<MOD2_IO>	RTRV-CRS-<STS_PATH>
	REPT ALM EQPT	RTRV-EQPT
	REPT ALM <MOD2ALM>	RTRV-G1000
	REPT DBCHG	RTRV-INV
	REPT EVT EQPT	RTRV-PTHTRC-<STS_PATH>
	REPT EVT <MOD2ALM>	RTRV-<STS_PATH>
	RLS-LPBK-<MOD2_IO>	
XTC/XCVT	ENT-EQPT	RTRV-ALM-EQPT
	INH-SWDX-EQPT	RTRV-ALM-<MOD2ALM>
	INIT-SYS	RTRV-COND-ALL
	REPT ALM EQPT	RTRV-COND-EQPT
	REPT ALM <MOD2ALM>	RTRV-COND-<MOD2ALM>
	REPT EVT EQPT	RTRV-EQPT
	REPT EVT <MOD2ALM>	RTRV-INV
	REPT SW	SW-DX-EQPT
	RTRV-ALM-ALL	

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

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

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

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

3.4 TL1 Commands

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

Each TL1 command must be less than or equal to 255 characters. Any command larger than 255 characters must be split into multiple commands. For example, if you use the ED-<STS_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-<STS_PATH> commands instead.

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

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

Note TL1 commands that are entered incorrectly are not completed.

Note Starting with Release 3.3 (R3.3), all TL1 commands will return the DENY error code without any additional error messages prior to a successful TL1 login (i.e., prior to a successful ACT-USER command). Releases earlier than R3.3 either return different error codes; for example, PLNA and IICT and also additional error messages; for example, Login Not Active.

3.4.1 ACT-USER: Activate User

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

Notes:

1. Passwords are masked for the following security commands: ACT-USER, ED-PID, ENT-USER-SECU and ED-USER-SECU. Access to a TL1 session via any means will have the password masked. The CTC Request History and Message Log will also show the masked commands. When a password-masked command is re-issued by double-clicking the command from CTC Request History, the password will still be masked in the CTC Request History and Message Log. The actual password that was previously issued will be sent to the NE. To use a former command as a template only, single-click the command in CTC Request History. The command will be placed in the Command Request text box, where you can edit the appropriate fields prior to re-issuing it.
2. In this release, the ACT-USER command does not return the date and time of the last session established by the UID or the number of unsuccessful session attempts since the last session.
3. This command is backwards compatible with userids and passwords from ONS 15454 2.X software versions according to the following rules:

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

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

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

Section	ACT-USER Description
Category	Security
Security	N/A

Section	ACT-USER Description (continued)	
Related Messages	ALW-MSG-SECU	ED-USER-SECU
	CANC	ENT-USER-SECU
	CANC-USER	REPT ALM SECU
	CLR-COND-SECU	REPT EVT SECU
	DLT-USER-SECU	REPT EVT SESSION
	ED-PID	RTRV-USER-SECU
Input Format	ACT-USER:[<TID>]:<UID>:<CTAG>::<PID>; where: • <UID> is the user identifier; <UID> is any combination of up to 10 alphanumeric characters. <UID> is a string and must not be null • <PID> is the user password; <PID> is any combination of up to 10 alphanumeric characters. <PID> is a string and must not be null **Note** CTC allows <UID> and <PID> of up to 20 characters. The 20 character CTC-entered <UID> and <PID> are not valid TL1 <UID> and <PID>	
Input Example	ACT-USER:PETALUMA:TERRI:100::MYPASSWD;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.2 ALW-MSG-ALL: Allow Message All

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

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

Section	ALW-MSG-ALL Description	
Category	System	
Security	Retrieve	
Related Messages	ED-DAT	RTRV-NE-GEN
	ED-NE-GEN	RTRV-NE-IPMAP
	ED-NE-SYNCN	RTRV-NE-SYNCN
	INH-MSG-ALL	RTRV-NE-WDMANS
	INIT-SYS	RTRV-TOD
	RTRV-HDR	SET-TOD
	RTRV-INV	
Input Format	ALW-MSG-ALL:[<TID>]::<CTAG>[::,,];	

Section	ALW-MSG-ALL Description (continued)
Input Example	ALW-MSG-ALL:PETALUMA::549;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.3 ALW-MSG-DBCHG: Allow Database Change Message

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

Note This command is not defined in the GR.

Section	ALW-MSG-DBCHG Description
Category	Log
Security	Retrieve
Related Messages	INH-MSG-DBCHG REPT DBCHG RTRV-LOG
Input Format	ALW-MSG-DBCHG:[<TID>]::<CTAG>[::,,];
Input Example	ALW-MSG-DBCHG:CISCO::123;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.4 ALW-MSG-SECU: Allow Message Security

This command enables REPT EVT SECU and REPT ALM SECU

Section	ALW-MSG-SECU Description	
Category	Security	
Security	Superuser	
Related Messages	ACT-USER	ENT-USER-SECU
	CANC	INH-MSG-SECU
	CANC-USER	REPT ALM SECU
	CLR-COND-SECU	REPT EVT SECU
	DLT-USER-SECU	REPT EVT SESSION
	ED-PID	RTRV-USER-SECU
	ED-USER-SECU	
Input Format	ALW-MSG-SECU:[<TID>]::<CTAG>;	
Input Example	ALW-MSG-SECU:PETALUMA::123;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.5 ALW-PMREPT-ALL: Allow Performance Report All

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

Section	ALW-PMREPT-ALL Description	
Category	Performance	
Security	Retrieve	
Related Messages	INH-PMREPT-ALL	RTRV-PMSCHED-<MOD2>
	INIT-REG-<MOD2>	RTRV-PMSCHED-ALL
	INIT-REG-G1000	RTRV-TH-<MOD2>
	REPT PM <MOD2>	SCHED-PMREPT-<MOD2>
	RTRV-PM-<MOD2>	SET-PMMODE-<STS_PATH>
	RTRV-PMMODE-<STS_PATH>	SET-TH-<MOD2>
Input Format	ALW-PMREPT-ALL:[<TID>]::<CTAG>;	
Input Example	ALW-PMREPT-ALL:CISCONODE::123;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.6 ALW-SWDX-EQPT: Allow Switch Duplex Equipment

(Cisco ONS 15454 only)

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

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

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

Section	ALW-SWDX-EQPT Description
Category	Equipment
Security	Maintenance

Section	ALW-SWDX-EQPT Description (continued)	
Related Messages	ALW-SWTOPROTN-EQPT ALW-SWTOWKG-EQPT DLT-EQPT ED-EQPT ENT-EQPT INH-SWDX-EQPT INH-SWTOPROTN-EQPT INH-SWTOWKG-EQPT	REPT ALM EQPT REPT EVT EQPT RTRV-ALM-EQPT RTRV-COND-EQPT RTRV-EQPT SW-DX-EQPT SW-TOPROTN-EQPT SW-TOWKG-EQPT
Input Format	ALW-SWDX-EQPT:[<TID>]:<AID>:<CTAG>[::]; where: • <AID> is the XC/XCVT/XC10G equipment AID from the "EQPT" section on page 4-23	
Input Example	ALW-SWDX-EQPT:CISCO:SLOT-8:1234;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

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

(Cisco ONS 15454 only)

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

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

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

Notes:

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

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

Section	ALW-SWTOPROTN-EQPT Description	
Category	Equipment	
Security	Maintenance	
Related Messages	ALW-SWDX-EQPT	REPT ALM EQPT
	ALW-SWTOWKG-EQPT	REPT EVT EQPT
	DLT-EQPT	RTRV-ALM-EQPT
	ED-EQPT	RTRV-COND-EQPT
	ENT-EQPT	RTRV-EQPT
	INH-SWDX-EQPT	SW-DX-EQPT
	INH-SWTOPROTN-EQPT	SW-TOPROTN-EQPT
	INH-SWTOWKG-EQPT	SW-TOWKG-EQPT
Input Format	ALW-SWTOPROTN-EQPT:[<TID>]:<AID>:<CTAG>[::<DIRN>]; where: • <AID> This parameter can either be the protection unit for which carrying traffic is to be allowed (release of lockout) or the working unit for which switching to protect is to be allowed (release of lock on); <AID> is from the "EQPT" section on page 4-23 • <DIRN> is the direction of the switching. The command only supports one value of the <DIRN> parameter - BTH. This parameter defaults to BTH; valid values for <DIRN> are shown in the "DIRECTION" section on page 4-65	
Input Example	ALW-SWTOPROTN-EQPT:CISCO:SLOT-2:123::BTH;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

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

(Cisco ONS 15454 only)

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

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

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

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

Notes:

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

Section	ALW-SWTOWKG-EQPT Description	
Category	Equipment	
Security	Maintenance	
Related Messages	ALW-SWDX-EQPT	REPT ALM EQPT
	ALW-SWTOPROTN-EQPT	REPT EVT EQPT
	DLT-EQPT	RTRV-ALM-EQPT
	ED-EQPT	RTRV-COND-EQPT
	ENT-EQPT	RTRV-EQPT
	INH-SWDX-EQPT	SW-DX-EQPT
	INH-SWTOPROTN-EQPT	SW-TOPROTN-EQPT
	INH-SWTOWKG-EQPT	SW-TOWKG-EQPT
Input Format	ALW-SWTOWKG-EQPT:[<TID>]:<AID>:<CTAG>[::<DIRN>]; where: • <AID> This parameter can either be the protection unit for which switching back to working is to be allowed (release of lock on) or the working unit for which carrying traffic is to be allowed (release of lockout); <AID> is from the "EQPT" section on page 4-23 • <DIRN> is the direction of the switching. The command only supports one value of the <DIRN> parameter - BTH. This parameter defaults to BTH; valid values for <DIRN> are shown in the "DIRECTION" section on page 4-65	
Input Example	ALW-SWTOWKG-EQPT:CISCO:SLOT-2:123::BTH;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.9 APPLY: Apply

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

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

Section	APPLY Description
Category	Software Download (R4.1)/File Transfer (R4.5)
Security	Superuser
Related Messages	COPY-RFILE REPT EVT FXFR
Input Format	APPLY:[<TID>]::<CTAG>[::<MEM_SW_TYPE>]; where: • <MEM_SW_TYPE> indicates memory switch action during the software upgrade; valid values are shown in the "DL_TYPE" section on page 4-65
Input Example	APPLY:CISCO::123::ACT;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.10 CANC: Cancel

Reports the occurrence of a session timeout event.

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

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

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

Section	CANC Description
Category	Security
Security	Retrieve

Section	CANC Description (continued)	
Related Messages	ACT-USER ALW-MSG-SECU CANC-USER CLR-COND-SECU DLT-USER-SECU ED-PID ED-USER-SECU	ENT-USER-SECU INH-MSG-SECU REPT ALM SECU REPT EVT SECU REPT EVT SESSION RTRV-USER-SECU
Output Format	SID DATE TIME A ATAG CANC "<UID>" ; where: • <UID> refers to the user's identification whose session is terminated due to timeout; <UID> is any combination of up to 10 alphanumeric characters. <UID> is a string	
Output Example	TID-000 1998-06-20 14:30:00 A 100.100 CANC "CISCO15" ;	

3.4.11 CANC-USER: Cancel User

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

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

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

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

Section	CANC-USER Description
Category	Security
Security	Retrieve

Section	CANC-USER Description (continued)	
Related Messages	ACT-USER	ENT-USER-SECU
	ALW-MSG-SECU	INH-MSG-SECU
	CANC	REPT ALM SECU
	CLR-COND-SECU	REPT EVT SECU
	DLT-USER-SECU	REPT EVT SESSION
	ED-PID	RTRV-USER-SECU
	ED-USER-SECU	
Input Format	CANC-USER:[<TID>]:<USERID>:<CTAG>; where: • <USERID> identifies the user to the system; <USERID> is any combination of up to 10 alphanumeric characters. <USERID> is a string **Note** CTC allows <UID> and <PID> of up to 20 characters. The 20 character CTC-entered <UID> and <PID> are not valid TL1 <UID> and <PID>	
Input Example	CANC-USER:PETALUMA:TERRI:101;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

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

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

This command changes the test access (TACC) mode for the circuit being tested. For more information on TACC, refer to the "Test Access" section on page 1-22.

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

For this command to be applicable, you must first create the TAP using the ED-<STS_PATH> or ED-<VT_PATH> commands

Notes:

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

Section	CHG-ACCMD-<MOD_TACC> Description
Category	Test Access
Security	Maintenance

Section	CHG-ACCMD-<MOD_TACC> Description (continued)
Related Messages	CONN-TACC-<MOD_TACC> DISC-TACC RTRV-TACC
Input Format	CHG-ACCMD-<MOD_TACC>:[<TID>]:<TAP>:<CTAG>::<MD>; where: • <TAP> indicates the test access path number selected by the NE. The <TAP> is used to identify all messages between the TSC and NE until the access point is released. The <TAP> number must be an integer with a range of 1 to 999. <TAP> is a string **Note** This command only changes a single TAP at a time. • <MD> indicates the test access mode (SPLTE, SPLTF, LOOPE, AND LOOPF require an external QRS input signal); valid values for <MD> are shown in the "TACC_MODE" section on page 4-97
Input Example	CHG-ACCMD-STS1:CISCO:8:123::MONE;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.13 CLR-COND-SECU: Clear Condition Security

This command clears the specified security condition or alarm.

Section	CLR-COND-SECU Description
Category	Security
Security	N/A

Section	CLR-COND-SECU Description (continued)	
Related Messages	ACT-USER	REPT EVT SECU
	ALW-MSG-SECU	REPT EVT SESSION
	CANC	RTRV-ALM-<MOD2ALM>
	CANC-USER	RTRV-ALM-ALL
	DLT-USER-SECU	RTRV-ALM-BITS
	ED-PID	RTRV-ALM-ENV
	ED-USER-SECU	RTRV-ALM-EQPT
	ENT-USER-SECU	RTRV-ALM-RING
	INH-MSG-SECU	RTRV-ALM-SYNCN
	REPT ALM <MOD2ALM>	RTRV-ALM-UCP
	REPT ALM BITS	RTRV-COND-<MOD2ALM>
	REPT ALM COM	RTRV-COND-ALL
	REPT ALM ENV	RTRV-COND-BITS
	REPT ALM EQPT	RTRV-COND-ENV
	REPT ALM RING	RTRV-COND-EQPT
	REPT ALM SECU	RTRV-COND-RING
	REPT ALM SYNCN	RTRV-COND-SYNCN
	REPT ALM UCP	RTRV-COND-UCP
	REPT EVT COM	RTRV-USER-SECU
Input Format	CLR-COND-SECU:[<TID>]::<CTAG>[::<SECUALMTYPE>]; where: • <SECUALMTYPE> is the security alarm type; valid values are shown in the "SECUALMTYPE" section on page 4-91 but for R4.1 and 4.5 the only value allowed is INTRUSION-PSWD. The default value is INTRUSION-PSWD	
Input Example	CLR-COND-SECU:CISCO::123::INTRUSION-PSWD;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

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

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

This command connects the STS or VT defined by AID to the STS specified by the TAP number. For more information on TACC, refer to the "Test Access" section on page 1-22.

The connection will exist only for the duration of the TL1 session, after which the TAP will be disconnected from the circuit before the session cancels out. For this command to be applicable, you must first create the TAP using the ED-<STS_PATH> or ED-<VT_PATH> commands.

Notes:

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

Section	CONN-TACC-<MOD_TACC> Description
Category	Test Access
Security	Provisioning
Related Messages	CHG-ACCMD-<CHG-ACCMD> DISC-TACC RTRV-TACC
Input Format	CONN-TACC-<MOD_TACC>:[<TID>]:<SRC>:<CTAG>::<TAP>:MD=<MD>; where: • <SRC> is the AID from the "ALL" section on page 4-9 and must not be null • <TAP> indicates the test access path number selected by the NE. The <TAP> is used to identify all messages between the TSC and the NE until the access point is released. The <TAP> number must be an integer with a range of 1 to 999. A null <TAP> defaults to an appropriate <TAP> number selected by the NE. <TAP> is an integer and a null value is equivalent to ALL • <MD> indicates the test access mode (SPLTE, SPLTF, LOOPE and LOOPF require an external QRS input signal); valid values for <MD> are shown in the "TACC_MODE" section on page 4-97. <MD> must not be null
Input Example	CONN-TACC-STS1:CISCO:STS-2-1-4:123::8:MD=MONE;

Section	CONN-TACC-<MOD_TACC> Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<TAP>" ; where: • <TAP> indicates the test access path number selected by the NE. The <TAP> is used to identify all messages between the TSC and NE until the access point is released. The <TAP> number must be an integer with a range of 1 - 999. A null <TAP> defaults to an appropriate <TAP> number selected by the NE. <TAP> is an integer
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "8" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.15 COPY-IOSCFG: Copy IOS Config File

(Cisco ONS 15454 only)

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

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

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

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

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

Notes:

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

   In a non-firewall environment, the format of the URL should be "FTP://[FTPUSER[:FTPPASSWORD]]@FTP_HOST_IP/PACKAGE_PATH" where:
   <FTPUSER> is the userid to connect to the computer with the package file
   <FTPPASSWORD> is the password used to connect to the computer with the package file

<FTP_HOST_IP> is the IP address of the computer with the package file, DNS lookup of hostnames is not supported
<PACKAGE_PATH> is the long path name to the package file

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

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

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

Section	COPY-IOSCFG Description
Category	IOS
Security	Provisioning
Related Messages	REPT EVT IOSCFG
Input Format	COPY-IOSCFG:[<TID>]:<AID>:<CTAG>::SRC=<SRC>,DEST=<DEST>; where: • <AID> specifies the slot number of the card where the IOS configuration file belongs and is from the AID "EQPT" section on page 4-23 • <SRC> specifies where the IOS config file is copied from and is a string • <DEST> specifies where the IOS config file is copied to and is a string
Input Example	COPY-IOSCFG::SLOT-1:CTAG::SRC="LONG_FTP_PATH",DEST="STARTUP";
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.16 COPY-RFILE: Copy RFILE

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

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

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

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

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

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

Example:

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

Notes:

1. The SWDL type is used for software package uploads. The RFBU type is used for system database backups, and the RFR type is used for system database restores. The SRC input is required when the type is SWDL or RFR. The DEST input is needed when the type is RFBU. The SRC and DEST inputs cannot both be used in the same command.
2. FTP is the only allowed file transfer method.
3. The extended FTP URL syntax is required by the COPY-RFILE syntax.
4. Port number (21) is optional. 21 is the only supported Port Number. Leaving this field blank defaults to 21.
5. In R4.1 only, Maintenance users can perform Database Backup (RFBU) and Software Downloads (SWDL). Database Restore can be performed by a Superuser only.

Section	COPY-RFILE Description
Category	Software Download (R4.1)/File Transfer (R4.5)
Security	Superuser, Maintenance (R4.1)/ Superuser (R4.5)
Related Messages	APPLY REPT EVT FXFR

Section	COPY-RFILE Description (continued)
Input Format	COPY-RFILE:[<TID>]:[<SRC>]:<CTAG>::TYPE=<XFERTYPE>, [SRC=<SRC1>,][DEST=<DEST>]; where: • <SRC> is the type of file being transferred; <SRC> is the AID from the "RFILE" section on page 4-27 • <XFERTYPE> is the file transfer protocol; valid values for <XFERTYPE> are shown in the "TX_TYPE" section on page 4-100 • <SRC1> specifies the source of the file to be transferred. Only the FTP URL is supported. In a non-firewall environment the format of the URL should be: "FTP://[FTP_USER[:FTP_PASSWORD]]@ FTP_HOST_IP/PACKAGE_PATH" where: – <FTP_USER> is the userid to connect to the computer with the package file – <FTP_PASSWORD> is the password used to connect to the computer with the package file – <FTP_HOST_IP> is the IP address of the computer with the package file, DNS lookup of hostnames is not supported – <PACKAGE_PATH> is the long path name to the package file **Note** Userid and password are optional if the user does not need to log into the host computer. The password may be optional if the user does not need to log in. All the other portions of the URL are required, including the initial "FTP://" string. <SRC1> is a string. • <DEST> see <SRC1> above
Input Example	COPY-RFILE:HERNDON:RFILE-PKG:703::TYPE=SWDL, SRC="LONG_FTP_PATH",DEST="LONG_FTP_PATH";
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.17 DISC-TACC: Disconnect Test Access

This command disconnects the TAP and puts the connection back to its original state (no splits). For more information on TACC, refer to the "Test Access" section on page 1-22.

For this command to be applicable, you must first create the TAP using the ED-<STS_PATH> or ED-<VT_PATH> commands.

Notes:

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

Section	DISC-TACC Description
Category	Test Access
Security	Provisioning

Section	DISC-TACC Description (continued)
Related Messages	CHG-ACCMD-<MOD_TACC> CONN-TACC-<MOD_TACC> RTRV-TACC
Input Format	DISC-TACC:[<TID>]:<TAP>:<CTAG>; where: • <TAP> indicates the test access path number selected by the NE. The <TAP> is used to identify all messages between the TSC and the NE until the access point is released. The <TAP> number must be an integer with a range of 1- 999. This command only supports changing a single <TAP> number at a time. <TAP> is a string **Note** This command only disconnects a single TAP at a time.
Input Example	DISC-TACC:CISCO:8:123;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.18 DLT-BLSR: Delete BLSR

This command deletes the BLSR of the NE.

Error conditions:

1. If the system fails on getting IOR, a SDBE (Status, Internal Data Base Error) error message is returned.
2. If the NE returns nothing for the required BLSR (BLSR-# AID), a SRQN (Status, Invalid Request) error message is returned.

Section	DLT-BLSR Description	
Category	BLSR	
Security	Provisioning	
Related Messages	ED-BLSR ENT-BLSR EX-SW-<OCN_BLSR> REPT ALM RING	REPT EVT RING RTRV-ALM-RING RTRV-BLSR RTRV-COND-RING
Input Format	DLT-BLSR:[<TID>]:<AID>:<CTAG>[:::]; where: • <AID> identifies the BLSR of the NE. “ALL” or “BLSR-ALL” AID is not allowed for editing BLSR. This command only supports a single BLSR AID. <AID> is the AID from the “BLSR” section on page 4-17	
Input Example	DLT-BLSR:PETALUMA:BLSR-2:123;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.19 DLT-CRS-<STS_PATH>: Delete Cross Connection (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C)

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

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

Notes:

1. The fields after CTAG (trailing colons) are optional.
2. For the 1-way cross-connections the AIDs must be in the same order as originally entered; for the 2-way cross-connections, either order will work.
3. This command does not support deleting multiple STS cross-connections.
4. Using "&" in the AID field of this command can delete an path protection STS cross-connection.
   a. The following command is used to delete a 1-way selector or 2-way selector and bridge with:

      from points: F1, F2

      to points: T1

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

   b. The following command is used to delete a 1-way bridge or 2-way selector and bridge with:

      from point: F1

      to points: T1, T2

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

   c. The following command is used to delete a 1-way or 2-way subtending path protection connection with:

      from point: F1, F2

      to points: T1, T2

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

   d. The AID format in the deletion command is the same as the AID format in the retrieved response message. For example, if the output of any retrieved AID is "F1&F2,T1:CCT,STS3C", the deletion command with the AID format (F1&F2,T1) is required to delete this cross-connection.

   e. The following command is used to create a path protection IDRI Cross-Connection:

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

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

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

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

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

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

   f. The following command is used to create a path protection DRI Cross-Connection:

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

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

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

C–Traffic to and from ring Y

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

5. All A&B AIDs in the TL1 cross-connection command are in the format of WorkingAID&ProtectAID.
6. You can experience some implementation behavior problems if additional drops have been added to the connection object.
7. The facility AID is only valid for slots holding the G1000-4 card.
8. The virtual facility AID (VFAC) is only valid on slots holding an ML-series card.
9. A TL1 cross-connect that has been upgraded to a CTC circuit can no longer be managed by TL1. For example, if you issue a DLT-CRS-<STS_PATH> command to delete a circuit, you will see that the circuit still appears in CTC as "incomplete". The reason for this is because in addition to creating cross-connects (as TL1 does), CTC creates another object on the source node that stores network-level circuit attributes. CTC will continue to see that object after the cross-connect is deleted which is why it shows an incomplete circuit.

Section	DLT-CRS-<STS_PATH> Description	
Category	Cross Connections	
Security	Provisioning	
Related Messages	DLT-CRS-<VT_PATH>	ENT-CRS-<VT_PATH>
	ED-CRS-<STS_PATH>	RTRV-CRS
	ED-CRS-<VT_PATH>	RTRV-CRS-<STS_PATH>
	ENT-CRS-<STS_PATH>	RTRV-CRS-<VT_PATH>
Input Format	DLT-CRS-<STS_PATH>:[<TID>]:<SRC>,<DST>:<CTAG>[:::]; where: • <SRC> is the AID from the "CrossConnectID" section on page 4-19 • <DST> is the AID from the "CrossConnectID" section on page 4-19	
Input Example	DLT-CRS-STS12C:VINBURG:STS-1-1-1,STS-12-1-1:102;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.20 DLT-CRS-<VT_PATH>: Delete Cross Connection (VT1, VT2)

This command deletes a cross-connection between VT paths.

Notes:

1. The fields after CTAG (trailing colons) are the optional.
2. For the 1-way cross-connections the AIDs must be in the same order as originally entered; for the 2-way either order will work.
3. This command does not support deleting multiple VT cross-connections.
4. Using "&" in the AID field of this command can delete an path protection VT cross-connection.
   a. The following command is used to delete a 1-way selector or 2-way selector and bridge with:

from points: F1, F2

to points: T1

DLT-CRS-VT1:[<TID>]:F1&F2,T1:<CTAG>;

b. The following command is used to delete a 1-way bridge or 2-way selector and bridge with:

from point: F1

to points: T1, T2

DLT-CRS-VT1:[<TID>]:F1,T1&T2:<CTAG>;

c. The following command is used to delete a 1-way subtending path protection connection or 2-way subtending path protection connection with:

from points: F1, F2

to points: T1, T2

DLT-CRS-VT1:[<TID>]:F1&F2,T1&T2:<CTAG>;

d. The AID format in the deletion command is the same as the AID format in the retrieved response message. For example, if the output of any retrieved AID is "F1&F2,T1:CCT", the deletion command with the AID format (F1&F2,T1) is required to delete this cross-connection.

5. All A&B AIDs in the TL1 cross-connection command are in the format of WorkingAID&ProtectAID.

6. You can experience some implementation behavior problems if additional drops have been added to the connection object.

Section	DLT-CRS-<VT_PATH> Description	
Category	Cross Connections	
Security	Provisioning	
Related Messages	DLT-CRS-<STS_PATH> ED-CRS-<STS_PATH> ED-CRS-<VT_PATH> ENT-CRS-<STS_PATH>	ENT-CRS-<VT_PATH> RTRV-CRS RTRV-CRS-<STS_PATH> RTRV-CRS-<VT_PATH>
Input Format	DLT-CRS-<VT_PATH>:[<TID>]:<SRC>,<DST>:<CTAG>[:::]; where: • <SRC> is the AID from the "VT1_5" section on page 4-33 • <DST> is the AID from the "VT1_5" section on page 4-33	
Input Example	DLT-CRS-VT1:CISCO:VT1-2-1-3-7-2,VT1-4-1-4-5-2:1234;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.21 DLT-EQPT: Delete Equipment

This command deletes a card from the NE.

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

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

Error conditions for deleting equipment may be:

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

Section	DLT-EQPT Description	
Category	Equipment	
Security	Provisioning	
Related Messages	ALW-SWDX-EQPT	REPT ALM EQPT
	ALW-SWTOPROTN-EQPT	REPT EVT EQPT
	ALW-SWTOWKG-EQPT	RTRV-ALM-EQPT
	ED-EQPT	RTRV-COND-EQPT
	ENT-EQPT	RTRV-EQPT
	INH-SWDX-EQPT	SW-DX-EQPT
	INH-SWTOPROTN-EQPT	SW-TOPROTN-EQPT
	INH-SWTOWKG-EQPT	SW-TOWKG-EQPT
Input Format	DLT-EQPT:[<TID>]:<AID>:<CTAG>[:::]; where: • <AID> is the equipment unit (slot) to act on and is the AID from the "EQPT" section on page 4-23	
Input Example	DLT-EQPT:SONOMA:SLOT-1:104;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.22 DLT-FFP-<OCN_TYPE>: Delete Facility Protection Group (OC3, OC12, OC48, OC192)

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

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

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

Section	DLT-FFP-<OCN_TYPE> Description
Category	SONET Line Protection
Security	Provisioning

Section	DLT-FFP-<OCN_TYPE> Description (continued)	
Related Messages	DLT-FFP-CLNT	RLS-PROTNSW-<OCN_TYPE>
	ED-FFP-<OCN_TYPE>	RTRV-FFP-<OCN_TYPE>
	ED-FFP-CLNT	RTRV-FFP-CLNT
	ENT-FFP-<OCN_TYPE>	RTRV-FFP-OCH
	ENT-FFP-CLNT	RTRV-PROTNSW-<OCN_TYPE>
	OPR-PROTNSW-<OCN_TYPE>	
Input Format	DLT-FFP-<OCN_TYPE>:[<TID>]:<WORK>,<PROTECT>:<CTAG>[:::]; where: • <WORK> identifies the working facility and is the AID from the "FACILITY" section on page 4-24 • <PROTECT> identifies the protect facility and is the AID "FACILITY" section on page 4-24	
Input Example	DLT-FFP-OC3:PETALUMA:FAC-2-1,FAC-1-1:1;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

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

(Cisco ONS 15454 only)

This command deletes Y cable protection on client facilities.

Section	DLT-FFP-CLNT Description
Category	DWDM
Security	Provisioning

Section	DLT-FFP-CLNT Description (continued)	
Related Messages	DLT-FFP-<OCN_TYPE>	OPR-PROTNSW-OCH
	DLT-LNK-<MOD2O>	RLS-LASER-OTS
	ED-CLNT	RLS-PROTNSW-<OCN_TYPE>
	ED-DWDM	RLS-PROTNSW-CLNT
	ED-FFP-<OCN_TYPE>	RLS-PROTNSW-OCH
	ED-FFP-CLNT	RTRV-CLNT
	ED-FFP-OCH	RTRV-DWDM
	ED-LNK-<MOD2O>	RTRV-FFP-<OCN_TYPE>
	ED-OCH	RTRV-FFP-CLNT
	ED-OMS	RTRV-FFP-OCH
	ED-OTS	RTRV-LNK-<MOD2O>
	ED-TRC-CLNT	RTRV-OCH
	ED-TRC-OCH	RTRV-OMS
	ENT-FFP-<OCN_TYPE>	RTRV-OTS
	ENT-FFP-CLNT	RTRV-PROTNSW-<OCN_TYPE>
	ENT-LNK-<MOD2O>	RTRV-PROTNSW-CLNT
	EX-SW-<OCN_BLSR>	RTRV-PROTNSW-OCH
	OPR-LASER-OTS	RTRV-TRC-CLNT
	OPR-PROTNSW-<OCN_TYPE>	RTRV-TRC-OCH
	OPR-PROTNSW-CLNT	
Input Format	DLT-FFP-CLNT:[<TID>]:<WORKAID>,<PROTAID>:<CTAG>[:::]; where: • <WORKAID> identifies the working facility and is the AID from the "FACILITY" section on page 4-24 • <PROTECTAID> identifies the protect facility and is the AID "FACILITY" section on page 4-24	
Input Example	DLT-FFP-CLNT:CISCO:FAC-1-1,FAC-2-1:100;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

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

(Cisco ONS 15454 only)

Note Applicable to Release 4.5 only.

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

Section	DLT-LNK-<MOD2O> Description	
Category	DWDM	
Security	Provisioning	
Related Messages	DLT-FFP-CLNT	RLS-LASER-OTS
	ED-CLNT	RLS-PROTNSW-CLNT
	ED-DWDM	RLS-PROTNSW-OCH
	ED-FFP-CLNT	RTRV-CLNT
	ED-FFP-OCH	RTRV-DWDM
	ED-LNK-<MOD2O>	RTRV-FFP-CLNT
	ED-OCH	RTRV-FFP-OCH
	ED-OMS	RTRV-LNK-<MOD2O>
	ED-OTS	RTRV-OCH
	ED-TRC-CLNT	RTRV-OMS
	ED-TRC-OCH	RTRV-OTS
	ENT-FFP-CLNT	RTRV-PROTNSW-CLNT
	ENT-LNK-<MOD2O>	RTRV-PROTNSW-OCH
	OPR-LASER-OTS	RTRV-TRC-CLNT
	OPR-PROTNSW-CLNT	RTRV-TRC-OCH
	OPR-PROTNSW-OCH	
Input Format	DLT-LNK-<MOD2O>:[<TID>]:<FROM>,<TO>:<CTAG>; where: • <FROM> indicates an identifier at one end of the optical link and is the AID from the "BAND" section on page 4-16 • <TO> indicates an identifier at the other end of the optical link and is the AID from the "BAND" section on page 4-16.	
Input Example	DLT-LNK-OMS:PENNGROVE:BAND-6-1-TX,BAND-13-1-RX:114;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.25 DLT-OSC: Delete OSC

(Cisco ONS 15454 only)

Note Applicable to Release 4.5 only.

This command deletes the OSC group of the NE.

Section	DLT-OSC Description
Category	DWDM
Security	Provisioning

Section	DLT-OSC Description (continued)
Related Messages	ENT-OSC ED-OSC RTRV-OSC
Input Format	DLT-OSC:[<TID>]:<AID>:<CTAG>; where: • <AID> identifies the OSC group of the NE and is the AID "OSC" section on page 4-26
Input Example	DLT-OSC:PENNGROVE:OSC-1:114;
Errors	Errors are listed in Table 7-32 on page 7-18.

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

(Cisco ONS 15454 only)

This command deletes a UCP IP control channel.

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

Section	DLT-UCP-CC Description	
Category	UCP	
Security	Provisioning	
Related Messages	DLT-UCP-IF	REPT EVT UCP
	DLT-UCP-NBR	RTRV-ALM-UCP
	ED-UCP-CC	RTRV-CKT-ORIG
	ED-UCP-IF	RTRV-CKT-TERM
	ED-UCP-NBR	RTRV-COND-UCP
	ED-UCP-NODE	RTRV-UCP-CC
	ENT-UCP-CC	RTRV-UCP-IF
	ENT-UCP-IF	RTRV-UCP-NBR
	ENT-UCP-NBR	RTRV-UCP-NODE
	REPT ALM UCP	
Input Format	DLT-UCP-CC:[<TID>]:<AID>:<CTAG>[::::]; where: • <AID> indicates an individual IPCC ID; <AID> is the AID from the "IPCC" section on page 4-25	

Section	DLT-UCP-CC Description (continued)
Input Example	DLT-UCP-CC:CISCO:CC-9:CTAG;
Errors	Errors are listed in Table 7-32 on page 7-18.

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

This command deletes a UCP interface.

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

Section	DLT-UCP-IF Description	
Category	UCP	
Security	Provisioning	
Related Messages	DLT-UCP-CC	REPT ALM UCP
	DLT-UCP-NBR	REPT EVT UCP
	ED-UCP-CC	RTRV-ALM-UCP
	ED-UCP-IF	RTRV-COND-UCP
	ED-UCP-NBR	RTRV-UCP-CC
	ED-UCP-NODE	RTRV-UCP-IF
	ENT-UCP-CC	RTRV-UCP-NBR
	ENT-UCP-IF	RTRV-UCP-NODE
	ENT-UCP-NBR	
Input Format	DLT-UCP-IF:[<TID>]:<AID>:<CTAG>[::::]; where: • <AID> indicates the interface port index of the data link; <AID> is the AID from the "FACILITY" section on page 4-24	
Input Example	DLT-UCP-IF:CISCO:FAC-2-1:CTAG;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

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

This command deletes a UCP neighbor.

Notes:

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

Section	DLT-UCP-NBR Description	
Category	UCP	
Security	Provisioning	
Related Messages	DLT-UCP-CC	REPT ALM UCP
	DLT-UCP-IF	REPT EVT UCP
	ED-UCP-CC	RTRV-ALM-UCP
	ED-UCP-IF	RTRV-COND-UCP
	ED-UCP-NBR	RTRV-UCP-CC
	ED-UCP-NODE	RTRV-UCP-IF
	ENT-UCP-CC	RTRV-UCP-NBR
	ENT-UCP-IF	RTRV-UCP-NODE
	ENT-UCP-NBR	
Input Format	DLT-UCP-NBR:[<TID>]:<AID>:<CTAG>[::::]; where: • <AID> indicates an individual neighbor AID of the UCP; <AID> is the AID from the "NBR" section on page 4-26	
Input Example	DLT-UCP-NBR:CISCO:NBR-8:CTAG;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.29 DLT-USER-SECU: Delete User Security

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

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

For the DLT-USER-SECU command:

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

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

Notes:

1. A userid cannot be deleted when that user is logged in. If you try to delete a userid and the user is logged in, an error message indicating that the user is logged in will be received.

Section	DLT-USER-SECU Description
Category	Security
Security	Superuser

Section	DLT-USER-SECU Description (continued)	
Related Messages	ACT-USER	ENT-USER-SECU
	ALW-MSG-SECU	INH-MSG-SECU
	CANC	REPT EVT SECU
	CANC-USER	REPT EVT SESSION
	ED-PID	RTRV-USER-SECU
	ED-USER-SECU	
Input Format	DLT-USER-SECU:[<TID>]:<UID>:<CTAG>; where: • <UID> is the user identifier and is a string; <UID> is any combination of up to 10 alphanumeric characters **Note** CTC allows <UID> and <PID> of up to 20 characters. The 20 character CTC-entered <UID> and <PID> are not valid TL1 <UID> and <PID>.	
Input Example	DLT-USER-SECU:PETALUMA:CISCO15:123;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.30 DLT-WLEN: Delete Wavelength

(Cisco ONS 15454 only)

Note Applicable to Release 4.5 only.

This command deletes the provisioned wavelength (WLEN).

Note:

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

Section	DLT-WLEN Description
Category	DWDM
Security	Provisioning
Related Messages	ENT-WLEN ED-WLEN RTRV-WLEN

Section	DLT-WLEN Description (continued)
Input Format	DLT-WLEN:[<TID>]:<AID>:<CTAG>[:::CMDMDE=<CMDMDE>]; where: • <AID> is the wavelength AID per ring direction from the "WLEN" section on page 4-34 • <CMDMDE> indicates the command execution mode. There are two options: NORM for normal (default), and FRCD for forced. Forced will override any safeguards that normally reject a request to delete an In Service resource. Valid values are shown in the "CMD_MODE" section on page 4-50
Input Example	DLT-WLEN:PENNGROVE:WLEN-W_E-1530.33:114:::CMDMDE=NORM;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.31 ED-<OCN_TYPE>: Edit (OC3, OC12, OC48, OC192)

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

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

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

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

UNI-C DCC provisioning notes:

1. The attributes DCC(Y/N) and mode (SONET/SDH) remain the same in the ED/RTRV-OCN commands when the DCC is used for UNI-C, in which case the port attribute UNIC is enables (UNIC=Y).
2. If the DCC is created under regular SONET provisioning, and this port is used by UNI-C, the port is converted as a UNI-C DCC automatically.
3. De-provisioning UNI-C IF/IB IPCC will free up DCC termination automatically.
4. The state of the T1 port cannot be changed to IS or OOS if a loopback has been operated upon the line.

Section	ED-<OCN_TYPE> Description
Category	Ports
Security	Provisioning

Section	ED-<OCN_TYPE> Description (continued)	
Related Messages	ED-DS1	RTRV-DS1
	ED-EC1	RTRV-EC1
	ED-G1000	RTRV-FSTE
	ED-T1	RTRV-G1000
	ED-T3	RTRV-GIGE
	INIT-REG-G1000	RTRV-POS
	RMV-<MOD2_IO>	RTRV-T1
	RST-<MOD2_IO>	RTRV-T3
	RTRV-<OCN_TYPE>	
Input Format	ED-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>:::[DCC=<DCC>,][SYNCMSG=<SYNCMSG>,][SENDDUS=<SENDDUS>,][PJMON=<PJMON>,][SFBER=<SFBER>,][SDBER=<SDBER>,][MODE=<MODE>,][MUX=<MUX>,][SOAK=<SOAK>]:[<PST>],[<SST>]; where: • <AID> is the access identifier from the "FACILITY" section on page 4-24 • <DCC> identifies an OCN port DCC connection; valid values for <DCC> are shown in the "SDCC_MODE" section on page 4-91 • <SYNCMSG> indicates if sync status messaging is enabled or disabled on the facility; valid values for <SYNCMSG> are shown in the "ON_OFF" section on page 4-83 • <SENDDUS> indicates that the facility will send out the DUS (do not use for synchronization) value as the sync status message for that facility; valid values are shown in the "ON_OFF" section on page 4-83 • <PJMON> identifies an OC-N port PJMON with a value range of [0, highest STS number for the sonet card]; <PJMON> is an integer • <SFBER> identifies an OC-N port SFBER; valid values for <SFBER> are shown in the "SF_BER" section on page 4-92 • <SDBER> identifies an OC-N port SDBER; valid values for <SDBER> are shown in the "SD_BER" section on page 4-91 • Valid values for <MODE> are shown in the "OPTICAL_MODE" section on page 4-84 • <MUX> BLSR Extension Byte (supported only on OC48AS cards); valid values for <MUX> are shown in the "MUX_TYPE" section on page 4-82 • <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 0–192 intervals (maximum of 48 hours). <SOAK> is an integer. • <PST> is the primary state; valid values for <PST> are shown in the "PST" section on page 4-90 • <SST> is the secondary state; valid values for <SST> are shown in the "SST" section on page 4-92	

Section	ED-<OCN_TYPE> Description (continued)
Input Example	ED-OC48:PENNGROVE:FAC-6-1:114:::DCC=Y,SYNCMSG=Y,SENDDUS=N, PJMON=48,SFBER=1E-4,SDBER=1E-6,MODE=SONET,MUX=E2, SOAK=10:OOS,AINS;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.32 ED-<STS_PATH>: Edit (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C)

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

This command edits the attributes associated with an STS path.

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

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

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

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

The TACC parameter edits an existing single STS or VT and changes it to a test access point. When an editing command on TACC is executed, it assigns the STS for the first 2-way connection and STS=1 as the second 2-way connection. For STS3C and STS12C, the next available STS of the same width is chosen. For more information on TACC, refer to the "Test Access" section on page 1-22.

J1 is implemented on the DS1/DS1N, DS3E/DS3NE, DS3XM, EC1, OC3, 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-<STS_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-<STS_PATH> commands instead.

Error conditions:

1. If sending this command to edit SFBER or SDBER or RVRTV or RVTM for the non-path protection STS path, an error message will be returned.
2. If sending this command to edit the EXPTRC string with the AUTO path trace mode (TRCMODE=AUTO), an error message will be returned.

3. If sending this command to edit TRC on any card other than DS3(N)E, DS1(N), and DS3XM cards, an error message (TRC-not allowed for monitor paths. Incorrect card type.) will be returned.
4. This command is allowed to edit EXPTRC on DS1(N), DS3(N)E, DS3XM, EC1, OC3, OC48AS, and OC192 cards.
5. If sending this command to edit both TACC and any other attribute(s), the (Parameters Not compatible) error message will be returned.
6. If sending this command to edit TACC on an AID with cross-connections, an error message (STS in Use) will be returned.
7. TACC creation will also be denied on the protect ports/cards for 1:1, 1:N, and 1+1.
8. The VFAC AID is only valid on slots containing an ML1000-2 or ML100T-12 card. TACC is not supported for the ML1000-2 or ML100T-12 cards.
9. After the BLSR switching, provisioning of the J1 trace string or trace mode is not allowed on the protection path.
10. TACC creation is allowed on PCA for two-fiber and four-fiber BLSR.
11. TACC is not supported on G1000, MXP_2.5_10G/TXP_MR-10G, ML1000-2 and ML100T-12 cards.

Section	ED-<STS_PATH> Description
Category	STS and VT Paths (R4.1)/Paths (R4.5)
Security	Provisioning
Related Messages	RTRV-<STS_PATH> RTRV-PTHTRC-<STS_PATH>

Section	ED-<STS_PATH> Description (continued)
Input Format	ED-<STS_PATH>:[<TID>]:<SRC>:<CTAG>:::[SFBER=<SFBER>,][SDBER=<SDBER>,][RVRTV=<RVRTV>,][RVTM=<RVTM>,][SWPDIP=<SWPDIP>,][HOLDOFFTIMER=<HOLDOFFTIMER>,][EXPTRC=<EXPTRC>,][TRC=<TRC>,][TRCMODE=<TRCMODE>,][TACC=<TACC>]:[<PST>],[<SST>]; where: • <SRC> is the access identifier from the "CrossConnectID" section on page 4-19 • <SFBER> identifies an STS path SFBER which only applies to path protection; valid values for <SFBER> are shown in the "SF_BER" section on page 4-92 • <SDBER> identifies an STS path SDBER which only applies to path protection; valid values for <SDBER> are shown in the "SD_BER" section on page 4-91 • <RVRTV> identifies a revertive mode which only applies to path protection; valid values for <RVRTV> are shown in the "ON_OFF" section on page 4-83 • <RVTM> identifies a revertive time which only applies to path protection; valid values for <RVTM> are shown in the "REVERTIVE_TIME" section on page 4-90. <RVTM> is not allowed to be set while <RVRTV> is N. • <SWPDIP> On-Off switch for path protection Payload Defect Level switching. Valid values for <SWPDIP> are shown in the "ON_OFF" section on page 4-83
Input Format (continued)	• <HOLDOFFTIMER> Hold-off timer for path protection DRI. Values must be within 0 and 10000 milliseconds (0 to 10 seconds) with increments of 100 milliseconds; <HOLDOFFTIMER> is an integer • <EXPTRC> indicates the expected path trace message (J1) contents. The EXPTRC is any 64 character string, including the terminating CR (carriage return) and LF (line feed); <EXPTRC> is a string • <TRC> identifies the path trace message to be transmitted. The TRC is any combination of 64 characters, including the terminating CR and LF. The trace byte (J1) continuously transmits a 64 byte string, one byte at a time. A null value defaults to the NE transmitting null characters (Hex 00); <TRC> is a string • <TRCMODE> indicates the path trace mode, and defaults to the OFF mode; valid values for <TRCMODE> are shown in the "TRCMODE" section on page 4-100 • <TACC> is the AID "TACC" section on page 4-32 • <PST> is the primary state; valid values for <PST> are shown in the "PST" section on page 4-90 • <SST> is the secondary state; valid values for <SST> are shown in the "SST" section on page 4-92

Section	ED-<STS_PATH> Description (continued)
Input Example	ED-STS1:FERNDALE:STS-2-1-4:115:::SFBER=1E-3,SDBER=1E-5, RVRTV=Y,RVTM=1.0,SWPDIP=Y,HOLDOFFTIMER=2000, EXPTRC="EXPTRCSTRING",TRC="TRCSTRING", TRCMODE=OFF,TACC=8:OOS,AINS;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.33 ED-<VT_PATH>: Edit (VT1, VT2)

This command edits the attributes associated with a VT path.

Both RVRTV and RVTM parameters only apply to path protection.

The TACC parameter edits an existing single STS or VT and changes it to a test access point. When an editing command on TACC is executed, it assigns the STS for the first 2-way connection and STS=1 as the second 2-way connection.

Error conditions:

1. Sending this command to edit RVRTV or RVTM for the non-path protection VT path, an error message will be returned.
2. If sending this command to edit both TACC and any other attribute(s), the (Parameters Not compatible) error message will be returned.
3. This command is only allowed whenever there are no circuits/cross-connections (no path protection connections) on that AID.
4. If sending this command to edit TACC on an AID with circuits or cross-connections, or if the port/VT has a test access point (TAP or TACC number), an error message (e.g., VT in Use) will be returned.
5. TACC creation will also be denied on the protect ports/cards.
6. TACC creation is allowed on PCA for two-fiber and four-fiber BLSR.
7. TACC is not supported on G1000, MXP_2.5G_10G/TXP_MR_10G, ML1000-2 and ML100T-12 cards.

Section	ED-<VT_PATH> Description	
Category	STS and VT Paths (R4.1)/Paths (R4.5)	
Security	Provisioning	
Related Messages	ED-<STS_PATH>	RTRV-PTHTRC-<STS_PATH>
	RTRV-<STS_PATH>	RTRV-<VT_PATH>

Section	ED-<VT_PATH> Description (continued)
Input Format	ED-<VT_PATH>:[<TID>]:<SRC>:<CTAG>:::[RVRTV=<RVRTV>,][RVTM=<RVTM>,][HOLDOFFTIMER=<HOLDOFFTIMER>,][TACC=<TACC>]:[<PST>],[<SST>]; where: • <SRC> is an access identifier from the "VT1_5" section on page 4-33 • <RVRTV> identifies revertive mode which only applies to path protection; valid values for <RVRTV> are shown in the "ON_OFF" section on page 4-83 • <RVTM> identifies revertive time; valid values for <RVTM> are shown in the "REVERTIVE_TIME" section on page 4-90 • <HOLDOFFTIMER> values must be within 0 and 10000 milliseconds (0 to 10 seconds) with increments of 100 milliseconds; <HOLDOFFTIMER> is an integer • <TACC> is the AID from the "TACC" section on page 4-32 • <PST> primary state; valid values for <PST> are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values for <SST> are shown in the "SST" section on page 4-92
Input Example	ED-VT1:CISCO:VT1-2-1-3-1-4:123:::RVRTV=Y,RVTM=1.0,HOLDOFFTIMER=2000,TACC=8:OOS,AINS;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.34 ED-BITS: Edit Building Integrated Timing Supply

This command edits the BITS reference attributes.

Note Starting with R4.1, the SYNC-BITS1 and SYNC-BITS2 AIDs can be used for setting the port state of BITS-OUT ports.

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

Section	ED-BITS Description (continued)
Input Format	ED-BITS:[<TID>]:<AID>:<CTAG>:::[LINECDE=<LINECDE>,][FMT=<FMT>,][LBO=<LBO>,][SYNCMSG=<SYNCMSG>,][AISTHRSHLD=<AISTHRSHLD>][:<PST>]; where: • <AID> is an access identifier from the "BITS" section on page 4-16 • <LINECDE> is a line code; valid values for <LINECDE> are shown in the "LINE_CODE" section on page 4-75 • <FMT> is the frame format; valid values for <FMT> are shown in the "FRAME_FORMAT" section on page 4-73 • <LBO> indicates BITS line build out. The default value is 0-133. Valid values for <LBO> are shown in the "BITS_LineBuildOut" section on page 4-46 • <SYNCMSG> indicates if this BITS facility supports synchronization status message; <SYNCMSG> defaults to (Y) and valid values are shown in the "ON_OFF" section on page 4-83 • <AISTHRSHLD> is the AIS Threshold. Valid values for <AISTHRSHLD> shown in the "SYNC_CLOCK_REF_QUALITY_LEVEL" section on page 4-95 • <PST> is a state; valid values for <PST> are shown in the "PST" section on page 4-90
Input Example	ED-BITS:SONOMA:BITS-2:779:::LINECDE=AMI,FMT=ESF,LBO=0-133,SYNCMSG=Y,AISTHRSHLD=PRS:IS;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.35 ED-BLSR: Edit Bidirectional Line Switched Ring

This command edits the BLSR attributes.

Notes:

1. Only the RVRTV, RVTM, SRVRTV, SRVTM attributes can be edited for the 4-Fiber BLSR.
2. Only the RVRTV and RVTM attributes can be edited for the 2-Fiber BLSR.

Error conditions:

1. If the system fails on getting IOR, a SDBE (Status, Internal Data Base Error) error message will be returned.
2. If the NE returns nothing for the required BLSR (BLSR-#, AID), a SRQN (Status, Invalid Request) error message will be returned.
3. If sending this command to modify any attribute other than RVRTV, RVTM, SRVRTV, and SRVTM on the 4-Fiber BLSR, an IDNV (Input, Data Not Valid) error message will be returned.
4. If sending this command to modify any attribute other than RVRTV or RVTM on the 2-fiber BLSR, an IDNV (Input, Data Not Valid) error message will be returned.
5. Both RINGID and NODEID can be edited using the ED-BLSR command starting with Release 3.2.

Section	ED-BLSR Description	
Category	BLSR	
Security	Provisioning	
Related Messages	DLT-BLSR	RTRV-ALM-RING
	ENT-BLSR	RTRV-BLSR
	REPT ALM RING	RTRV-COND-RING
	REPT EVT RING	
Input Format	ED-BLSR:[<TID>]:<AID>:<CTAG>:::[RINGID=<RINGID>,][NODEID=<NODEID>,][RVRTV=<RVRTV>,][RVTM=<RVTM>,][SRVRTV=<SRVRTV>,][SRVTM=<SRVTM>][:]; where: • <AID> identifies the BLSR of the NE and is from the "BLSR" section on page 4-17 (the AID "ALL" or "BLSR ALL" is not allowed for editing BLSR). This command only supports a single BLSR AID • <RINGID> identifies the BLSR ring ID of the NE. It ranges from 0–9999. <RINGID> is an integer • <NODEID> identifies the BLSR node ID of the NE. It ranges from 0–31. <NODEID> is an integer • <RVRTV> identifies the revertive mode and valid values are shown in the "ON_OFF" section on page 4-83 • <RVTM> identifies the revertive time; valid values for <RVTM> are shown in the "REVERTIVE_TIME" section on page 4-90 • <SRVRTV> identifies the span revertive mode for 4F BLSR only and valid values are shown in the "ON_OFF" section on page 4-83 • <SRVTM> identifies the span revertive time for 4F BLSR only; valid values for <SRVTM> are shown in the "REVERTIVE_TIME" section on page 4-90	
Input Example	ED-BLSR:PETALUMA:BLSR-43:123:::RINGID=43,NODEID=3,RVRTV=Y,RVTM=2.0,SRVRTV=Y,SRVTM=5.0;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.36 ED-CLNT: Edit Client

(Cisco ONS 15454 only)

This command edits client facility attributes.

Section	ED-CLNT Description
Category	DWDM
Security	Provisioning

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

Section	ED-CLNT Description (continued)
Input Format	ED-CLNT:[<TID>]:<AID>:<CTAG>:::[NAME=<PORTNAME>,][1] [SFBER=<SFBER>,][SDBER=<SDBER>,][ALSMODE=<ALSMODE>,] [ALSRCINT=<ALSRCINT>,][ALSRCPW=<ALSRCPW>,][COMM=<COMM>,] [MACADDR=<MACADDR>,][SYNCMSG=<SYNCMSG>,] [SENDDUS=<SENDDUS>,][RLASER=<RLASER>,][SOAK=<SOAK>]: [<PST>],[<SST>]; 1. [NAME=<PORTNAME>,] applies to R4.5 only. where: • <AID> is from the "FACILITY" section on page 4-24 • <PORTNAME> indicates the port name and is a string **Note** <PORTNAME applies to R4.5 only. • <SFBER> identifies the SFBER for the SONET payload; valid values are shown in the "SF_BER" section on page 4-92 • <SDBER> identifies the SDBER for the SONET payload; valid values are shown in the "SD_BER" section on page 4-91 • <ALSMODE> indicates if the Automatic Laser Shutdown is enabled or disabled; valid values are shown in the "ALS_MODE" section on page 4-45 • <ALSRCINT> indicates the ALS recovery interval. Range is 100–300 seconds; <ALSRCINT> is an integer • <ALSRCPW> indicates the ALS recovery pulse width. The range is 2–100 seconds, in increments of 100ms, e.g. 30.1; <ALSRCPW> is a float • <COMM> indicates if the GCC or DCC is enabled or disabled. The GCC can be enabled only if the digital wrapper has been enabled for the card. The default is NONE. Valid values are shown in the "COMM_TYPE" section on page 4-50. Rules for an MXP_2.5G_10G/TXP_MR_10G client port are; only the DCC can be provisioned, if the termination mode is not transparent and the payload is SONET. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the DCC can be enabled only if the G.709 is not enabled and if the payload is SONET and the termination mode is not transparent. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the GCC can be enabled if there is no DCC and the G.709 flag is enabled. • <MACADDR> identifies the MAC address for the 10GEthernet payload; <MACADDR> is a string • <SYNCMSG> indicates that the facility be enabled to provide the synchronization clock. This does not apply to a TXP_MR_10G card. This applies to an MXP_2.5G_10G card, only if the payload is SONET and the card termination mode is as follows: TRANSPARENT - All Client ports are available for all timing selections. All Trunk ports are not available. Valid values are shown in the "ON_OFF" section on page 4-83 LINE - All ports are available for all-timing selections.

Section	ED-CLNT Description (continued)
Input Format (continued)	• <SENDDUS> indicates that the facility send out a Do not Use for Sync message. This does not apply to a TXP_MR_10G card. This applies to an MXP_2.5G_10G card, only if the payload is SONET and the card termination mode is as follows: TRANSPARENT - All Client ports are available for all timing selections. All Trunk ports are not available. LINE - All ports are available for all-timing selections. Valid values are shown in the "ON_OFF" section on page 4-83 • <RLASER> indicates if the laser should be restarted. This is applicable only if the ALSMODE is not automatic; valid values are shown in the "ON_OFF" section on page 4-83 • <SOAK> OOS-AINS to IS transition soak time as measured in 15–minute intervals. A value of 4 translates to a soak time of one hour. The allowable range is 0–192 intervals (maximum of 48–hours). <SOAK> is an integer • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92
Input Example	ED-CLNT:CISCO:FAC-1-1:100:::NAME="NYPORT",SFBER=1E-4, SDBER=1E-5,ALSMODE=Y,ALSRCINT=30,ALSRCPW=35.1, COMM=DCC,MACADDR=00-0E-AA-BB-CC-FF,SYNCMSG=Y, SENDDUS=Y,RLASER=Y,SOAK=10:OOS,AINS; **Note** NAME="NYPORT" applies to R4.5 only
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.37 ED-CRS-<STS_PATH>:ED CRS (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS 48C, STS192C)

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

Section	ED-CRS-<STS_PATH> Description	
Category	Cross Connections	
Security	Provisioning	
Related Messages	DLT-CRS-<STS_PATH>	ENT-CRS-<VT_PATH>
	DLT-CRS-<VT_PATH>	RTRV-CRS
	ED-CRS-<VT_PATH>	RTRV-CRS-<STS_PATH>
	ENT-CRS-<STS_PATH>	RTRV-CRS-<VT_PATH>

Section	ED-CRS-<STS_PATH> Description (continued)
Input Format	ED-CRS-<STS_PATH>:[<TID>]:<SRC>,<DST>:<CTAG>:::[ADD=<ADD>,] [REMOVE=<REMOVE>]:[<PST>],[<SST>]; where: • <SRC> is the AID from the "CrossConnectID" section on page 4-19 • <DST> is the AID from the "CrossConnectID" section on page 4-19 • <ADD> is the AID from the "CrossConnectID" section on page 4-19 • <REMOVE> is the AID from the "CrossConnectID" section on page 4-19 • <PST> primary state; valid values for <PST> are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values for <SST> are shown in the "SST" section on page 4-92
Input Example	ED-CRS-STS1::STS-1-1-1,STS-2-1-1:1:::ADD=STS-13-1-1, REMOVE=STS-2-1-1:OOS,AINS;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.38 ED-CRS-<VT_PATH>: Edit Cross Connection (VT1, VT2)

This command edits a VT cross-connection.

Note It is not possible to use both ADD and REMOVE at the same time.

Section	ED-CRS-<VT_PATH> Description	
Category	Cross Connections	
Security	Provisioning	
Related Messages	DLT-CRS-<STS_PATH>	ENT-CRS-<VT_PATH>
	DLT-CRS-<VT_PATH>	RTRV-CRS
	ED-CRS-<STS_PATH>	RTRV-CRS-<STS_PATH>
	ENT-CRS-<STS_PATH>	RTRV-CRS-<VT_PATH>

Section	ED-CRS-<VT_PATH> Description (continued)
Input Format	ED-CRS-<VT_PATH>:[<TID>]:<SRC>,<DST>:<CTAG>::::[ADD=<ADD>,] [REMOVE=<REMOVE>]:[<PST>],[<SST>]; where: • <SRC> is the AID from the "VT1_5" section on page 4-33 • <DST> is the AID from the "VT1_5" section on page 4-33 • <ADD> is the AID from the "VT1_5" section on page 4-33 • <REMOVE> is the AID from the "VT1_5" section on page 4-33 • <PST> primary state; valid values for <PST> are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values for <SST> are shown in the "SST" section on page 4-92
Input Example	ED-CRS-VT1::VT1-1-1-1-1-1-1,VT1-2-1-1-1-1-1:1:::ADD=VT1-3-1-1-1-1, REMOVE=VT1-2-1-1-1-1-1:OOS,AINS;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.39 ED-DAT: Edit Date and Time

This command edits the date and the time

Section	ED-DAT Description	
Category	System	
Security	Provisioning	
Related Messages	ALW-MSG-ALL	RTRV-INV
	COPY-RFILE	RTRV-MAP-NETWORK
	ED-NE-GEN	RTRV-NE-GEN
	ED-NE-SYNCN	RTRV-NE-IPMAP
	INH-MSG-ALL	RTRV-NE-SYNCN
	INIT-SYS	RTRV-TOD
	REPT EVT FXFR	SET-TOD
	RTRV-HDR	
Input Format	ED-DAT:[<TID>]::<CTAG>::[<DATE>],[<TIME>]; where: • <DATE> identifies the date and is a string • <TIME> identifies the time and is a string	
Input Example	ED-DAT:CISCO::1234::99-12-21,14-35-15;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.40 ED-DS1: Edit DS1

(Cisco ONS 15454 only)

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

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

Section	ED-DS1 Description	
Category	Ports	
Security	Provisioning	
Related Messages	ED-<OCN_TYPE>	RTRV-DS1
	ED-EC1	RTRV-EC1
	ED-G1000	RTRV-FSTE
	ED-T1	RTRV-G1000
	ED-T3	RTRV-GIGE
	INIT-REG-G1000	RTRV-POS
	RMV-<MOD2_IO>	RTRV-T1
	RST-<MOD2_IO>	RTRV-T3
	RTRV-<OCN_TYPE>	
Input Format	ED-DS1:[<TID>]:<AID>:<CTAG>[:::TACC=<TACC>]; where: • <AID> is the access identifier of a DS1 access on the DS3XM card and is from the "DS1" section on page 4-22 • <TACC> defines the STS as a test access port with a selected unique TAP number. The TAP number ranges from 0–999. When TACC is 0, the TAP is deleted. <TACC> is an integer	
Input Example	ED-DS1:PETALUMA:DS1-2-6-12:123:::TACC=8;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.41 ED-DWDM: Edit Dense Wavelength Division Multiplexing

(Cisco ONS 15454 only)

The command edits an already pre-provisioned/provisioned MXP_2.5G_10G/TXP_MR_10G card. It changes the operating parameters for the card.

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

The rules for provisioning the payload field are as follows: For a TXP_MR_10G card, the SONET/10GE (Ethernet) applies. For a TXP_MR_2.5G card or TXPP_MR_2.5G card, the options of SONET/10GE are not applicable. Instead, the actual protocol; for example, OC3/OC12/OC48/STM1 should be used. The port has to be in OOS state for a payload change to be successful. There should be no Trace enabled for the port. To set the Payload to 10GE, the termination mode should already be in Transparent mode.

The MXP_2.5_10G card does not support 10GE payload. To change the payload type for the MXP_2.5_10G card, all the ports should be in OOS state.

See the "Provisioning Rules for MXP_2.5G_10G and TXP_MR_10G Cards" section on page 1-8 and "Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards" section on page 1-13 for specific card provisioning rules.

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

Section	ED-DWDM Description (continued)
Input Format	ED-DWDM:[<TID>]:<AID>:<CTAG>:::[PEERID=<PEERID>,] [NAME=<NAME>,][1][TERMMODE=<TERMMODE>,] [PAYLOAD=<PAYLOAD>,][PWL=<PWL>]; 1. [NAME=<NAME>,] applies to R4.5 only. where: • <AID> is from the "EQPT" section on page 4-23 • <PEERID> peer regeneration group card slot AID from the "EQPT" section on page 4-23 • <NAME> name for the regeneration group; <NAME> is a string **Note** <NAME> applies to R4.5 only. • <TERMMODE> termination mode of the card; valid values are shown in the "TERM_MODE" section on page 4-98 • <PAYLOAD> type of payload supported by the card; valid values are shown in the "EQPT_TYPE" section on page 4-68 • <PWL> provisioned wavelength; valid values are shown in the "OPTICAL_WLEN" section on page 4-85
Input Example	ED-DWDM:VA454-22:SLOT-1:100:::PEERID=SLOT-2, NAME="NY GROUP",TERMMODE=TRANS,PAYLOAD=OC48,PWL=1546.52; **Note** NAME="NY GROUP" applies to R4.5 only.
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.42 ED-EC1: Edit Electrical Carrier

(Cisco ONS 15454 only)

This command edits the attributes of an EC1.

Notes:

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

Section	ED-EC1 Description
Category	Ports
Security	Provisioning

Section	ED-EC1 Description (continued)	
Related Messages	ED-<OCN_TYPE>	RTRV-DS1
	ED-DS1	RTRV-EC1
	ED-G1000	RTRV-FSTE
	ED-T1	RTRV-G1000
	ED-T3	RTRV-GIGE
	INIT-REG-G1000	RTRV-POS
	RMV-<MOD2_IO>	RTRV-T1
	RST-<MOD2_IO>	RTRV-T3
	RTRV-<OCN_TYPE>	
Input Format	ED-EC1:[<TID>]:<AID>:<CTAG>:::[PJMON=<PJMON>,][LBO=<LBO>,][SOAK=<SOAK>,][SFBER=<SFBER>,][SDBER=<SDBER>]:[<PST>],[<SST>]; where: • <AID> is a facility AID of an EC1 port and is from the "FACILITY" section on page 4-24 • <PJMON> is a SONET pointer number (0 or 1) of an EC1 port and is an integer • Valid values for <LBO> are shown in the "E_LBO" section on page 4-66 • <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 0–192 intervals (maximum of 48 hours). <SOAK> is an integer • <SFBER> identifies port SFBER; valid values are shown in the "SF_BER" section on page 4-92 • <SDBER> identifies port SDBER; valid values are shown in the "SD_BER" section on page 4-91 • <PST> primary state; valid values for <PST> are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values for <SST> are shown in the "SST" section on page 4-92	
Input Example	ED-EC1:CISCO:FAC-1-1:123:::PJMON=0,LBO=0-225,SOAK=10,SFBER=1E-4,SDBER=1E-6:OOS,AINS;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.43 ED-EQPT: Edit Equipment

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

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

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

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

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

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

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

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

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

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

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

1:1 protection group

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

1:N protection group

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

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

1. Editing the PRTYPE or PROTID (non-NULL value) parameters.
2. Editing RVRTV or RVTM when no protection group exists.
3. Editing RVRTV for 1:N protection.
4. Failed to remove, currently switched to protect.

Section	ED-EQPT Description	
Category	Equipment	
Security	Provisioning	
Related Messages	ALW-SWDX-EQPT	REPT EVT EQPT
	ALW-SWTOPROTN-EQPT	REPT RMV EQPT
	ALW-SWTOWKG-EQPT	REPT RST EQPT
	DLT-EQPT	RTRV-ALM-EQPT
	ENT-EQPT	RTRV-COND-EQPT
	INH-SWDX-EQPT	RTRV-EQPT
	INH-SWTOPROTN-EQPT	SW-DX-EQPT
	INH-SWTOWKG-EQPT	SW-TOPROTN-EQPT
	REPT ALM EQPT	SW-TOWKG-EQPT

Section	ED-EQPT Description (continued)
Input Format	ED-EQPT:[<TID>]:<AID>:<CTAG>:::[PROTID=<PROTID>,][PRTYPE=<PRTYPE>,][RVRTV=<RVRTV>,][RVTM=<RVTM>][:]; where: • <AID> is an access identifier from the "EQPT" section on page 4-23 • <PROTID> is the protecting card slot number of the protection group. <PROTID> is the AID from the "UCP" section on page 4-32 • <PRTYPE> is the protection group type; valid values for <PRTYPE> are shown in the "PROTECTION_GROUP" section on page 4-89 • <RVRTV> is the revertive mode: valid values for <RVRTV> are shown in the "ON_OFF" section on page 4-83 • <RVTM> is the revertive time; valid values for <RVTM> are shown in the "REVERTIVE_TIME" section on page 4-90
Input Example	ED-EQPT:CISCO:SLOT-2:123:::PROTID=SLOT-1,PRTYPE=1-1,RVRTV=Y,RVTM=9.0;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.44 ED-FFP-<OCN_TYPE>: Edit Facility Protection Group (OC3, OC12, OC48, OC192)

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

This command edits the optical facility protection.

Notes:

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

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

Section	ED-FFP-<OCN_TYPE> Description (continued)
Input Format	ED-FFP-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>:::[PROTID=<PROTID>,][RVRTV=<RVRTV>,][RVTM=<RVTM>,][PSDIRN=<PSDIRN>][:]; where: • <AID> is the facility AID from the "FACILITY" section on page 4-24 • <PROTID> is the protection group identifier (protection group name) and is a string; <PROTID> can have a maximum of 32 characters • <RVRTV> identifies a revertive mode; valid values for <RVRTV> are shown in the "ON_OFF" section on page 4-83 • <RVTM> identifies a revertive time; valid values for <RVTM> are shown in the "REVERTIVE_TIME" section on page 4-90 • <PSDIRN> identifies the switching mode; valid values for <PSDIRN> are shown in the "UNI_BI" section on page 4-102
Input Example	ED-FFP-OC3:PETALUMA:FAC-1-1:1:::PROTID=PROT_NAME,RVRTV=Y,RVTM=1.0,PSDIRN=BI;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.45 ED-FFP-CLNT: Edit Facility Protection Group Client

(Cisco ONS 15454 only)

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

See the "Provisioning Rules for MXP_2.5G_10G and TXP_MR_10G Cards" section on page 1-8 and the "Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards" section on page 1-13 for specific card provisioning rules.

Section	ED-FFP-CLNT Description
Category	DWDM
Security	Provisioning

Section	ED-FFP-CLNT Description (continued)	
Related Messages	DLT-FFP-<OCN_TYPE>	OPR-PROTNSW-OCH
	DLT-FFP-CLNT	RLS-LASER-OTS
	DLT-LNK-<MOD2O>	RLS-PROTNSW-<OCN_TYPE>
	ED-CLNT	RLS-PROTNSW-CLNT
	ED-DWDM	RLS-PROTNSW-OCH
	ED-FFP-<OCN_TYPE>	RTRV-CLNT
	ED-FFP-OCH	RTRV-DWDM
	ED-LNK-<MOD2O>	RTRV-FFP-<OCN_TYPE>
	ED-OCH	RTRV-FFP-CLNT
	ED-OMS	RTRV-FFP-OCH
	ED-OTS	RTRV-LNK-<MOD2O>
	ED-TRC-CLNT	RTRV-OCH
	ED-TRC-OCH	RTRV-OMS
	ENT-FFP-<OCN_TYPE>	RTRV-OTS
	ENT-FFP-CLNT	RTRV-PROTNSW-<OCN_TYPE>
	ENT-LNK-<MOD2O>	RTRV-PROTNSW-CLNT
	EX-SW-<OCN_BLSR>	RTRV-PROTNSW-OCH
	OPR-LASER-OTS	RTRV-TRC-CLNT
	OPR-PROTNSW-<OCN_TYPE>	RTRV-TRC-OCH
	OPR-PROTNSW-CLNT	
Input Format	ED-FFP-CLNT:[<TID>]:<AID>:<CTAG>:::[PROTID=<PROTID>,][RVRTV=<RVRTV>,][RVTM=<RVTM>,][PSDIRN=<PSDIRN>][:];	
	where:	
	• <AID> identifies a port in a protection group and is the AID from the "FACILITY" section on page 4-24	
	• <PROTID> is a protection group identifier (protection group name). It defaults to the protecting port AID of the protection group. It is a string and can have a maximum length of 32 characters. <PROTID> is a string	
	• <RVRTV> identifies a revertive mode. The retrieve behavior defaults to N (non-revertive mode); valid values are shown in the "ON_OFF" section on page 4-83	
	• <RVTM> identifies a revertive time. The revertive time defaults to 5.0 minutes; valid values are shown in the "REVERTIVE_TIME" section on page 4-90	
	• <PSDIRN> identifies the switching mode and defaults to UNI. MXP_2.5G_10G/TXP_MR_10G cards do not support BI-DIRECTIONAL switching. Valid values for <PSDIRN> are shown in the "UNI_BI" section on page 4-102	

Section	ED-FFP-CLNT Description (continued)
Input Example	ED-FFP-CLNT:CISCO:FAC-1-1:100:::PROTID=DC-METRO,RVRTV=N, RVTM=1.0,PSDIRN=BI;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.46 ED-FFP-OCH: Edit Facility Protection Group OCH

(Cisco ONS 15454 only)

This command changes the provisioning for the default protection group on the DWDM port of a TXP_MR_2.5G and TXPP_MR_2.5G card.

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

Section	ED-FFP-OCH Description (continued)
Input Format	ED-FFP-OCH:[<TID>]:<AID>:<CTAG>:::[PROTID=<PROTID>,][RVRTV=<RVRTV>,][RVTM=<RVTM>,][PSDIRN=<PSDIRN>][:]; where: • <AID> is the AID from the "CHANNEL" section on page 4-18 • <PROTID> is a protection group and is a string • <RVRTV> identifies a revertive mode; valid values are shown in the "ON_OFF" section on page 4-83 • <RVTM> identifies a revertive time; valid values are shown in the "REVERTIVE_TIME" section on page 4-90 • Valid values for <PSDIRN> are shown in the "TRANS_MODE" section on page 4-99
Input Example	ED-FFP-OCH:VA454-22:CHAN-2-2:100:::PROTID="FIXED PROTECTION",RVRTV=N,RVTM=1.0,PSDIRN=BI;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.47 ED-G1000: Edit G1000

(Cisco ONS 15454 only)

This command edits the attributes related to a G1000 port.

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

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

Section	ED-G1000 Description (continued)
Input Format	ED-G1000:[<TID>]:<AID>:<CTAG>:::[MFS=<MFS>,][FLOW=<FLOW>,][LOWMRK=<LOWMRK>,][HIWMRK=<HIWMRK>]:[<PST>],[<SST>]; where: • <AID> is the AID facility from the "FACILITY" section on page 4-24 • Valid values for <MFS> are shown in the "MFS_TYPE" section on page 4-76 • Valid values for <FLOW> are shown in the "ON_OFF" section on page 4-83 • <LOWMRK> low watermark value and an integer • <HIWMRK> high watermark value and an integer • <PST> primary state; valid values for <PST> are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values for <SST> are shown in the "SST" section on page 4-92
Input Example	ED-G1000:TID:FAC-1-1:CTAG:::MFS=1548,FLOW=Y,LOWMRK=20,HIWMRK=492:OOS,AINS;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.48 ED-LNK-<MOD2O>: Edit Link (OCH, OMS, OTS)

(Cisco ONS 15454 only)

Note Applicable to Release 4.5 only.

This command edits an optical link state.

Section	ED-LNK-<MOD2O> Description
Category	DWDM
Security	Provisioning

Section	ED-LNK-<MOD2O> Description (continued)	
Related Messages	DLT-FFP-CLNT	RLS-LASER-OTS
	DLT-LNK-<MOD2O>	RLS-PROTNSW-CLNT
	ED-CLNT	RLS-PROTNSW-OCH
	ED-DWDM	RTRV-CLNT
	ED-FFP-CLNT	RTRV-DWDM
	ED-FFP-OCH	RTRV-FFP-CLNT
	ED-OCH	RTRV-FFP-OCH
	ED-OMS	RTRV-LNK-<MOD2O>
	ED-OTS	RTRV-OCH
	ED-TRC-CLNT	RTRV-OMS
	ED-TRC-OCH	RTRV-OTS
	ENT-FFP-CLNT	RTRV-PROTNSW-CLNT
	ENT-LNK-<MOD2O>	RTRV-PROTNSW-OCH
	OPR-LASER-OTS	RTRV-TRC-CLNT
	OPR-PROTNSW-CLNT	RTRV-TRC-OCH
	OPR-PROTNSW-OCH	
Input Format	ED-LNK-<MOD2O>:[<TID>]:<FROM>,<TO>:<CTAG>::::<PST>,[<SST>]; where: • <FROM> indicates an identifier at one end of the optical link and is the AID from the "BAND" section on page 4-16 • <TO> indicates an identifier at the other end of the optical link and is the AID from the "BAND" section on page 4-16 • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state: valid values are shown in the "SST" section on page 4-92	
Input Example	ED-LNK-OMS:PENNGROVE:BAND-6-1-TX,BAND-13-1-RX:114::::OOS,AINS;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.49 ED-NE-GEN: Edit Network Element General

This command edits the node attributes of the NE.

Notes:

1. Only the IPADDR, IPMASK, DEFRTR, IIOP PORT and node name can be modified with this command.
2. The node name can be a maximum of 20 characters. If the entered name exceeds 20 characters, an IPNV (Node Name Too Long) error message is returned.
3. The feature of setting a timing source has been supported since ONS 15454 R3.2.
4. An existing timing source can be removed by setting the address to 0.0.0.0.

Section	ED-NE-GEN Description	
Category	System	
Security	Superuser	
Related Messages	ALW-MSG-ALL	RTRV-INV
	COPY-RFILE	RTRV-MAP-NETWORK
	ED-DAT	RTRV-NE-GEN
	ED-NE-SYNCN	RTRV-NE-IPMAP
	INH-MSG-ALL	RTRV-NE-SYNCN
	INIT-SYS	RTRV-TOD
	REPT EVT FXFR	SET-TOD
	RTRV-HDR	
Input Format	ED-NE-GEN:[<TID>]::<CTAG>:::[NAME=<NAME>,][IPADDR=<IPADDR>,][IPMASK=<IPMASK>,][DEFRTR=<DEFRTR>,][IIOPPORT=<IIOPPORT>,][NTP=<NTP>]; where: • <NAME> indicates the node name and is a string • <IPADDR> indicates the node IP address and is a string • <IPMASK> indicates the node IP mask and is a string • <DEFRTR> indicates the node default router and is a string • <IIOPPORT> indicates the node IIOPPORT and is an integer • <NTP> indicates the node's NTP timing origin address and is a string	
Input Example	ED-NE-GEN:CISCO::123:::NAME=NODENAME,IPADDR=192.168.100.52,IPMASK=255.255.255.0,DEFRTR=192.168.100.1,IIOPPORT=57790,NTP=192.168.100.52;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.50 ED-NE-SYNCN: Edit Network Element Synchronization

This command edits the synchronization attributes of the NE.

Notes:

1. Although mixed mode timing is supported in this release, it is not recommended. See the "Mixed Mode Timing Support" section on page 1-20 for more information.
2. The existing external and line modes have the same functionality in all ONS 15454 3.x releases:

   External mode: the node derives its timing from the BITS inputs.

   Line mode: the node derives its timing from the SONET line(s).

   Mixed mode: the node derives its timing from the BITS input or SONET lines.

Section	ED-NE-SYNCN Description	
Category	Synchronization	
Security	Provisioning	
Related Messages	ALW-MSG-ALL	RTRV-ALM-BITS
	COPY-RFILE	RTRV-ALM-SYNCN
	ED-BITS	RTRV-BITS
	ED-DAT	RTRV-COND-BITS
	ED-NE-GEN	RTRV-COND-SYNCN
	ED-SYNCN	RTRV-HDR
	INH-MSG-ALL	RTRV-INV
	INIT-SYS	RTRV-MAP-NETWORK
	OPR-SYNCNSW	RTRV-NE-GEN
	REPT ALM BITS	RTRV-NE-IPMAP
	REPT ALM SYNCN	RTRV-NE-SYNCN
	REPT EVT BITS	RTRV-SYNCN
	REPT EVT FXFR	RTRV-TOD
	REPT EVT SYNCN	SET-TOD
	RLS-SYNCNSW	
Input Format	ED-NE-SYNCN:[<TID>]::<CTAG>:::[TMMD=<TMMD>,] [SSMGEN=<SSMGEN>,][QRES=<QRES>,][RVRTV=<RVRTV>,] [RVTM=<RVTM>]; where: • <TMMD> is the timing mode; valid values for <TMMD> are shown in the "TIMING_MODE" section on page 4-98 • <SSMGEN> is the SSM message set; valid values for <SSMGEN> are shown in the "SYNC_GENERATION" section on page 4-95 • <QRES> is the quality of the RES; valid values for <QRES> are shown in the "SYNC_QUALITY_LEVEL" section on page 4-95 • <RVRTV> is the revertive mode; valid values for <RVRTV> are shown in the "ON_OFF" section on page 4-83 • <RVTM> is the revertive time; valid values for <RVTM> are shown in the "REVERTIVE_TIME" section on page 4-90	
Input Example	ED-NE-SYNCN:CISCO::123:::TMMD=LINE,SSMGEN=GEN1, QRES=ABOVE-PRS,RVRTV=Y,RVTM=8.0;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.51 ED-OCH: Edit Optical Channel

(Cisco ONS 15454 only)

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

Note MXP_2.5G_10G/TXP_MR_10G attributes are supported starting with Release 4.0. Optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards attributes are supported starting with Release 4.5.

See the "Provisioning Rules for MXP_2.5G_10G and TXP_MR_10G Cards" section on page 1-8 and the "Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards" section on page 1-13 for specific card provisioning rules.

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

Section	ED-OCH Description (continued)
Input Format	ED-OCH:[<TID>]:<AID>:<CTAG>:::[RDIRN=<RDIRN>,][EXPWLEN=<EXPWLEN>,][VOAATTN=<VOAATTN>,][VOAPWR=<VOAPWR>,][CALOPWR=<CALOPWR>,][CHPOWER=<CHPOWER>,][1][NAME=<PORTNAME>,][1][SFBER=<SFBER>,][SDBER=<SDBER>,][ALSMODE=<ALSMODE>,][ALSRCINT=<ALSRCINT>,][ALSRCPW=<ALSRCPW>,][COMM=<COMM>,][GCCRATE=<GCCRATE>,][OSFBER=<OSFBER>,][OSDBER=<OSDBER>,][DWRAP=<DWRAP>,][FEC=<FEC>,][MACADDR=<MACADDR>,][SYNCMSG=<SYNCMSG>,][SENDDUS=<SENDDUS>,][RLASER=<RLASER>,][SOAK=<SOAK>]:[<PST>],[<SST>]; 1. [CHPOWER=<CHPOWER>,] and [NAME=<PORTNAME>,] apply to R4.5 only. where: • <AID> is an access identifier from the "CHANNEL" section on page 4-18 • <RDIRN> identifies the ring directionality of the optical line; valid values are shown in the "RDIRN_MODE" section on page 4-90 • <EXPWLEN> identifies the expected value of wavelength for this port. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. Valid values are shown in the "OPTICAL_WLEN" section on page 4-85 • <VOAATTN> indicates the value of calibrated attenuation for the VOA. It is expressed in dBm. For the following cards: optical service channel, optical amplifier, dispersion compensation units, multiplexor and demultiplexor and OADM, the range is 0.0 to +30.0. <VOAATTN> is a float • <VOAPWR> indicates the value of calibrated output power that the VOA is going to set as a result of its attenuation. Applicable only to the following cards: optical service channel, optical amplifier, dispersion compensation units, multiplexor and demultiplexor and OADM. <VOAPWR> is a float • <CALOPWR> indicates the value of the calibrated optical power expected for the output line added to the calculated value which equals the total expected output power; <CALOPWR> is a float expressed in dBm.

Section	ED-OCH Description (continued)
Input Format (continued)	• <CHPOWER> indicates the value of per channel optical power expected to the OCH drop port of an AD-4C unit. <CHPOWER> is a float expressed in dBm. **Note** <CHPOWER> applies to R4.5 only. • <PORTNAME> identifies a port name and is a string **Note** <PORTNAME> applies to R4.5 only. • <SFBER> identifies the SFBER for the SONET payload; valid values are shown in the "SF_BER" section on page 4-92 • <SDBER> identifies the SDBER for the SONET payload; valid values are shown in the "SD_BER" section on page 4-91 • <ALSMODE> indicates if the Automatic Laser Shutdown is enabled or disabled; valid values are shown in the "ALS_MODE" section on page 4-45 • <ALSRCINT> indicates the ALS recovery interval. Range is 100–300 seconds; <ALSRCINT> is an integer • <ALSRCPW> indicates the ALS recovery pulse width. The range is 2–100 seconds, in increments of 100ms, e.g. 30.1; <ALSRCPW> is a float • <COMM> indicates if the GCC or DCC is enabled or disabled. The GCC can be enabled only if the digital wrapper has been enabled for the card. The default is NONE. Valid values are shown in the "COMM_TYPE" section on page 4-50. Rules for an MXP_2.5G_10G/TXP_MR_10G client port are; only the DCC can be provisioned, if the termination mode is not transparent and the payload is SONET. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the DCC can be enabled only if the G.709 is not enabled and if the payload is SONET and the termination mode is not transparent. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the GCC can be enabled if there is no DCC and the G.709 flag is enabled. • <GCCRATE> indicates the data rate of the GCC traffic. Valid values are shown in the "GCCRATE" section on page 4-74. The default is 192Kbps. For MXP_2.5G_10G/TXP_MR_10G cards this applies only to the DWDM port. The 576K option is not supported for this release. • <OSDBER> identifies the signal degrade threshold setting for the OTN level. Applicable only if the G.709 is enabled; valid values are shown in the "SD_BER" section on page 4-91

Section	ED-OCH Description (continued)
Input Format (continued)	• <OSFBER> identifies the signal fail threshold setting for the OTN level. Applicable only if the G.709 is enabled; valid values are shown in the "SF_BER" section on page 4-92 • <DWRAP> is the G.709 digital wrapper. It is either on or off. The system default is ON. For MXP_2.5G_10G/TXP_MR_10G cards, this applies only to the DWDM port. To enable G.709 there should be no GCC on the DWDM port. To disable G.709 there should be no GCC on the DWDM port. The FEC should be turned to off; valid values are shown in the "ON_OFF" section on page 4-83 • <FEC> is the Forward Error Correction. It can be enabled only if the G.709 is turned ON. It is either on or off. The system default is ON. For MXP_2.5G_10G/TXP_MR_10G cards this applies only to the DWDM port. The FEC level PM and thresholds apply if the FEC is turned on; valid values are shown in the "ON_OFF" section on page 4-83 • <MACADDR> identifies the MAC address for the 10GE payload; <MACADDR> is a string • <SYNCMSG> indicates that the facility be enabled to provide the synchronization clock. This does not apply to a TXP_MR-10G card. This applies to an MXP_2.5G_10G card, only if the payload is SONET and the card termination mode is as follows: TRANSPARENT - All Client ports are available for all timing selections. All Trunk ports are not available. LINE - All ports are available for all-timing selections. Valid values are shown in the "ON_OFF" section on page 4-83 • <SENDDUS> indicates that the facility send out a Do not Use for Sync message. This does not apply to a TXP card. This applies to an MXP_2.5G_10G card, only if the payload is SONET and the card termination mode is as follows: TRANSPARENT- All Client ports are available for all timing selections. All Trunk ports are not available. LINE - All ports are available for all-timing selections. Valid values are shown in the "ON_OFF" section on page 4-83 • <RLASER> indicates if the laser should be restarted. This is applicable only if the ALSMODE is not automatic; valid values are shown in the "ON_OFF" section on page 4-83 • <SOAK> OOS-AINS to IS transition soak time as measured in 15–minute intervals. A value of 4 translates to a soak time of one hour. The allowable range is 0–192 intervals (maximum of 48–hours). <SOAK> is an integer • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92

Section	ED-OCH Description (continued)
Input Example	ED-OCH:CISCO:CHAN-6-2:114:::RDIRN=W-E,EXPWLEN=1530.32, VOAATTN=2.5,VOAPWR=7.5,CALOPWR=0.0,CHPOWER=2.0, NAME="NY LINE",SFBER=1E-5,SDBER=1E-6,ALSMODE=Y, ALSRCINT=30,ALSRCPW=35.1,COMM=DCC,GCCRATE=192K, OSFBER=1E-4,OSDBER=1E-5,DWRAP=Y,FEC=Y, MACADDR=00-0E-AA-BB-CC-DD,SYNCMSG=N,SENDDUS=Y,RLASER=Y, SOAK=10:OOS,AINS; **Note** CHPOWER=2.0 and NAME="NY LINE" apply to R4.5 only.
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.52 ED-OMS: Edit Optical Multiplex Section

(Cisco ONS 15454 only)

Note Applicable to Release 4.5 only.

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

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

Section	ED-OMS Description (continued)
Input Format	ED-OMS:[<TID>]:<AID>:<CTAG>:::[RDIRN=<RDIRN>,] [EXPBAND=<EXPBAND>,][VOAATTN=<VOAATTN>,] [VOAPWR=<VOAPWR>,][CALOPWR=<CALOPWR>,] [CHPOWER=<CHPOWER>]:[<PST>],[<SST>]; where: • <AID> is the AID from the "BAND" section on page 4-16 • <RDIRN> identifies the ring directionality of the optical line; valid values are shown in the "RDIRN_MODE" section on page 4-90 • <EXPBAND> identifies the expected value of band for this port; valid values are shown in the "OPTICAL_BAND" section on page 4-83 • <VOAATTN> indicates the value of calibrated attenuation for the VOA. The range is 0,0 to +3.0. <VOAATTN> is a float • <VOAPWR> indicates the value of calibrated output power that the VOA is going to set as a result of its attenuation. <VOAPWR> is a float • <CALOPWR> indicates the value of the calibrated optical power expected for the output line which you provide to sum with the calculated value to have the total expected output power; <CALOPWR> is a float expressed in dBm. • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92
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:OOS,AINS;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.53 ED-OSC: Edit Optical Service Channel

(Cisco ONS 15454 only)

Note Applicable to Release 4.5 only.

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

Section	ED-OSC Description
Category	DWDM
Security	Provisioning
Related Messages	ENT-OSC DLT-OSC RTR-OSC

Section	ED-OSC Description (continued)
Input Format	ED-OSC:[<TID>]:<AID>:<CTAG>:::[RINGID=<RINGID>,] [NODEID=<NODEID>]; where: • <AID> identifies the OSC group of the NE and is the AID from the "OSC" section on page 4-26 • <RINGID> identifies the OSC ring ID of the NE. <RINGID> ranges from 1 to 9999 and is an integer. • <NODEID> identifies the OSC node ID of the NE. <NODEID> ranges from 0 to 31 and is an integer
Input Example	ED-OSC:PENNGROVE:OSC-1:114:::RINGID=1,NODEID=10;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.54 ED-OTS: Edit OTS

(Cisco ONS 15454 only)

Note Applicable to Release 4.5 only.

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

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

Section	ED-OTS Description (continued)
Input Format	ED-OTS:[<TID>]:<AID>:<CTAG>:::[RDIRN=<RDIRN>,] [VOAATTN=<VOAATTN>,][VOAPWR=<VOAPWR>,] [CALOPWR=<CALOPWR>,][CALTILT=<CALTILT>,][OSRI=<OSRI>,] [EXPGAIN=<EXPGAIN>]:[<PST>],[<SST>]; where: • <AID> is an access identifier from the "LINE" section on page 4-25 • <RDIRN> identifies the ring directionality of the optical line; valid values are shown in the "RDIRN_MODE" section on page 4-90 • <VOAATTN> indicates the value of calibrated attenuation for the VOA. The range is 0.0 to +3.0. <VOAATTN> is a float • <VOAPWR> indicates the value of calibrated output power that the VOA is going to set as a result of its attenuation. <VOAPWR> is a float • <CALOPWR> indicates the value of the calibrated optical power expected for the output line added to the calculated value which equals the total expected output power; <CALOPWR> is a float • <CALTILT> indicates the amplifier calibration tilt offset added to the calculated reference value. <CALTILT> is an integer and optional • <OSRI> indicates the OSRI enable or disable feature. <OSRI> is optional and present only on a port where the safety is supported; valid values are shown in the "ON_OFF" section on page 4-83 • <EXPGAIN> indicates the gain expected value to be reached from an amplifier when the node works in a DWDM access network. <EXPGAIN> is a float expressed in dBm and is optional • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92
Input Example	ED-OTS:PENNGROVE:LINE-6-1:114:::RDIRN=W-E,VOAATTN=5.0, VOAPWR=10.0,CALOPWR=0,CALTILT=0,OSRI=N,EXPGAIN=-5.0:OOS,AINS;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.55 ED-PID: Edit Password

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

The password cannot be null. It will be echoed as clear text as the message is parsed only after the complete message is entered and terminated.

Notes:

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

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

2. The password will not appear in the TL1 log on the NE.
3. You must use the ED-USER-SECU command to change the empty password (Superuser CISCO15 default empty password) to a non-empty, valid password. The ED-PID command cannot be used to change the empty password to a valid password.
4. For the ED-PID command:

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

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

Section	ED-PID Description	
Category	Security	
Security	Retrieve	
Related Messages	ACT-USER	ENT-USER-SECU
	ALW-MSG-SECU	INH-MSG-SECU
	CANC	REPT EVT SECU
	CANC-USER	REPT EVT SESSION
	DLT-USER-SECU	RTRV-USER-SECU
	ED-USER-SECU	
Input Format	ED-PID:[<TID>]:<UID>:<CTAG>::<OLDPID>,<NEWPID>; where: • <UID> is the user identifier and is a string; <UID> is any combination of up to 10 alphanumeric characters • <OLDPID> is the old password and is a string; <OLDPID> is any combination of up to 10 alphanumeric characters. The syntax of <OLDPID> is not checked for backwards compatibility • <NEWPID> is the user login password and is a string; <NEWPID> is a minimum of 6, maximum of 10 alphanumeric characters including at least one digit and one special character (%, #, or +) **Note** CTC allows <UID> and <PID> of up to 20 characters. The 20 character CTC-entered <UID> and <PID> are not valid TL1 <UID> and <PID>.	
Input Example	ED-PID:CISCO:UID:123::OLDPWD,NEWPWD;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.56 ED-SYNCN: Edit Synchronization

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

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

Section	ED-SYNCN Description	
Category	Synchronization	
Security	Provisioning	
Related Messages	ED-BITS	RTRV-ALM-BITS
	ED-NE-SYNCN	RTRV-ALM-SYNCN
	OPR-SYNCNSW	RTRV-BITS
	REPT ALM BITS	RTRV-COND-BITS
	REPT ALM SYNCN	RTRV-COND-SYNCN
	REPT EVT BITS	RTRV-NE-SYNCN
	REPT EVT SYNCN	RTRV-SYNCN
	RLS-SYNCNSW	
Input Format	ED-SYNCN:[<TID>]:<AID>:<CTAG>:::[PRI=<PRI>,][SEC=<SEC>,][THIRD=<THIRD>][:]; where: • <AID> is the synchronization reference to be modified and is from the "SYNC_REF" section on page 4-30 • <PRI> is the primary reference of the synchronization and is the AID from the "SYN_SRC" section on page 4-29 • <SEC> is the secondary reference of the synchronization and is the AID from the "SYN_SRC" section on page 4-29 • <THIRD> is the third reference of the synchronization and is the AID from the "SYN_SRC" section on page 4-29	
Input Example	ED-SYNCN:BOYES:SYNC-NE:112:::PRI=INTERNAL,SEC=INTERNAL,THIRD=INTERNAL;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.57 ED-T1: Edit T1

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

Notes:

1. This command is not allowed if the card is a protecting card.
2. 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.
3. Editing TACC via an ED-xxx command is only allowed when there is no circuit/cross-connection on this port and the port/VT does not have a test access point (TAP or TACC number). Otherwise, an error message (e.g. VT in Use) will be returned.
4. TACC creation will also be denied on the protect ports/cards.

5. The state of the T1 port cannot be changed to IS or OOS if a loopback has been operated upon the line.

Section	ED-T1 Description	
Category	Ports	
Security	Provisioning	
Related Messages	ED-<OCN_TYPE>	RTRV-<OCN_TYPE>
	ED-DS1	RTRV-DS1
	ED-EC1	RTRV-EC1
	ED-G1000	RTRV-FSTE
	ED-T3	RTRV-G1000
	INIT-REG-G1000	RTRV-GIGE
	REPT RMV <MOD2_IO>	RTRV-POS
	REPT RST <MOD2_IO>	RTRV-T1
	RMV-<MOD2_IO>	RTRV-T3
	RST-<MOD2_IO>	
Input Format	ED-T1:[<TID>]:<AID>:<CTAG>:::[LINECDE=<LINECDE>,][FMT=<FMT>,][LBO=<LBO>,][TACC=<TACC>,][SOAK=<SOAK>,][SFBER=<SFBER>,][SDBER=<SDBER>]:[<PST>],[<SST>]; where: • <AID> is the access identifier from the "FACILITY" section on page 4-24 • <LINECDE> is a line code; valid values for <LINECDE> are shown in the "LINE_CODE" section on page 4-75 • <FMT> is a frame format; valid values for <FMT> are shown in the "FRAME_FORMAT" section on page 4-73 • <LBO> is a line build out; valid values for <LBO> are shown in the "LINE_BUILDOUT" section on page 4-74 • <TACC> defines the STS as a test access port with a selected unique TAP number. The TAP number ranges from 0–999. When TACC is 0, the TAP is deleted; <TACC> is an integer. • <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 0–192 intervals (maximum of 48 hours); <SOAK> is an integer • <SFBER> identifies port SFBER; valid values are shown in the "SF_BER" section on page 4-92 • <SDBER> identifies port SDBER; valid values are shown in the "SD_BER" section on page 4-91 • <PST> primary state; valid values for <PST> are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values for <SST> are shown in the "SST" section on page 4-92	

Section	ED-T1 Description (continued)
Input Example	ED-T1:CISCO:FAC-2-1:1223:::LINECDE=AMI,FMT=ESF,LBO=0-131, TACC=8,SOAK=10,SFBER=1E-4,SDBER=1E-6:OOS,AINS;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.58 ED-T3: Edit T3

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

Notes:

1. This command is not allowed if the card is a protecting card.
2. Both FMT and Line code are not supported for T3/DS3 facility. They are supported on both the DS3XM and DS3E card. The unframed value of the framing format is only supported on the DS3E facility.
3. If sending this command to edit TACC and any other attribute(s), and the port having the cross-connection or the port/VT has a test access point (TAP or TACC number), the (Parameters Not compatible) error message will be returned.
4. Editing TACC via an ED-xxx command is only allowed when there is no circuit/cross-connection on the port and the port/VT does not have a test access point (TAP or TACC number). Otherwise, an error message (e.g. VT in Use) will be returned.
5. TACC creation will also be denied on the protect ports/cards.

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

Section	ED-T3 Description (continued)
Input Format	ED-T3:[<TID>]:<AID>:<CTAG>:::[FMT=<FMT>,][LINECDE=<LINECDE>,][LBO=<LBO>,][TACC=<TACC>,][SOAK=<SOAK>,][SFBER=<SFBER>,][SDBER=<SDBER>]:[<PST>],[<SST>]; where: • <AID> indicates a facility AID from the "FACILITY" section on page 4-24 • <FMT> is a frame format and the unframed value of the framing format is only supported for the DS3E; valid values for <FMT> are shown in the "DS_LINE_TYPE" section on page 4-65 • <LINECDE> is a line code; valid values for <LINECDE> are shown in the "DS_LINE_CODE" section on page 4-65 • <LBO> is a line buildout; valid values for <LBO> are shown in the "E_LBO" section on page 4-66 • <TACC> defines the STS as a test access port with a selected unique TAP number. The TAP number ranges from 0–999. When TACC is 0, the TAP is deleted; <TACC> is an integer • <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 0–192 intervals (maximum of 48 hours); <SOAK> is an integer • <SFBER> identifies port SFBER; valid values are shown in the "SF_BER" section on page 4-92 • <SDBER> identifies port SDBER; valid values are shown in the "SD_BER" section on page 4-91 • <PST> primary state; valid values for <PST> are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values for <SST> are shown in the "SST" section on page 4-92
Input Example	ED-T3:CISCO:FAC-1-2:123:::FMT=C-BIT,LINECDE=B3ZS,LBO=0-225,TACC=8,SOAK=10,SFBER=1E-4,SDBER=1E-6:OOS,AINS;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.59 ED-TRC-CLNT: Edit Trace Client

(Cisco ONS 15454 only)

This command edits trace-related attributes on client facilities.

See the "Provisioning Rules for MXP_2.5G_10G and TXP_MR_10G Cards" section on page 1-8 and the "Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards" section on page 1-13 for specific card provisioning rules.

Section	ED-TRC-CLNT Description
Category	DWDM
Security	Provisioning

Section	ED-TRC-CLNT Description (continued)	
Related Messages	DLT-FFP-CLNT	RLS-LASER-OTS
	DLT-LNK-<MOD2O>	RLS-PROTNSW-CLNT
	ED-CLNT	RLS-PROTNSW-OCH
	ED-DWDM	RTRV-CLNT
	ED-FFP-CLNT	RTRV-DWDM
	ED-FFP-OCH	RTRV-FFP-CLNT
	ED-LNK-<MOD2O>	RTRV-FFP-OCH
	ED-OCH	RTRV-LNK-<MOD2O>
	ED-OMS	RTRV-OCH
	ED-OTS	RTRV-OMS
	ED-TRC-OCH	RTRV-OTS
	ENT-FFP-CLNT	RTRV-PROTNSW-CLNT
	ENT-LNK-<MOD2O>	RTRV-PROTNSW-OCH
	OPR-LASER-OTS	RTRV-TRC-CLNT
	OPR-PROTNSW-CLNT	RTRV-TRC-OCH
	OPR-PROTNSW-OCH	
Input Format	ED-TRC-CLNT:[<TID>]:<SRC>:<CTAG>:::[EXPTRC=<EXPTRC>,][TRC=<TRC>,][TRCMODE=<TRCMODE>,][TRCLEVEL=<TRCLEVEL>,][TRCFORMAT=<TRCFORMAT>][:]; where: • <SRC> is the AID from the "FACILITY" section on page 4-24 and must not be null • <EXPTRC> indicates the expected path trace message (OTUK-path,J0-section, for example) contents. <EXPTRC> is any 64-character string, including the termination CR (carriage return) and LF (line feed). <EXPTRC> is a string and a null value is equivalent to ALL • <TRC> identifies the path trace message to be transmitted. The TRC is any combination of 64 characters, including the terminating CR and LF. The trace byte (OTUK-path,J0-section, for example) continuously transmits a 64-byte string, one byte at a time. A null value defaults to the NE transmitting null characters (Hex 00). <TRC> is a string and a null value is equivalent to ALL • <TRCMODE> indicates the trace mode and defaults to the OFF mode; valid values are shown in the "TRCMODE" section on page 4-100 and a null value is equivalent to ALL • <TRCLEVEL> indicates the level of trace: valid values are shown in the "TRCLEVEL" section on page 4-99 and a null value is equivalent to ALL • <TRCFORMAT> indicates the trace message size; valid values are shown in the "TRCFORMAT" section on page 4-99. A null value is equivalent to ALL	
Input Example	ED-TRC-CLNT:CISCO:FAC-6-1:10:::EXPTRC="AAA",TRC="AAA", TRCMODE=MAN,TRCLEVEL=J0,TRCFORMAT=16-BYTE;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.60 ED-TRC-OCH: Edit Trace Optical Channel Facilities

(Cisco ONS 15454 only)

The command edits trace-related optical channel facilities.

See the "Provisioning Rules for MXP_2.5G_10G and TXP_MR_10G Cards" section on page 1-8 and the "Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards" section on page 1-13 for specific card provisioning rules.

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

Section	ED-TRC-OCH Description (continued)
Input Format	ED-TRC-OCH:[<TID>]:<SRC>:<CTAG>:::[EXPTRC=<EXPTRC>,][TRC=<TRC>,][TRCMODE=<TRCMODE>,][TRCLEVEL=<TRCLEVEL>,][TRCFORMAT=<TRCFORMAT>][:]; where: • <SRC> is the AID from the "CHANNEL" section on page 4-18 • <EXPTRC> indicates the expected path trace message (OTUK-path,J0-section, for example) contents. The <EXPTRC> is any 64-character string, including the termination CR (carriage return) and LF (line feed). <EXPTRC> is a string • <TRC> identifies the path trace message to be transmitted. The TRC is any combination of 64 characters, including the terminating CR and LF. The trace byte (OTUK-path, J0-section, for example) continuously transmits a 64-byte string, one byte at a time. A null value defaults to the NE transmitting null characters (Hex 00). <TRC> is a string • <TRCMODE> identifies the trace mode and defaults to the OFF mode; valid values are shown in the "TRCMODE" section on page 4-100 • <TRCLEVEL> is a string • <TRCFORMAT> indicates the size of the trace message: valid values are shown in the "TRCFORMAT" section on page 4-99
Input Example	ED-TRC-OCH:CISCO:CHAN-6-2:10:::EXPTRC="AAA",TRC="AAA",TRCMODE=MAN,TRCLEVEL=TTI-PM,TRCFORMAT=64-BYTE;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.61 ED-UCP-CC: Edit Unified Control Plane Control Channel

(Cisco ONS 15454 only)

This command edits UCP IP control channel attributes.

Notes:

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

Section	ED-UCP-CC Description
Category	UCP
Security	Provisioning

Section	ED-UCP-CC Description (continued)	
Related Messages	DLT-UCP-CC	REPT ALM UCP
	DLT-UCP-IF	REPT EVT UCP
	DLT-UCP-NBR	RTRV-ALM-UCP
	ED-UCP-IF	RTRV-COND-UCP
	ED-UCP-NBR	RTRV-UCP-CC
	ED-UCP-NODE	RTRV-UCP-IF
	ENT-UCP-CC	RTRV-UCP-NBR
	ENT-UCP-IF	RTRV-UCP-NODE
	ENT-UCP-NBR	
Input Format	ED-UCP-CC:[<TID>]:<AID>:<CTAG>:::[LOCALIPCC=<LOCALIPCC>,][REMOTEIPCC=<REMOTEIPCC>,][LMPHELLOINT=<LMPHELLOINT>,][LMPHELLODEADINT=<LMPHELLODEADINT>,][MTU=<MTU>,][CRCMD=<CRCMD>][:]; where: • <AID> indicates an individual IPCC ID; <AID> is the AID from the "IPCC" section on page 4-25 • <LOCALIPCC> indicates the local IP address of the control channel and is a string • <REMOTEIPCC> indicates the remote IP address of the control channel and is a string • <LMPHELLOINT> indicates the LMP (line management protocol) interval (in milliseconds) and is an integer. It is the time between hello messages sent by this node. • <LMPHELLODEADINT> indicates the control channel time-out interval (in milliseconds) by the neighbor if the neighbor does not receive the hello message; <LMPHELLODEADINT> is an integer • <MTU> indicates the MTU size of this control channel and is an integer • <CRCMD> indicates the CRC mode for this control channel. It is applicable to IPCCs in SDCC type.Valid values for <CRCMD> are shown in the "UCP_CRC_MODE" section on page 4-102	
Input Example	ED-UCP-CC:CISCO:CC-9:CTAG:::LOCALIPCC=172.20.209.31, REMOTEIPCC=172.20.209.15,LMPHELLOINT=1,LMPHELLODEADINT=5, MTU=1500,CRCMD=16-BIT;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.62 ED-UCP-IF: Edit Unified Control Plane Interface

(Cisco ONS 15454 only)

This command edits UCP interface attributes.

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

Section	ED-UCP-IF Description	
Category	UCP	
Security	Provisioning	
Related Messages	DLT-UCP-CC	REPT ALM UCP
	DLT-UCP-IF	REPT EVT UCP
	DLT-UCP-NBR	RTRV-ALM-UCP
	ED-UCP-CC	RTRV-COND-UCP
	ED-UCP-NBR	RTRV-UCP-CC
	ED-UCP-NODE	RTRV-UCP-IF
	ENT-UCP-CC	RTRV-UCP-NBR
	ENT-UCP-IF	RTRV-UCP-NODE
	ENT-UCP-NBR	
Input Format	ED-UCP-IF:[<TID>]:<AID>:<CTAG>:::[TNATYPE=<TNATYPE>,][TNAADDR=<TNAADDR>,][CORENETWORKID=<CORENETWORKID>][:]; where: • <AID> indicates the interface port index of the data link; <AID> is the AID from the "FACILITY" section on page 4-24 • <TNATYPE> indicates the TNA (transport network administered) type; valid values for <TNATYPE> are shown in the "UCP_TNA_TYPE" section on page 4-102 • <TNAADDR> indicates the TNA (transport network administered) IP address and is a string • <CORENETWORKID> is an integer	
Input Example	ED-UCP-IF:CISCO:FAC-2-1:CTAG:::TNATYPE=IPV4,TNAADDR=172.20.209.73,CORENETWORKID=9;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.63 ED-UCP-NBR: Edit Unified Control Plane Neighbor

(Cisco ONS 15454 only)

This command edits a UCP neighbor.

The default value of the node name can be overwritten by the TL1 user to a string in a maximum size of 20 characters. If the node name includes non-identified TL1 characters (e.g. space), the text string format with the double quotes is required.

Example:

ENT-UCP-NBR::NBR-18:CTAG:::NBRIX=18,NODEID=192.168.101.18,
NAME=NeibhgorName,NDEN=N,HELLOEN=Y,HELLOINT=5, REFREDEN=Y;

Notes:

1. If this command is sent twice or input with invalid data, a SRQN (Status, Invalid Request) error message is returned.
2. If sending this command without neighbor node name in the "NAME" field, an IIAC (Neighbor Name Cannot Be Empty) error message is returned.
3. If sending this command to set the hello interval while the RSVP hello is disabled, an IIAC (HELLOINT Is Not Allowed If HELLOEN Is Disabled) error message is returned.

Section	ED-UCP-NBR Description	
Category	UCP	
Security	Provisioning	
Related Messages	DLT-UCP-CC	REPT ALM UCP
	DLT-UCP-IF	REPT EVT UCP
	DLT-UCP-NBR	RTRV-ALM-UCP
	ED-UCP-CC	RTRV-COND-UCP
	ED-UCP-IF	RTRV-UCP-CC
	ED-UCP-NODE	RTRV-UCP-IF
	ENT-UCP-CC	RTRV-UCP-NBR
	ENT-UCP-IF	RTRV-UCP-NODE
	ENT-UCP-NBR	
Input Format	ED-UCP-NBR:[<TID>]:<AID>:<CTAG>:::[NAME=<NAME>,][HELLOEN=<HELLOEN>,][HELLOINT=<HELLOINT>,][REFREDEN=<REFREDEN>][:]; where: • <AID> indicates an individual neighbor index of the UCP. An available neighbor index will be assigned internally while sending this command without AID; <AID> is the AID from the "NBR" section on page 4-26 • <NAME> indicates the neighbor node name. It defaults to the ASCII representation of the node ID in this command. The default value of this node name can be overwritten by the TL1 user to a string in a maximum size of 20 characters. If the node name includes non-identified TL1 characters (e.g. space), the text string format with the double quotes is required. Node name is a string. The default value is "defaults to the nodeid ASCII representation". <NAME> is a string. The default value is "the ASCII representation of the nodeid". <NAME> is a string • <HELLOEN> indicates if the RSVP hello enabled to this neighbor or not; valid values for <HELLOEN> are shown in the "ON_OFF" section on page 4-83 • <HELLOINT> indicates the interval between hello messages to neighbor; <HELLOINT> is an integer • <REFREDEN> indicates if the refresh reduction is enabled or not; valid values for <REFREDEN> are shown in the "ON_OFF" section on page 4-83	

Section	ED-UCP-NBR Description (continued)
Input Example	ED-UCP-NBR:CISCO:NBR-8:CTAG:::NAME=NODE-B,HELLOEN=Y, HELLOINT=20,REFREDEN=N;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.64 ED-UCP-NODE: Edit Unified Control Plane Node

(Cisco ONS 15454 only)

This command edits the UCP node level attributes.

The nodeid is the unique number used to identify the local node in LMP, RSVP messages sent to the neighbors. It defaults to the local ethernet interface address (ISA).

The retry initial interval (in seconds) is used for that have been released by the net work side. This interval has a range of 60 seconds (1 minute) to 1800 seconds (30 minutes), with a default value of 180 seconds.

The retry max interval (in seconds) is used for released circuits. The node will back off exponentially from the initial retry interval to this maximum value of 600 seconds (10 minutes).

The restart time is used to be signaled to neighbors. It indicates the time taken by this node (in seconds) to restart. This timer has a range of 1 second to 10 seconds with a default of 5 seconds.

The recovery time is used to be signaled to neighbors. It indicates the time taken by this node (in seconds) to re-sync path, reservation state with a given neighbor. This timer has a range of 300 seconds (5 minutes) to 1800 seconds (30 minutes) and a default value of 600 seconds (10 minutes).

The transmit interval is used to retransmit un-acknowledged messages. This timer has a range of 1 second to 7 seconds with a default value of 1 second.

The refresh interval is used to refresh path, reservation state. This interval has a range of 30 seconds to 4060800 seconds (47 days) with a default value of 30 seconds.

The timeout RESV CONF interval is used to wait for a RESV CONF message in response to a RESV message. This interval has a range of 10–180 seconds with a default value of 60 seconds.

The Destination Deletion progress is a timeout interval while the destination is in the progress of cleanly deleting a call. This interval has a range of 1–180 seconds with a default value of 60 seconds.

Notes:

1. If the retry initial interval is set to zero, it will be interpreted as having the retry procedure disable.
2. The retry maximum interval has to be set to a higher value than the initial retry interval.

Section	ED-UCP-NODE Description
Category	UCP
Security	Provisioning

Section	ED-UCP-NODE Description (continued)	
Related Messages	DLT-UCP-CC	REPT ALM UCP
	DLT-UCP-IF	REPT EVT UCP
	DLT-UCP-NBR	RTRV-ALM-UCP
	ED-UCP-CC	RTRV-COND-UCP
	ED-UCP-IF	RTRV-UCP-CC
	ED-UCP-NBR	RTRV-UCP-IF
	ENT-UCP-CC	RTRV-UCP-NBR
	ENT-UCP-IF	RTRV-UCP-NODE
	ENT-UCP-NBR	
Input Format	ED-UCP-NODE:[<TID>]::<CTAG>:::[NODEID=<NODEID>,] [INITRETRY=<INITRETRY>,][MAXRETRY=<MAXRETRY>,] [RESTARTTM=<RESTARTTM>,][RECOVTM=<RECOVTM>,] [RXMTINT=<RXMTINT>,][RFRSHINT=<RFRSHINT>,] [RESVTIMEOUT=<RESVTIMEOUT>,] [RESVCONFTIMEOUT=<RESVCONFTIMEOUT>,] [SOURCEDIP=<SOURCEDIP>,][DESTINATIONDIP=<DESTINATIONDIP>][:];	

where:

- <NODEID> indicates the node IP address and is a string
- <INITRETRY> indicates the circuit retry initial interval (in seconds) and is an integer
- <MAXRETRY> indicates the circuit maximum retry initial interval (in seconds) and is an integer
- <RESTARTTM> indicates the restart time taken by this local node; <RESTARTTM> is an integer and the default value is 5 seconds.
- <RECOVTM> indicates the circuit retry maximum interval (in seconds) and is an integer
- <RXMTINT> indicates the interval for re-transmitting un-acknowledged messages and is an integer
- <RFRSHINT> indicates the interval for refreshing path, reservation state and is an integer
- <RESVTIMEOUT> indicates the timeout interval for waiting for a reservation message in response to a PATH message; <RESVTIMEOUT> is an integer
- <RESVCONFTIMEOUT> indicates the timeout interval for waiting for a RESV CONF message in response to a RESV message; <RESVCONFTIMEOUT> is an integer
- <SOURCEDIP> indicates the timeout interval of the SourceDip (Source Deletion in Progress) while the source is in the process of cleanly deleting a call; <SOURCEDIP> is an integer
- <DESTINATIONDIP> indicates the timeout interval of the DestinationDip (Destination Deletion in Progress) while the destination is in the process of cleanly deleting a call; <DESTINATIONDIP> is an integer

Section	ED-UCP-NODE Description (continued)
Input Example	ED-UCP-NODE:CISCO::CTAG:::NODEID=192.168.100.52,INITRETRY=180, MAXRETRY=600,RESTARTTM=5,RECOVTM=600,RXMTINT=1, RFRSHINT=30,RESVTIMEOUT=60,RESVCONFTIMEOUT=60, SOURCEDIP=60,DESTINATIONDIP=60;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.65 ED-USER-SECU: Edit User Security

This command edits a user's privileges, password, or ID. Only a Superuser may perform this operation. Privilege levels are described in the ENT-USER-SECU command.

Notes:

1. Passwords are masked for the following security commands: ACT-USER, ED-PID, ENT-USER-SECU and ED-USER-SECU. Access to a TL1 session via any means will have the password masked. The CTC Request History and Message Log will also show the masked commands. When a password-masked command is re-issued by double-clicking the command from CTC Request History, the password will still be masked in the CTC Request History and Message Log. The actual password that was previously issued will be sent to the NE. To use a former command as a template only, single-click the command in CTC Request History. The command will be placed in the Command Request text box, where you can edit the appropriate fields prior to re-issuing it.
2. The <UID> can be any combination of up to 10 alphanumeric characters.
3. The <PID> is a string of up to 10 characters where at least 2 are non-alphabetic with at least one special character (+, %, or #).
4. Although the CTC allows both <UID> and <PID> of up to 20 characters, the CTC-entered users (<UID>, <PID>) are not valid TL1 users (e.g., if issuing an ACT-USER command and using the CTC-entered <UID> that is greater than 10 characters long, TL1 will respond with DENY.
5. For the ED-USER-SECU command;

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

   a. The syntax of <NEWPID> is checked.
   b. If the <NEWPID> is specified, the syntax is checked.
   c. The syntax of <UID> is not checked.
   d. Old users can change their password without changing their userid, but the new password must meet the new requirements.
   e. The <NEWPID> is required when changing the <USERID>.

   Currently, when <NEWUID> is specified, <NEWPID> is not optional; however, it is possible to change a userid without changing the password by providing the same password. Users are not allowed to keep their old password if the old password does not meet the new syntax requirements; for example,

   <USERID> = DODI2345
   <PASSWORD> = DODI#234 /*PASSWORD ALREADY MEETS REQUIREMENTS*/

   > ED-USER-SECU::DODI2345:1::DODI3456,DODI#234,,PROV;
   ED-USER-SECU::DODI2345:1::DODI3456,DODI#234,,PROV;

```
 TCCP 1970-01-02 13:15:35
   M  1 COMPLD
;
<NEWUSERID> = DODI3456
<PASSWORD> = DODI#234
<USERID> = CISCO40
<PASSWORD> = CISCO40 /*PASSWORD DOES NOT MEET REQUIREMENTS*/


> ED-USER-SECU::CISCO40:1::CISCO40,,PROV;
ED-USER-SECU::CISCO40:1::CISCO40,,PROV;


   TCCP 1970-01-02 13:14:24
M  1 DENY
   IIFM
    /* INVALID PASSWORD */
;
```

6. You must use the ED-USER-SECU command to change the empty password (Superuser CISCO15 default empty password) to a non-empty, valid password. The ED-PID command cannot be used to change the empty password to a valid password.

Section	ED-USER-SECU Description	
Category	Security	
Security	Superuser	
Related Messages	ACT-USER	ENT-USER-SECU
	ALW-MSG-SECU	INH-MSG-SECU
	CANC	REPT EVT SECU
	CANC-USER	REPT EVT SESSION
	DLT-USER-SECU	RTRV-USER-SECU
	ED-PID	

Section	ED-USER-SECU Description (continued)
Input Format	ED-USER-SECU:[<TID>]:<UID>:<CTAG>::[<NEWUID>],[<NEWPID>],,[<UAP>][:]; where: • <UID> is the user identifier and is a string. The minimum <UID> size is 6, the maximum UID size is 10 • <NEWUID> is the new user identifier and is a string. The minimum <UID> size is 6, the maximum PID size is 10 • <NEWPID> is a new password and is a string; <NEWPID> is a minimum of 6, maximum of 10 alphanumeric characters including at least one digit and one special character (%, #, or +). • <UAP> is a user access privilege; valid values for <UAP> are shown in the "PRIVILEGE" section on page 4-89 **Note** CTC allows <UID> and <PID> of up to 20 characters. The 20 character CTC-entered <UID> and <PID> are not valid TL1 <UID> and <PID>.
Input Example	ED-USER-SECU:PETALUMA:CISCO15:123::NEWUID,NEWPID,,MAINT;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.66 ED-WDMANS: Edit Wavelength Division Multiplexing Automatic Node Setup

(Cisco ONS 15454 only)

Note Applicable to Release 4.5 only

This command edits the optical node setup application (AONS) attributes.

Section	ED-WDMANS Description
Category	DWDM
Security	Provisioning
Related Messages	OPR-AONS RTRV-WDMANS

Section	ED-WDMANS Description (continued)
Input Format	ED-WDMANS:[<TID>]:<AID>:<CTAG>:::[POWER-IN=<POWERIN>,] [POWER-OUT=<POWEROUT>,][POWER-EXP=<POWEREXP>,] [POWER-DROP=<POWERDROP>,][SYS-TYPE=<SYSTYPE>,] [RING-TYPE=<RINGTYPE>]; where: • <AID> is the AID from the "WDMANS" section on page 4-34 • <POWERIN> is the input power for OADM section of an OADM optical network element; <POWERIN> is a float expressed in dBm • <POWEROUT> output power for OADM section or Mux/Demux of HUB, TERMINAL, or OADM optical network elements; <POWEROUT> is a float expressed in dBm • <POWEREXP> is the express power for mux/demux section of a HUB or TERMINAL optical network element; <POWEREXP> is a float expressed in dBm • <POWERDROP> is the drop power for mux/demux section of a HUB or TERMINAL optical network element; <POWERDROP> is a float expressed in dBm • <SYSTYPE> is the type of interconnected fiber between two adjacent nodes and the length category between them; valid values are shown in "SYS_TYPE" section on page 4-96 • <RINGTYPE> is the type of network where the DWDM node is installed; valid values are shown in the "DWDM_RING_TYPE" section on page 4-66
Input Example	ED-WDMANS:PENNGROVE:WDMANS-W:114:::POWER-IN=10.0, POWER-OUT=10.0,POWER-EXP=10.0,POWER-DROP=10.0, SYS-TYPE=SMF-28-SR,RING-TYPE=METRO-CORE;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.67 ED-WLEN: Edit Wavelength

(Cisco ONS 15454 only)

Note Applicable to Release 4.5 only.

This command edits WLEN (wavelength) provisioning.

Notes:

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

Section	ED-WLEN Description
Category	DWDM
Security	Provisioning

Section	ED-WLEN Description (continued)
Related Messages	ENT-WLEN DLT-WLEN RTRV-WLEN
Input Format	ED-WLEN:[<TID>]:<AID>:<CTAG>:::[SIZE=<SIZE>]:[<PST>],[<SST>]; where: • <AID> is the AID from the "WLEN" section on page 4-34 • <SIZE> is the circuit size allocated on this wavelength; valid values are shown in the "CIRCUIT_SIZE" section on page 4-50. <SIZE> is optional • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92
Input Example	ED-WLEN:PENNGROVE:WLEN-W-ADD-1530.33:1:::SIZE=NOT-SPEC:OOS,AINS;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.68 ENT-BLSR: Enter BLSR

This command creates either a two-fiber or four-fiber BLSR.

On successful creation of the BLSR, all cross-connections using the protection bandwidth of the BLSR will be automatically converted to PCA cross-connections.

Note <RINGID> defaults to the AID number.

Input examples:

Four-fiber BLSR:

ENT-BLSR:PETALUMA:BLSR-2:123:::RINGID=2,NODEID=3,MODE=4F,RVRTV=Y,RVTM=5.0,SRVRTV=Y,SRVTM=5.0,EASTWORK=FAC-5-1,WESTWORK=FAC-6-1,EASTPROT=FAC-12-1,WESTPROT=FAC-13-1:;

Two-fiber BLSR:

ENT-BLSR:PETALUMA:BLSR-4:123:::RINGID=4,NODEID=6,MODE=2F,RVRTV=Y,RVTM=5.0,EASTWORK=FAC-5-1,WESTWORK=FAC-6-1:;

Error conditions:

1. If the system fails on getting IOR, a SDBE (Status, Internal Data Base Error) error message is returned.
2. If the NE returns nothing for the required BLSR (BLSR-# AID), a SRQN (Status, Invalid Request) error message is returned.
3. In RINGID is different from the AID number, a SDNC (Status, Input Ringid Is Not Consistent with NE Data) error message is returned.
4. Both <EASTPROT> and <WESTPROT> are optional, but required for 4-fiber BLSR creation.

5. Four-fiber BLSR is only supported on OC48 and OC192 cards. Two-fiber BLSR is only supported on OC12, OC48 and OC192 cards. Any attempt to create a BLSR on any other card combination results in a "BLSR Creation Failed" error message.
6. If sending this command to create 4-fiber BLSR on OC12 cards, or 2-fiber BLSR on OC3 cards, an IIAC (Input, Invalid work/prot port) error message will be returned.
7. If sending this command to create a BLSR on an NE that already has two BLSRs, a SRQN (BLSR Creation Failed) error message will be returned because one NE is only allowed to have two BLSRs in this release.
8. If sending this command to create a BLSR on a port with 1+1,a SRQN (BLSR Creation Failed) error message will be returned.

Section	ENT-BLSR Description	
Category	BLSR	
Security	Provisioning	
Related Messages	DLT-BLSR	RTRV-ALM-RING
	ED-BLSR	RTRV-BLSR
	REPT ALM RING	RTRV-COND-RING
	REPT EVT RING	

Section	ENT-BLSR Description (continued)
Input Format	ENT-BLSR:[<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>]; where: • <AID> identifies the BLSR of the NE. “ALL” or “BLSR-ALL” AID is not allowed for editing BLSR. This command only supports a single BLSR AID. <AID> is the AID from the “BLSR” section on page 4-17 • <RINGID> identifies the BLSR ring ID of the NE. It ranges from 0–9999. <RINGID> is an integer and the default value is the AID number • <NODEID> identifies the BLSR node ID of the NE and is an integer. It ranges from 0–31 • <MODE> identifies the BLSR mode; valid values for <MODE> are shown in the “BLSR_MODE” section on page 4-47 • <RVRTV> identifies the revertive mode and defaults to Y (revertive mode). Valid values for <RVRTV> are shown in the “ON_OFF” section on page 4-83. The default value is Y. • <RVTM> identifies the revertive time and defaults to 5.0. Valid values for <RVTM> are shown in the “REVERTIVE_TIME” section on page 4-90; the default value is 5.0 • <SRVRTV> identifies the span revertive mode for 4-fiber BLSR only. <SRVRTV> defaults to Y (revertive mode); valid values are shown in the “ON_OFF” section on page 4-83. The default value is Y. • <SRVTM> identifies the span revertive time for 4-fiber BLSR only. <SRVTM> defaults to 5.0 and valid values are shown in the “REVERTIVE_TIME” section on page 4-90. The default value is 5.0 • <EASTWORK> identifies the east working facility and is the AID from the “FACILITY” section on page 4-24 • <WESTWORK> identifies the west working facility and is the AID from the “FACILITY” section on page 4-24 • <EASTPROT identifies the east protecting facility and is the AID from the “FACILITY” section on page 4-24 • <WESTPROT> identifies the west protecting facility and is the AID from the “FACILITY” section on page 4-24
Input Example	ENT-BLSR:PETALUMA:BLSR-2:123:::RINGID=2,NODEID=1,MODE=4F, RVRTV=Y,RVTM=5.0,SRVRTV=Y,SRVTM=5.0,EASTWORK=FAC-5-1, WESTWORK=FAC-6-1,EASTPROT=FAC-12-1,WESTPROT=FAC-13-1;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.69 ENT-CRS-<STS_PATH>: Enter Cross Connection (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C)

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

This command creates an STS cross-connection with a cross-connection type (CCT).

When a path protection cross-connection is created, the path presented by the first AID is configured to be the preferred path. For example, the AID (F1) of the cross-connection (created by ENT-CRS-STS1::F1&F2,T1:123;) is the preferred path.

Notes:

1. The default cross-connection type is 2-way
2. If a path is already in a connection, it cannot be in another connection even if the other is a 1-way and the new one will be 1-way the other direction.
3. This command does not support creating multiple STS cross-connections.
4. The path protection cross STS connection can be created by using "&" in the AID fields of this command.
   a. The following command is used to create a 1-way selector or 2-way selector and bridge with:

      from points: F1, F2

      to points: T1

      ENT-CRS-{STS_PATH}:[<TID>]:F1&F2,T1:<CTAG>::[<CCT>];
   b. The following command is used to create a 1-way bridge or 2-way selector and bridge with:

      from point: F1

      to points: T1, T2

      ENT-CRS-{STS_PATH}:[<TID>]:F1,T1&T2:<CTAG>::[<CCT>];
   c. The following command is used to create a 1-way subtending path protection connection or 2-way subtending path protection connection with:

      from point: F1, F2

      to points: T1, T2

      ENT-CRS-{STS_PATH}:[<TID>]:F1&F2,T1&T2:<CTAG>::[<CCT>];
   d. The following command is used to create a 2-way selector and bridge with:

      from point: F1,F2 (F1 is the working side, F2 is the protect side)

      selector points: S1, S2 (S1 is the working side, S2 is the protect side)

      ENT-CRS-{STS_PATH}:[<TID>]:F1&F2,S1&S2:<CTAG>::2WAY;
   e. The following command is used to create a path protection IDRI Cross-Connection:

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

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

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

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

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

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

f. The following command is used to create a path protection DRI Cross-Connection:

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

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

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

C–Traffic to and from ring Y

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

5. All A&B AIDs in the TL1 cross-connection command are in the format of WorkingAID&ProtectAID.
6. To establish a cross-connection on a 2-fiber protection path or on a 4-fiber protection channel, the PCA connection type (1WAYPCA or 2WAYPCA) is required.
7. If you send a PCA cross-connection type on the non-PCA AIDs, the IIAC error message is returned.
8. If you send a non-PCA cross-connection type on the PCA AIDs, the IIAC error message is returned.
9. The facility AID is only valid on slots holding a G1000-4 card (ONS 15454).
10. The virtual facility AID (VFAC) is only valid on slots holding the ML-series card.

Section	ENT-CRS-<STS_PATH> Description	
Category	Cross Connections	
Security	Provisioning	
Related Messages	DLT-CRS-<STS_PATH>	ENT-CRS-<VT_PATH>
	DLT-CRS-<VT_PATH>	RTRV-CRS
	ED-CRS-<STS_PATH>	RTRV-CRS-<STS_PATH>
	ED-CRS-<VT_PATH>	RTRV-CRS-<VT_PATH>
Input Format	ENT-CRS-<STS_PATH>:[<TID>]:<SRC>,<DST>:<CTAG>::[<CCT>]::[<PST>],[<SST>]; where: • <SRC> is the AID from the "CrossConnectID" section on page 4-19 • <DST> is the AID from the "CrossConnectID" section on page 4-19 • <CCT> identifies the cross-connection type; valid values for <CCT> are shown in the "CCT" section on page 4-49 • <PST> primary state; valid values for <PST> are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values for <SST> are shown in the "SST" section on page 4-92	
Input Example	ENT-CRS-STS1:BODEGA:STS-5-1-1,STS-12-1-5:116::2WAY::OOS,AINS;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.70 ENT-CRS-<VT_PATH>: Enter STS Cross Connection (VT1, VT2)

This command creates a VT cross connect. 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 first AID (F1) of the cross-connection (created by ENT-CRS-VT1::F1&F2,T1:123;) is the preferred path.

Notes:

1. The default cross-connection type is 2-way.
2. If a path is already in a connection, it cannot be in another connection even if the other is a 1-way and the new one will be 1-way the other direction.
3. This command does not support creating multiple VT cross-connections.
4. The path protection VT cross-connection can be created by using "&" in the AID fields of this command.
   a. The following command is used to create a 1-way selector or 2-way selector and bridge with:

      from points: F1, F2

      to points: T1

      ENT-CRS-VT1:[<TID>]:F1&F2,T1:<CTAG>::[<CCT>];

   b. The following command is used to create a 1-way bridge or 2-way selector and bridge with:

      from point: F1

      to points: T1, T2

      ENT-CRS-VT1:[<TID>]:F1,T1&T2:<CTAG>::[<CCT>];

   c. The following command is used to create a 1-way subtending path protection connection or 2-way subtending path protection connection with:

      from point: F1, F2

      to points: T1, T2

      ENT-CRS-VT1:[<TID>]:F1&F2,T1&T2:<CTAG>::[<CCT>];

   d. The following command is used to create a 2-way selector and bridge with:

      from points: F1, F2 (F1 is the working side, F2 is the protect side)

      selector points: S1, S2 (S1 is the working side, S2 is the protect side)

      ENT-CRS-VT1:[<TID>]:F1&F2,S1&S2:<CTAG>::2WAY;
5. All a&b AIDs in the TL1 cross-connection command are in the format of WorkingAID&ProtectAID.
6. To establish a cross-connection on a 2-fiber protection path or on a 4-fiber protection channel, the PCA connection type (1WAYPCA or 2WAYPCA) is required.
7. If you send a PCA cross-connection type on the non-PCA AIDs, an IIAC error message is returned.
8. If you send a non-PCA cross-connection type on the PCA AIDs, an IIAC error message is returned.
9. 1-way monitor cross-connects cannot be created. 1WAYMON value for CCT parameter is not supported. However, such cross-connects can be retrieved through the RTRV-CRS-<VT_PATH> and RTRV-CRS commands.

Section	ENT-CRS-<VT_PATH> Description	
Category	Cross Connections	
Security	Provisioning	
Related Messages	DLT-CRS-<STS_PATH>	ENT-CRS-<STS_PATH>
	DLT-CRS-<VT_PATH>	RTRV-CRS
	ED-CRS-<STS_PATH>	RTRV-CRS-<STS_PATH>
	ED-CRS-<VT_PATH>	RTRV-CRS-<VT_PATH>
Input Format	ENT-CRS-<VT_PATH>:[<TID>]:<FROM>,<TO>:<CTAG>::[<CCT>]::[<PST>],[<SST>]; where: • <FROM> indicates an identifier at one end of the VT cross connection and is the AID from the "VT1_5" section on page 4-33 • <TO> indicates an identifier at the other end of the VT cross-connection and is the AID from the "VT1_5" section on page 4-33 • <CCT> identifies the cross-connection type; valid values for <CCT> are shown in the "CCT" section on page 4-49 • <PST> primary state; valid values for <PST> are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values for <SST> are shown in the "SST" section on page 4-92	
Input Example	ENT-CRS-VT1:CISCO:VT1-2-3-7-2,VT1-4-4-5-2:1234::1WAY::OOS,AINS;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.71 ENT-EQPT: Enter Equipment

This command enters the card type and attributes for a given equipment slot in the NE. It also automatically enters all facilities supported by the card, assigning default values to all facility and path attributes.

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

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

The PROTID slot must be provisioned first.

To create 1:1 with the ENT-EQPT command, the working card should not be provisioned first, so the AID type field should be presented in ENT-EQPT for the AID on this <AID>.

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

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

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

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

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

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

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

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

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

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

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

If the provisioning fails for some AIDs, PRTL responses will be provided indicating failed AIDs. If the provisioning fails for all the AIDs, a DENY response will be provided. For both CMPLD and PRTL responses on creating protection group query, the protection group has been created for the successful AID(s) query.

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

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

Both ENT-EQPT and ED-EQPT commands can provision all working AIDs (1-5) together for 1:N by using listed AIDs.

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

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

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

An example to provision a 1:1 protection group:

ENT-EQPT::SLOT-1:12::DS3;// provision the protect card

ENT-EQPT::SLOT-2:12::DS3:PROTID=SLOT-1,RVRTV=Y,RVTM=8.0; //provision a card and add it to the protection group.

An example to provision a 1:N protection group:

ENT-EQPT::SLOT-3:12::DS3N;//provision the protect card

ENT-EQPT::SLOT-1:12::DS3:PROTID=SLOT-3,RVTM=7.5,PRTYPE=1-N;//provision a card and add it to protection group.

Notes:

1. Sending this command to provision a DS3NE card on Slot {1,2,4,5,6,12,13,14,16,or 17}, the DS3E card type is presented.
2. Sending this command to provision a DS3N card on Slot {1,2,4,5,6,12,13,14,16,17}, the DS3 card type is presented.
3. Sending this command to provision a DS1N card on Slot-{1,2,4,5,6,12,13,14,16,17}, the DS1 card type is presented.

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

1. AID sent to a non-working slot; the working cards must be in even slots for 1:1 and in the same bank for 1:N and not in Slot 3 or Slot 15 (ONS 15454).
2. Invalid AID chosen for protection slot.
3. Working AID is already in protection group.
4. AID is a protect AID.
5. The protect card has a circuit.
6. The equipment type does not match with the allowed AID.
7. The slot is already provisioned.
8. The protecting slot is not provisioned.
9. Multiple working AIDs for 1:1 protection.

Section	ENT-EQPT Description	
Category	Equipment	
Security	Provisioning	
Related Messages	ALW-SWDX-EQPT	REPT EVT EQPT
	ALW-SWTOPROTN-EQPT	REPT RMV EQPT
	ALW-SWTOWKG-EQPT	REPT RST EQPT
	DLT-EQPT	RTRV-ALM-EQPT
	ED-EQPT	RTRV-COND-EQPT
	INH-SWDX-EQPT	RTRV-EQPT
	INH-SWTOPROTN-EQPT	SW-DX-EQPT
	INH-SWTOWKG-EQPT	SW-TOPROTN-EQPT
	REPT ALM EQPT	SW-TOWKG-EQPT

Section	ENT-EQPT Description (continued)
Input Format	ENT-EQPT:[<TID>]:<AID>:<CTAG>::<AIDTYPE>:[PROTID=<PROTID>,][PRTYPE=<PRTYPE>,][RVRTV=<RVRTV>,][RVTM=<RVTM>][:]; where: • <AID> is an access identifier from the "EQPT" section on page 4-23 • <AIDTYPE> is the AID card type; valid values for <AIDTYPE> are shown in the "EQUIPMENT_TYPE" section on page 4-71 • <PROTID> is the protecting card slot identifier of the protection group and is the AID from the "PRSLOT" section on page 4-26 • <PRTYPE> is the protection group type; valid values for <PRTYPE> are shown in the "PROTECTION_GROUP" section on page 4-89 • <RVRTV> is the revertive mode; valid values for <RVRTV> are shown in the "ON_OFF" section on page 4-83 • <RVTM> is the revertive time; valid values for <RVTM> are shown in the "REVERTIVE_TIME" section on page 4-90
Input Example	ENT-EQPT:PETALUMA:SLOT-12:118::DS1:PROTID=SLOT-13,PRTYPE=1-1,RVRTV=Y,RVTM=8.5:;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.72 ENT-FFP-<OCN_TYPE>: Enter Facility Protection Group (OC3, OC12, OC48, OC192)

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

This command creates an optical 1+1 protection.

Notes:

1. Protect AID must not be provisioned with traffic.
2. Work AID can be provisioned with traffic.
3. PROTID is a string and can have a maximum length of 32 characters.

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

Section	ENT-FFP-<OCN_TYPE> Description (continued)
Input Format	ENT-FFP-<OCN_TYPE>:[<TID>]:<WORK>,<PROTECT>:<CTAG>::: [PROTID=<PROTID>,][RVRTV=<RVRTV>,][RVTM=<RVTM>,] [PSDIRN=<PSDIRN>][:]; where: • <WORK> identifies a working port and is the AID from the "FACILITY" section on page 4-24 • <PROTECT> identifies a protection port and is the AID from the "FACILITY" section on page 4-24 • <PROTID> is the protection group identifier (protection group name); <PROTID> defaults to the protecting port AID of the protection group, it is a string and can have a maximum length of 32 characters. • <RVRTV> identifies a revertive mode and defaults to N (non-revertive mode); valid values for <RVRTV> are shown in the "ON_OFF" section on page 4-83 • <RVTM> identifies a revertive time and defaults to 5.0 minutes; valid values for <RVTM> are shown in the "REVERTIVE_TIME" section on page 4-90 • <PSDIRN> identifies the switching mode and defaults to UNI; valid values for <PSDIRN> are shown in the "UNI_BI" section on page 4-102
Input Example	ENT-FFP-OC3:PETALUMA:FAC-2-1,FAC-1-1:1:::PROTID=PROT_NAME, RVRTV=Y,RVTM=1.0,PSDIRN=BI;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.73 ENT-FFP-CLNT: Enter Facility Protection Group Client

(Cisco ONS 15454 only)

This command creates Y cable protection on client facilities.

See the "Provisioning Rules for MXP_2.5G_10G and TXP_MR_10G Cards" section on page 1-8 and the "Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards" section on page 1-13 for specific card provisioning rules.

Section	ENT-FFP-CLNT Description
Category	DWDM
Security	Provisioning

Section	ENT-FFP-CLNT Description (continued)	
Related Messages	DLT-FFP-<OCN_TYPE>	OPR-PROTNSW-OCH
	DLT-FFP-CLNT	RLS-LASER-OTS
	DLT-LNK-<MOD2O>	RLS-PROTNSW-<OCN_TYPE>
	ED-CLNT	RLS-PROTNSW-CLNT
	ED-DWDM	RLS-PROTNSW-OCH
	ED-FFP-<OCN_TYPE>	RTRV-CLNT
	ED-FFP-CLNT	RTRV-DWDM
	ED-FFP-OCH	RTRV-FFP-<OCN_TYPE>
	ED-LNK-<MOD2O>	RTRV-FFP-CLNT
	ED-OCH	RTRV-FFP-OCH
	ED-OMS	RTRV-LNK-<MOD2O>
	ED-OTS	RTRV-OCH
	ED-TRC-CLNT	RTRV-OMS
	ED-TRC-OCH	RTRV-OTS
	ENT-FFP-<OCN_TYPE>	RTRV-PROTNSW-<OCN_TYPE>
	ENT-LNK-<MOD2O>	RTRV-PROTNSW-CLNT
	EX-SW-<OCN_BLSR>	RTRV-PROTNSW-OCH
	OPR-LASER-OTS	RTRV-TRC-CLNT
	OPR-PROTNSW-<OCN_TYPE>	RTRV-TRC-OCH
	OPR-PROTNSW-CLNT	

Section	ENT-FFP-CLNT Description (continued)
Input Format	ENT-FFP-CLNT:[<TID>]:<WORKAID>,<PROTAID>:<CTAG>:::[PROTTYPE=<PROTTYPE>,][PROTID=<PROTID>,][RVRTV=<RVRTV>,][RVTM=<RVTM>,][PSDIRN=<PSDIRN>][:]; where: • <WORKAID> identifies a working port and is the AID from the "FACILITY" section on page 4-24 • <PROTAID> identifies a protection port and is the AID from the "FACILITY" section on page 4-24 • <PROTTYPE> identifies the type of facility protection; valid values are shown in the "PROTTYPE" section on page 4-89 • <PROTID> protection group identifier (protection group name). Defaults to the protecting port AID of the protection group. Is is a string and can have a maximum length of 32 characters; <PROTID> is a string • <RVRTV> identifies the revertive mode. Defaults to N (non-revertive mode); valid values are shown in the "ON_OFF" section on page 4-83 • <RVTM> identifies the revertive time. Defaults to 5.0 minutes; valid values are shown in the "REVERTIVE_TIME" section on page 4-90 • <PSDIRN> identifies the switching mode and defaults to UNI. Release 4.0 MXP_2.5G_10G/TXP_MR_10G cards do not support BI-DIRECTIONAL switching. Valid values for <PSDIRN> are shown in the "UNI_BI" section on page 4-102
Input Example	ENT-FFP-CLNT:CISCO:FAC-1-1,FAC-2-1:100:::PROTTYPE=Y-CABLE,PROTID=DC-METRO-1,RVRTV=Y,RVTM=1.0,PSDIRN=BI;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.74 ENT-LNK-<MOD2O>: Enter Optical Link (OCH, OMS, OTS)

(Cisco ONS 15454 only)

Note Applicable to Release 4.5 only.

This command creates an optical link between two optical connection points. The optical links can be established between two OTS or two OMS of the same band, and two OCH of the same wavelength. The created optical link must be between points belonging to the same ring directionality. An optical link between two OMS or two OCH can be HITLESS if the connection is between two points from one drop to a consecutive add in the logical link.

Section	ENT-LNK-<MOD2O> Description
Category	DWDM
Security	Provisioning

Section	ENT-LNK-<MOD2O> Description (continued)	
Related Messages	DLT-FFP-CLNT	RLS-LASER-OTS
	DLT-LNK-<MOD2O>	RLS-PROTNSW-CLNT
	ED-CLNT	RLS-PROTNSW-OCH
	ED-DWDM	RTRV-CLNT
	ED-FFP-CLNT	RTRV-DWDM
	ED-FFP-OCH	RTRV-FFP-CLNT
	ED-LNK-<MOD2O>	RTRV-FFP-OCH
	ED-OCH	RTRV-LNK-<MOD2O>
	ED-OMS	RTRV-OCH
	ED-OTS	RTRV-OMS
	ED-TRC-CLNT	RTRV-OTS
	ED-TRC-OCH	RTRV-PROTNSW-CLNT
	ENT-FFP-CLNT	RTRV-PROTNSW-OCH
	OPR-LASER-OTS	RTRV-TRC-CLNT
	OPR-PROTNSW-CLNT	RTRV-TRC-OCH
	OPR-PROTNSW-OCH	
Input Format	ENT-LNK-<MOD2O>:[<TID>]:<FROM>,<TO>:<CTAG>::::<PST>,[<SST>]; where: • <FROM> indicates an identifier at one end of the optical link and is the AID from the "BAND" section on page 4-16 • <TO> indicates an identifier at the other end of the optical link and is the AID from the "BAND" section on page 4-16 • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92	
Input Example	ENT-LNK-OMS:PENNGROVE:BAND-6-1-TX,BAND-13-1-RX:114::::OOS,AINS;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.75 ENT-OSC: Enter Optical Service Channel

(Cisco ONS 15454 only)

Note Applicable to Release 4.5 only.

This command creates the OSC (optical service channel) group of the NE.

Notes:

1. RINGID defaults to the AID number.

Section	ENT-OSC Description
Category	DWDM
Security	Provisioning
Related Messages	DLT-OSC ED-OSC RTRV-OSC
Input Format	ENT-OSC:[<TID>]:<AID>:<CTAG>:::[RINGID=<RINGID>,] NODEID=<NODEID>,[EAST=<EAST>,] [WEST=<WEST>]; where: • <AID> identifies the OSC group of the NE and is the AID from the "OSC" section on page 4-26 • <RINGID> identifies the OSC ring ID of the NE. It ranges from 1 to 9999. The default value is the AID number. <RINGID> is an integer • <NODEID> identifies the OSC node ID of the NE. It ranges from 0 to 31. <NODEID> is an integer • <EAST> identifies the east OC3 facility. In Release 4.5 only one OC3 for east direction is supported. <EAST> is the AID from the "FACILITY" section on page 4-24 • <WEST> identifies the east OC3 facility. In Release 4.5 only one OC3 for west direction is supported. <WEST> is the AID from the "FACILITY" section on page 4-24
Input Example	ENT-OSC:PENNGROVE:OSC-1:114:::RINGID=10,NODEID=1, EAST=FAC-8-1,WEST=FAC-10-1;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.76 ENT-UCP-CC: Enter Unified Control Plane Control Channel

(Cisco ONS 15454 only)

This command creates a UCP IP control channel.

If the CCTYPE is SCCC, the SDCC of the port should be created.

The LMP Hello parameters, CRC mode and MTU can be left NULL. The defaults will be assigned by the node.

The UCP remote cannot be provisioned by the user. The local CCID will be allocated by the node.

If the CCTYPE is routed, the remote IPCC defaults to its neighbor's nodeID.

Examples:

ENT-UCP-CC::CC-12:CTAG:::NBRIX=1,CCTYPE=SDCC,PORT=FAC-6-1,
LOCALCCID=12,LOCALIPCC=172.20.209.73,REMOTEIPCC=192.168.100.18,
LMPHELLOINT=2,LMPHELLODEADINT=6,MTU=1500,CRCMD=32-BIT;

ENT-UCP-CC::CC-15:CTAG:::NBRIX=8,CCTYPE=ROUTED,LOCALCCID=15,
LOCALIPCC=172.20.209.73,REMOTEIPCC=192.168.100.18,LMPHELLOINT=2,
LMPHELLODEADINT=6,MTU=1500,CRCMD=16-BIT;

ENT-UCP-CC::CC-16:CTAG:::NBRIX=8,CCTYPE=ROUTED,LOCALCCID=16,
LOCALIPCC=172.20.209.73,LMPHELLOINT=2,LMPHELLODEADINT=6,
MTU=1500,CRCMD=16-BIT;

Notes:

1. If this command is sent twice, or input with invalid data, a SRQN (Status, Invalid Request) error message is returned.
2. If sending this command to provision MTU, CRCMD, or both while the IPCC type is routed (CCTYPE=ROUTED), an IIAC (Routed CC Is Not Allowed to Provision MTU and CRCMD) error message is returned.
3. The LMPHELLODEADINT interval has to be larger than the hello interval and is normally set to 3 times the hello interval. Its range is 3 seconds to 30 seconds with a default of 15 seconds.
4. If sending this command to provision a ROUTED IPCC no matter if the neighbor discovery (NDEN) is Enabled or Disabled, the REMOTEIPCC has to be specified by the user with non zeros, otherwise, an error message will be returned.
5. If sending this command to provision an SDCC IPCC while the neighbor discovery (NDEN=Y) is Enabled, the REMOTEIPCC defaults to 0.0.0.0, and the user is not allowed to specify REMOTEIPCC, otherwise, and error message (SROF, Cannot specify Remote IPCC for SDCC-IPCC when ND is enabled) will be returned.
6. If sending this command to provision an SDCC IPCC while the neighbor discovery (NDEN=N) is Disabled, the REMOTEIPCC defaults to its neighbor's node ID (IP address).
7. If sending this command to provision an SDCC IPCC with a complete result, the SDCC of the specified SONET line is created (or enabled) automatically with a DB change reporting (if the DB change report is enabled).
8. If sending this command to provision more than 16 IPCC over one NE, a (Cannot create IPCC. Max. number (16) reached) error message is returned.

Section	ENT-UCP-CC Description	
Category	UCP	
Security	Provisioning	
Related Messages	DLT-UCP-CC	REPT ALM UCP
	DLT-UCP-IF	REPT EVT UCP
	DLT-UCP-NBR	RTRV-ALM-UCP
	ED-UCP-CC	RTRV-COND-UCP
	ED-UCP-IF	RTRV-UCP-CC
	ED-UCP-NBR	RTRV-UCP-IF
	ED-UCP-NODE	RTRV-UCP-NBR
	ENT-UCP-IF	RTRV-UCP-NODE
	ENT-UCP-NBR	

Section	ENT-UCP-CC Description (continued)
Input Format	ENT-UCP-CC:[<TID>]:[<AID>]:<CTAG>:::[NBRIX=<NBRIX>,][CCTYPE=<CCTYPE>,][PORT=<PORT>,][LOCALCCID=<LOCALCCID>,][LOCALIPCC=<LOCALIPCC>,][REMOTCCID=<REMOTECCID>,][REMOTEIPCC=<REMOTEIPCC>,][LMPHELLOINT=<LMPHELLOINT>,][LMPHELLODEADINT=<LMPHELLODEADINT>,][MTU=<MTU>,][CRCMD=<CRCMD>,][TUNMD=<TUNMD>][:]; where: • <AID> indicates an individual IPCC ID and is the AID from the "IPCC" section on page 4-25. The default value is "local IPCC ID" • <NBRIX> indicates a neighbor within the local node and is an integer • <CCTYPE> indicates the type of the control channel; valid values for <CCTYPE> are shown in the "UCP_IPCC_TYPE" section on page 4-102 • <PORT> indicates the port which the control channel is configured, while the CCTYPE is the type of SDCC. <PORT> is the AID from the "FACILITY" section on page 4-24 and the default value is "applicable only if it is SDCC type" • <LOCALCCID> indicates the local control channel ID and is an integer. The default value is "local UCP node id" • <LOCALIPCC> indicates the local IP address of the control channel and is a string. The default value is "local node id's node name" • <REMOTECCID> indicates the local control channel ID and is an integer. The default value is "zero (0) – undefined until discovery by LMP" • <REMOTEIPCC> indicates the remote IP address of the control channel and is a string. The default value is "0.0.0.0 – undefined for SDCC IPCC and discovered by LMP" • <LMPHELLOINT> indicates the LMP (line management protocol) interval (in milliseconds). It is the time between hello messages sent by this node, defaults to 5 (with the range of 1–10). <LMPHELLOINT> is an integer and the default value is "5 seconds – (1–10 seconds)" • <LMPHELLODEADINT> indicates the control channel time-out interval (in milliseconds) by the neighbor if the neighbor does not receive the hello message, and defaults to 15 (with the range of 3–30). This interval has to be at least as large as the hello interval and is normally set to 3 times the hello interval. It's range is 3–30 seconds with a default of 15 seconds. <LMPHELLODEADINT> is an integer and it's default value is "15 seconds – (3–30 seconds)" • <MTU> indicates the MTU size of this control channel. <MTU> is an integer and it's default value is "1500 bytes" • <CRCMD> indicates the CRC mode for this control channel. It is applicable to IPCCs in SDCC type. Valid values for <CRCMD> are shown in the "UCP_CRC_MODE" section on page 4-102 • <TUNMD> indicates the IP Tunneling option. It defaults to disabled and valid values are shown in the "UCP_CC_TUN_MD" section on page 4-101

Section	ENT-UCP-CC Description (continued)
Input Example	ENT-UCP-CC:CISCO:CC-9:CTAG:::NBRIX=8,CCTYPE=SDCC,PORT=FAC-2-1,LOCALCCID=9,LOCALIPCC=172.20.209.162,REMOTCCID=2,REMOTEIPCC=172.20.209.73,LMPHELLOINT=1,LMPHELLODEADINT=5,MTU=1500,CRCMD=16-BIT,TUNMD=DISABLED;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.77 ENT-UCP-IF: Enter Unified Control Plane Interface

(Cisco ONS 15454 only)

This command creates a UCP interface.

The CCID can be set to zero to request the use of any control channel to the neighbor for this UCP interface/data link.

The local interface ID (LOCALIFID) is used by LMP/RSVP (Line Management Protocol/Resource Reservation Protocol). If zero is passed in as the local Interface ID of the data link, then the node assigns a value for it. If the user specifies a non-zero value, then the node checks if that Interface ID is available and uses it.

If the UCP interface/data link control channel type is SDCC type, the local interface ID should be the same as CCID. Otherwise, an error message will be returned by the node.

The remote interface ID is allowed to be unspecified (by passing zero) if the NDEN is Enabled and there is a SDCC IPCC specified for this UPC Interface with the same Interface Index, or when Routed IPCC is used for this data link.

Examples:

ENT-UCP-IF::FAC-2-3:CTAG:::NBRIX=8,CCID=2,LOCALIFID=0,REMOTEIFID=4,TNATYPE=IPV4,TNAADDR=172.20.209.162,CORENETWORKID=3;

ENT-UCP-IF::FAC-2-4:CTAG:::NBRIX=8,CCID=1,LOCALIFID=0,REMOTEIFID=4,TNATYPE=NSAP,TNAADDR=0102030405060708090A0B0C0D0E0F1011121314,CORENETWORKID=3;

Note If this command is sent twice, or inputs invalid data, a SRQN (Status, Invalid Request) error message is returned.

Section	ENT-UCP-IF Description
Category	UCP
Security	Provisioning

Section	ENT-UCP-IF Description (continued)	
Related Messages	DLT-UCP-CC	REPT ALM UCP
	DLT-UCP-IF	REPT EVT UCP
	DLT-UCP-NBR	RTRV-ALM-UCP
	ED-UCP-CC	RTRV-COND-UCP
	ED-UCP-IF	RTRV-UCP-CC
	ED-UCP-NBR	RTRV-UCP-IF
	ED-UCP-NODE	RTRV-UCP-NBR
	ENT-UCP-CC	RTRV-UCP-NODE
	ENT-UCP-NBR	
Input Format	ENT-UCP-IF:[<TID>]:<AID>:<CTAG>:::[NBRIX=<NBRIX>,][CCID=<CCID>,] [LOCALIFID=<LOCALIFID>,][REMOTEIFID=<REMOTEIFID>,] [TNATYPE=<TNATYPE>,][TNAADDR=<TNAADDR>,] [CORENETWORKID=<CORENETWORKID>][:]; where: • <AID> indicates the interface port index of the data link and is the AID from the "FACILITY" section on page 4-24 • <NBRIX> indicates a neighbor within the local node and is an integer • <CCID> indicates the control channel ID. It can be set to zero to request the use of any control channel to the neighbor for this UCP interface/ data link. <CCID> is an integer. A null value defaults to "any control channel to the neighbor" • <LOCALIFID> indicates the local interface ID used by LMP/RSVP (Line Management Protocol/Resource reservation Protocol). If this attribute value is assigned by the UI, it will be ignored. <LOCALIFID> is an integer • <REMOTEIFID> indicates the remote interface ID on the neighbor's side. If this attribute value is passed by UI, it will be ignored. <REMOTEIFID> is an integer • <TNATYPE> indicates the TNA (Transport Network Administered) type and defaults to IPv4. Valid values for <TNATYPE> are shown in the "UCP_TNA_TYPE" section on page 4-102. The default value is "IPv4" • <TNAADDR> indicates the TNA (Transport Network Administered) IP address and defaults to IPv4 0.0.0.0. <TNAADDR> is a string. The default value is "0" • <CORENETWORKID> indicates the core network ID and defaults to one (1). <CORENETWORKID> is an integer and the default value is "1"	
Input Example	ENT-UCP-IF:CISCO:FAC-2-1:CTAG:::NBRIX=12,CCID=16,LOCALIFID=16, REMOTEIFID=0,TNATYPE=IPV4,TNAADDR=172.20.209.162, CORENETWORKID=7;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.78 ENT-UCP-NBR: Enter Unified Control Plane Neighbor

(Cisco ONS 15454 only)

This command creates a UCP neighbor.

The default value of the node name can be overwritten by the TL1 user to a string in a maximum size of 20 characters. If the node name includes non-identified TL1 characters (e.g. space), the text string format with the double quotes is required.

Notes:

1. If this command is sent twice or inputs invalid data, a SRQN (Status, Invalid Request) error message is returned.
2. If sending this command without neighbor node name in the “NAME” field, an IIAC (Neighbor Name Can Not be Empty) error message is returned.
3. If sending this command with nodeid while the neighbor discovery is enabled (NDEN=Y), an IIAC (NODEID Is Not Allowed If NDEN Is Enabled) error message is returned.
4. If sending this command to set the hello interval while the RSVP hello is disabled, an IIAC (HELLOINT Is Not Allowed If HELLOEN Is Disabled) error message is returned.
5. If provisioning a neighbor with disabled neighbor discovery (NDEN=N), and NULL nodeid, a SROF (UCP Neighbor's NodeID cannot be null when Neighbor Discovery is disabled) is returned.
6. If sending this command to create a neighbor with the neighbor node name string longer than 64 characters, an IIAC (Node Name Too Long) error message is returned.

Section	ENT-UCP-NBR Description	
Category	UCP	
Security	Provisioning	
Related Messages	DLT-UCP-CC	REPT ALM UCP
	DLT-UCP-IF	REPT EVT UCP
	DLT-UCP-NBR	RTRV-ALM-UCP
	ED-UCP-CC	RTRV-COND-UCP
	ED-UCP-IF	RTRV-UCP-CC
	ED-UCP-NBR	RTRV-UCP-IF
	ED-UCP-NODE	RTRV-UCP-NBR
	ENT-UCP-CC	RTRV-UCP-NODE
	ENT-UCP-IF	

Section	ENT-UCP-NBR Description (continued)
Input Format	ENT-UCP-NBR:[<TID>]:<AID>:<CTAG>:::[NBRIX=<NBRIX>,] [NODEID=<NODEID>,]NAME=<NAME>,[NDEN=<NDEN>,] [HELLOEN=<HELLOEN>,][HELLOINT=<HELLOINT>,] [REFREDEN=<REFREDEN>,][NUMRXMTS=<NUMRXMTS>][:]; where: • <AID> indicates an individual neighbor index of the UCP. An available neighbor index will be assigned internally while sending this command without AID; <AID> is the AID from the "NBR" section on page 4-26 • <NBRIX> indicates a neighbor within the local node. <NBRIX > is an integer and the default value is the AID number or undefined zero (0) <NODEID> indicates the neighbor node ID as received in RSVP, LMP messages from that node and is a string • <NAME> indicates the neighbor node name, it has to be specified by the user. If the node name includes non-identified TL1 characters (e.g. space), the text string format with the double quotes is required. <NAME> is a string • <NDEN> indicates if the neighbor discovery is enabled or not for this neighbor and it defaults to enable (Y). The default value is "Y". Valid values for <NDEN> are shown in the "ON_OFF" section on page 4-83 • <HELLOEN> indicates if the RSVP hello is enabled to this neighbor or not and defaults to enable (Y). The default value is "Y". Valid values for <HELLOEN> are shown in the "ON_OFF" section on page 4-83 • <HELLOINT> indicates the interval between hello messages to neighbor and defaults to 5. The default value is "5". <HELLOINT> is an integer • <REFREDEN> indicates if the refresh reduction is enabled or not and defaults to enable (Y). The default value is "Y". Valid values for <REFREDEN> are shown in the "ON_OFF" section on page 4-83 • <NUMRXMTS> indicates the maximum number of retransmits of each message and defaults to 3. The default value is "3". <NUMRXMTS> is an integer
Input Example	ENT-UCP-NBR:CISCO:NBR-8:CTAG:::NBRIX=8,NODEID=192.168.100.52, NAME=NODE-A,NDEN=Y,HELLOEN=Y,HELLOINT=20,REFREDEN=Y, NUMRXMTS=3;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.79 ENT-USER-SECU: Enter User Security

This command adds a user account. Only a Superuser can do this. Each user is configured as being at one of these four privilege levels:

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

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

Notes:

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

Section	ENT-USER-SECU Description	
Category	Security	
Security	Superuser	
Related Messages	ACT-USER	ED-USER-SECU
	ALW-MSG-SECU	INH-MSG-SECU
	CANC	REPT EVT SECU
	CANC-USER	REPT EVT SESSION
	DLT-USER-SECU	RTRV-USER-SECU
	ED-PID	

Section	ENT-USER-SECU Description (continued)
Input Format	ENT-USER-SECU:[<TID>]:<UID>:<CTAG>::<PID>,,<UAP>[:]; where: • <UID> is the user identifier. The minimum <UID> size is 6, the maximum <UID> size is 10; <UID> is a string. • <PID> is a string. • <UAP> is the user access privilege value; valid values for <UAP> are shown in the "PRIVILEGE" section on page 4-89
Input Example	ENT-USER-SECU:PETALUMA:CISCO15:123::PSWD11#,,MAINT;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.80 ENT-WLEN: Enter Wavelength

(Cisco ONS 15454 only)

Note Applicable for Release 4.5 only.

This command allocates a wavelength.

Note This command does not support allocating multiple wavelengths.

Section	ENT-WLEN Description
Category	DWDM
Security	Provisioning
Related Messages	DLT-WLEN ED-WLEN RTRV-WLEN
Input Format	ENT-WLEN:[<TID>]:<AID>:<CTAG>:::[SIZE=<SIZE>]:[<PST>],[<SST>]; where: • <AID> is the wavelength AID from the "WLEN" section on page 4-34 • <SIZE> is the circuit size allocated on this wavelength; valid values are shown in the "CIRCUIT_SIZE" section on page 4-50 • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92
Input Example	ENT-WLEN:PENNGROVE:WLEN-W-ADD-1530.33:114:::SIZE=MULTI-RATE:OOS,MT;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.81 EX-SW-<OCN_BLSR>: Operate Protection Switch (OC12, OC48, OC192)

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

This command exercises the algorithm for switching from a working facility to a protection facility without actually performing a switch. It is assumed that the facility being exercised is the working unit. The exercise switching success or failure result will be indicated by an automatic alarm.

Exercise switch for the SONET protection line is not supported in this release. If sending this command to the protection unit, an error message will be returned. In addition to all normal INPUT, EQUIPAGE, PRIVILEGE error codes, the following error codes are also included in this command:

SNVS (Status, Not in Valid State)

SROF (Status, Requested Operation Failed)

SSRD (Status, Switch Request Denied)

Section	EX-SW-<OCN_BLSR> Description	
Category	SONET Line Protection	
Security	Maintenance	
Related Messages	DLT-FFP-<OCN_TYPE>	OPR-PROTNSW-<OCN_TYPE>
	DLT-FFP-CLNT	RLS-PROTNSW-<OCN_TYPE>
	ED-FFP-<OCN_TYPE>	RTRV-FFP-<OCN_TYPE>
	ED-FFP-CLNT	RTRV-FFP-CLNT
	ENT-FFP-<OCN_TYPE>	RTRV-PROTNSW-<OCN_TYPE>
	ENT-FFP-CLNT	
Input Format	EX-SW-<OCN_BLSR>:[TID]:<AID>:[CTAG]::[<ST>]; where: • <AID> identifies the facility in the NE to which the switch request is directed. <AID> is from the "FACILITY" section on page 4-24. <AID> must not be null. • <ST> is the BLSR switch type. the switch type is optional and for BLSR protection switch only. <ST> defaults to RING switch type and valid values are shown in the "SWITCH_TYPE" section on page 4-94. A null value is equivalent to ALL.	
Input Example	EX-SW-OC48:CISCO:FAC-12-1:123::SPAN;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.82 INH-MSG-ALL: Inhibit Message All

This command inhibits all REPT ALM and REPT EVT autonomous messages from being transmitted. See the ALW-MSG-ALL to resume these autonomous messages. When a TL1 session starts, the REPT ALM and REPT EVT messages are allowed by default.

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

Section	INH-MSG-ALL Description	
Category	System	
Security	Retrieve	
Related Messages	ALW-MSG-ALL	RTRV-INV
	COPY-RFILE	RTRV-MAP-NETWORK
	ED-DAT	RTRV-NE-GEN
	ED-NE-GEN	RTRV-NE-IPMAP
	ED-NE-SYNCN	RTRV-NE-SYNCN
	INIT-SYS	RTRV-TOD
	REPT EVT FXFR	SET-TOD
	RTRV-HDR	
Input Format	INH-MSG-ALL:[<TID>]::<CTAG>[::,,];	
Input Example	INH-MSG-ALL:PETALUMA::550;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.83 INH-MSG-DBCHG: Inhibit Database Change Message

This command disables REPT DBCHG.

Section	INH-MSG-DBCHG Description
Category	Log
Security	Retrieve
Related Messages	ALW-MSG-DBCHG
	REPT DBCHG
	RTRV-LOG
Input Format	INH-MSG-DBCHG:[<TID>]::<CTAG>[::,,];
Input Example	INH-MSG-DBCHG:CISCO::123;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.84 INH-MSG-SECU: Inhibit Message Security

This command inhibits the REPT EVT SECU and REPT ALM SECU messages.

Section	INH-MSG-SECU Description
Category	Security
Security	Superuser

Section	INH-MSG-SECU Description (continued)	
Related Messages	ACT-USER	ED-USER-SECU
	ALW-MSG-SECU	ENT-USER-SECU
	CANC	REPT EVT SECU
	CANC-USER	REPT EVT SESSION
	DLT-USER-SECU	RTRV-USER-SECU
	ED-PID	
Input Format	INH-MSG-SECU:[<TID>]::<CTAG>;	
Input Example	INH-MSG-SECU:PETALUMA::123;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.85 INH-PMREPT-ALL: Inhibit Performance Report All

This command inhibits all scheduled PM reporting. The inhibitance of the PM reporting is session-based, which means the command is only effective to the TL1 session that issues this command. By default, the scheduled PM reporting is inhibited by a TL1 session.

A TL1 session for which PM reports are inhibited will include an INHMSG-PMREPT condition when issuing TL1 command RTRV-COND-ALL.

Section	INH-PMREPT-ALL Description	
Category	Performance	
Security	Retrieve	
Related Messages	ALW-PMREPT-ALL	RTRV-PMSCHED-<MOD2>
	INIT-REG-<MOD2>	RTRV-PMSCHED-ALL
	INIT-REG-G1000	RTRV-TH-<MOD2>
	REPT PM <MOD2>	SCHED-PMREPT-<MOD2>
	RTRV-PM-<MOD2>	SET-PMMODE-<STS_PATH>
	RTRV-PMMODE-<STS_PATH>	SET-TH-<MOD2>
Input Format	INH-PMREPT-ALL:[<TID>]::<CTAG>;	
Input Example	INH-PMREPT-ALL:NE-NAME::123;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.86 INH-SWDX-EQPT: Inhibit Switch Duplex Equipment

(Cisco ONS 15454 only)

This command inhibits automatic or manual switching on a system containing duplex equipment. Use the ALW-SWDX command to release the inhibit. This command is not used for SONET line protection switching. For SONET line/path protection switching commands, use the OPR-PROTNSW and RLS-PROTNSW commands. This command is not used for 1:1 and 1:N equipment protection switching, use ALW-SWTOPROTN, ALW-SWTOWKG, INH-SWTOPROTN, INH-SWTOWKG commands.

Notes:

1. This command applies for XC, XCVT, or XC10G equipment units only in this release.
2. When sending this command to a TCC+/TCC2 card, an error message will occur because the NE treats the TCC+/TCC2 as a non-revertive protection group without user control.

Section	INH-SWDX-EQPT Description	
Category	Equipment	
Security	Maintenance	
Related Messages	ALW-SWDX-EQPT	REPT ALM EQPT
	ALW-SWTOPROTN-EQPT	REPT EVT EQPT
	ALW-SWTOWKG-EQPT	RTRV-ALM-EQPT
	DLT-EQPT	RTRV-COND-EQPT
	ED-EQPT	RTRV-EQPT
	ENT-EQPT	SW-DX-EQPT
	INH-SWTOPROTN-EQPT	SW-TOPROTN-EQPT
	INH-SWTOWKG-EQPT	SW-TOWKG-EQPT
Input Format	INH-SWDX-EQPT:[<TID>]:<AID>:<CTAG>[::]; where: • <AID> is the XC/XCVT/XC10G equipment AID (Slot 8 or Slot 10) from the "EQPT" section on page 4-23	
Input Example	INH-SWDX-EQPT:CISCO:SLOT-1:1234;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.87 INH-SWTOPROTN-EQPT: Inhibit Switch to Protection Equipment

(Cisco ONS 15454 only)

This command inhibits automatic or manual switching of an equipment unit to protection. Use the ALW-SWTOPROTN-EQPT command to release the inhibit.

INH-SWTOPROTN-EQPT is used for non-SONET line cards (e.g. DS1, DS3, DS3XM and EC1 cards). DS1 and DS3 cards have 1:1 and 1:N equipment protection. DS3XM and EC1 cards have only 1:1 equipment protection. When performing a lockout with this command, the traffic will be switched from the unit specified by the AID, unless the working unit being protected has failed or is missing. When performing a lock on with this command and the working unit specified in the AID is in standby, sending this command will also initiate a traffic switch. When traffic is locked on a working unit or locked out of the protection unit with this command, the protection unit will not carry traffic, even if the working unit is pulled from the system.

Sending this command to a working unit in a 1:N protection group does not prevent a protection switch from another working unit in the same protection group. All the working units must be sent this command to prevent a protection switch. If the command is sent only to a subset of the working units, only those working units will have traffic locked on.

The inhibit state is persistent over TCC+/TCC2 side switches and removal/reboot of all the units in the protection group. The inhibit state can, but does not have to be persistent over a complete power cycle of the NE.

The unit specified by the AID will raise the condition of INHSWPR when this command is sent.

Notes:

1. This command only supports one value of the <DIRN> parameter - BTH. A command with any other value is considered an incorrect use of the command. An IDNV (Input, Data Not Valid) error message should be responsed.
2. This command is not used for the common control (TCC+/TCC2 or XC/XCVT/XC10G) cards. A command on a common control card will receive an IIAC (Input, Invalid Access Identifier) error message. To use the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
3. This command is not used for SONET (OCN) cards. A command on a SONET card will receive an IIAC (Input, Invalid Access Identifier) error message. To use a SONET card switching command, use the OPR-PROTNSW and RLS-PROTNSW commands.
4. If this command is used on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message should be received.
5. If this command is used on a card that is already in the inhibit state, the SAIN (Status, Already Inhibited) error message should be received.
6. If sending the inhibit switch to protection command to a working card when the protect card in the same protection group has already raised the condition of INHSWWKG, the SPLD (Status, Protection unit Locked) error message should be responsed.
7. If sending the inhibit switch to protection command to the protect card when a working card in the same protection group has already raised the condition of INHSWWKG, the SWLD (Status, Working unit Locked) error message should be responsed.
8. Sending the inhibit switch to protection command to an active protect card when the peer working card is failed or missing, the SWFA (Status, Working unit Failed) error message should be responsed.
9. The following situation(s) are allowed and will not generate any error response: sending this command to missing cards as long as none of the previous error conditions apply.

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

Section	INH-SWTOPROTN-EQPT Description (continued)
Input Format	INH-SWTOPROTN-EQPT:[<TID>]:<AID>:<CTAG>[::<DIRN>]; where: • <AID> This parameter can either be the working unit for which switching to protection is inhibited (lock on) or the protection unit for which carrying traffic is to be inhibited (lockout); <AID> is from the "EQPT" section on page 4-23 • <DIRN> is the direction of the switching. The command only supports one value of the <DIRN> parameter - BTH. This parameter defaults to BTH; valid values for <DIRN> are shown in the DIRECTION, page 65
Input Example	INH-SWTOPROTN-EQPT:CISCO:SLOT-2:123::BTH;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.88 INH-SWTOWKG-EQPT: Inhibit Switch to Working Equipment

(Cisco ONS 15454 only)

This command inhibits automatic or manual switching of an equipment unit back to the working unit. Use the ALW-SWTOWKG-EQPT command to release the inhibit.

INH-SWTOWKG-EQPT is used for non-SONET line cards (e.g. DS1, DS3, DS3XM and EC1 cards). DS1 and DS3 cards have 1:1 and 1:N equipment protection. DS3XM and EC1 cards have only 1:1 equipment protection. When performing a lock-out with this command, the traffic will be switched from the unit specified by the AID, unless the protection unit has failed or is missing. When performing a lock-on with this command and the protection unit specified in the AID is in standby, sending this command will initiate a traffic switch only when there is one working card in the protection group. In the case where there is more than one working card in the protection group, an error will be generated (see error conditions below). When traffic is locked on the protection unit or locked out of a working unit with this command, the working unit will not carry traffic, even if the protection unit is pulled from the system.

The inhibit state is persistent over TCC+/TCC2 side switches and removal/reboot of all the units in the protection group. The inhibit state can but does not have to be persistent over a complete power cycle of the NE.

The unit specified by the AID will raise the condition of INHSWWKG when this command is sent.

Notes:

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

5. If this command is used on a card that is already in the inhibit state, the SAIN (Status, Already Inhibited) error message should be received.
6. If sending this command to a working card when the protect card in the same protection group has already raised the condition of INHSWPR, the SPLD (Status, Protection unit Locked) error message should be received.
7. If sending the INH-SWTOWKG command to a protect card when a working card in the same protection group has already raised the condition of INHSWPR, the SWLD (Status, Working unit Locked) error message should be responsed.
8. If sending the INH-SWTOWKG command to an active working card when the protect card has failed or is missing, the SPFA (Status, Protection unit Failed) error message should be received.
9. If sending the INH-SWTOWKG command to an active working card when the protect card is already carrying traffic (this only occurs in a 1:N protection group with N greater than one), the SPAC (Status, Protection unit Active) error message should be received.
10. The following situation is allowed and will not generate any error response: Sending this command to missing cards as long as none of the previous error conditions apply.

Section	INH-SWTOWKG-EQPT Description	
Category	Equipment	
Security	Maintenance	
Related Messages	ALW-SWDX-EQPT	REPT ALM EQPT
	ALW-SWTOPROTN-EQPT	REPT EVT EQPT
	ALW-SWTOWKG-EQPT	RTRV-ALM-EQPT
	DLT-EQPT	RTRV-COND-EQPT
	ED-EQPT	RTRV-EQPT
	ENT-EQPT	SW-DX-EQPT
	INH-SWDX-EQPT	SW-TOPROTN-EQPT
	INH-SWTOPROTN-EQPT	SW-TOWKG-EQPT
Input Format	INH-SWTOWKG-EQPT:[<TID>]:<AID>:<CTAG>[::<DIRN>]; where: • <AID> This parameter can either be the protection unit for which switching back to working is inhibited (lock-on) or the working unit for which carrying traffic is to be inhibited (lockout); <AID> is from the "EQPT" section on page 4-23 • <DIRN> is the direction of the switching. The command only supports one value of the <DIRN> parameter - BTH. This parameter defaults to BTH; valid values for <DIRN> are shown in the DIRECTION, page 65	
Input Example	INH-SWTOWKG-EQPT:CISCO:SLOT-2:123::BTH;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.89 INIT-REG-<MOD2>: Initialize Register (CLNT, DS1, DS3I, E1, E3, E4, EC1, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STM1E, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

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

This command initializes the performance monitoring (PM) registers.

Notes:

1. The time period is always the current time period, and the previous time period counts are not cleared; therefore, both <MONDAT> and <MONTM> are not supported in this command.
2. Both transmit and receive directions are allowed in DS1, other cards only support the receive direction.

Section	INIT-REG-<MOD2> Description	
Category	Performance	
Security	Maintenance	
Related Messages	ALW-PMREPT-ALL	RTRV-PMSCHED-<MOD2>
	INH-PMREPT-ALL	RTRV-PMSCHED-ALL
	INIT-REG-G1000	RTRV-TH-<MOD2>
	REPT PM <MOD2>	SCHED-PMREPT-<MOD2>
	RTRV-PM-<MOD2>	SET-PMMODE-<STS_PATH>
	RTRV-PMMODE-<STS_PATH>	SET-TH-<MOD2>
Input Format	INIT-REG-<MOD2>:[<TID>]:<AID>:<CTAG>::,,[<LOCN>],[<DIRN>],[<TMPER>][,,];	
	where: • <AID> is the access identifier. All the STS, VT1, facility and DS1 AIDs are supported; <AID> is from the "ALL" section on page 4-9 • <LOCN> indicates the location, in reference to the entity identified by the AID, valid values for <LOCN> are shown in the "LOCATION" section on page 4-75 • <DIRN> is the direction of PM relative to the entity identified by the AID. <DIRN> defaults to ALL, which means that the command initializes all the registers irrespective of the PM direction. Valid values for <DIRN> are shown in the "DIRECTION" section on page 4-65. • <TMPER> indicates the accumulation time period for the PM information; valid values for <TMPER> are shown in the "TMPER" section on page 4-98. A null value of <TMPER> defaults to 15-MIN. The default value is 15-MIN.	
Input Example	INIT-REG-OC3:CISCO:FAC-1-1:1234::,,NEND,BTH,15-MIN;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.90 INIT-REG-G1000: Initialize Register G1000

This command initializes the performance monitoring registers for the G1000-4 and G1000-2 ports.

Notes:

1. The time period is always the current time period and the previous time period counts are not cleared. Both MONDAT and MONTM are not supported in this command.
2. Only DIRN of XXX is supported.

Section	INIT-REG-G1000 Description	
Category	Ports	
Security	Maintenance	
Related Messages	ALW-PMREPT-ALL	RTRV-FSTE
	ED-<OCN_TYPE>	RTRV-G1000
	ED-DS1	RTRV-GIGE
	ED-EC1	RTRV-PM-<MOD2>
	ED-G1000	RTRV-PMMODE-<STS_PATH>
	ED-T1	RTRV-PMSCHED-<MOD2>
	ED-T3	RTRV-PMSCHED-ALL
	INH-PMREPT-ALL	RTRV-POS
	INIT-REG-<MOD2>	RTRV-T1
	REPT PM <MOD2>	RTRV-T3
	RMV-<MOD2_IO>	RTRV-TH-<MOD2>
	RST-<MOD2_IO>	SCHED-PMREPT-<MOD2>
	RTRV-<OCN_TYPE>	SET-PMMODE-<STS_PATH>
	RTRV-DS1	SET-TH-<MOD2>
	RTRV-EC1	
Input Format	INIT-REG-G1000:[<TID>]:<SRC>:<CTAG>::,,<LOCATION>,<DIRECTION>,<TMPER>[,,];	
	where: • <SRC> is the access identifier from the "FACILITY" section on page 4-24 • <LOCATION> indicates the location in reference to the entity identified by the AID from which the PM value is being retrieved; valid values are shown in the "LOCATION" section on page 4-75 • Valid values for <DIRECTION> are shown in the "DIRECTION" section on page 4-65 • <TMPER> indicates the accumulation time period for the PM information. A null value defaults to 15-MIN; valid values are shown in the "TMPER" section on page 4-98	
Input Example	INIT-REG-G1000::FAC-5-1:1234::,,NEND,BTH,15-MIN;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.91 INIT-SYS: Initialize System

This command initializes the specified card and its associated subsystem(s).

Notes:

1. The SLOT-ALL AID and the list AID are not allowed in this command.
2. Only one level of restart is supported in this command.
3. It is important that the standby TCC+/TCC2 should be up and running fully standby before this command is sent on the active TCC+/TCC2 for a period of time. During this time, the system is vulnerable to traffic outages caused by timing disruptions or other causes.

Section	INIT-SYS Description	
Category	System	
Security	Maintenance	
Related Messages	ALW-MSG-ALL	RTRV-INV
	COPY-RFILE	RTRV-MAP-NETWORK
	ED-DAT	RTRV-NE-GEN
	ED-NE-GEN	RTRV-NE-IPMAP
	ED-NE-SYNCN	RTRV-NE-SYNCN
	INH-MSG-ALL	RTRV-TOD
	REPT EVT FXFR	SET-TOD
	RTRV-HDR	
Input Format	INIT-SYS:[<TID>]:<AID>:<CTAG>[::]; where: • <AID> is the access identifier of the equipment unit or slot and is from the "EQPT" section on page 4-23	
Input Example	INIT-SYS:HOTWATER:SLOT-8:201;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.92 OPR-ACO-ALL: Operate Alarm Cutoff All

This command cuts off the office audible alarm indication without changing the local alarm indications.

This command does not have any effect on future alarms at the NE, it directs the NE to provide conditioning only on those alarms that are currently active.

The ACO retires the Central Office (CO) alarm audible indicators without clearing the indicators that show the trouble still exists. There is no need for a RLS-ACO command.

Section	OPR-ACO-ALL Description
Category	Environment Alarms and Controls
Security	Maintenance

Section	OPR-ACO-ALL Description (continued)	
Related Messages	OPR-EXT-CONT	RTRV-ATTR-ENV
	REPT ALM ENV	RTRV-COND-ENV
	REPT EVT ENV	RTRV-EXT-CONT
	RLS-EXT-CONT	SET-ATTR-CONT
	RTRV-ALM-ENV	SET-ATTR-ENV
	RTRV-ATTR-CONT	
Input Format	OPR-ACO-ALL:[<TID>]::<CTAG>;	
Input Example	OPR-ACO-ALL:CISCO::123;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.93 OPR-AONS: Operate Automatic Optical Node Setup

(Cisco ONS 15454 only)

Note Applicable to Release 4.5 only.

This command operates the Automatic Optical Node Setup (AONS) application inside the NE to force a recompute of the value to be assigned to all VOAs representing the Optical Path inside the node.

Section	OPR-AONS Description
Category	DWDM
Security	Maintenance
Related Messages	ED-WDMANS RTRV-WDMANS
Input Format	OPR-AONS:[<TID>]::<CTAG>;
Input Example	OPR-AONS:PENNGROVE::114;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.94 OPR-EXT-CONT: Operate External Control

This command operates an external control and closes the external control contact. The control can be operated momentarily or continuously.

Notes:

1. The duration has two values in this release:

   MNTRY: Momentary duration

   CONTS: Continuos duration

2. In an automatic state, the contact could be opened or closed depending on the provisioned trigger.

3. RLS-EXT-CONT changes the state to automatic. Therefore, issuing an OPR-EXT-CONT command when the control is manually open and then issuing a RLS-EXT-CONT will not revert the state back to Manual Open.
4. A NULL value for the duration parameter defaults to MNTRY in this release.
5. The RLS-EXT-CONT is not allowed during the MNTRY duration, the command is allowed for the CONTS duration. The length of the MNTRY duration is set to be 2 seconds on Cisco ONS 15454.

Caution Do not turn on external controls that activate a potential danger; such as, sprinklers or other controls connected to possibly hazardous systems or equipment.

Section	OPR-EXT-CONT Description	
Category	Environment Alarms and Controls	
Security	Maintenance	
Related Messages	OPR-ACO-ALL	RTRV-ATTR-ENV
	REPT ALM ENV	RTRV-COND-ENV
	REPT EVT ENV	RTRV-EXT-CONT
	RLS-EXT-CONT	SET-ATTR-CONT
	RTRV-ALM-ENV	SET-ATTR-ENV
	RTRV-ATTR-CONT	
Input Format	OPR-EXT-CONT:[<TID>]:<AID>:<CTAG>::[<CONTTYPE>],[<DURATION>]; where: • <AID> is the access identifier environment AID from the "ENV" section on page 4-22 and must not be null • <CONTTYPE> is the type of control; valid values for <CONTTYPE> are shown in the "CONTTYPE" section on page 4-64. A null value is equivalent to ALL. • Valid values for <DUR> are shown in the "DURATION" section on page 4-66. A null value is equivalent to ALL.	
Input Example	OPR-EXT-CONT:CISCO:ENV-OUT-2:123::AIRCOND,CONTS;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.95 OPR-LASER-OTS: Operate Laser Optical Transport Section

(Cisco ONS 15454 only)

Note Applicable to Release 4.5 only.

This command instructs a laser to switch on.

Section	OPR-LASER-OTS Description	
Category	DWDM	
Security	Maintenance	
Related Messages	DLT-FFP-CLNT	RLS-LASER-OTS
	DLT-LNK-<MOD2O>	RLS-PROTNSW-CLNT
	ED-CLNT	RLS-PROTNSW-OCH
	ED-DWDM	RTRV-CLNT
	ED-FFP-CLNT	RTRV-DWDM
	ED-FFP-OCH	RTRV-FFP-CLNT
	ED-LNK-<MOD2O>	RTRV-FFP-OCH
	ED-OCH	RTRV-LNK-<MOD2O>
	ED-OMS	RTRV-OCH
	ED-OTS	RTRV-OMS
	ED-TRC-CLNT	RTRV-OTS
	ED-TRC-OCH	RTRV-PROTNSW-CLNT
	ENT-FFP-CLNT	RTRV-PROTNSW-OCH
	ENT-LNK-<MOD2O>	RTRV-TRC-CLNT
	OPR-PROTNSW-CLNT	RTRV-TRC-OCH
	OPR-PROTNSW-OCH	
Input Format	OPR-LASER-OTS:[<TID>]:<AID>:<CTAG>; where: • <AID> indicates an identifier of an optical facility supporting laser; <AID> is the AID from the "LINE" section on page 4-25	
Input Example	OPR-LASER-OTS::LINE-5-2-TX:3;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.96 OPR-LNK: Operate Link

(Cisco ONS 15454 only)

Note Applicable to Release 4.5 only.

This command operates the optical link (OLNK) application inside the NE to calculate all the automatic optical links between end points which can be univocally identified by the NE.

Section	OPR-LNK Description
Category	DWDM
Security	Maintenance

Section	OPR-LNK Description (continued)
Related Messages	DLT-LNK-<MOD2O> ED-LNK-<MOD2O> ENT-LNK-<MOD2O>
Input Format	OPR-LNK:[<TID>]::<CTAG>;
Input Example	OPR-LNK:PENNGROVE::114;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.97 OPR-LPBK-<MOD2>: Operate Loopback (CLNT, DS1, DS3I, E1, E3, E4, EC1, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STM1E, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

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

This command operates a signal loopback on an I/O card or on a cross-connect.

The optional [<LPBKTYPE>] defaults to FACILITY in this command if it is given to a port entity. It defaults to CRS if given to an STS entity.

Notes:

1. The value CRS for the LPBKTYPE parameter is applicable only for the STS modifier. The FACILITY and TERMINAL values are applicable to the ports.
2. The TERMINAL loopback type is not supported for the DS1 line of a DS3XM card.
3. Loopbacks are only allowed to be setup if the port/interface/STS_PATH is in OOS-MT or in OOS-AINS state.
4. Cross-connect loopbacks cannot be applied to the destination end of any 1WAY cross-connect.:
5. A cross-connect loopback can be applied only on one STS path of a cross-connect.
6. A Lockout of the protection command is required before putting the span of either two-fiber or four-fiber BLSR line in loopback. (a) A span lockout of one side (e.g. East side) of the two-fiber BLSR is requried before operating a Facility (or Terminal) line Loopback on the same side (eg. East side) of the ring. (b) A span lockout of one Protection side (e.g. East Protection side) of the four-fiber BLSR is required before operating a Facility (or Terminal) line Loopback on the same side Working line (e.g. East Working side) of the ring.

Section	OPR-LPBK-<MOD2> Description
Category	Testing
Security	Maintenance
Related Messages	RLS-LPBK-<MOD2>

Section	OPR-LPBK-<MOD2> Description (continued)
Input Format	OPR-LPBK-<MOD2>:[<TID>]:<SRC>:<CTAG>::,,,[<LPBKTYPE>]; where: • <SRC> is an access identifier from the "DS1" section on page 4-22. Valid values for AID are facility, DS1, and STS. • <LPBKTYPE> is a loopback type; valid values for <LPBKTYPE> are shown in the "LPBK_TYPE" section on page 4-75
Input Example	OPR-LPBK-DS1:PTREYES:DS1-4-1-2-13:203::,,,FACILITY;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.98 OPR-PROTNSW-<OCN_TYPE>: Operate Protection Switch (OC3, OC12, OC48, OC192)

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

This command initiates a SONET line protection switch request. User switch requests initiated with this command remain active until they are released via the RLS-PROTNSW-OCN command or are overridden by a higher priority protection switch request.

The switch commands; MAN (Manual Switch), FRCD (Forced Switch) and LOCKOUT (Lockout) are supported by the ONS 15454.

Manual Switch of Protection Line (to Working Line). If the AID identifies the protection line, then (only in the 1+1 architecture) service will be transferred from the protection line to the working line, unless a request of equal or higher priority is in effect.

Manual Switch of Working Line (to Protection Line). If the AID identifies a working line, then service will be switched from the working line to the protection line unless a request of equal or higher priority is in effect.

Force Switch of Protection Line (to Working Line). If the AID identifies the protection line, then (only in the 1+1 architecture) service will be transferred from the protection line to the working line unless a request of equal or higher priority is in effect.

Force Switch of Working Line (to Protection Line). If the AID identifies a working line, then service will be transferred from the working line to the protection line unless a request of equal or higher priority is in effect. A lockout of protection and a signal fail of protection line have higher priority than this switch command.

Lockout of Protection Line. If the AID identifies the protection line, this switch command will prevent the working line from switching to protection line. If the working line is already on protection, then the working line will be switched back to its original working line.

Lockout of Protection Line. If the AID identifies protection line, this switch command will prevent the working line from switching to protection line. If the working line is already on protection, then the working line will be switched back from protection line to its original working line.

Notes:

1. This command is not used for the common control (TCC+/TCC2 or XC/XCVT/XC10G) cards. A query on a common control card will generate an IIAC (Input, Invalid Access Identifier) error message. To use this command on the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.

2. Sending this command on non-SONET (OCN) cards, an IIAC (Input, Invalid Access Identifier) error message should be received. To query on a non-SONET card switching command, use the ALW-SWTOPROTN/SWTOWKG-EQPT and INH-SWTOPROTN/SWTOWKG-EQPT commands.
3. When sending this command to query on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message should be received.
4. When sending this command to a working card that is failed or missing, the SROF (Protection Switching Failed) error message should be received.
5. When sending this command to a protect card that is failed or missing, the SROF (Protection Switching Failed) error message should be received.
6. When sending this command to a card that is already in protection with a higher priority, the SSRD (Status, Switch Request Denied) error message should be received.
7. Sending this command to an OCN line with a switching mode that is already in mode, will return a SAMS (Already in the Maintenance State) error message.
8. To get the protection switching state (manual, lockout, forced), use the RTRV-COND-ALL or RTRV-ALM-ALL commands.
9. If the far end of the same span has a higher protection switching state, for example, the near end is under Manual protection switching state, the far end is in the Forced protection switching state, the near end protection switching state will be preemptive and shown as APS_CLEAR switching state over the CTC/TL1 interface. The RTRV-PROTNSW-OCN command is used to retrieve the current switching state of a SONET line.
10. If sending this command with EXERCISE or APS_CLEAR switch operation, an error SROF (Invalid Protection Switch Operation) will be returned because these operations are not valid according to GR-833-CORE.

    The EX-SW-<OCN_BLSR> is the correct command to perform the EXERCISE switch over the BLSR line.
11. Protection switch will be denied if SD/SF is already present on the switching path. If SD/SF is generated on the switching path after the switch is performed, the switch will be overwritten by the APS_CLEAR state. This does not apply for lockout of protection and forced switch which have higher priority than SD/SF.
12. Sending the following Manual Ring switching requests on both east and west sides/spans of a two-fiber or four-fiber ring in less than 30-45 seconds, such as: (a) A single TL1 command with both side/span AIDs (in the list AID format) of the same two-fiber or four-fiber ring; (b) The separated (via TL1, or CTC, or TL1 and CTC user interfaces) queries on the both sides/spans of the same two-fiber or four-fiber ring. The system will only execute one (WEST) side MS-RING query, and preempt the other (EAST) side query. There will be no event messages coming out for the preempted side, which switching state will be in APS-CLEAR state.
13. A lockout of the protection command is required before putting the span of either two-fiber or four-fiber BLSR line in loopback. (a) A span lockout of one side (e.g. East side) of the two-fiber BLSR is required before operating a Facility (or Terminal) line Loopback on the same side (e.g. East side) of the ring. (b) A span lockout of one Protection side (e.g. East Protection side) of the four-fiber BLSR is required before operating a Facility (or Terminal) line Loopback on the same side Working line (e.g. East Working side) of the ring.

Section	OPR-PROTNSW-<OCN_TYPE> Description
Category	SONET Line Protection
Security	Maintenance

Section	OPR-PROTNSW-<OCN_TYPE> Description (continued)	
Related Messages	DLT-FFP-<OCN_TYPE>	EX-SW-<OCN_BLSR>
	DLT-FFP-CLNT	RLS-PROTNSW-<OCN_TYPE>
	ED-FFP-<OCN_TYPE>	RTRV-FFP-<OCN_TYPE>
	ED-FFP-CLNT	RTRV-FFP-CLNT
	ENT-FFP-<OCN_TYPE>	RTRV-PROTNSW-<OCN_TYPE>
	ENT-FFP-CLNT	
Input Format	OPR-PROTNSW-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>::<SC>, [<SWITCHTYPE>]; where: • <AID> identifies the facility in the NE to which the switch request is directed and is from the "FACILITY" section on page 4-24 • <SC> is the switch command on the facility; valid values for <SC> are shown in the "SW" section on page 4-94 • Valid values for <SWITCHTYPE> are shown in the "SWITCH_TYPE" section on page 4-94 ⚠ **Caution** MANWKSWBK, MANWKSWPR, FRCDWKSWBK, FRCDWKSWPR, LOCKOUTOFPR, and LOCKOUTOFWK do not apply to BLSR protection switching.	
Input Example	OPR-PROTNSW-OC48:PETALUMA:FAC-6-1:204::LOCKOUT,SPAN;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.99 OPR-PROTNSW-<STS_PATH>: Operate Protection Switch (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C)

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

This command initiates a SONET path protection switch request. User switch requests initiated with this command (forced switch, lockout, and manual switch) remain active until they are released through the RLS-PROTNSW-<STS_PATH> command or overridden by a higher priority protection switch request.

Notes:

1. This command applies to path protection configuration only.
2. The VTAID should be working or protect AID only.
3. If you send this command on the Drop AID, a DENY (Invalid AID, should use working/protect AID) message will be returned.
4. To get the protection switching state (manual, lockout, forced), use the RTRV-COND-ALL or RTRV-ALM-ALL commands.
5. The GR-1400 does not allow the LOCKOUT_OF_WORKING on the path protection WORKING path/AID. Sending this command on the path protection WORKING path, a SROF (Invalid Protection Switch Operation) is returned.

6. If sending this command with EXERCISE or APS_CLEAR switch operation, an error SROF (Invalid Protection Switch Operation) will be returned because these operations are not valid according to GR-833-CORE.
7. Protection switch will be denied if SD/SF is already present on the switching path. If SD/SF is generated on the switching path after the switch is performed, the switch will be overwritten by the APS_CLEAR state. This does not apply for lockout of protection and forced switch which have higher priority than SD/SF.

Section	OPR-PROTNSW-<STS_PATH> Description
Category	Path Protection Switching
Security	Maintenance
Related Messages	REPT SW RTRV-PROTNSW-<STS_PATH> RLS-PROTNSW-<STS_PATH>
Input Format	OPR-PROTNSW-<STS_PATH>:[<TID>]:<AID>:<CTAG>::<SC>[:]; where: • <AID> identifies the entity in the NE to which the switch request is directed and is from the "STS" section on page 4-27 • <SC> is the switch command that is to be initiated on the paths; valid values for <SC> are shown in the "SW" section on page 4-94
Input Example	OPR-PROTNSW-STS1:CISCO:STS-2-1-1:123::MAN;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.100 OPR-PROTNSW-<VT_PATH>: Operate Protection Switch (VT1, VT2)

This command initiates a SONET path protection switch request. User switch requests initiated with this command (forced switch, lockout, and manual switch) remain active until they are released through the RLS-PROTNSW-<VT_PATH> command or overridden by a higher priority protection switch request.

Notes:

1. This command applies to path protection configuration only.
2. The VTAID should be working or protect AID only.
3. If you send this command on the Drop AID, a DENY (Invalid AID, should use working/protect AID) message will be returned.
4. To get protection switching state (manual, lockout, forced), use the RTRV-COND-ALL or RTRV-ALM-ALL commands.
5. The GR-1400 does not allow the LOCKOUT_OF_WORKING on the path protection WORKING path/AID. Sending this command on the path protection WORKING path, a SROF (Invalid Protection Switch Operation) is returned.
6. If sending this command with EXERCISE or APS_CLEAR switch operation, an error SROF (Invalid Protection Switch Operation) will be returned because these operations are not valid according to GR-833-CORE.
7. Protection switch will be denied if SD/SF is already present on the switching path. If the switch is operated and later SD/SF is generated on the switching path, then the switch will be overwritten by the APS_CLEAR state.

The above rule will not be applicable to Lockout of Protection and Forced Switch as they have higher priority than SD/SF.

Section	OPR-PROTNSW-<VT_PATH> Description	
Category	Path Protection Switching	
Security	Maintenance	
Related Messages	OPR-PROTNSW-<STS_PATH>	RLS-PROTNSW-<VT_PATH>
	REPT SW	RTRV-PROTNSW-<STS_PATH>
	RLS-PROTNSW-<STS_PATH>	RTRV-PROTNSW-<VT_PATH>
Input Format	OPR-PROTNSW-<VT_PATH>:[<TID>]:<AID>:<CTAG>::<SC>[:]; where: • <AID> identifies the entity in the NE to which the switch request is directed and is from the "VT1_5" section on page 4-33 • <SC> is the switch command that is to be initiated on the paths; valid values for <SC> are shown in the "SW" section on page 4-94	
Input Example	OPR-PROTNSW-VT1:CISCO:VT1-5-2-4-1:123::MAN;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.101 OPR-PROTNSW-CLNT: Operate Protection Switch Client

(Cisco ONS 15454 only)

This command instructs the NE to initiate a Y cable protection switch request. User switch requests initiated with this command remain active until they are released via the RLS-PROTNSW-CLNT command or are overridden by a higher priority protection switch request.

The switch commands MAN (Manual Switch), FRCD (Forced Switch) and LOCKOUT (Lockout) switch command are supported by the Cisco ONS 15454.

Manual Switch of Protection Line (to Working Line) -- If the AID identifies the protection line, then service will be transferred from the protection line to the working line, unless a request of equal or higher priority is in effect.

Manual Switch of Working Line (to Protection Line) -- If the AID identifies a working line, then service will be switched from the working line to the protection line unless a request of equal or higher priority is in effect.

Force Switch of Protection Line (to Working Line) -- If the AID identifies the protection line, then service will be transferred from the protection line to the working line unless a request of equal or higher priority is in effect.

Force Switch of Working Line (to Protection Line) -- If the AID identifies a working line, then service will be transferred from the working line to the protection line unless a request of equal or higher priority is in effect. A lockout of protection and a signal fail of protection line have higher priority than this switch command.

Lockout of Protection Line -- If the AID identifies protection line, this switch command will prevent the working line from switching to protection line. If the working line is already on protection, then the working line will be switched back from protection line to its original working line.

Lockout of Protection Line -- If the AID identifies protection line, this switch command will prevent the working line from switching to protection line. If the working line is already on protection, then the working line will be switched back from protection line to its original working line.

If this command is used against pre-provisioned cards, the SROF (Protection Switching Failed) error will be returned.

Section	OPR-PROTNSW-CLNT Description	
Category	DWDM	
Security	Maintenance	
Related Messages	DLT-FFP-CLNT	RLS-LASER-OTS
	DLT-LNK-<MOD2O>	RLS-PROTNSW-CLNT
	ED-CLNT	RLS-PROTNSW-OCH
	ED-DWDM	RTRV-CLNT
	ED-FFP-CLNT	RTRV-DWDM
	ED-FFP-OCH	RTRV-FFP-CLNT
	ED-LNK-<MOD2O>	RTRV-FFP-OCH
	ED-OCH	RTRV-LNK-<MOD2O>
	ED-OMS	RTRV-OCH
	ED-OTS	RTRV-OMS
	ED-TRC-CLNT	RTRV-OTS
	ED-TRC-OCH	RTRV-PROTNSW-CLNT
	ENT-FFP-CLNT	RTRV-PROTNSW-OCH
	ENT-LNK-<MOD2O>	RTRV-TRC-CLNT
	OPR-LASER-OTS	RTRV-TRC-OCH
	OPR-PROTNSW-OCH	
Input Format	OPR-PROTNSW-CLNT:[<TID>]:<AID>:<CTAG>::<SC>[:]; where: • <AID> is the AID from the "FACILITY" section on page 4-24 • <SC> identifies the switch operation; valid values are shown in the "SW" section on page 4-94	
Input Example	OPR-PROTNSW-CLNT:CISCO:FAC-1-1:100::FRCD;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.102 OPR-PROTNSW-OCH: Operate Protection Switch OCH

(Cisco ONS 15454 only)

This command operates a protection switch on the trunk port of a TXPP_MR_2.5G card.

Section	OPR-PROTNSW-OCH Description	
Category	DWDM	
Security	Maintenance	
Related Messages	DLT-FFP-CLNT	RLS-LASER-OTS
	DLT-LNK-<MOD2O>	RLS-PROTNSW-CLNT
	ED-CLNT	RLS-PROTNSW-OCH
	ED-DWDM	RTRV-CLNT
	ED-FFP-CLNT	RTRV-DWDM
	ED-FFP-OCH	RTRV-FFP-CLNT
	ED-LNK-<MOD2O>	RTRV-FFP-OCH
	ED-OCH	RTRV-LNK-<MOD2O>
	ED-OMS	RTRV-OCH
	ED-OTS	RTRV-OMS
	ED-TRC-CLNT	RTRV-OTS
	ED-TRC-OCH	RTRV-PROTNSW-CLNT
	ENT-FFP-CLNT	RTRV-PROTNSW-OCH
	ENT-LNK-<MOD2O>	RTRV-TRC-CLNT
	OPR-LASER-OTS	RTRV-TRC-OCH
	OPR-PROTNSW-CLNT	
Input Format	OPR-PROTNSW-OCH:[<TID>]:<AID>:<CTAG>::<CMDMODE>[:]; where: • <AID> indicates the trunk port and is the AID from the "CHANNEL" section on page 4-18 • Valid values for <CMDMODE> are shown in the "CMD_MODE" section on page 4-50	
Input Example	OPR-PROTNSW-OCH:VA454-22:CHAN-2-2:100::FRCD;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.103 OPR-SYNCNSW: Operate Synchronization Switch

This command initiates a switch to the reference specified by the synchronization reference number if the reference supplied is valid.

For manual types of switches the reference to which you want to switch should be of the same quality as the active reference source, otherwise the command will fail.

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

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

Once the switch is effective, a minor alarm "MANSWTOPRI" (Manual Switch to Primary or Secondary Reference...) will be raised for Manual switches and alarms like "FRCDSWTOPRI" (Forced Switch to Primary or Secondary Reference...) will be raised for Forced switches.

Section	OPR-SYNCNSW Description	
Category	Synchronization	
Security	Maintenance	
Related Messages	ED-BITS	RTRV-ALM-BITS
	ED-NE-SYNCN	RTRV-ALM-SYNCN
	ED-SYNCN	RTRV-BITS
	REPT ALM BITS	RTRV-COND-BITS
	REPT ALM SYNCN	RTRV-COND-SYNCN
	REPT EVT BITS	RTRV-NE-SYNCN
	REPT EVT SYNCN	RTRV-SYNCN
	RLS-SYNCNSW	
Input Format	OPR-SYNCNSW:[<TID>]:[<AID>]:<CTAG>::<SWITCHTO>,[<SC>]; where: • <AID> is the access identifier from the "SYNC_REF" section on page 4-30. THe default value is SYNC-NE. • <SWITCHTO> identifies the new synchronization reference that will be used and is the AID from the "SYNCSW" section on page 4-31 • <SC> is the switch command to be issued. Only manual (MAN) and forced (FRCD) switches are allowed for this command. Valid values for <SC> are shown in the "SW" section on page 4-94. The default value is "MAN"	
Input Example	OPR-SYNCNSW:CISCO:SYNC-NE:3::PRI,MAN;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.104 REPT ALM <MOD2ALM>: Report Alarm (CLNT, DS1, DS3I, E1, E100, E1000, E3, E4, EC1, FSTE, G1000, GIGE, OC12, OC192, OC3, OC48, OCH, OMS, OSC, OTS, POS, STM1E, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, UDCDCC, UDCF, VT1, VT2, WLEN)

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

Reports an alarm condition against a facility or a path.

Section	REPT ALM <MOD2ALM> Description
Category	Fault
Security	Retrieve

Section	REPT ALM <MOD2ALM> Description (continued)	
Related Messages	REPT ALM BITS	RTRV-ALM-EQPT
	REPT ALM COM	RTRV-ALM-RING
	REPT ALM ENV	RTRV-ALM-SYNCN
	REPT ALM EQPT	RTRV-ALM-UCP
	REPT ALM RING	RTRV-COND-<MOD2ALM>
	REPT ALM SYNCN	RTRV-COND-ALL
	REPT ALM UCP	RTRV-COND-BITS
	REPT EVT COM	RTRV-COND-ENV
	RTRV-ALM-<MOD2ALM>	RTRV-COND-EQPT
	RTRV-ALM-ALL	RTRV-COND-RING
	RTRV-ALM-BITS	RTRV-COND-SYNCN
	RTRV-ALM-ENV	RTRV-COND-UCP
Output Format	SID DATE TIME ** ATAG REPT ALM <MOD2ALM> "<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,:[<DESC>], [<AIDDET>]" ; where: • <AID> is the access identifier from the "ALL" section on page 4-9 • <NTFCNCDE> indicates a 2-letter notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82 • <CONDTYPE> indicates an alarm condition; valid values for <CONDTYPE> are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values for <SRVEFF> are shown in the "SERV_EFF" section on page 4-91 • <DESC> is the condition description; <DESC> is a string and is optional • <AIDDET> specifies the AID type; valid values for <AIDDET> are shown in the "EQPT_TYPE" section on page 4-68, <AIDDET> is optional	
Output Example	TID-000 1998-06-20 14:30:00 ** 100.100 REPT ALM CLNT "FAC-2-1:MJ,LOS,SA,,,,:\"LOSS OF SIGNAL\",OC12" ;	

3.4.105 REPT ALM BITS: Report Alarm Building Integrated Timing Supply

Reports an alarm condition on a BITS facility.

Section	REPT ALM BITS Description
Category	Synchronization
Security	Retrieve

Section	REPT ALM BITS Description (continued)	
Related Messages	ED-BITS	RTRV-ALM-BITS
	ED-NE-SYNCN	RTRV-ALM-ENV
	ED-SYNCN	RTRV-ALM-EQPT
	OPR-SYNCNSW	RTRV-ALM-RING
	REPT ALM <MOD2ALM>	RTRV-ALM-SYNCN
	REPT ALM COM	RTRV-ALM-UCP
	REPT ALM ENV	RTRV-BITS
	REPT ALM EQPT	RTRV-COND-<MOD2ALM>
	REPT ALM RING	RTRV-COND-ALL
	REPT ALM SYNCN	RTRV-COND-BITS
	REPT ALM UCP	RTRV-COND-ENV
	REPT EVT BITS	RTRV-COND-EQPT
	REPT EVT COM	RTRV-COND-RING
	REPT EVT SYNCN	RTRV-COND-SYNCN
	RLS-SYNCNSW	RTRV-COND-UCP
	RTRV-ALM-<MOD2ALM>	RTRV-NE-SYNCN
	RTRV-ALM-ALL	RTRV-SYNCN
Output Format	SID DATE TIME ** ATAG REPT ALM BITS "<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,:[<DESC>]" ; where: • <AID> is the access identifier from the "BITS" section on page 4-16 • <NTFCNCDE> identifies a 2-letter notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82 • <CONDTYPE> indicates an alarm condition; valid values for <CONDTYPE> are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values for <SRVEFF> are shown in the "SERV_EFF" section on page 4-91 • <DESC> is the condition description; <DESC> is a string and is optional	
Output Example	TID-000 1998-06-20 14:30:00 ** 100.100 REPT ALM BITS "BITS-1:MJ,SYNC,SA,,,,:\"LOSS OF TIMING\"" ;	

3.4.106 REPT ALM COM: Report Alarm COM

Reports an alarm condition when an AID cannot be given, for example, a fan failure is reported using this message.

Section	REPT ALM COM Description	
Category	Fault	
Security	Retrieve	
Related Messages	REPT ALM <MOD2ALM>	RTRV-ALM-EQPT
	REPT ALM BITS	RTRV-ALM-RING
	REPT ALM ENV	RTRV-ALM-SYNCN
	REPT ALM EQPT	RTRV-ALM-UCP
	REPT ALM RING	RTRV-COND-<MOD2ALM>
	REPT ALM SYNCN	RTRV-COND-ALL
	REPT ALM UCP	RTRV-COND-BITS
	REPT EVT COM	RTRV-COND-ENV
	RTRV-ALM-<MOD2ALM>	RTRV-COND-EQPT
	RTRV-ALM-ALL	RTRV-COND-RING
	RTRV-ALM-BITS	RTRV-COND-SYNCN
	RTRV-ALM-ENV	RTRV-COND-UCP
Output Format	SID DATE TIME ** ATAG REPT ALM COM "[<AID>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,:[<DESC>]" ; where: • <AID> indicates the alarm without AID; <AID> is a string and is optional • <NTFCNCDE> indicates a notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82 • <CONDTYPE> indicates an alarm condition; valid values for <CONDTYPE> are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values for <SRVEFF> are shown in the "SERV_EFF" section on page 4-91 • <DESC> is the condition description; <DESC> is a string and is optional	
Output Example	TID-000 1998-06-20 14:30:00 ** 100.100 REPT ALM COM "COM:MJ,FAN,NSA,,,,:\"FAN FAILURE\"" ;	

3.4.107 REPT ALM ENV: Report Alarm Environment

Reports a customer-defined condition on an environmental alarm input.

Section	REPT ALM ENV Description
Category	Environment Alarms and Controls
Security	Retrieve

Section	REPT ALM ENV Description (continued)	
Related Messages	OPR-ACO-ALL	RTRV-ALM-RING
	OPR-EXT-CONT	RTRV-ALM-SYNCN
	REPT ALM <MOD2ALM>	RTRV-ALM-UCP
	REPT ALM BITS	RTRV-ATTR-CONT
	REPT ALM COM	RTRV-ATTR-ENV
	REPT ALM EQPT	RTRV-COND-<MOD2ALM>
	REPT ALM RING	RTRV-COND-ALL
	REPT ALM SYNCN	RTRV-COND-BITS
	REPT ALM UCP	RTRV-COND-ENV
	REPT EVT COM	RTRV-COND-EQPT
	REPT EVT ENV	RTRV-COND-RING
	RLS-EXT-CONT	RTRV-COND-SYNCN
	RTRV-ALM-<MOD2ALM>	RTRV-COND-UCP
	RTRV-ALM-ALL	RTRV-EXT-CONT
	RTRV-ALM-BITS	SET-ATTR-CONT
	RTRV-ALM-ENV	SET-ATTR-ENV
	RTRV-ALM-EQPT	
Output Format	SID DATE TIME ** ATAG REPT ALM ENV "<AID>:<NTFCNCDE>,<ALMTYPE>,,,[<DESC>]" ; where: • <AID> identifies an environmental input and is from the "ENV" section on page 4-22 • <NTFCNCDE> identifies a 2-letter notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82 • <ALMTYPE> abbreviated code identifying the alarm; valid values for <ALMTYPE> are shown in the "ENV_ALM" section on page 4-66 • <DESC> is the alarm message; <DESC> is a string and is optional	
Output Example	TID-000 1998-06-20 14:30:00 ** 100.100 REPT ALM ENV "ENV-IN-1:MJ,OPENDR,,,\"OPEN DOOR\"" ;	

3.4.108 REPT ALM EQPT: Report Alarm Equipment

Reports an alarm condition against an equipment unit or slot.

Section	REPT ALM EQPT Description	
Category	Equipment	
Security	Retrieve	
Related Messages	ALW-SWDX-EQPT	RTRV-ALM-ALL
	ALW-SWTOPROTN-EQPT	RTRV-ALM-BITS
	ALW-SWTOWKG-EQPT	RTRV-ALM-ENV
	DLT-EQPT	RTRV-ALM-EQPT
	ED-EQPT	RTRV-ALM-RING
	ENT-EQPT	RTRV-ALM-SYNCN
	INH-SWDX-EQPT	RTRV-ALM-UCP
	INH-SWTOPROTN-EQPT	RTRV-COND-<MOD2ALM>
	INH-SWTOWKG-EQPT	RTRV-COND-ALL
	REPT ALM <MOD2ALM>	RTRV-COND-BITS
	REPT ALM BITS	RTRV-COND-ENV
	REPT ALM COM	RTRV-COND-EQPT
	REPT ALM ENV	RTRV-COND-RING
	REPT ALM RING	RTRV-COND-SYNCN
	REPT ALM SYNCN	RTRV-COND-UCP
	REPT ALM UCP	RTRV-EQPT
	REPT EVT COM	SW-DX-EQPT
	REPT EVT EQPT	SW-TOPROTN-EQPT
	RTRV-ALM-<MOD2ALM>	SW-TOWKG-EQPT

Section	REPT ALM EQPT Description (continued)
Output Format	SID DATE TIME ** ATAG REPT ALM EQPT "<AID>:<NTFCNCDE>,<CONDITION>,<SRVEFF>,,,,:[<DESC>], [<AIDDET>]" ; where: • <AID> is the equipment AID SLOT from the "EQPT" section on page 4-23 • <NTFCNCDE> is the notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82 • <CONDITION> is the type of alarm condition; valid values for <CONDTYPE> are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values for <SRVEFF> are shown in the "SERV_EFF" section on page 4-91 • <DESC> is the condition description; <DESC> is a string and is optional • <AIDDET> specifies the type of AID; valid values for <AIDDET> are shown in the "EQPT_TYPE" section on page 4-68, <AIDDET> is optional
Output Example	TID-000 1998-06-20 14:30:00 ** 100.100 REPT ALM EQPT "SLOT-7:MJ,CONTR,NSA,,,,:\"CONTROLLER FAILURE\",TCC" ;

3.4.109 REPT ALM RING: Report Alarm Ring

Reports an alarm condition against a ring object for BLSR.

Section	REPT ALM RING Description
Category	Fault
Security	Retrieve

Section	REPT ALM RING Description (continued)	
Related Messages	DLT-BLSR	RTRV-ALM-ENV
	ED-BLSR	RTRV-ALM-EQPT
	ENT-BLSR	RTRV-ALM-RING
	REPT ALM <MOD2ALM>	RTRV-ALM-SYNCN
	REPT ALM BITS	RTRV-ALM-UCP
	REPT ALM COM	RTRV-BLSR
	REPT ALM ENV	RTRV-COND-<MOD2ALM>
	REPT ALM EQPT	RTRV-COND-ALL
	REPT ALM SYNCN	RTRV-COND-BITS
	REPT ALM UCP	RTRV-COND-ENV
	REPT EVT COM	RTRV-COND-EQPT
	REPT EVT RING	RTRV-COND-RING
	RTRV-ALM-<MOD2ALM>	RTRV-COND-SYNCN
	RTRV-ALM-ALL	RTRV-COND-UCP
	RTRV-ALM-BITS	
Output Format	SID DATE TIME ** ATAG REPT ALM RING "<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,:[<DESC>]" ; where: • <AID> is from the "BLSR" section on page 4-17 • <NTFCNCDE> indicates a 2-letter notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82 • <CONDTYPE> indicates a BLSR alarm; valid values for <CONDTYPE> are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values for <SRVEFF> are shown in the "SERV_EFF" section on page 4-91 • <DESC> is the condition description; <DESC> is a string and is optional	
Output Example	TID-000 1998-06-20 14:30:00 ** 100.100 REPT ALM RING "BLSR-999:MJ,PRC-DUPID,SA,,,,:\"DUPLICATE NODE ID\"," ;	

3.4.110 REPT ALM SECU: Report Alarm Security

Reports the occurrence of an alarmed security event against the NE.

Based on TR-NWT-000835, the AID of the security alarm should be the Connection IDentifier (CID) which is not currently supported.

The COM or UID is an acceptable substitute for the AID.

Note The INTRUSION-PSWD condition is the only condition that is reported as a standing condition instead of a transient condition. It defaults to NA and is reported by the REPT EVT SECU message. However, it can be reprovisioned to be reported at a higher severity. If the severity of this alarm is higher than NA, it is reported by the REPT ALM SECU message.

Section	REPT ALM SECU Description	
Category	Security	
Security	Superuser	
Related Messages	ACT-USER	REPT EVT SECU
	ALW-MSG-SECU	REPT EVT SESSION
	CANC	RTRV-ALM-<MOD2ALM>
	CANC-USER	RTRV-ALM-ALL
	CLR-COND-SECU	RTRV-ALM-BITS
	DLT-USER-SECU	RTRV-ALM-ENV
	ED-PID	RTRV-ALM-EQPT
	ED-USER-SECU	RTRV-ALM-RING
	ENT-USER-SECU	RTRV-ALM-SYNCN
	INH-MSG-SECU	RTRV-ALM-UCP
	REPT ALM <MOD2ALM>	RTRV-COND-<MOD2ALM>
	REPT ALM BITS	RTRV-COND-ALL
	REPT ALM COM	RTRV-COND-BITS
	REPT ALM ENV	RTRV-COND-ENV
	REPT ALM EQPT	RTRV-COND-EQPT
	REPT ALM RING	RTRV-COND-RING
	REPT ALM SYNCN	RTRV-COND-SYNCN
	REPT ALM UCP	RTRV-COND-UCP
	REPT EVT COM	RTRV-USER-SECU

Section	REPT ALM SECU Description (continued)
Output Format	SID DATE TIME ** ATAG REPT ALM SECU "<AID>:<NOTIFCODE>,<SECUALMTYPE>" ; where: • <AID> identifies an entity with the condition. It defaults to COM and is a string • <NOTIFCODE> indicates a 2-letter notification code; valid values for <NOTIFCODE> are shown in the "NOTIF_CODE" section on page 4-82 • <SECUALMTYPE> security alarm type; it is a subset of the CONDITION type. Valid values are shown in the "SECUALMTYPE" section on page 4-91. For R4.1 and 4.5 the only allowable type is INTRUSION-PSWD.
Output Example	TID-000 1998-06-20 14:30:00 ** 100.100 REPT ALM SECU "COM:CR,INTRUSION-PSWD" ;

3.4.111 REPT ALM SYNCN: Report Alarm Synchronization

Reports an alarm condition against a synchronization reference.

Section	REPT ALM SYNCN Description	
Category	Synchronization	
Security	Retrieve	
Related Messages	ED-BITS	RTRV-ALM-BITS
	ED-NE-SYNCN	RTRV-ALM-ENV
	ED-SYNCN	RTRV-ALM-EQPT
	OPR-SYNCNSW	RTRV-ALM-RING
	REPT ALM <MOD2ALM>	RTRV-ALM-SYNCN
	REPT ALM BITS	RTRV-ALM-UCP
	REPT ALM COM	RTRV-BITS
	REPT ALM ENV	RTRV-COND-<MOD2ALM>
	REPT ALM EQPT	RTRV-COND-ALL
	REPT ALM RING	RTRV-COND-BITS
	REPT ALM UCP	RTRV-COND-ENV
	REPT EVT BITS	RTRV-COND-EQPT
	REPT EVT COM	RTRV-COND-RING
	REPT EVT SYNCN	RTRV-COND-SYNCN
	RLS-SYNCNSW	RTRV-COND-UCP
	RTRV-ALM-<MOD2ALM>	RTRV-NE-SYNCN
	RTRV-ALM-ALL	RTRV-SYNCN

Section	REPT ALM SYNCN Description (continued)
Output Format	SID DATE TIME ** ATAG REPT ALM SYNCN "<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,:[<DESC>]" ; where: • <AID> identifies a synchronization reference with alarm condition and is from the "SYNC_REF" section on page 4-30 • <NTFCNCDE> indicates a 2-letter notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82 • <CONDTYPE> indicates an alarm condition; valid values for <CONDTYPE> are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values for <SRVEFF> are shown in the "SERV_EFF" section on page 4-91 • <DESC> is the condition description; <DESC> is a string and is optional
Output Example	TID-000 1998-06-20 14:30:00 ** 100.100 REPT ALM SYNCN "SYNC-NE:MJ,MAN,SA,,,,:\"MANUAL SWITCH\"," ;

3.4.112 REPT ALM UCP: Report Alarm Unified Control Plane

Reports an alarm condition against a UCP object.

Section	REPT ALM UCP Description
Category	UCP
Security	Retrieve

Section	REPT ALM UCP Description (continued)	
Related Messages	DLT-UCP-CC	RTRV-ALM-ALL
	DLT-UCP-IF	RTRV-ALM-BITS
	DLT-UCP-NBR	RTRV-ALM-ENV
	ED-UCP-CC	RTRV-ALM-EQPT
	ED-UCP-IF	RTRV-ALM-RING
	ED-UCP-NBR	RTRV-ALM-SYNCN
	ED-UCP-NODE	RTRV-ALM-UCP
	ENT-UCP-CC	RTRV-COND-<MOD2ALM>
	ENT-UCP-IF	RTRV-COND-ALL
	ENT-UCP-NBR	RTRV-COND-BITS
	REPT ALM <MOD2ALM>	RTRV-COND-ENV
	REPT ALM BITS	RTRV-COND-EQPT
	REPT ALM COM	RTRV-COND-RING
	REPT ALM ENV	RTRV-COND-SYNCN
	REPT ALM EQPT	RTRV-COND-UCP
	REPT ALM RING	RTRV-UCP-CC
	REPT ALM SYNCN	RTRV-UCP-IF
	REPT EVT COM	RTRV-UCP-NBR
	REPT EVT UCP	RTRV-UCP-NODE
	RTRV-ALM-<MOD2ALM>	
Output Format	SID DATE TIME ** ATAG REPT ALM UCP “<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,:[<DESC>]” ; where: • <AID> identifies a UCP object with alarm condition and is from the “ALL” section on page 4-9 • <NTFCNCDE> is a notification code; valid values for <NTFCNCDE> are shown in the “NOTIF_CODE” section on page 4-82 • <CONDTYPE> is the type of condition to be retrieved; valid values for <CONDTYPE> are shown in the “CONDITION” section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values for <SRVEFF> are shown in the “SERV_EFF” section on page 4-91 • <DESC> is the condition description; <DESC> is a string and is optional	
Output Example	TID-000 1998-06-20 14:30:00 ** 100.100 REPT ALM UCP “CC-1:MJ,LMP-HELLODOWN,SA,,,,: \“LMP HELLO FSM ON CONTROL CHANNEL DOWN\”,” ;	

3.4.113 REPT DBCHG: Report Database Change Message

Reports any changes on the NE that result from:

1. TL1 provisioning commands or their GUI equivalents containing the verbs: ALW, DLT, ED, ENT, INH, INIT, OPR, RLS, SET, and SW (for example, DLT-EQPT, ENT-CRS-STS1)
2. External event such as a board insertion.

Section	REPT DBCHG Description
Category	Log
Security	Retrieve
Related Messages	ALW-MSG-DBCHG INH-MSG-DBCHG RTRV-LOG
Output Format	SID DATE TIME A ATAG REPT DBCHG "TIME=<TIME>,DATE=<DATE>,[SOURCE=<SOURCE>,] [USERID=<USERID>,]DBCHGSEQ=<DBCHGSEQ>:<COMMAND>:<VT>" ; where: • <TIME> is the time of the message triggered by the NE; <TIME> is a time • <DATE> is the date of the message triggered by the NE; <DATE> is a date • <SOURCE> is an input command CTAG if present; <SOURCE> is an integer and is optional • <USERID> is the user name or user identifier; <USERID> is a string and is optional • <DBCHGSEQ> is a sequential number of the DBCHG message; <DBCHGSEQ> is an integer • <COMMAND> is the input command or substitute; <COMMAND> is a string • <VT> is the AID from the "VT1_5" section on page 4-33
Output Example	TID-000 1998-06-20 14:30:00 A 001 REPT DBCHG "TIME=14-35-46,DATE=99-07-28,SOURCE=123,USERID=CISCO15, DBCHGSEQ=456:ENT-CRS-VT1:VT1-4-1-2-6-4" ;

3.4.114 REPT EVT <MOD2ALM>: Report Event (CLNT, DS1, DS3I, E1, E100, E1000, E3, E4, EC1, FSTE, G1000, GIGE, OC12, OC192, OC3, OC48, OCH, OMS, OSC, OTS, POS, STM1E, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, UDCDCC, UDCF, VT1, VT2, WLEN)

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

Reports the occurrence of a non-alarmed event.

Section	REPT EVT <MOD2ALM> Description
Category	Fault
Security	Retrieve
Related Messages	—
Output Format	SID DATE TIME A ATAG REPT EVT <MOD2ALM> "<AID>:<CONDTYPE>,[<CONDEFF>],,,[<LOCN>],,[<MONVAL>], [<THLEV>],[<TMPER>]:[<DESC>],[<AIDDET>]" ; where: • <AID> indicates an event with the condition type and is from the "ALL" section on page 4-9 • <CONDTYPE> indicates an event with the condition type and is a string • <CONDEFF> is the effect of the condition on the NE; valid values are shown in the "COND_EFF" section on page 4-50, <CONDEFF> is optional • <LOCN> indicates the location; valid values for <LOCN> are shown in the "LOCATION" section on page 4-75, <LOCN> is optional • <MONVAL> is the monitored value and is a float; <MONVAL> is an integer and is optional • <THLEV> is the threshold value and is a float; <THLEV> is an integer and is optional • <TMPER> is the accumulation time period for the PM information; valid values for <TMPER> are shown in the "TMPER" section on page 4-98. <TMPER> is optional • <DESC> is the condition description; <DESC> is a string and is optional • <AIDDET> specifies the type of AID; valid values for <AIDDET> are shown in the "EQPT_TYPE" section on page 4-68, <AIDDET> is optional
Output Example	TID-000 1998-06-20 14:30:00 A 100.100 REPT EVT DS1 "FAC-5-1:WKSWPR,TC,,,FEND,,12,13,15-MIN: \"WORKING SWITCH TO PROTECTION\",OC48" ;

3.4.115 REPT EVT BITS: Report Event BITS

Reports a non-alarmed event against a BITS facility.

Section	REPT EVT BITS Description
Category	Synchronization
Security	Retrieve

Section	REPT EVT BITS Description (continued)	
Related Messages	ED-BITS	RTRV-ALM-BITS
	ED-NE-SYNCN	RTRV-ALM-SYNCN
	ED-SYNCN	RTRV-BITS
	OPR-SYNCNSW	RTRV-COND-BITS
	REPT ALM BITS	RTRV-COND-SYNCN
	REPT ALM SYNCN	RTRV-NE-SYNCN
	REPT EVT SYNCN	RTRV-SYNCN
	RLS-SYNCNSW	
Output Format	SID DATE TIME A ATAG REPT EVT BITS "<AID>:<CONDTYPE>,[<CONDEFF>],,,,,,,:[<DESC>]" ; where: • <AID> indicates an access identifier and is from the "BITS" section on page 4-16 • <CONDTYPE> indicates a condition type and the valid values are shown in the "CONDITION" section on page 4-51 • <CONDEFF> indicates an effect of the condition on the NE; valid values for are shown in the "COND_EFF" section on page 4-50, <CONDEFF> is optional • <DESC> is the condition description; <DESC> is a string and is optional	
Output Example	TID-000 1998-06-20 14:30:00 A 100.100 REPT EVT BITS "BITS-1:SSM-STU,TC,,,,,,,:\"SYNCHRONIZED - TRACEABILITY UNKNOWN\"" ;	

3.4.116 REPT EVT COM: Report Event COM

Reports a non-alarmed event against an NE when there is no AID associated with it.

Section	REPT EVT COM Description
Category	Fault
Security	Retrieve

Section	REPT EVT COM Description (continued)	
Related Messages	REPT ALM <MOD2ALM>	RTRV-ALM-EQPT
	REPT ALM BITS	RTRV-ALM-RING
	REPT ALM COM	RTRV-ALM-SYNCN
	REPT ALM ENV	RTRV-ALM-UCP
	REPT ALM EQPT	RTRV-COND-<MOD2ALM>
	REPT ALM RING	RTRV-COND-ALL
	REPT ALM SYNCN	RTRV-COND-BITS
	REPT ALM UCP	RTRV-COND-ENV
	RTRV-ALM-<MOD2ALM>	RTRV-COND-EQPT
	RTRV-ALM-ALL	RTRV-COND-RING
	RTRV-ALM-BITS	RTRV-COND-SYNCN
	RTRV-ALM-ENV	RTRV-COND-UCP
Output Format	SID DATE TIME A ATAG REPT EVT COM "[<AID>]:<CONDTYPE>,[<CONDEFF>],,,,,,,:[<DESC>]" ; where: • <AID> indicates this event is from the NE. <AID> is a string and is optional. • <CONDTYPE> indicates an event condition type. Valid values are shown in the "CONDITION" section on page 4-51 • <CONDEFF> indicates an effect of the condition on the NE; valid values for <CONDEFF> are shown in the "COND_EFF" section on page 4-50, <CONDEFF> is optional • <DESC> is the description message for the condition; <DESC> is a string and is optional	
Output Example	TID-000 1998-06-20 14:30:00 A 100.100 REPT EVT COM "COM:CLDRESTART,TC,,,,,,,:\"COLD RESTART\"," ;	

3.4.117 REPT EVT ENV: Report Event Environment

Reports the occurrence of a non-alarmed event against an environment alarm input.

Section	REPT EVT ENV Description
Category	Environment Alarms and Controls
Security	Retrieve

Section	REPT EVT ENV Description (continued)	
Related Messages	OPR-ACO-ALL	RTRV-ATTR-ENV
	OPR-EXT-CONT	RTRV-COND-ENV
	REPT ALM ENV	RTRV-EXT-CONT
	RLS-EXT-CONT	SET-ATTR-CONT
	RTRV-ALM-ENV	SET-ATTR-ENV
	RTRV-ATTR-CONT	
Output Format	SID DATE TIME A ATAG REPT EVT ENV "<AID>:<ALMTYPE>,[<CONDEFF>],,,,,,,:[<DESC>]" ; where: • <AID> identifies an environmental input and is from the "ENV" section on page 4-22 • <ALMTYPE> is an abbreviated code identifying the alarm and the valid values are shown in the "ENV_ALM" section on page 4-66 • <CONDEFF> indicates an effect of the condition on the NE; valid values for <CONDEFF> are shown in the "COND_EFF" section on page 4-50, <CONDEFF> is optional • <DESC> is an alarm message; <DESC> is a string and is optional	
Output Example	TID-000 1998-06-20 14:30:00 A 100.100 REPT EVT ENV "ENV-IN-2:OPENDR,TC,,,,,,,:\"OPEN DOOR\"" ;	

3.4.118 REPT EVT EQPT: Report Event Equipment

Reports the occurrence of a non-alarmed event against an equipment unit or slot.

Section	REPT EVT EQPT Description	
Category	Equipment	
Security	Retrieve	
Related Messages	ALW-SWDX-EQPT	INH-SWTOWKG-EQPT
	ALW-SWTOPROTN-EQPT	REPT ALM EQPT
	ALW-SWTOWKG-EQPT	RTRV-ALM-EQPT
	DLT-EQPT	RTRV-COND-EQPT
	ED-EQPT	RTRV-EQPT
	ENT-EQPT	SW-DX-EQPT
	INH-SWDX-EQPT	SW-TOPROTN-EQPT
	INH-SWTOPROTN-EQPT	SW-TOWKG-EQPT

Section	REPT EVT EQPT Description (continued)
Output Format	SID DATE TIME A ATAG REPT EVT EQPT "<AID>:<CONDTYPE>,[<CONDEFF>],,,,,,,:[<DESC>],[<AIDDET>]" ; where: • <AID> indicates an equipment AID SLOT and is from the "EQPT" section on page 4-23 • <CONDTYPE> indicates an event condition type; <CONDTYPE> defaults to EQPT and the valid values are shown in the "CONDITION" section on page 4-51 • <CONDEFF> indicates an effect of the condition on the NE; valid values for <CONDEFF> are shown in the "COND_EFF" section on page 4-50, <CONDEFF> is optional • <DESC> is the condition description; <DESC> is a string and is optional • <AIDDET> specifies the type of AID; valid values for <AIDDET> are shown in the "EQPT_TYPE" section on page 4-68, <AIDDET> is optional
Output Example	TID-000 1998-06-20 14:30:00 A 100.100 REPT EVT EQPT "SLOT-7:PLUGIN,TC,,,,,,,:\"EQUIPMENT PLUG-IN\",TCC" ;

3.4.119 REPT EVT FXFR: Report Event Software Download

Reports the FTP software download status of the start, completion, and completed percentage.

Notes:

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

Section	REPT EVT FXFR Description
Category	Software Download (R4.1)/File Transfer (R4.5)
Security	Retrieve
Related Messages	APPLY COPY-RFILE

Section	REPT EVT FXFR Description (continued)
Output Format	SID DATE TIME A ATAG REPT EVT FXFR "<FILENAME>,<FXFR_STATUS>,[<FXFR_RSLT>],[<BYTES_XFRD>]" ; where: • <FILENAME> when a package is being transferred between the FTP server and the controller cards, the <FILENAME> field will contain the string "active". Following the transfer, if there is a second controller card on the node, the file will be copied over to the second card. While this is happening, REPT EVT FXFR messages will be generated with a filename of "standby". <FILENAME> is a string • <FXFR_STATUS> indicates the file transferred status; START, or IP (In Progress), or COMPLD. Valid values for <FXFR_STATUS> are shown in the "TX_STATUS" section on page 4-100 • <FXFR_RSLT> indicates the file transferred result; SUCCESS or FAILURE. Valid values for <FXFR_RSLT> are shown in the "TX_RSLT" section on page 4-100 and <FXFR_RSLT> is optional • <BYTES_XFRD> indicates the transferred byte count; <BYTES_XFRD> is a string and is optional
Output Example	TID-000 1998-06-20 14:30:00 A 100.100 REPT EVT FXFR "NEW.PKG,COMPLD,SUCCESS,21215147" ;

3.4.120 REPT EVT IOSCFG: Report Event IOS Config File

(Cisco ONS 15454 only)

Reports the status of copying the IOS configuration file when the COPY-IOSCFG command is issued.

Notes:

1. You can identify if this message is caused by an IOS config file downloading/uploading/merging by looking at the SRC and DEST field in the message. Refer to the COPY-IOSCFG command for more details.
2. There is no success/failure in the message to indicate the success or failure of the merge process when merging the startup IOS config file to the running config file.

Section	REPT EVT IOSCFG Description
Category	IOS
Security	Retrieve
Related Messages	COPY IOSCFG

Section	REPT EVT IOSCFG Description (continued)
Output Format	SID DATE TIME A ATAG REPT EVT IOSCFG "<AID>:<SRC>,<DEST>,<STATUS>,[<RESULT>]" ; where: • <AID> slot AID for the equipment and is from the AID "EQPT" section on page 4-23 • <SRC> specifies where the IOS config file is copied from and is a string • <DEST> specifies where the IOS config file is copied to and is a string • <STATUS> indicates the status of COPY-IOSCFG: Start, IP (In Process), or COMPLD; valid values are shown in the "TX_STATUS" section on page 4-100 • <RESULT> indicates the result of COPY-IOSCFG: Success or Failure; valid values are shown in the "TX_RSLT" section on page 4-100 and <RESULT> is optional
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" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.121 REPT EVT RING: Report Event Ring

Reports the occurrence of a non-alarmed event against a ring object for BLSR.

In this release, the BLSR-UPDATED condition has been added and will be reported as a transient message, not a standing condition/alarm.

Note When a change is made to a BLSR, including creating a new circuit, the circuit will not have BLSR protection until after the BLSR-UPDATED message is received.

Section	REPT EVT RING Description	
Category	BLSR	
Security	Retrieve	
Related Messages	DLT-BLSR	RTRV-ALM-RING
	ED-BLSR	RTRV-BLSR
	ENT-BLSR	RTRV-COND-RING
	REPT ALM RING	

Section	REPT EVT RING Description (continued)
Output Format	SID DATE TIME A ATAG REPT EVT RING "<AID>:<CONDTYPE>,[<CONDEFF>],,,,,,,:[<DESC>]" ; where: • <AID> is from the "BLSR" section on page 4-17 • <CONDTYPE> indicates an event condition type; valid values for <CONDTYPE> are shown in the "CONDITION" section on page 4-51 • <CONDEFF> is the effect of the condition on the NE; valid values for <CONDEFF> are shown in the "COND_EFF" section on page 4-50 • <DESC> is the condition description; <CONDDESR> is a string and is optional
Output Example	TID-000 1998-06-20 14:30:00 A 100.100 REPT EVT RING "BLSR-88:BLSR-RESYNC,TC,,,,,,,:\"BLSR TABLESRESYNCHRONIZED\"," ;

3.4.122 REPT EVT SECU: Report Event Security

Reports the occurrence of a non-alarmed security event against the NE.

Based on TR-NWT-000835 in TR-NWT-000835 and the AID of the security alarm should be the Connection Identifier (CID) which is not supported in this release. The COM or UID is an acceptable substitute for the AID here. CID's will be supported in a future release.

For the rule of single failure, single message/alarm, the security alarm will not be reported as REPT ALM COM, because it is reported as REPT ALM SECU.

Because the NE sends this security message as a transient message, to make all TL1 autonomous messages consistent, the TL1 agent reports the security message into REPT EVT SECU.

Section	REPT EVT SECU Description	
Category	Security	
Security	Retrieve	
Related Messages	ACT-USER	ED-USER-SECU
	ALW-MSG-SECU	ENT-USER-SECU
	CANC	INH-MSG-SECU
	CANC-USER	REPT EVT SESSION
	DLT-USER-SECU	RTRV-USER-SECU
	ED-PID	

Section	REPT EVT SECU Description (continued)
Output Format	SID DATE TIME A ATAG REPT EVT SECU "<AID>:<CONDTYPE>,[<CONDEFF>],,,,,,,:[<DESC>]" ; where: • <AID> identifies an entity with the condition and defaults to "COM"; <AID> is a string • <CONDTYPE> is the condition type and valid values are shown in the "CONDITION" section on page 4-51 • <CONDEFF> indicates an effect of the condition on the NE and valid values are shown in the "COND_EFF" section on page 4-50; <CONDEFF> is optional • <DESC> is the condition description; <DESC> is a string and is optional
Output Example	TID-000 1998-06-20 14:30:00 A 100.100 REPT EVT SECU "COM:INTRUSION,TC,,,,,,,:\"SECURITY-INVALID LOGIN (SEE AUDIT TRIAL)\"" ;

3.4.123 REPT EVT SESSION: Report Event Session

Reports a non-alarmed event related to establishing a session with the NE.

Notes:

1. The WARN field may contain different information depending on the type of session-related event.
2. If a session is terminated for any reason (except a user timeout), this message is sent to indicate the reason for the session termination.

Section	REPT EVT SESSION Description	
Category	Security	
Security	Retrieve	
Related Messages	ACT-USER	ED-USER-SECU
	ALW-MSG-SECU	ENT-USER-SECU
	CANC	INH-MSG-SECU
	CANC-USER	REPT EVT SECU
	DLT-USER-SECU	RTRV-USER-SECU
	ED-PID	

Section	REPT EVT SESSION Description (continued)
Output Format	SID DATE TIME A ATAG REPT EVT SESSION "<AID>:<EXP>,[<PCN>]" /*WARN*/ ; where: • <AID> identifies the NE with which a session is being attempted; <AID> is a string • <EXP> indicates whether the password is "alive" (i.e., no password updating is required at the moment), has expired, or is about to expire. For release 4.0, this value is always NO. Valid values are shown in the "EXP" section on page 4-73 • <PCN> not applicable in this release (R4.1 and R4.5) • <WARN> Free format text containing additional information about the security event; <WARN> is a string
Output Example	TID-000 1998-06-20 14:30:00 A 100.100 REPT EVT SESSION "AID:EXP,PCN" /*WARN*/ ;

3.4.124 REPT EVT SYNCN: Report Event Synchronization

Reports the occurrence of a non-alarmed event against a synchronization entity.

Section	REPT EVT SYNCN Description	
Category	Synchronization	
Security	Retrieve	
Related Messages	ED-BITS	RTRV-ALM-BITS
	ED-NE-SYNCN	RTRV-ALM-SYNCN
	ED-SYNCN	RTRV-BITS
	OPR-SYNCNSW	RTRV-COND-BITS
	REPT ALM BITS	RTRV-COND-SYNCN
	REPT ALM SYNCN	RTRV-NE-SYNCN
	REPT EVT BITS	RTRV-SYNCN
	RLS-SYNCNSW	

Section	REPT EVT SYNCN Description (continued)
Output Format	SID DATE TIME A ATAG REPT EVT SYNCN "<AID>:<CONDTYPE>,[<CONDEFF>],,,,,,,:[<DESC>],[<AIDDET>]" ; where: • <AID> identifies the synchronization entity with the condition and is from the "SYNC_REF" section on page 4-30 • <CONDTYPE> indicates the condition type; <CONDTYPE> defaults to SYNCN and the valid values are shown in the "CONDITION" section on page 4-51 • <CONDEFF> indicates the effect of the condition on the NE; valid values for <CONDEFF> are shown in the "COND_EFF" section on page 4-50, <CONDEFF> is optional • <DESC> is the condition description; <DESC> is a string and is optional • <AIDDET> specifies the type of AID; valid values for <AIDDET> are shown in the "EQPT_TYPE" section on page 4-68, <AIDDET> is optional
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" ;

3.4.125 REPT EVT UCP: Report Event Unified Control Plane

Reports the occurrence of a non-alarmed even against a UCP object.

Section	REPT EVT UCP Description	
Category	UCP	
Security	Retrieve	
Related Messages	DLT-UCP-CC	ENT-UCP-NBR
	DLT-UCP-IF	REPT ALM UCP
	DLT-UCP-NBR	RTRV-ALM-UCP
	ED-UCP-CC	RTRV-COND-UCP
	ED-UCP-IF	RTRV-UCP-CC
	ED-UCP-NBR	RTRV-UCP-IF
	ED-UCP-NODE	RTRV-UCP-NBR
	ENT-UCP-CC	RTRV-UCP-NODE
	ENT-UCP-IF	

Section	REPT EVT UCP Description (continued)
Output Format	SID DATE TIME A ATAG REPT EVT UCP "<AID>:[<CONDTYPE>],<CONDEFF>,,,,,,,:[<DESC>]" ; where: • <AID> identifies a UCP object with alarm condition and is from the "ALL" section on page 4-9 • <CONDTYPE> is the type of condition to be retrieved. Valid values for <CONDTYPE> are shown in the "CONDITION" section on page 4-51; <CONDTYPE> is optional • <CONDEFF> is the effect on service caused by the alarm condition; valid values for <CONDEFF> are shown in the "COND_EFF" section on page 4-50 • <DESC> is a condition description; <DESC> is a string and is optional
Output Example	TID-000 1998-06-20 14:30:00 A 100.100 REPT EVT UCP "CC-1:LMP-HELLODOWN,TC,,,,,,,:\"LMP HELLO FSM ON CONTROL CHANNEL DOWN\"," ;

3.4.126 REPT PM <MOD2>: Report Performance Monitoring (CLNT, DS1, DS3I, E1, E3, E4, EC1, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STM1E, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

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

Reports autonomous monitoring statistics as a result of the schedule created by SCHED-PMREPT.

Section	REPT PM <MOD2> Description	
Category	Performance	
Security	Retrieve	
Related Messages	ALW-PMREPT-ALL	RTRV-PMSCHED-<MOD2>
	INH-PMREPT-ALL	RTRV-PMSCHED-ALL
	INIT-REG-<MOD2>	RTRV-TH-<MOD2>
	INIT-REG-G1000	SCHED-PMREPT-<MOD2>
	RTRV-PM-<MOD2>	SET-PMMODE-<STS_PATH>
	RTRV-PMMODE-<STS_PATH>	SET-TH-<MOD2>

Section	REPT PM <MOD2> Description (continued)
Output Format	SID DATE TIME A ATAG REPT PM <MOD2> "<AID>:<MONTYPE>,<MONVAL>,<VLDTY>,<LOCN>,<DIRN>, <TMPER>,<MONDAT>,<MONTM>" ; where: • <AID> access identifier from the "ALL" section on page 4-9 • <MONTYPE> type of monitored parameter; valid values are shown in the "ALL_MONTYPE" section on page 4-36 • <MONVAL> measured value of monitored parameter; <MONVAL> is a string • <VLDTY> validity indicator for the reported PM data; valid values for <VLDTY> are shown in the "VALIDITY" section on page 4-103 • <LOCN> indicates the location; valid values are shown in "LOCATION" section on page 4-75 • <DIRN> direction of PM relative to the entity identified by the AID; valid values are shown in the "DIRECTION" section on page 4-65 • <TMPER> indicates the accumulation time period for the PM data; valid values are shown in the "TMPER" section on page 4-98 • <MONDAT> is the date of the beginning of the PM period specified by the TMPER parameter; <MONDAT> is a string • <MONTM> is the beginning time of day of the PM period specified by the TMPER parameter; <MONTM> is a string
Output Example	TID-000 1998-06-20 14:30:00 A 100 REPT PM CLNT "FAC-3-1:CVL,10,PRTL,NEND,BTH,15-MIN,05-25,14-46" ;

3.4.127 REPT SW: Report Switch

(Cisco ONS 15454 only)

Reports the autonomous switching of a unit in a duplex equipment pair to the standby state and its mate unit to the active state. An automatic report for the occurrence or clearance of an alarm or event that triggers the switch may be associated with the message.

Section	REPT SW Description
Category	Path Protection Switching
Security	Retrieve
Related Messages	OPR-PROTNSW-<STS_PATH> RTRV-PROTNSW-<STS_PATH> RLS-PROTNSW-<STS_PATH>

Section	REPT SW Description (continued)
Output Format	SID DATE TIME A ATAG REPT SW "<ACTID>,<STDBYID>" ; where: • <ACTID> identifies the equipment unit that has been placed in the active state. Parameter grouping cannot be used with this parameter; <ACTID> is the AID from the "EQPT" section on page 4-23 • <STDBYID> identifies the equipment unit that was placed in the standby state. Parameter grouping cannot be used with this parameter; <STDBYID> is the AID from the "EQPT" section on page 4-23
Output Example	TID-000 1998-06-20 14:30:00 A 001 REPT SW "SLOT-8,SLOT-10" ;

3.4.128 RLS-EXT-CONT: Release External Control

This command releases a forced contact state and returns the control of the contact to an AUTOMATIC control state. In AUTOMATIC control state, the contact could be opened or closed depending on triggers that may or may not be provisioned in the NE. Therefore, issuing an RLS might not produce any contact state change.

The NE defaults to having no triggers provisioned for external controls which consequently produces default open contacts. An NE with this default provisioning will always produce an open contact with a RLS-EXT-CONT command.

Notes:

1. The duration is not supported, it defaults to CONTS.
2. In an automatic state, the contact could be opened or closed depending on the provisioned trigger. Therefore, issuing an OPR-EXT-CONT command followed by an RLS-EXT-CONT command might not produce any contact state change.
3. The RLS-EXT-CONT is not allowed during the MNTRY duration. The command is allowed for the CONTS duration. The length of MNTRY duration is set to be 2 seconds.

Section	RLS-EXT-CONT Description	
Category	Environment Alarms and Controls	
Security	Maintenance	
Related Messages	OPR-ACO-ALL	RTRV-ATTR-ENV
	OPR-EXT-CONT	RTRV-COND-ENV
	REPT ALM ENV	RTRV-EXT-CONT
	REPT EVT ENV	SET-ATTR-CONT
	RTRV-ALM-ENV	SET-ATTR-ENV
	RTRV-ATTR-CONT	

Section	RLS-EXT-CONT Description (continued)
Input Format	RLS-EXT-CONT:[<TID>]:<AID>:<CTAG>[::,]; where: • <AID> identifies the external control being released and is from the "ENV" section on page 4-22
Input Example	RLS-EXT-CONT:CISCO:ENV-OUT-2:123;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.129 RLS-LASER-OTS: Release Laser Optical Transport Section

(Cisco ONS 15454 only)

Note Applicable to Release 4.5 only.

This command instructs a laser to be switched off.

Section	RLS-LASER-OTS Description	
Category	DWDM	
Security	Maintenance	
Related Messages	DLT-FFP-CLNT	OPR-PROTNSW-OCH
	DLT-LNK-<MOD2O>	RLS-PROTNSW-CLNT
	ED-CLNT	RLS-PROTNSW-OCH
	ED-DWDM	RTRV-CLNT
	ED-FFP-CLNT	RTRV-DWDM
	ED-FFP-OCH	RTRV-FFP-CLNT
	ED-LNK-<MOD2O>	RTRV-FFP-OCH
	ED-OCH	RTRV-LNK-<MOD2O>
	ED-OMS	RTRV-OCH
	ED-OTS	RTRV-OMS
	ED-TRC-CLNT	RTRV-OTS
	ED-TRC-OCH	RTRV-PROTNSW-CLNT
	ENT-FFP-CLNT	RTRV-PROTNSW-OCH
	ENT-LNK-<MOD2O>	RTRV-TRC-CLNT
	OPR-LASER-OTS	RTRV-TRC-OCH
	OPR-PROTNSW-CLNT	
Input Format	RLS-LASER-OTS:[<TID>]:<AID>:<CTAG>; where: • <AID> indicates an identifier of an optical facility supporting laser and is the AID from the "LINE" section on page 4-25	

Section	RLS-LASER-OTS Description (continued)
Input Example	RLS-LASER-OTS::LINE-5-2-TX:3;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.130 RLS-LPBK-<MOD2>: Release Loopback (CLNT, DS1, DS3I, E1, E3, E4, EC1, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STM1E, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

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

This command releases a signal loopback on an I/O card or a cross-connect.

Notes:

1. The value CRS for the LPBKTYPE parameter is applicable only for the STS modifier. The FACILITY and TERMINAL values for LPBKTYPE parameter are applicable to the ports.
2. The optional [<LPBKTYPE>] field defaults to the current existing loopback type.
3. The TERMINAL loopback type is not supported for a DS3XM card.

Section	RLS-LPBK-<MOD2> Description
Category	Testing
Security	Maintenance
Related Messages	OPR-LPBK-<MOD2>
Input Format	RLS-LPBK-<MOD2>:[<TID>]:<SRC>:<CTAG>::,,,[<LPBKTYPE>]; where: • <SRC> is an access identifier from the "DS1" section on page 4-22; valid values for AID are facility, DS1, and STS • <LPBKTYPE> indicates the loopback type; valid values for <LPBKTYPE> are shown in the "LPBK_TYPE" section on page 4-75
Input Example	RLS-LPBK-DS1:PTREYES:DS1-4-1-2-13:203::,,,FACILITY;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.131 RLS-PROTNSW-<OCN_TYPE>: Release Protection Switch (OC3, OC12, OC48, OC192)

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

This command releases a SONET line protection switch request.

The release of a protection switch request is applicable only to the OPR-PROTNSW protection switch commands, the user-initiated switch protection commands.

Notes:

1. This command is not used for the common control (TCC+/TCC2 or XC/XCVT/XC10G) cards. Sending a command on a common control card will generate an IIAC (Input, Invalid Access Identifier) error message. To query the common control card switching commands, use SW-DX-EQPT, ALW-SWDX-EQPT commands.
2. When sending this command on non-SONET (OCN) cards, an IIAC (Input, Invalid Access Identifier) error message should be responsed. To use this command on a non-SONET card switching command, use ALW-SWTOPROTN/SWTOWKG-EQPT and INH-SWTOPROTN/SWTOWKG-EQPT commands.
3. When sending this command to query on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message should be responsed.
4. When sending this command to a working card that is failed or missing, the SWFA (Status, Working unit Failed) error message should be responsed.
5. When sending this command to a protect card that is failed or missing, the SPFA (Status, Protection unit Failed) error message should be responsed.
6. When sending this command to a card that is not in protection, the SNPR (Status, Not in Protection State) error message should be responsed.
7. Sending this command to an OCN line that is already in clear mode will return a SAMS (Already in Clear Maintenance State) error message.
8. To get the protection switching state (manual, lockout, forced), use the RTRV-COND-ALL or RTRV-ALM-ALL command.

Section	RLS-PROTNSW-<OCN_TYPE> Description	
Category	SONET Line Protection	
Security	Maintenance	
Related Messages	DLT-FFP-<OCN_TYPE>	EX-SW-<OCN_BLSR>
	DLT-FFP-CLNT	OPR-PROTNSW-<OCN_TYPE>
	ED-FFP-<OCN_TYPE>	RTRV-FFP-<OCN_TYPE>
	ED-FFP-CLNT	RTRV-FFP-CLNT
	ENT-FFP-<OCN_TYPE>	RTRV-PROTNSW-<OCN_TYPE>
	ENT-FFP-CLNT	
Input Format	RLS-PROTNSW-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[::]; where: • <AID> identifies the facility in the NE to which the switch request is directed and is from the "FACILITY" section on page 4-24	
Input Example	RLS-PROTNSW-OC48:PETALUMA:FAC-6-1:209;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.132 RLS-PROTNSW-<STS_PATH>: Release Protection Switch (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C)

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

This command releases a SONET path protection switch request that was established with the OPR-PROTNSW-<STS_PATH> command. This command assumes that only one user-initiated switch is active per AID.

Notes:

1. This command applies to path protection configuration only.
2. The VTAID should be working or protect AID only.
3. If sending this command on the Drop AID, a DENY (Invalid AID, should use working/protect AID) message will be returned.
4. To get the protection switching state (manual, lockout, forced), use the RTRV-COND-ALL or RTRV-ALM-ALL command.

Section	RLS-PROTNSW-<STS_PATH> Description
Category	Path Protection Switching
Security	Maintenance
Related Messages	OPR-PROTNSW-<STS_PATH> RTRV-PROTNSW-<STS_PATH> REPT SW
Input Format	RLS-PROTNSW-<STS_PATH>:[<TID>]:<AID>:<CTAG>[::]; where: • <AID> identifies the entity in the NE to which the switch request is directed and is from the "STS" section on page 4-27
Input Example	RLS-PROTNSW-STS1:CISCO:STS-2-1:123;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.133 RLS-PROTNSW-<VT_PATH>: Release Protection Switch (VT1, VT2)

This command releases a SONET path protection switch request that was established with the OPR-PROTNSW-<VT_PATH> command. This command assumes that only one user-initiated switch is active per AID.

Notes:

1. This command applies to path protection configuration only.
2. The VTAID should be working or protect AID only.
3. Sending this command on the Drop AID, a DENY (Invalid AID, should use working/protect AID) message will be returned.
4. To get the protection switching state (manual, lockout, forced), use the RTRV-COND-ALL or RTRV-ALM-ALL command.

Section	RLS-PROTNSW-<VT_PATH> Description	
Category	Path Protection Switching	
Security	Maintenance	
Related Messages	OPR-PROTNSW-<STS_PATH>	RLS-PROTNSW-<STS_PATH>
	OPR-PROTNSW-<VT_PATH>	RTRV-PROTNSW-<STS_PATH>
	REPT SW	RTRV-PROTNSW-<VT_PATH>

Section	RLS-PROTNSW-<VT_PATH> Description (continued)
Input Format	RLS-PROTNSW-<VT_PATH>:[<TID>]:<AID>:<CTAG>[::]; where: • <AID> identifies the entity in the NE to which the switch request is directed and is from the "VT1_5" section on page 4-33
Input Example	RLS-PROTNSW-VT1:CISCO:VT1-4-2-3-1:123;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.134 RLS-PROTNSW-CLNT: Release Protection Switch Client

(Cisco ONS 15454 only)

This command releases a Y cable protection switch on client facilities.

Section	RLS-PROTNSW-CLNT Description	
Category	DWDM	
Security	Maintenance	
Related Messages	DLT-FFP-CLNT	OPR-PROTNSW-OCH
	DLT-LNK-<MOD2O>	RLS-LASER-OTS
	ED-CLNT	RLS-PROTNSW-OCH
	ED-DWDM	RTRV-CLNT
	ED-FFP-CLNT	RTRV-DWDM
	ED-FFP-OCH	RTRV-FFP-CLNT
	ED-LNK-<MOD2O>	RTRV-FFP-OCH
	ED-OCH	RTRV-LNK-<MOD2O>
	ED-OMS	RTRV-OCH
	ED-OTS	RTRV-OMS
	ED-TRC-CLNT	RTRV-OTS
	ED-TRC-OCH	RTRV-PROTNSW-CLNT
	ENT-FFP-CLNT	RTRV-PROTNSW-OCH
	ENT-LNK-<MOD2O>	RTRV-TRC-CLNT
	OPR-LASER-OTS	RTRV-TRC-OCH
	OPR-PROTNSW-CLNT	
Input Format	RLS-PROTNSW-CLNT:[<TID>]:<AID>:<CTAG>[::]; where: • <AID> is from the "FACILITY" section on page 4-24	
Input Example	RLS-PROTNSW-CLNT:CISCO:FAC-1-1:100;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.135 RLS-PROTNSW-OCH: Release Protection Switch OCH

(Cisco ONS 15454 only)

This command releases the protection switch on a TXPP_MR_2.5G card.

Section	RLS-PROTNSW-OCH Description	
Category	DWDM	
Security	Maintenance	
Related Messages	DLT-FFP-CLNT	OPR-PROTNSW-OCH
	DLT-LNK-<MOD2O>	RLS-LASER-OTS
	ED-CLNT	RLS-PROTNSW-CLNT
	ED-DWDM	RTRV-CLNT
	ED-FFP-CLNT	RTRV-DWDM
	ED-FFP-OCH	RTRV-FFP-CLNT
	ED-LNK-<MOD2O>	RTRV-FFP-OCH
	ED-OCH	RTRV-LNK-<MOD2O>
	ED-OMS	RTRV-OCH
	ED-OTS	RTRV-OMS
	ED-TRC-CLNT	RTRV-OTS
	ED-TRC-OCH	RTRV-PROTNSW-CLNT
	ENT-FFP-CLNT	RTRV-PROTNSW-OCH
	ENT-LNK-<MOD2O>	RTRV-TRC-CLNT
	OPR-LASER-OTS	RTRV-TRC-OCH
	OPR-PROTNSW-CLNT	
Input Format	RLS-PROTNSW-OCH:[<TID>]:<AID>:<CTAG>; where: • <AID> is the AID from the "CHANNEL" section on page 4-18	
Input Example	RLS-PROTNSW-OCH:VA454-22:CHAN-2-2:1;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.136 RLS-SYNCNSW: Release Synchronization Switch

This command releases the previous synchronization reference provided by the OPR-SYNCNSW command.

In a non-revertive system, the use of the RLS-SYNCNSW command may not be appropriate. All the switching between synchronization references should be initiated with the OPR-SYNCNSW command.

Once a switch is released, a minor alarm "MANSWTOPRI", (Manual Switch to Primary Reference or Secondary...) or "FRDCSWTOPRI" (Forced Switch to Primary Reference or Secondary...), will be cleared.

Section	RLS-SYNCNSW Description	
Category	Synchronization	
Security	Maintenance	
Related Messages	ED-BITS	RTRV-ALM-BITS
	ED-NE-SYNCN	RTRV-ALM-SYNCN
	ED-SYNCN	RTRV-BITS
	OPR-SYNCNSW	RTRV-COND-BITS
	REPT ALM BITS	RTRV-COND-SYNCN
	REPT ALM SYNCN	RTRV-NE-SYNCN
	REPT EVT BITS	RTRV-SYNCN
	REPT EVT SYNCN	
Input Format	RLS-SYNCNSW:[<TID>]:[<AID>]:<CTAG>; where: • <AID> is the access identifier from the "SYNC_REF" section on page 4-30. The default value is SYNC-NE.	
Input Example	RLS-SYNCNSW:CISCO:SYNC-NE:3;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.137 RMV-<MOD2_IO>: Remove (CLNT, DS1, DS3I, E1, E3, E4, EC1, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STM1E, T1, T3)

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

This command removes a facility from service.

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

Section	RMV-<MOD2_IO> Description (continued)
Input Format	RMV-<MOD2_IO>:[<TID>]:<AID>:<CTAG>::[<CMDMODE>],[<PST>],[<SST>]; where: • <AID> is the access identifier from the "ALL" section on page 4-9 • <CMDMODE> is the command mode; valid values are shown in the "CMD_MODE" section on page 4-50 • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92
Input Example	RMV-EC1:CISCO:FAC-1-1:1::NORM,OOS,AINS;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.138 RST-<MOD2_IO>: Restore (CLNT, DS1, DS3I, E1, E3, E4, EC1, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STM1E, T1, T3)

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

This command provisions a facility in service.

Section	RST-<MOD2_IO> Description	
Category	Ports	
Security	Maintenance	
Related Messages	ED-<OCN_TYPE>	RTRV-DS1
	ED-DS1	RTRV-EC1
	ED-EC1	RTRV-FSTE
	ED-G1000	RTRV-G1000
	ED-T1	RTRV-GIGE
	ED-T3	RTRV-POS
	INIT-REG-G1000	RTRV-T1
	RMV-<MOD2_IO>	RTRV-T3
	RTRV-<OCN_TYPE>	
Input Format	RST-<MOD2_IO>:[<TID>]:<AID>:<CTAG>[::]; where: • <AID> is an access identifier from the "ALL" section on page 4-9	
Input Example	RST-EC1:CISCO:FAC-1-1:1;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.139 RTRV-<OCN_TYPE>: Retrieve (OC3, OC12, OC48, OC192)

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

This command retrieves the attributes (i.e., service parameters) and the state of an OC-N facility.

Both RINGID and BLSRTYPE identify the OCN port connected with a BLSR. These attributes are only presented for the OC12, OC48, OC192 ports within a BLSR connection. The RTRV-BLSR command with the AID BLSR-RINGID, can provide more information on this BLSR.

Note This command does not show the WVLEN attribute if the OCN port has zero value on WVLELN.

UNI-C DCC provisioning notes:

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

Section	RTRV-<OCN_TYPE> Description	
Category	Ports	
Security	Retrieve	
Related Messages	ED-<OCN_TYPE> ED-DS1 ED-EC1 ED-G1000 ED-T1 ED-T3 INIT-REG-G1000 RMV-<MOD2_IO> RST-<MOD2_IO>	RTRV-DS1 RTRV-EC1 RTRV-FSTE RTRV-G1000 RTRV-GIGE RTRV-POS RTRV-T1 RTRV-T3
Input Format	RTRV-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[::::]; where: • <AID> is the access identifier from the "FACILITY" section on page 4-24 and must not be null.	
Input Example	RTRV-OC48:PENNGROVE:FAC-6-1:236;	

Section	RTRV-<OCN_TYPE> Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:,,[<ROLE>],[<STATUS>]:[DCC=<DCC>,][TMGREF=<TMGREF>,] [SYNCMSG=<SYNCMSG>,][SENDDUS=<SENDDUS>,] [PJMON=<PJMON>,][SFBER=<SFBER>,][SDBER=<SDBER>,] [MODE=<MODE>,][WVLEN=<WVLEN>,][RINGID=<RINGID>,] [BLSRTYPE=<BLSRTYPE>,][MUX=<MUX>,][UNIC=<UNIC>,] [CCID=<CCID>,][NBRIX=<NBRIX>,][SOAK=<SOAK>,] [SOAKLEFT=<SOAKLEFT>]:<PST>,[<SST>]" ; where: • <AID> is the access identifier from the "FACILITY" section on page 4-24 • <ROLE> identifies the OCN port role (e.g. WORK or PROT); valid values for <ROLE> are shown in the "SIDE" section on page 4-92, <ROLE> is optional • <STATUS> identifies the OCN port status (e.g. Active or Standby); valid values for <STATUS> are shown in the "STATUS" section on page 4-92, <STATUS> is optional • <DCC> identifies the OCN port DCC connection and defaults to N; valid values for <DCC> are shown in the "ON_OFF" section on page 4-83, <DCC> is optional • <TMGREF> identifies if an OCN port has timing reference and defaults to N; valid values for <TMGREF> are shown in the "ON_OFF" section on page 4-83, <TMGREF> is optional • <SYNCMSG> indicates if sync status messaging is enabled or disabled on the facility; <SYNCMSG> defaults to Y and the valid values are shown in the "ON_OFF" section on page 4-83. <SYNCMSG> is optional. • <SENDDUS> indicates that the facility will send out the DUS (do not use for synchronization) value as the sync status message for that facility; <SENDDUS> defaults to N and the valid values are shown in the "ON_OFF" section on page 4-83. <SENDDUS> is optional • <PJMON> identifies the OCN port PJMON; <PJMON> defaults to 0 (zero), is an integer and is optional

Section	RTRV-<OCN_TYPE> Description (continued)
Output Format (continued)	• <SFBER> identifies the OCN port SFBER and defaults to 1E-4; valid values for <SFBER> are shown in the "SF_BER" section on page 4-92, <SFBER> is optional • <SDBER> identifies the OCN port SDBER and defaults to 1E-7; valid values for <SDBER> are shown in the "SD_BER" section on page 4-91, <SDBER> is optional • <MODE> identifies the OCN port mode (e.g. SONET, SDH) and defaults to SONET; valid values for <MODE> are shown in the "OPTICAL_MODE" section on page 4-84, <MODE> is optional • <WVLEN> identifies the OCN port wavelength; <WVLEN> is wavelength in nm (nanometer) for unit, e.g. WVLEN=1310.00 means it operates at 1310 nm in the DWM application. <WVLEN> is a float and is optional • <RINGID> identifies the BLSR RINGID with which the port is connected. The <RINGID> ranges from 0–9999; <RINGID> is an integer and is optional • <BLSRTYPE> identifies the BLSR type with which the port is connected. Valid values for <BLSRTYPE> are shown in the "BLSR_TYPE" section on page 4-47 and <BLSRTYPE> is optional. • <MUX> BLSR Extension Byte. Valid values for <MUX> are shown in the "MUX_TYPE" section on page 4-82; <MUX> is optional. • <UNIC> indicates if the port connects to the UCP; valid values are shown in the "ON_OFF" section on page 4-83 and <UNIC> is optional • <CCID> indicates the UCP control channel ID; <CCID> is an integer and is optional • <NBRIX> indicates the UCP neighbor ID. <NBRIX> is an integer and is optional • <SOAK> OOS-AINS to IS transition soak time measured in 15 minute intervals. <SOAK> is an integer and is optional • <SOAKLEFT><SOAKLEFT> time remaining for the transition from OOS-AINS to IS measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. <SOAKLEFT> is optional Rules for <SOAKLEFT> are as follows: – When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed. – When the port is in OOS_AINS, but the countdown has not started due to fault signal the value will be SOAKLEFT=NOT-STARTED. – When the port is in OOS_AINS state and the countdown has started the value will be shown in HH-MM format. • <PST> primary state; valid values for <PST> are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92 and <SST> is optional

Section	RTRV-<OCN_TYPE> Description (continued)
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "FAC-6-1:,,WORK,ACT:DCC=N,TMGREF=N,SYNCMSG=Y,SENDDUS=N, PJMON=48,SFBER=1E-4, SDBER=1E-6,MODE=SONET,WVLEN=1310.00, RINGID=43,BLSRTYPE=WESTWORK,MUX=E2,UNIC=Y,CCID=8,NBRIX=2, SOAK=52,SOAKLEFT=12-25:OOS,AINS" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.140 RTRV-<STS_PATH>: Retrieve (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C)

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

This command retrieves the attributes associated with an STS path.

The SFBER, SDBER, RVRTV, RVTM, SWPDIP, HOLDOFFTIMER, AND UPSRPTHSTATE parameters only apply to path protection.

The path trace message is a 64 character string including the terminating CR (carriage return) and LF (line feed) that is transported in the J1 byte of the SONET STS Path overhead.

The EXPTRC indicates the contents of the expected incoming path trace are provisioned by the user in the ED-STS_PATH command. The TRC indicates the contents of the outgoing path trace message. The INCTRC indicates the contents of the incoming path trace message.

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

When the expected string is queried under the OFF path trace mode, the expected string is a copy of the provisioned string or NULL. When an expected string is queried under the MANUAL path trace mode, the expected string is a copy of the user entered string. When an expected string is queried under the AUTO path trace mode, the expected string is a copy of the acquired received string or NULL if the string has not been acquired.

When the incoming string is queried under the OFF path trace mode, the incoming string is NULL. When an incoming string is queried under the MANUAL or AUTO path trace mode, the incoming string is a copy of the received string or NULL if the string has not been received.

J1 (EXPTRC) is implemented on the DS1/DS1N, DS3E/DS3NE, DS3XM, EC1, OC3, OC48AS and OC192.

TRC and INCTRC are supported on DS1(N), DS3(N)E, and DS3XM cards.

Notes:

1. An optional parameter BLSRPTHTYPE is introduced into this command to provide more options to retrieve J1/C2 of a particular BLSR path. This field is valid only if the queried AID port has BLSR. The BLSRPTHTYPE defaults to "non-pca" path type if the BLSR is switched, or defaults to all BLSR path types if there is no BLSR switching.

2. Sending this command while BLSRPTHTYPE=PCA, whether there is BLSR switch or not, the PCA path J1/C2 data will be returned (if there is PCA circuit on the AID). Sending this command with an STS AID without circuits and no BLSR switched on the STS, an error message will be returned.
3. An optional output parameter BLSRPTHSTATE is introduced into this command output. Each J1/C2 output data of this command will include the BLSR path state information.
4. After the BLSR switching, the J1/IPPM/C2 data can be retrieved over the protection path, to provision J1 trace string, trace mode, or threshold is not allowed on the protection path.

Section	RTRV-<STS_PATH> Description
Category	STS and VT Paths (R4.1)/Paths (R4.5)
Security	Retrieve
Related Messages	ED-<STS_PATH> RTRV-PTHTRC-<STS_PATH>
Input Format	RTRV-<STS_PATH>:[<TID>]:<AID>:<CTAG>::: [BLSRPTHTYPE=<BLSRPTHTYPE>][:]; where: • <AID> is an access identifier from the "CrossConnectID" section on page 4-19 and must not be null • <BLSRPTHTYPE> indicates the BLSR path type only if the port is on the BLSR. It defaults to "non-pca". Valid values are shown in the "BLSR_PTH_TYPE" section on page 4-47. A null value defaults to "non-pca"
Input Example	RTRV-STS1:FERNDALE:STS-2-1-4:238:::BLSRPTHTYPE=NON-PCA;

Section	RTRV-<STS_PATH> Description (continued)
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>,] [UPSRPTHSTATE=<UPSRPTHSTATE>,][C2=<C2>,] [BLSRPTHSTATE=<BLSRPTHSTATE>]:[<PST>],[<SST>]" ; where: • <AID> is an access identifier from the "CrossConnectID" section on page 4-19 • <LEVEL> indicates the rate of the cross connected channel; valid values for <LEVEL> are shown in the "STS_PATH" section on page 4-93, <LEVEL> is optional • <SFBER> identifies the STS path SFBER which only applies to path protection; <SFBER> defaults to 1E-4 and valid values are shown in the "SF_BER" section on page 4-92, <SFBER> is optional • <SDBER> identifies the STS path SDBER which only applies to path protection; <SDBER> defaults to 1E-6 and valid values are shown in the "SD_BER" section on page 4-91, <SDBER> is optional • <RVRTV> identifies a revertive mode which only applies to path protection and defaults to N (non-revertive mode) when a path protection STSp is created; valid values for <RVRTV> are shown in the "ON_OFF" section on page 4-83 and <RVRTV> is optional • <RVTM> identifies a revertive time which only applies to path protection and defaults to empty because <RVRTV> is N when a path protection STSp is created; valid values for <RVTM> are shown in the "REVERTIVE_TIME" section on page 4-90 and <RVTM> is optional

Section	RTRV-<STS_PATH> Description (continued)
Output Format (continued)	• Valid values for <SWPDIP> are shown in the "ON_OFF" section on page 4-83; <SWDIP> is optional • <HOLDOFFTIMER> is an integer and is optional • <EXPTRC> indicates the expected path trace message (J1) contents. The EXPTRC is any 64 character string, including the terminating CR (carriage return) and LF (line feed); <EXPTRC> defaults to null when a path protection STSp is created. <EXPTRC> is a string and is optional • <TRC> identifies the path trace message to be transmitted. The TRC is any combination of 64 characters, including the terminating CR (carriage return) and LF (line feed). The trace byte (J1) continuously transmits a 64 byte string, one byte at a time. A null value defaults to the NE transmitting null characters (Hex 00); <TRC> defaults to null when a path protection STSp is created. <TRC> is a string and is optional • <INCTRC> identifies the incoming path trace message contents. The INCTRC is any combination of 64 characters; <INCTRC> defaults to null when path protection STSp is created. <INCTRC> is a string and is optional • <TRCMODE> indicates the path trace mode, and defaults to the OFF mode when a path protection STSp is created; valid values for <TRCMODE> are shown in the"TRCMODE" section on page 4-100 and <TRCMODE> is optional • <TACC> is the AID from the "TACC" section on page 4-32 and is optional • Valid values for <UPSRPTHSTATE> are shown in the "STATUS" section on page 4-92 • <C2> indicates C2 Byte Hex Code; valid values are shown in the "C2_BYTE" section on page 4-48 • <BLSRPTHSTATE> indicates the BLSR path state only if the port is on the BLSR; valid values are shown in the "BLSR_PTH_STATE" section on page 4-47 • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92. <SST> is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "STS-2-1-4::LEVEL=STS1,SFBER=1E-3,SDBER=1E-5,RVRTV=Y, RVTM=1.0,SWPDIP=Y,HOLDOFFTIMER=2000, EXPTRC="EXPTRCSTRING",TRC="TRCSTRING", INCTRC="INCTRCSTRING",TRCMODE=AUTO,TACC=8, UPSRPTHSTATE=ACT,C2=0X04, BLSRPTHSTATE=PROTPTHACT:OOS,AINS" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.141 RTRV-<VT_PATH>: RTRV (VT1, VT2)

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

This command retrieves the attributes associated with a VT path.

RVRTV, RVTM, HOLDOFFTIMER and UPSRPTHSTATE parameters only apply to path protection.

Section	RTRV-<VT_PATH> Description
Category	STS and VT Paths (R4.1)/Paths (R4.5)
Security	Retrieve
Related Messages	ED-<STS_PATH> RTRV-PTHTRC-<STS_PATH>
Input Format	RTRV-<VT_PATH>:[<TID>]:<SRC>:<CTAG>[::::]; where: • <SRC> is an access identifier from the "VT1_5" section on page 4-33 and must not be null
Input Example	RTRV-VT1:CISCO:VT1-2-1-4-1-2:123;
Output Format	SID DATE TIME M CTAG COMPLD "<VT>::[RVRTV=<RVRTV>,][RVTM=<RVTM>,] [HOLDOFFTIMER=<HOLDOFFTIMER>,][TACC=<TACC>,] [UPSRPTHSTATE=<UPSRPTHSTATE>]:[<PST>],[<SST>]" ; where: • <VT> is an access identifier from the "VT1_5" section on page 4-33 • <RVRTV> identifies a revertive mode which only applies to path protection VT1 path and defaults to N (non-revertive mode) when a path protection VT1 is created; valid values for <RVRTV> are shown in the "ON_OFF" section on page 4-83 and <RVRTV> is optional • <RVTM> identifies a revertive time which only applies to path protection VT1 and defaults to empty because <RVRTV> is N when a path protection VT1 is created; valid values for <RVTM> are shown in the "REVERTIVE_TIME" section on page 4-90 and <RVTM> is optional • <HOLDOFFTIMER> is an integer and is optional • <TACC> is the AID from the "TACC" section on page 4-32 and is optional • <UPSRPTHSTATE> indicates if the VT_AID is the working or standby path of a path protection cross-connect; valid values for <UPSRPTHSTATE> are shown in the "STATUS" section on page 4-92 and <UPSRPTHSTATE> is optional • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92. <SST> is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "VT1-2-1-4-1-2::RVRTV=Y,RVTM=1.0,HOLDOFFTIMER=2000, TACC=8,UPSRPTHSTATE=ACT:OOS,AINS" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.142 RTRV-ALM-<MOD2ALM>:Retrieve Alarm (CLNT, DS1, DS3I, E1, E100, E1000, E3, E4, EC1, FSTE, G1000, GIGE, OC12, OC192, OC3, OC48, OCH, OMS, OSC, OTS, POS, STM1E, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, UDCDCC, UDCF, VT1, VT2, WLEN)

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

This command retrieves and sends the current status of alarm conditions. The alarm condition or severity to be retrieved can be specified by using the input parameters as a filter.

Notes:

1. VT1-n-n-n replaces PS_VT1-n-n-n for the VT1 alarm AID.
2. The [<AIDTYPE>] shows STS1 for STS alarms.

Section	RTRV-ALM-<MOD2ALM> Description	
Category	Fault	
Security	Retrieve	
Related Messages	REPT ALM <MOD2ALM>	RTRV-ALM-EQPT
	REPT ALM BITS	RTRV-ALM-RING
	REPT ALM COM	RTRV-ALM-SYNCN
	REPT ALM ENV	RTRV-ALM-UCP
	REPT ALM EQPT	RTRV-COND-<MOD2ALM>
	REPT ALM RING	RTRV-COND-ALL
	REPT ALM SYNCN	RTRV-COND-BITS
	REPT ALM UCP	RTRV-COND-ENV
	REPT EVT COM	RTRV-COND-EQPT
	RTRV-ALM-ALL	RTRV-COND-RING
	RTRV-ALM-BITS	RTRV-COND-SYNCN
	RTRV-ALM-ENV	RTRV-COND-UCP

Section	RTRV-ALM-<MOD2ALM> Description (continued)
Input Format	RTRV-ALM-<MOD2ALM>:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>][,,,]; where: • <AID> is the access identifier from the "ALL" section on page 4-9 and must not be null • <NTFCNCDE> is the 2-letter notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82. A null value is equivalent to ALL. • <CONDTYPE> is the alarm condition; valid values for <CONDTYPE> are shown in the "CONDITION" section on page 4-51. A null value is equivalent to ALL. • <SRVEFF> is the effect on service caused by the alarm condition; valid values for <SRVEFF> are shown in the "SERV_EFF" section on page 4-91. A null value is equivalent to ALL.
Input Example	RTRV-ALM-OC12:ELDRIDGE:FAC-5-1:225::MN,SD,SA;
Output Format	SID DATE TIME M CTAG COMPLD "<AID>,[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,: [<DESC>]" ; where: • <AID> is the access identifier from the "ALL" section on page 4-9 • <AIDTYPE> is the type of access identifier; valid values for <AIDTYPE> are shown in the "MOD2ALM" section on page 4-77, <AIDTYPE> is optional • <NTFCNCDE> is the 2-letter notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82 • <CONDTYPE> is the alarm condition; valid values for <CONDTYPE> are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values for <SRVEFF> are shown in the "SERV_EFF" section on page 4-91 • <DESC> is the condition description; <DESC> is a string and is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "FAC-5-1,OC12:MJ,SD,SA,,,,:\"BER AT SIGNAL DEGRADE LEVEL\"," ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.143 RTRV-ALM-ALL: Retrieve Alarm All

This command retrieves and sends the current status of all active alarm conditions. The alarm condition or severity to be retrieved is specified using the input parameters as a filter.

According to GR-833, the RTRV-ALM-ALL command only reports EQPT, RING, COM, and rr (T1, T3, OCN, EC1, STSN, VT1, and DS1) alarms.

To retrieve all the NE alarms, issue all of the following commands:

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

Section	RTRV-ALM-ALL Description	
Category	Fault	
Security	Retrieve	
Related Messages	REPT ALM <MOD2ALM>	RTRV-ALM-EQPT
	REPT ALM BITS	RTRV-ALM-RING
	REPT ALM COM	RTRV-ALM-SYNCN
	REPT ALM ENV	RTRV-ALM-UCP
	REPT ALM EQPT	RTRV-COND-<MOD2ALM>
	REPT ALM RING	RTRV-COND-ALL
	REPT ALM SYNCN	RTRV-COND-BITS
	REPT ALM UCP	RTRV-COND-ENV
	REPT EVT COM	RTRV-COND-EQPT
	RTRV-ALM-<MOD2ALM>	RTRV-COND-RING
	RTRV-ALM-BITS	RTRV-COND-SYNCN
	RTRV-ALM-ENV	RTRV-COND-UCP
Input Format	RTRV-ALM-ALL:[<TID>]::<CTAG>::[<NTFCNCDE>],[<CONDITION>],[<SRVEFF>][,,,]; where: • <NTFCNCDE> is a notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82. A null value is equivalent to ALL. • <CONDITION> is the type of alarm condition; valid values for <CONDITION> are shown in the "CONDITION" section on page 4-51. A null value is equivalent to ALL. • <SRVEFF> is the effect on service caused by the alarm condition; valid values for <SRVEFF> are shown in the "SERV_EFF" section on page 4-91. A null value is equivalent to ALL.	
Input Example	RTRV-ALM-ALL:COTATI::229::MN,PWRRESTART,NSA;	

Section	RTRV-ALM-ALL Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "[<AID>],[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,: [<DESC>],[<AIDDET>]" ; where: • <AID> is the identifier that has an alarm condition and is from the "ALL" section on page 4-9, <AID> is optional • <AIDTYPE> is the type of access identifier; valid values for <AIDTYPE> are shown in the "MOD2B" section on page 4-78, <AIDTYPE> is optional • <NTFCNCDE> is the notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82 • <CONDTYPE> is the single type of alarm condition being reported on this particular line; valid values are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values for <SRVEFF> are shown in the "SERV_EFF" section on page 4-91 • <DESC> is the condition description; <DESC> is a string and is optional • <AIDDET> is the supplementary equipment identification; <AIDDET> is a string and is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "SLOT-2,EQPT:MN,PWRRESTART,NSA,,,,:\"POWER FAIL RESTART\", DS1-14" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.144 RTRV-ALM-BITS: Retrieve Alarm Building Integrated Timing Supply

This command retrieves and sends the current status of alarm conditions associated with the BITS facility. The alarm condition or severity retrieved is specified using the input parameters as a filter.

Section	RTRV-ALM-BITS Description
Category	Synchronization
Security	Retrieve

Section	RTRV-ALM-BITS Description (continued)	
Related Messages	ED-BITS	RTRV-ALM-ALL
	ED-NE-SYNCN	RTRV-ALM-ENV
	ED-SYNCN	RTRV-ALM-EQPT
	OPR-SYNCNSW	RTRV-ALM-RING
	REPT ALM <MOD2ALM>	RTRV-ALM-SYNCN
	REPT ALM BITS	RTRV-ALM-UCP
	REPT ALM COM	RTRV-BITS
	REPT ALM ENV	RTRV-COND-<MOD2ALM>
	REPT ALM EQPT	RTRV-COND-ALL
	REPT ALM RING	RTRV-COND-BITS
	REPT ALM SYNCN	RTRV-COND-ENV
	REPT ALM UCP	RTRV-COND-EQPT
	REPT EVT BITS	RTRV-COND-RING
	REPT EVT COM	RTRV-COND-SYNCN
	REPT EVT SYNCN	RTRV-COND-UCP
	RLS-SYNCNSW	RTRV-NE-SYNCN
	RTRV-ALM-<MOD2ALM>	RTRV-SYNCN
Input Format	RTRV-ALM-BITS:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>][,,,];	
	where: • <AID> is an identifier that has an alarm condition and is from the AID "BITS" section on page 4-16; <AID> must not be null • <NTFCNCDE> is a 2-letter notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82. A null value is equivalent to ALL. • <CONDTYPE> is an alarm condition; valid values for <CONDTYPE> are shown in the "CONDITION" section on page 4-51. A null value is equivalent to ALL. • <SRVEFF> is the effect on service caused by the alarm condition; valid values for <SRVEFF> are shown in the "SERV_EFF" section on page 4-91. A null value is equivalent to ALL.	
Input Example	RTRV-ALM-BITS:ELVERANO:BITS-1:228::CR,LOS,SA;	

Section	RTRV-ALM-BITS Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>,[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,: [<DESC>]" ; where: • <AID> is the identifier that has an alarm condition and is from the "BITS" section on page 4-16 • <AIDTYPE> is the type of access identifier; valid values for <AIDTYPE> are shown in the "MOD2B" section on page 4-78 and <AIDTYPE> is optional • <NTFCNCDE> is the 2-letter notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82 • <CONDTYPE> is the alarm condition; valid values for <CONDTYPE> are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values for <SRVEFF> are shown in the "SERV_EFF" section on page 4-91 • <DESC> is the condition description; <DESC> is a string and is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "BITS-1,BITS:CR,LOS,SA,,,,:\"LOSS OF SIGNAL\"," ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.145 RTRV-ALM-ENV: Retrieve Alarm Environment

This command retrieves the environmental alarms.

Section	RTRV-ALM-ENV Description
Category	Environment Alarms and Controls
Security	Retrieve

Section	RTRV-ALM-ENV Description (continued)	
Related Messages	OPR-ACO-ALL	RTRV-ALM-RING
	OPR-EXT-CONT	RTRV-ALM-SYNCN
	REPT ALM <MOD2ALM>	RTRV-ALM-UCP
	REPT ALM BITS	RTRV-ATTR-CONT
	REPT ALM COM	RTRV-ATTR-ENV
	REPT ALM ENV	RTRV-COND-<MOD2ALM>
	REPT ALM EQPT	RTRV-COND-ALL
	REPT ALM RING	RTRV-COND-BITS
	REPT ALM SYNCN	RTRV-COND-ENV
	REPT ALM UCP	RTRV-COND-EQPT
	REPT EVT COM	RTRV-COND-RING
	REPT EVT ENV	RTRV-COND-SYNCN
	RLS-EXT-CONT	RTRV-COND-UCP
	RTRV-ALM-<MOD2ALM>	RTRV-EXT-CONT
	RTRV-ALM-ALL	SET-ATTR-CONT
	RTRV-ALM-BITS	SET-ATTR-ENV
	RTRV-ALM-EQPT	
Input Format	RTRV-ALM-ENV:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<ALMTYPE>]; where: • <AID> is the access identifier from the "ENV" section on page 4-22; <AID> must not be null **Note** For RTRV-ALM-ENV, only ENV-IN-{1-4} is a valid AID for ONS 15454 and only ENV-IN-{1-6} is a valid AID for ONS 15327. ENV-OUT-{1,6} is not a valid AID for RTRV-ALM-ENV. • <NTFCNCDE> is a notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82. A null value is equivalent to ALL. • <ALMTYPE> is the alarm type for the environmental alarm; valid values for <ALMTYPE> are shown in the "ENV_ALM" section on page 4-66. A null value is equivalent to ALL.	
Input Example	RTRV-ALM-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR;	

Section	RTRV-ALM-ENV Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:<NTFCNCDE>,<ALMTYPE>,,,[<DESC>]" ; where: • <AID> is an access identifier from the "ENV" section on page 4-22 • <NTFCNCDE> is the notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82 • <ALMTYPE> is the alarm type for the environmental alarm; valid values for <ALMTYPE> are shown in the "ENV_ALM" section on page 4-66 • <DESC> is the alarm message; <DESC> is a string and is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "ENV-IN-1:MJ,OPENDR,,,\"OPEN DOOR\"" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.146 RTRV-ALM-EQPT: Retrieve Alarm Equipment

This command retrieves and sends the current status of alarm conditions associated with the equipment units. The alarm condition or severity to be retrieved is specified using the input parameters as a filter.

Section	RTRV-ALM-EQPT Description
Category	Equipment
Security	Retrieve

Section	RTRV-ALM-EQPT Description (continued)	
Related Messages	ALW-SWDX-EQPT	RTRV-ALM-<MOD2ALM>
	ALW-SWTOPROTN-EQPT	RTRV-ALM-ALL
	ALW-SWTOWKG-EQPT	RTRV-ALM-BITS
	DLT-EQPT	RTRV-ALM-ENV
	ED-EQPT	RTRV-ALM-RING
	ENT-EQPT	RTRV-ALM-SYNCN
	INH-SWDX-EQPT	RTRV-ALM-UCP
	INH-SWTOPROTN-EQPT	RTRV-COND-<MOD2ALM>
	INH-SWTOWKG-EQPT	RTRV-COND-ALL
	REPT ALM <MOD2ALM>	RTRV-COND-BITS
	REPT ALM BITS	RTRV-COND-ENV
	REPT ALM COM	RTRV-COND-EQPT
	REPT ALM ENV	RTRV-COND-RING
	REPT ALM EQPT	RTRV-COND-SYNCN
	REPT ALM RING	RTRV-COND-UCP
	REPT ALM SYNCN	RTRV-EQPT
	REPT ALM UCP	SW-DX-EQPT
	REPT EVT COM	SW-TOPROTN-EQPT
	REPT EVT EQPT	SW-TOWKG-EQPT
Input Format	RTRV-ALM-EQPT:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>][,,,];	
	where: • <AID> is an identifier that has an alarm condition and is from the "EQPT" section on page 4-23; <AID> must not be null • <NTFCNCDE> is the 2-letter notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82. A null value is equivalent to ALL. • <CONDTYPE> is the alarm condition; valid values for <CONDTYPE> are shown in the "CONDITION" section on page 4-51. A null value is equivalent to ALL. • <SRVEFF> is the effect on service caused by the alarm condition; valid values for <SRVEFF> are shown in the "SERV_EFF" section on page 4-91. A null value is equivalent to ALL.	
Input Example	RTRV-ALM-EQPT:TWOROCK:SLOT-7:227::MJ,HITEMP,NSA;	

Section	RTRV-ALM-EQPT Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "[<AID>],[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,: [<DESC>]" ; where: • <AID> is an identifier that has an alarm condition and is from the "EQPT" section on page 4-23; <AID> is optional • valid values for <AIDTYPE> are shown in the "MOD2B" section on page 4-78; <AIDTYPE> is optional • <NTFCNCDE> is a 2-letter notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82 • <CONDTYPE> is an alarm condition; valid values for <CONDTYPE> are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values for <SRVEFF> are shown in the "SERV_EFF" section on page 4-91 • <DESC> is a condition description; <DESC> is a string and is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "SLOT-7,EQPT:MJ,HITEMP,NSA,,,,:\"HI TEMPERATURE\"," ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.147 RTRV-ALM-RING: Retrieve Alarm Ring

This command retrieves and sends the current status of all active alarm conditions against a ring object for BLSR. The alarm condition or severity to be retrieved can be specified by using the input parameters as a filter.

Section	RTRV-ALM-RING Description
Category	Fault
Security	Retrieve

Section	RTRV-ALM-RING Description (continued)	
Related Messages	DLT-BLSR	RTRV-ALM-BITS
	ED-BLSR	RTRV-ALM-ENV
	ENT-BLSR	RTRV-ALM-EQPT
	REPT ALM <MOD2ALM>	RTRV-ALM-SYNCN
	REPT ALM BITS	RTRV-ALM-UCP
	REPT ALM COM	RTRV-BLSR
	REPT ALM ENV	RTRV-COND-<MOD2ALM>
	REPT ALM EQPT	RTRV-COND-ALL
	REPT ALM RING	RTRV-COND-BITS
	REPT ALM SYNCN	RTRV-COND-ENV
	REPT ALM UCP	RTRV-COND-EQPT
	REPT EVT COM	RTRV-COND-RING
	REPT EVT RING	RTRV-COND-SYNCN
	RTRV-ALM-<MOD2ALM>	RTRV-COND-UCP
	RTRV-ALM-ALL	
Input Format	RTRV-ALM-RING:[<TID>]:[<AID>]:<CTAG>::[<NTFCNCDE>],[<CONDITION>],[<SRVEFF>][,,,];	
	where: • <AID> identifies a BLSR RING ID with alarm condition and is the AID from the "BLSR" section on page 4-17; <AID> is a string and a null value is equivalent to ALL. • <NTFCNCDE> is a notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82 and a null value is equivalent ALL. • <CONDITION> indicates a BLSR alarm condition; valid values for <CONDITION> are shown in the "CONDITION" section on page 4-51 and a null value is equivalent to ALL. • <SRVEFF> is the effect on service caused by the alarm condition; valid values for <SRVEFF> are shown in the "SERV_EFF" section on page 4-91 and a null value is equivalent to ALL.	
Input Example	RTRV-ALM-RING:CISCO:BLSR-999:123::MJ,PRC-DUPID,SA;	

Section	RTRV-ALM-RING Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,:[<DESC>]" ; where: • <AID> identifies a BLSR RING ID with alarm condition and is from the "BLSR" section on page 4-17 • <NTFCNCDE> is a notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82 • <CONDTYPE> indicates a BLSR alarm condition; valid values for <CONDTYPE> are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values for <SRVEFF> are shown in the "SERV_EFF" section on page 4-91 • <DESC> is a condition description; <DESC> is a string and is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "BLSR-999:MJ,PRC-DUPID,SA,,,,:\"DUPLICATE NODE ID\"," ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.148 RTRV-ALM-SYNCN: Retrieve Alarm Synchronization

This command retrieves and sends the current status of alarm conditions associated with a synchronization facility. The alarm condition or severity to be retrieved can be specified by using the input parameters as a filter.

Section	RTRV-ALM-SYNCN Description
Category	Synchronization
Security	Retrieve

Section	RTRV-ALM-SYNCN Description (continued)	
Related Messages	ED-BITS	RTRV-ALM-ALL
	ED-NE-SYNCN	RTRV-ALM-BITS
	ED-SYNCN	RTRV-ALM-ENV
	OPR-SYNCNSW	RTRV-ALM-EQPT
	REPT ALM <MOD2ALM>	RTRV-ALM-RING
	REPT ALM BITS	RTRV-ALM-UCP
	REPT ALM COM	RTRV-BITS
	REPT ALM ENV	RTRV-COND-<MOD2ALM>
	REPT ALM EQPT	RTRV-COND-ALL
	REPT ALM RING	RTRV-COND-BITS
	REPT ALM SYNCN	RTRV-COND-ENV
	REPT ALM UCP	RTRV-COND-EQPT
	REPT EVT BITS	RTRV-COND-RING
	REPT EVT COM	RTRV-COND-SYNCN
	REPT EVT SYNCN	RTRV-COND-UCP
	RLS-SYNCNSW	RTRV-NE-SYNCN
	RTRV-ALM-<MOD2ALM>	RTRV-SYNCN
Input Format	RTRV-ALM-SYNCN:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>][,,,];	
	where: • <AID> identifies the access identifier from the "SYNC_REF" section on page 4-30, <AID> must not be null • <NTFCNCDE> is the 2-letter notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82. A null value is equivalent to ALL. • <CONDTYPE> is the alarm condition; valid values for <CONDTYPE> are shown in the "CONDITION" section on page 4-51. A null value is equivalent to ALL. • <SRVEFF> is the effect on service caused by the alarm condition; valid values for <SRVEFF> are shown in the "SERV_EFF" section on page 4-91. A null value is equivalent to ALL.	
Input Example	RTRV-ALM-SYNCN:FULTON:SYNC-NE:226::CR,FAILTOSW,SA;	

Section	RTRV-ALM-SYNCN Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>,[<AIDTYPE>]:<NTFCNCDE>,<CONDTYPE>, <SRVEFF>,,,,:[<DESC>]" ; where: • <AID> is the identifier that has an alarm condition and is from the "SYN" section on page 4-29 • <AIDTYPE> is the type of access identifier: valid values for <AIDTYPE> are shown in the "MOD2B" section on page 4-78 and <AIDTYPE> is optional • <NTFCNCDE> is the 2-letter notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82 • <CONDTYPE> is the alarm condition; valid values for <CONDTYPE> are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values for <SRVEFF> are shown in the "SERV_EFF" section on page 4-91 • <DESC> is the condition description; <DESC> is a string and is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "SYNC-NE,SYNCN:CR,FAILTOSW,SA,,,,: \"FAILURE TO SWITCH TO PROTECTION\"," ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.149 RTRV-ALM-UCP: Retrieve Alarm Unified Control Plane

This retrieves and sends the current status of all active alarm conditions against a UCP object. The alarm condition or severity to be retrieved can be specified by using the input parameters as a filter.

Section	RTRV-ALM-UCP Description
Category	UCP
Security	Retrieve

Section	RTRV-ALM-UCP Description (continued)	
Related Messages	DLT-UCP-CC	RTRV-ALM-<MOD2ALM>
	DLT-UCP-IF	RTRV-ALM-ALL
	DLT-UCP-NBR	RTRV-ALM-BITS
	ED-UCP-CC	RTRV-ALM-ENV
	ED-UCP-IF	RTRV-ALM-EQPT
	ED-UCP-NBR	RTRV-ALM-RING
	ED-UCP-NODE	RTRV-ALM-SYNCN
	ENT-UCP-CC	RTRV-COND-<MOD2ALM>
	ENT-UCP-IF	RTRV-COND-ALL
	ENT-UCP-NBR	RTRV-COND-BITS
	REPT ALM <MOD2ALM>	RTRV-COND-ENV
	REPT ALM BITS	RTRV-COND-EQPT
	REPT ALM COM	RTRV-COND-RING
	REPT ALM ENV	RTRV-COND-SYNCN
	REPT ALM EQPT	RTRV-COND-UCP
	REPT ALM RING	RTRV-UCP-CC
	REPT ALM SYNCN	RTRV-UCP-IF
	REPT ALM UCP	RTRV-UCP-NBR
	REPT EVT COM	RTRV-UCP-NODE
	REPT EVT UCP	
Input Format	RTRV-ALM-UCP:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<CONDTYPE>],[<SRVEFF>][,,,];	
	where: • <AID> identifies a UCP object with alarm condition; <AID> is from the "UCP" section on page 4-32 and must not be null • <NTFCNCDE> is a notification code; valid values <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82. A null value is equivalent to ALL • <CONDTYPE> is the type of condition to be retrieved; valid values are shown in the "CONDITION" section on page 4-51. A null value is equivalent to ALL • <SRVEFF> is the effect on service caused by the alarm condition; valid values are shown in the "SERV_EFF" section on page 4-91. A null value is equivalent to ALL	
Input Example	RTRV-ALM-UCP:CISCO:CC-1:123::MJ,LMP-HELLODOWN,SA;	

Section	RTRV-ALM-UCP Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:<NTFCNCDE>,<CONDTYPE>,<SRVEFF>,,,,:[<DESC>]" ; where: • <AID> identifies a UCP object with alarm condition; <AID> is from the "UCP" section on page 4-32 • <NTFCNCDE> is a notification code; valid values are shown in the "NOTIF_CODE" section on page 4-82 • <CONDTYPE> is the type of condition to be retrieved; valid values are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values are shown in the "SERV_EFF" section on page 4-91 • <DESC> is a condition description; <DESC> is a string and is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "CC-1:MJ,LMP-HELLODOWN,SA,,,,:\ "LMP HELLO FSM ON CONTROL CHANNEL DOWN\"," ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.150 RTRV-ALMTH-<MOD2>: Retrieve Alarm Threshold (CLNT, DS1, DS3I, E1, E3, E4, EC1, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STM1E, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

(Cisco ONS 15454 only)

This command retrieves the alarm threshold values. The only applicable MOD2 are CLNT/OCH/OMS/OTS.

Section	RTRV-ALMTH-<MOD2> Description
Category	DWDM
Security	Retrieve
Related Messages	SET-ALMTH-<MOD2>
Input Format	RTRV-ALMTH-<MOD2>:[<TID>]:<AID>:<CTAG>::<ALMTHR>[,,::]; where: • <AID> is from the "ALL" section on page 4-9 and must not be null • Valid values for <ALMTHR> are shown in the "ALM_THR" section on page 4-44 and <ALMTHR> must not be null
Input Example	RTRV-ALMTH-:<MOD2>::CHAN-2-2:1::OPT-HIGH;

Section	RTRV-ALMTH-<MOD2> Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>,<MOD>:<CONDTYPE>,<THLEVEL>" ; where: • <AID> is from the "ALL" section on page 4-9 • <MOD> is the AID type; valid values are shown in the "MOD2" section on page 4-76 • <CONDTYPE> alarm threshold condition type; valid values are shown in the "ALM_THR" section on page 4-44 • <THLEVEL>is the threshold level and is a float
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "CHAN-2-2,OCH:OPT-HIGH,20" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.151 RTRV-ATTR-CONT: Retrieve Attribute Control

This command retrieves and sends the attributes associated with an external control. These attributes are used when an external control is operated or released. To set these attributes, use the SET-ATTR-CONT command.

Section	RTRV-ATTR-CONT Description	
Category	Environment Alarms and Controls	
Security	Retrieve	
Related Messages	OPR-ACO-ALL OPR-EXT-CONT REPT ALM ENV REPT EVT ENV RLS-EXT-CONT RTRV-ALM-ENV	RTRV-ATTR-ENV RTRV-COND-ENV RTRV-EXT-CONT SET-ATTR-CONT SET-ATTR-ENV
Input Format	RTRV-ATTR-CONT:[<TID>]:<AID>:<CTAG>[::<CONTTYPE>]; where: • <AID> identifies the external control for which attributes are being set; <AID> is from the "ENV" section on page 4-22 and must not be null • <CONTTYPE> is the type of external control; valid values for <CONTTYPE> are shown in the "CONTTYPE" section on page 4-64. A null value is equivalent to ALL	
Input Example	RTRV-ATTR-CONT:CISCO:ENV-OUT-2:123::AIRCOND;	

Section	RTRV-ATTR-CONT Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:[<CONTTYPE>]" ; where: • <AID> identifies the external control for which attributes are being set and is from the "ENV" section on page 4-22 • <CONTTYPE> is the type of external control; valid values are shown in the "CONTTYPE" section on page 4-64 and <CONTTYPE> is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "ENV-OUT-2:AIRCOND" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.152 RTRV-ATTR-ENV: Retrieve Attribute Environment

This command retrieves the attributes associated with an environmental alarm.

Section	RTRV-ATTR-ENV Description	
Category	Environment Alarms and Controls	
Security	Retrieve	
Related Messages	OPR-ACO-ALL	RTRV-ATTR-CONT
	OPR-EXT-CONT	RTRV-COND-ENV
	REPT ALM ENV	RTRV-EXT-CONT
	REPT EVT ENV	SET-ATTR-CONT
	RLS-EXT-CONT	SET-ATTR-ENV
	RTRV-ALM-ENV	
Input Format	RTRV-ATTR-ENV:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<ALMTYPE>]; where: • <AID> is the access identifier from the "ENV" section on page 4-22 and must not be null • <NTFCNCDE> is the notification code for the environmental alarm; valid values are shown in the "NOTIF_CODE" section on page 4-82. A null value is equivalent to ALL • <ALMTYPE> is the alarm type for the environmental alarm; valid values are shown in the "ENV_ALM" section on page 4-66. A null value is equivalent to ALL	
Input Example	RTRV-ATTR-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR;	

Section	RTRV-ATTR-ENV Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:[<NTFCNCDE>],[<ALMTYPE>],[<DESC>]" ; where: • <AID> is the access identifier from the "ENV" section on page 4-22 • <NTFCNCDE> is the notification code for the environmental alarm; valid values are shown in the "NOTIF_CODE" section on page 4-82, <NTFCNCDE> is optional • <ALMTYPE> is the alarm type for the environmental alarm; valid values are shown in the "ENV_ALM" section on page 4-66, <ALMTYPE> is optional • <DESC> is the alarm description; <DESC> is a string and is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "ENV-IN-1:MJ,OPENDR,\"OPEN DOOR\"" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.153 RTRV-BITS: Retrieve Building Integrated Timing Supply

This command retrieves the BITS configuration command.

Note Starting with R4.1, the SYNC-BITS1 and SYNC-BITS2 AIDs can be used for retrieving the port state of BITS-OUT ports.

Section	RTRV-BITS Description	
Category	Synchronization	
Security	Retrieve	
Related Messages	ED-BITS	RLS-SYNCNSW
	ED-NE-SYNCN	RTRV-ALM-BITS
	ED-SYNCN	RTRV-ALM-SYNCN
	OPR-SYNCNSW	RTRV-COND-BITS
	REPT ALM BITS	RTRV-COND-SYNCN
	REPT ALM SYNCN	RTRV-NE-SYNCN
	REPT EVT BITS	RTRV-SYNCN
	REPT EVT SYNCN	
Input Format	RTRV-BITS:[<TID>]:<AID>:<CTAG>[::::]; where: • <AID> is a bit access identifier from the "BITS" section on page 4-16 and must not be null	

Section	RTRV-BITS Description (continued)
Input Example	RTRV-BITS:SONOMA:BITS-1:782;
Output Format	SID DATE TIME M CTAG COMPLD "<AID>::[LINECDE=<LINECDE>,][FMT=<FMT>,][LBO=<LBO>,] [SYNCMSG=<SYNCMSG>,][AISTHRSHLD=<AISTHRSHLD>]:[<PST>]" ; where: • <AID> is an access identifier from the "BITS" section on page 4-16 • <LINECDE> is a line code; valid values for <LINECDE> are shown in the "LINE_CODE" section on page 4-75, <LINECDE> is optional • <FMT> is a frame format; valid values are shown in the "FRAME_FORMAT" section on page 4-73, <FMT> is optional • <LBO> indicates BITS line build-out; valid values are shown in the "BITS_LineBuildOut" section on page 4-46, <LBO> is optional • <SYNCMSG> indicates a sync messaging; <SYNCMSG> defaults to (Y) and valid values are shown in the "ON_OFF" section on page 4-83, <SYNCMSG> is optional • <AIRTHRSHLD> is the AIS threshold. Valid values are shown in the "SYNC_CLOCK_REF_QUALITY_LEVEL" section on page 4-95; <AIRTHRSHLD> is optional • <PST> is the state; valid values are shown in the "PST" section on page 4-90, <PST> is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "BITS-1::LINECDE=AMI,FMT=ESF,LBO=0-133,SYNCMSG=Y, AISTHRSHLD=PRS:IS" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.154 RTRV-BLSR: Retrieve Bidirectional Line Switched Ring

This command retrieves the BLSR information of the NE. A two-fiber or four-fiber BLSR can be retrieved.

Output examples:

4F BLSR

"BLSR-43::RINGID=43,NODEID=3,MODE=4F,RVRTV=Y,RVTM=5.0,SRVRTV=Y,
SRVTM=5.0,EASTWORK=FAC-5-1,WESTWORK=FAC-6-1,EASTPROT=FAC-12-1,
WESTPROT=FAC-13-1"

2F BLSR

"BLSR-12::RINGID=12,NODEID=2,MODE=2F,RVRTV=Y,RVTM=5.0,EASTWORK=FAC-5-1,
WESTWORK=FAC-6-1"

Error conditions:

1. Only ALL, null, or single “BLSR-#” in the AID in is allowed in this command.
2. A NULL AID defaults to the AID ALL.
3. If the system fails on getting IOR, a SDBE (Status, Internal Data Base Error) error message will be returned.
4. If the NE does not have BSLR, the TL1 session will return the COMPLD error message with empty information to the user.

Section	RTRV-BLSR Description	
Category	BLSR	
Security	Retrieve	
Related Messages	DLT-BLSR	REPT EVT RING
	ED-BLSR	RTRV-ALM-RING
	ENT-BLSR	RTRV-COND-RING
	REPT ALM RING	
Input Format	RTRV-BLSR:[<TID>]:[<AID>]:<CTAG>[::::];	
	where:	
	• <AID> identifies the BLSR of the NE. Only ALL, NULL, or single “BLSR-#” in <AID> is allowed; <AID> is from the “BLSR” section on page 4-17. A null value is equivalent to ALL.	
Input Example	RTRV-BLSR:PETALUMA:ALL:123;	

Section	RTRV-BLSR Description (continued)
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>]" ; where: • <AID> identifies the BLSR of the NE and is from the "BLSR" section on page 4-17 • <RINGID> identifies the BLSR ID of the NE and ranges from 0–9999; <RINGID> is an integer • <NODEID> identifies the BLSR node ID of the NE and ranges from 0–31; <NODEID> is an integer • <MODE> identifies the BLSR mode and can be 2-fiber or 4-fiber; valid values for <MODE> are shown in the "BLSR_MODE" section on page 4-47 • <RVRTV> identifies the revertive mode; valid values are shown in the "ON_OFF" section on page 4-83 • <RVTM> identifies the revertive time; valid values are shown in the "REVERTIVE_TIME" section on page 4-90 • <SRVRTV> identifies the span revertive mode; valid values are shown in the "ON_OFF" section on page 4-83 and <SRVRTV> is optional • <SRVTM> identifies the span revertive time; valid values are shown in the "REVERTIVE_TIME" section on page 4-90. <SRVTM> is optional. • <EASTWORK> identifies the east working facility and is the AID from the "FACILITY" section on page 4-24 • <WESTWORK> identifies the west working facility and is the AID from the "FACILITY" section on page 4-24 • <EASTPROT> identifies the east protecting facility and is the AID from the "FACILITY" section on page 4-24; <EASTPROT> is optional • <WESTPROT> identifies the west protecting facility and is the AID from the "FACILITY" section on page 4-24; <WESTPROT> is optional
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" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.155 RTRV-CLNT: Retrieve Client

(Cisco ONS 15454 only)

This command retrieves client facility attributes.

See the "Provisioning Rules for MXP_2.5G_10G and TXP_MR_10G Cards" section on page 1-8 and the "Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards" section on page 1-13 for specific card provisioning rules.

Section	RTRV-CLNT Description	
Category	DWDM	
Security	Retrieve	
Related Messages	DLT-FFP-CLNT	OPR-PROTNSW-OCH
	DLT-LNK-<MOD2O>	RLS-LASER-OTS
	ED-CLNT	RLS-PROTNSW-CLNT
	ED-DWDM	RLS-PROTNSW-OCH
	ED-FFP-CLNT	RTRV-DWDM
	ED-FFP-OCH	RTRV-FFP-CLNT
	ED-LNK-<MOD2O>	RTRV-FFP-OCH
	ED-OCH	RTRV-LNK-<MOD2O>
	ED-OMS	RTRV-OCH
	ED-OTS	RTRV-OMS
	ED-TRC-CLNT	RTRV-OTS
	ED-TRC-OCH	RTRV-PROTNSW-CLNT
	ENT-FFP-CLNT	RTRV-PROTNSW-OCH
	ENT-LNK-<MOD2O>	RTRV-TRC-CLNT
	OPR-LASER-OTS	RTRV-TRC-OCH
	OPR-PROTNSW-CLNT	
Input Format	RTRV-CLNT:[<TID>]:<AID>:<CTAG>; where: • <AID> is the AID from the "FACILITY" section on page 4-24 and must not be null	
Input Example	RTRV-CLNT:CISCO:FAC-1-1:100;	

Section	RTRV-CLNT Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:,,[<ROLE>],<STATUS>:[NAME=<PORTNAME>,][1] [COMM=<COMM>,][SFBER=<SFBER>,] [SDBER=<SDBER>,][ALSMODE=<ALSMODE>,] [ALSRCINT=<ALSRCINT>,][ALSRCPW=<ALSRCPW>,] [SYNCMSG=<SYNCMSG>,][SENDDUS=<SENDDUS>,] [LSRSTAT=<LSRSTAT>,][CLEI=<CLEI>,][PN=<PARTNUM>,] [SN=<SERIALNUM>,][VENDOR=<VENDOR>,] [VENDORREV=<VENDORREV>,][PLGTYPE=<PLGTYPE>,][1] [MACADDR=<MACADDR>,][SOAK=<SOAK>,]:<PST>,[<SST>]" ; 1. [NAME=<PORTNAME>,] and [PLGTYPE=<PLGTYPE>,] apply to R4.5 only. where: • <AID> is the facility AID from the "FACILITY" section on page 4-24 • <ROLE> identifies an OCn port role (i.e. WORK or PROT); valid values for are shown in the "SIDE" section on page 4-92 • <STATUS> identifies an OCn port status (i.e. Active or Standby); valid values are shown in the "STATUS" section on page 4-92 • <PORTNAME> identifies the port name; <PORTNAME> is a string and is optional (R4.5 only) • <COMM> indicates if the GCC or DCC is enabled or disabled. The GCC can be enabled only if the digital wrapper has been enabled for the card. The default is NONE. Valid values are shown in the "COMM_TYPE" section on page 4-50. Rules for an MXP_2.5G_10G/TXP_MR_10G client port are; only the DCC can be provisioned, if the termination mode is not transparent and the payload is SONET. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the DCC can be enabled only if the G.709 is not enabled and if the payload is SONET and the termination mode is not transparent. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the GCC can be enabled if there is no DCC and the G.709 flag is enabled.

Section	RTRV-CLNT Description (continued)
Output Format (continued)	• <SFBER> signal fail bit error ration that defaults to 1E-4; valid values are shown in the "SF_BER" section on page 4-92 and <SFBER> is optional • <SDBER> signal degrade bit error ratio that defaults to 1E-7; valid values are shown in the "SD_BER" section on page 4-91 and <SDBER> is optional • <ALSMODE> automatic laser shutdown mode that defaults to DISABLED; valid values are shown in the "ALS_MODE" section on page 4-45 and <ALSMODE> is optional • <ALSRCINT> ALS interval; <ALSRCINT> is an integer and is optional • <ALSRCPW> ALS pulse width; <ALSRCPW> is a float and is optional • <SYNCMSG> indicates that the facility be enabled to provide the synchronization clock. This does not apply to a TXP_MR_10G card. This applies for a MXP_2.5G_10G card only if the payload is SONET and the card termination mode is as follows: TRANSPARENT–all client ports are available for all timing selections. All trunk ports are not available. LINE–all ports are available for all timing selections. Valid values are shown in the "ON_OFF" section on page 4-83 and <SYNCMSG> is optional • <SENDDUS> indicates that the facility send out a do not use for sync message. This does not apply to a TXP_MR_10G card. This applies for a MXP_2.5G_10G card only if the payload is SONET and the card termination mode is as follows: TRANSPARENT–All client ports are available for all timing selections. All trunk ports are not available. LINE–All ports are available for all timing selections. Valid values are shown in the "ON_OFF" section on page 4-83 and <SENDDUS> is optional • <LSRSTAT> displays the laser status; valid values are shown in the "UP_DOWN" section on page 4-103 and <LSRSTAT> is optional • <CLEI> is the CLEI code for the SFP for the MXP_2.5G_10G card; <CLEI> is a string and is optional • <PARTNUM> is the part number for the SFP for the MXP_2.5G_10G card; <PARTNUM> is a string and is optional • <SERIALNUM> is the serial number of the SFP for the MXP_2.5G_10G card; <SERIALNUM> is a string and is optional • <VENDOR> is the vendor name for the SFP in a MXP_2.5G_10G card; <VENDOR> is a string and is optional • <VENDORREV> is the vendor SFP revision number; <VENDORREV> is a string and is optional

Section	RTRV-CLNT Description (continued)
Output Format (continued)	• <PLGTYPE> indicates the pluggable optics type; <PLGTYPE> is a string and is optional (R4.5 only) • <MACADDR> identifies the MAC address for the 10GE payload; <MACADDR> is a string and is optional • <SOAK> OOS-AINS to IS transition soak time as measured in 15-minute intervals. A value of 4 translates to a soak time of 1 hour. The allowable range is 0 to 480 intervals. <SOAK> is an integer and is optional • <SOAKLEFT> time remaining for the transition from OOS-AINS to IS measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. <SOAKLEFT> is optional Rules for <SOAKLEFT> are as follows: – When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed. – When the port is in OOS_AINS, but the countdown has not started due to fault signal the value will be SOAKLEFT=NOT-STARTED. – When the port is in OOS_AINS state and the countdown has started the value will be shown in HH-MM format. • <PST> is the primary state; valid values are shown in the "PST" section on page 4-90 • <SST> is the secondary state; valid values are shown in the "SST" section on page 4-92 and <SST> is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "FAC-1-1:,,ROLE,ACT:NAME="\NYPORT\",COMM=DCC,SFBER=1E-4, SDBER=1E-6,ALSMODE=Y,ALSRCINT=30,ALSRCPW=35.1, SYNCMSG=Y,SENDDUS=Y,LSRSTAT=UP,CLEI=ABC,PN=123,SN=123, VENDOR=CISCO,VENDORREV=111,PLGTYPE=IC48-LR, MACADDR=00-11-22-33-44-55,SOAK=52,SOAKLEFT=12-25:IS,AINS" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.156 RTRV-COND-<MOD2ALM>: Retrieve Condition (CLNT, DS1, DS3I, E1, E100, E1000, E3, E4, EC1, FSTE, G1000, GIGE, OC12, OC192, OC3, OC48, OCH, OMS, OSC, OTS, POS, STM1E, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, UDCDCC, UDCF, VT1, VT2, WLEN)

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

This command retrieves the current standing condition and state associated with an entity.

Section	RTRV-COND-<MOD2ALM> Description
Category	Fault
Security	Retrieve

Section	RTRV-COND-<MOD2ALM> Description (continued)	
Related Messages	REPT ALM <MOD2ALM>	RTRV-ALM-ENV
	REPT ALM BITS	RTRV-ALM-EQPT
	REPT ALM COM	RTRV-ALM-RING
	REPT ALM ENV	RTRV-ALM-SYNCN
	REPT ALM EQPT	RTRV-ALM-UCP
	REPT ALM RING	RTRV-COND-ALL
	REPT ALM SYNCN	RTRV-COND-BITS
	REPT ALM UCP	RTRV-COND-ENV
	REPT EVT COM	RTRV-COND-EQPT
	RTRV-ALM-<MOD2ALM>	RTRV-COND-RING
	RTRV-ALM-ALL	RTRV-COND-SYNCN
	RTRV-ALM-BITS	RTRV-COND-UCP
Input Format	RTRV-COND-<MOD2ALM>:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>][,,,];	
	where: • <AID> is the identifier that has an alarm condition; <AID> is from the "ALL" section on page 4-9 and must not be null • <TYPEREQ> is the type of condition to be retrieved; valid values are shown in the "CONDITION" section on page 4-51. A null value is equivalent to ALL.	
Input Example	RTRV-COND-T3:TID:FAC-2-1:229::LOS;	
Output Format	SID DATE TIME M CTAG COMPLD "<AID>,[<AIDTYPE>]:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>], [<OCRDAT>],[<OCRTM>],,,[<DESC>]" ; where: • <AID> is an identifier that has an alarm condition and is from the "ALL" section on page 4-9 • Valid values for <AIDTYPE> are shown in the "MOD2ALM" section on page 4-77, <AIDTYPE> is optional • <NTFCNCDE> is a notification code; valid values are shown in the "NOTIF_CODE" section on page 4-82, <NTFCNCDE> is optional • <TYPEREP> is the condition itself; valid values are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values are shown in the "SERV_EFF" section on page 4-91, <SRVEFF> is optional • <OCRDAT> is a date and is optional • <OCRTM> is a time and is optional • <DESC> is a condition description; <DESC> is a string and is optional	

Section	RTRV-COND-<MOD2ALM> Description (continued)
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "FAC-2-1,T3:CR,LOS,SA,01-01,16-00-20,,,\"LOS OF SIGNAL\"" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.157 RTRV-COND-ALL: Retrieve Condition All

This command retrieves the current standing condition for all entities.

According to GR-833, the RTRV-COND-ALL command only reports EQPT, COM, and rr (T1, T3, OCN, EC1, STSN, VT1, and DS1) alarms.

To retrieve all the NE conditions, issue all of the following commands:

RTRV-COND-ALL
RTRV-COND-ENV
RTRV-COND-BITS
RTRV-COND-RING
RTRV-COND-SYNCN

RTRV-COND-ALL does not return all conditions that are returned by other, more specific RTRV-COND commands. Instead it returns a subset of those conditions. This is a requirement from section 6.2.1.8.4 of GR-253-CORE. The specific requirements are R6-288, R6-289 and R6-290. Section 6.2.1.8.4 states a retrieval that returns ALL conditions from a node (RTRV-COND-ALL) must omit any conditions that are "same root cause" as other raised conditions. The section also states any retrieval of a subset of the conditions from a node, regardless of how the subsetting occurs, should not omit these "same root cause" conditions. RTRV-COND-STS1, for example, must include "same root cause" conditions in the set it returns, while RTRV-COND-ALL must not.

Section	RTRV-COND-ALL Description	
Category	Fault	
Security	Retrieve	
Related Messages	REPT ALM <MOD2ALM>	RTRV-ALM-ENV
	REPT ALM BITS	RTRV-ALM-EQPT
	REPT ALM COM	RTRV-ALM-RING
	REPT ALM ENV	RTRV-ALM-SYNCN
	REPT ALM EQPT	RTRV-ALM-UCP
	REPT ALM RING	RTRV-COND-<MOD2ALM>
	REPT ALM SYNCN	RTRV-COND-BITS
	REPT ALM UCP	RTRV-COND-ENV
	REPT EVT COM	RTRV-COND-EQPT
	RTRV-ALM-<MOD2ALM>	RTRV-COND-RING
	RTRV-ALM-ALL	RTRV-COND-SYNCN
	RTRV-ALM-BITS	RTRV-COND-UCP

Section	RTRV-COND-ALL Description (continued)
Input Format	RTRV-COND-ALL:[<TID>]::<CTAG>::[<TYPEREQ>][,,,]; where: • <TYPEREQ> is the type of condition to be retrieved; valid values are shown in the "CONDITION" section on page 4-51. A null value is equivalent to ALL
Input Example	RTRV-COND-ALL:TID::229::LOS;
Output Format	SID DATE TIME M CTAG COMPLD "<AID>,[<AIDTYPE>]:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>], [<OCRDAT>],[<OCRTM>],,,[<DESC>]" ; where: • <AID> is an identifier that has an alarm condition; <AID> is from the "ALL" section on page 4-9 • <AIDTYPE> is the type of access identifier; valid values are shown in the "MOD2B" section on page 4-78, <AIDTYPE> is optional • <NTFCNCDE> is the notification code; valid values are shown in the "NOTIF_CODE" section on page 4-82, <NTFCNCDE> is optional • <TYPEREP> is the type of condition to be retrieved; valid values are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values are shown in the "SERV_EFF" section on page 4-91, <SRVEFF> is optional • <OCRDAT> is a date and is optional • <OCRTM> is a time and is optional • <DESC> is the condition description; <DESC> is a string and is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "FAC-2-1,OC3:CR,LOS,SA,01-01,16-02-15,,,\"LOS OF SIGNAL\"" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.158 RTRV-COND-BITS: Retrieve Condition Building Integrated Timing Supply

This command retrieves the standing conditions on BITS.

Section	RTRV-COND-BITS Description
Category	Synchronization
Security	Retrieve

Section	RTRV-COND-BITS Description (continued)	
Related Messages	ED-BITS	RTRV-ALM-ALL
	ED-NE-SYNCN	RTRV-ALM-BITS
	ED-SYNCN	RTRV-ALM-ENV
	OPR-SYNCNSW	RTRV-ALM-EQPT
	REPT ALM <MOD2ALM>	RTRV-ALM-RING
	REPT ALM BITS	RTRV-ALM-SYNCN
	REPT ALM COM	RTRV-ALM-UCP
	REPT ALM ENV	RTRV-BITS
	REPT ALM EQPT	RTRV-COND-<MOD2ALM>
	REPT ALM RING	RTRV-COND-ALL
	REPT ALM SYNCN	RTRV-COND-ENV
	REPT ALM UCP	RTRV-COND-EQPT
	REPT EVT BITS	RTRV-COND-RING
	REPT EVT COM	RTRV-COND-SYNCN
	REPT EVT SYNCN	RTRV-COND-UCP
	RLS-SYNCNSW	RTRV-NE-SYNCN
	RTRV-ALM-<MOD2ALM>	RTRV-SYNCN
Input Format	RTRV-COND-BITS:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>][,,,];	
	where:	
	• <AID> is the access identifier from the "BITS" section on page 4-16 and must not be null	
	• <TYPEREQ> is the type of condition to be retrieved; valid values are shown in the "CONDITION" section on page 4-51. A null value is equivalent to ALL	
Input Example	RTRV-COND-BITS:TID:BITS-1:229::LOS;	

Section	RTRV-COND-BITS Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>,[<AIDTYPE>]:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>], [<OCRDAT>],[<OCRTM>],,,[<DESC>]" ; where: • <AID> is an identifier that has an alarm condition and is from the "BITS" section on page 4-16 • <AIDTYPE> is the type of AID. It is always reported as BITS; valid values are shown in the "MOD2B" section on page 4-78, <AIDTYPE> is optional • <NTFCNCDE> is the notification code; valid values are shown in the "NOTIF_CODE" section on page 4-82, <NTFCNCDE> is optional • <TYPEREP> is the type of condition to be retrieved; valid values are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values are shown in the "SERV_EFF" section on page 4-91, <SRVEFF> is optional • <OCRDAT> is a date and is optional • <OCRTM> is a time and is optional • <DESC> is a string and is optional
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\"" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.159 RTRV-COND-ENV: Retrieve Environmental Condition

This command retrieves the environmental conditions.

Section	RTRV-COND-ENV Description
Category	Environment Alarms and Controls
Security	Retrieve

Section	RTRV-COND-ENV Description (continued)	
Related Messages	OPR-ACO-ALL	RTRV-ALM-EQPT
	OPR-EXT-CONT	RTRV-ALM-RING
	REPT ALM <MOD2ALM>	RTRV-ALM-SYNCN
	REPT ALM BITS	RTRV-ALM-UCP
	REPT ALM COM	RTRV-ATTR-CONT
	REPT ALM ENV	RTRV-ATTR-ENV
	REPT ALM EQPT	RTRV-COND-<MOD2ALM>
	REPT ALM RING	RTRV-COND-ALL
	REPT ALM SYNCN	RTRV-COND-BITS
	REPT ALM UCP	RTRV-COND-EQPT
	REPT EVT COM	RTRV-COND-RING
	REPT EVT ENV	RTRV-COND-SYNCN
	RLS-EXT-CONT	RTRV-COND-UCP
	RTRV-ALM-<MOD2ALM>	RTRV-EXT-CONT
	RTRV-ALM-ALL	SET-ATTR-CONT
	RTRV-ALM-BITS	SET-ATTR-ENV
	RTRV-ALM-ENV	
Input Format	RTRV-COND-ENV:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<ALMTYPE>][,,,];	
	where: • <AID> is an access identifier from the "ENV" section on page 4-22 and must not be null **Note** For RTRV-COND-ENV, only ENV-IN-{1-4} is a valid AID for ONS 15454 and only ENV-IN-{1-6} is a valid AID for ONS 15327. ENV-OUT-{1,6} is not a valid AID for RTRV-COND-ENV. • <NTFCNCDE> is a notification code; valid values are shown in the "NOTIF_CODE" section on page 4-82. A null value is equivalent to ALL. • <ALMTYPE> is the condition type for the environmental conditions; valid values are shown in the "ENV_ALM" section on page 4-66. A null value is equivalent to ALL.	
Input Example	RTRV-COND-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR;	

Section	RTRV-COND-ENV Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:<NTFCNCDE>,<ALMTYPE>,[<OCRDAT>], [<OCRTM>],,,,[<DESC>]" ; where: • <AID> is an access identifier and is from the "ENV" section on page 4-22 • <NTFCNCDE> is the notification code; valid values are shown in the "NOTIF_CODE" section on page 4-82 • <ALMTYPE> is an alarm type for the environmental alarm; valid values are shown in the "ENV_ALM" section on page 4-66 • <OCRDAT> is a date and is optional • <OCRTM> is a time and is optional • <DESC> is the description of the condition; <DESC> is a string and is optional
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\"" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.160 RTRV-COND-EQPT: Retrieve Condition Equipment

This command retrieves the equipment conditions.

Section	RTRV-COND-EQPT Description
Category	Equipment
Security	Retrieve

Section	RTRV-COND-EQPT Description (continued)	
Related Messages	ALW-SWDX-EQPT	RTRV-ALM-<MOD2ALM>
	ALW-SWTOPROTN-EQPT	RTRV-ALM-ALL
	ALW-SWTOWKG-EQPT	RTRV-ALM-BITS
	DLT-EQPT	RTRV-ALM-ENV
	ED-EQPT	RTRV-ALM-EQPT
	ENT-EQPT	RTRV-ALM-RING
	INH-SWDX-EQPT	RTRV-ALM-SYNCN
	INH-SWTOPROTN-EQPT	RTRV-ALM-UCP
	INH-SWTOWKG-EQPT	RTRV-COND-<MOD2ALM>
	REPT ALM <MOD2ALM>	RTRV-COND-ALL
	REPT ALM BITS	RTRV-COND-BITS
	REPT ALM COM	RTRV-COND-ENV
	REPT ALM ENV	RTRV-COND-RING
	REPT ALM EQPT	RTRV-COND-SYNCN
	REPT ALM RING	RTRV-COND-UCP
	REPT ALM SYNCN	RTRV-EQPT
	REPT ALM UCP	SW-DX-EQPT
	REPT EVT COM	SW-TOPROTN-EQPT
	REPT EVT EQPT	SW-TOWKG-EQPT
Input Format	RTRV-COND-EQPT:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>][,,,]; where: • <AID> is an identifier that has an alarm condition; <AID> is from the "EQPT" section on page 4-23 and must not be null • <TYPEREQ> is the type of condition to be retrieved; valid values are shown in the "CONDITION" section on page 4-51. A null value is equivalent to ALL	
Input Example	RTRV-COND-EQPT:TID:SLOT-1:229::LOS;	

Section	RTRV-COND-EQPT Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>,[<AIDTYPE>]:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>], [<OCRDAT>],[<OCRTM>],,,[<DESC>]" ; where: • <AID> is the identifier that has an alarm condition and is from the "EQPT" section on page 4-23 • <AIDTYPE> is the type of the AID. It is always reported as EQPT for the equipment condition; valid values are shown in the "MOD2B" section on page 4-78, <AIDTYPE> is optional • <NTFCNCDE> is the notification code; valid values are shown in the "NOTIF_CODE" section on page 4-82, <NTFCNCDE> is optional • <TYPEREP> is the type of condition to be retrieved; valid values are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values are shown in the "SERV_EFF" section on page 4-91, <SRVEFF> is optional • <OCRDAT> is a date and is optional • <OCRTM> is a time and is optional • <DESC> is the condition description; <DESC> is a string and is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "SLOT-1,EQPT:CR,LOS,SA,01-01,16-02-15,,,\"LOS OF SIGNAL\"" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.161 RTRV-COND-RING: Retrieve Condition Ring

This command retrieves the current standing condition against a ring object for BLSR. The condition BLSR-UPDATED has been added and is always reported as a transient message, not a standing condition/alarm.

Note When a change is made to a BLSR, including creating a new circuit, the circuit will not have BLSR protection until after the BLSR-UPDATED message is received.

Section	RTRV-COND-RING Description
Category	BLSR
Security	Retrieve

Section	RTRV-COND-RING Description (continued)	
Related Messages	DLT-BLSR	RTRV-ALM-BITS
	ED-BLSR	RTRV-ALM-ENV
	ENT-BLSR	RTRV-ALM-EQPT
	REPT ALM <MOD2ALM>	RTRV-ALM-RING
	REPT ALM BITS	RTRV-ALM-SYNCN
	REPT ALM COM	RTRV-ALM-UCP
	REPT ALM ENV	RTRV-BLSR
	REPT ALM EQPT	RTRV-COND-<MOD2ALM>
	REPT ALM RING	RTRV-COND-ALL
	REPT ALM SYNCN	RTRV-COND-BITS
	REPT ALM UCP	RTRV-COND-ENV
	REPT EVT COM	RTRV-COND-EQPT
	REPT EVT RING	RTRV-COND-SYNCN
	RTRV-ALM-<MOD2ALM>	RTRV-COND-UCP
	RTRV-ALM-ALL	
Input Format	RTRV-COND-RING:[<TID>]:[<AID>]:<CTAG>::[<TYPEREQ>][,,,];	
	where:	
	• <AID> identifies a BLSR ID with alarm condition; <AID> is a string and a null value is equivalent to ALL	
	• Valid values for <TYPEREQ> are shown in the "CONDITION" section on page 4-51 and a null value is equivalent to ALL	
Input Example	RTRV-COND-RING:CISCO:RING-88:123::RING-MISMATCH;	
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>],[<OCRDAT>], [<OCRTM>],,,[<DESC>]" ;	
	where:	
	• <AID> identifies a BLSR ID with alarm condition; <AID> is from the "BLSR" section on page 4-17	
	• Valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82. <NTFCNCDE> is optional.	
	• Valid values for <TYPEREP> are shown in the "CONDITION" section on page 4-51	
	• <SRVEFF> is the effect on service caused by the alarm condition; valid values are shown in the "SERV_EFF" section on page 4-91. <SRVEFF> is optional.	
	• <OCRDAT> is a date and is optional	
	• <OCRTM> is a time and is optional	
	• <DESC> is a string and is optional	

Section	RTRV-COND-RING Description (continued)
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "BLSR-88:MN,RING-MISMATCH,SA,01-01,16-02-15,,, \"FAR END OF FIBER IS PROVISIONED WITH DIFFERENT RING ID\"," ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.162 RTRV-COND-SYNCN: Retrieve Condition Synchronization

This command retrieves the synchronization condition.

Section	RTRV-COND-SYNCN Description	
Category	Synchronization	
Security	Retrieve	
Related Messages	ED-BITS	RTRV-ALM-ALL
	ED-NE-SYNCN	RTRV-ALM-BITS
	ED-SYNCN	RTRV-ALM-ENV
	OPR-SYNCNSW	RTRV-ALM-EQPT
	REPT ALM <MOD2ALM>	RTRV-ALM-RING
	REPT ALM BITS	RTRV-ALM-SYNCN
	REPT ALM COM	RTRV-ALM-UCP
	REPT ALM ENV	RTRV-BITS
	REPT ALM EQPT	RTRV-COND-<MOD2ALM>
	REPT ALM RING	RTRV-COND-ALL
	REPT ALM SYNCN	RTRV-COND-BITS
	REPT ALM UCP	RTRV-COND-ENV
	REPT EVT BITS	RTRV-COND-EQPT
	REPT EVT COM	RTRV-COND-RING
	REPT EVT SYNCN	RTRV-COND-UCP
	RLS-SYNCNSW	RTRV-NE-SYNCN
	RTRV-ALM-<MOD2ALM>	RTRV-SYNCN
Input Format	RTRV-COND-SYNCN:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>][,,,];	
	where: • <AID> is an identifier that has an alarm condition; <AID> is from the "SYNC_REF" section on page 4-30 and must not be null • <TYPEREQ> is the type of condition to be retrieved; valid values are shown in the "CONDITION" section on page 4-51. A null value is equivalent to ALL	
Input Example	RTRV-COND-SYNCN:TID:SYNC-NE:229::LOS;	

Section	RTRV-COND-SYNCN Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>,[<AIDTYPE>]:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>], [<OCRDAT>],[<OCRTM>],,,[<DESC>]" ; where: • <AID> is the identifier that has an alarm condition and is from the "SYN" section on page 4-29 • <AIDTYPE> is the type of AID. It is always reported as SYNCN; valid values are shown in the "MOD2B" section on page 4-78, <AIDTYPE> is optional • <NTFCNCDE> is the notification code; valid values for <NTFCNCDE> are shown in the "NOTIF_CODE" section on page 4-82, <NTFCNCDE> is optional • <TYPEREP> is the type of condition to be retrieved; valid values are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values are shown in the "SERV_EFF" section on page 4-91, <SRVEFF> is optional • <OCRDAT> is a date and is optional • <OCRTM> is a time and is optional • <DESC> is the condition description; <DESC> is a string and is optional
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\"" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.163 RTRV-COND-UCP: Retrieve Condition Unified Control Plane

This command retrieves the current standing condition against a UCP object.

Section	RTRV-COND-UCP Description
Category	UCP
Security	Retrieve

Section	RTRV-COND-UCP Description (continued)	
Related Messages	DLT-UCP-CC	RTRV-ALM-<MOD2ALM>
	DLT-UCP-IF	RTRV-ALM-ALL
	DLT-UCP-NBR	RTRV-ALM-BITS
	ED-UCP-CC	RTRV-ALM-ENV
	ED-UCP-IF	RTRV-ALM-EQPT
	ED-UCP-NBR	RTRV-ALM-RING
	ED-UCP-NODE	RTRV-ALM-SYNCN
	ENT-UCP-CC	RTRV-ALM-UCP
	ENT-UCP-IF	RTRV-COND-<MOD2ALM>
	ENT-UCP-NBR	RTRV-COND-ALL
	REPT ALM <MOD2ALM>	RTRV-COND-BITS
	REPT ALM BITS	RTRV-COND-ENV
	REPT ALM COM	RTRV-COND-EQPT
	REPT ALM ENV	RTRV-COND-RING
	REPT ALM EQPT	RTRV-COND-SYNCN
	REPT ALM RING	RTRV-UCP-CC
	REPT ALM SYNCN	RTRV-UCP-IF
	REPT ALM UCP	RTRV-UCP-NBR
	REPT EVT COM	RTRV-UCP-NODE
	REPT EVT UCP	
Input Format	RTRV-COND-UCP:[<TID>]:<AID>:<CTAG>::[<TYPEREQ>][,,,]; where: • <AID> identifies a UCP object with alarm condition; <AID> is from the "UCP" section on page 4-32 and must not be NULL • <TYPEREQ> is the type of condition to be retrieved; valid values are shown in the "CONDITION" section on page 4-51 and a NULL value is equivalent to ALL	
Input Example	RTRV-COND-UCP:CISCO:CC-18:123::LMP-HELLODOWN;	

Section	RTRV-COND-UCP Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:[<NTFCNCDE>],<TYPEREP>,[<SRVEFF>],[<OCRDAT>], [<OCRTM>],,,[<DESC>]" ; where: • <AID> identifies a UCP object with alarm condition; <AID> is from the "UCP" section on page 4-32 • <NTFCNCDE> is a notification code; valid values are shown in the "NOTIF_CODE" section on page 4-82 and <NTFCNCDE> is optional • <TYPEREP> is the type of condition to be retrieved; valid values are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is the effect on service caused by the alarm condition; valid values are shown in the "SERV_EFF" section on page 4-91 and <SRVEFF> is optional • <OCRDAT> is a date and is optional • <OCRTM> is a time and is optional • <DESC> is a condition description, a string and is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "CC-18:MN,LMP-HELLODOWN,SA,01-01,16-02-15,,, \"LMP HELLO FSM ON CONTROL CHANNEL DOWN\"," ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.164 RTRV-CRS: Retrieve Cross Connect

This command retrieves all the cross-connections based on the required CRSTYPE (for all STS connections), STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C and VT).

Notes:

1. A NULL AID defaults to ALL (NE).
2. A NULL CRSTYPE defaults to all the existing cross-connections.
3. The level in the output field is an optional field, and is used to indicate the bandwidth of the STS cross-connection.

Section	RTRV-CRS Description	
Category	Cross Connections	
Security	Retrieve	
Related Messages	DLT-CRS-<STS_PATH>	ENT-CRS-<STS_PATH>
	DLT-CRS-<VT_PATH>	ENT-CRS-<VT_PATH>
	ED-CRS-<STS_PATH>	RTRV-CRS-<STS_PATH>
	ED-CRS-<VT_PATH>	RTRV-CRS-<VT_PATH>

Section	RTRV-CRS Description (continued)
Input Format	RTRV-CRS:[<TID>]:<AID>:<CTAG>:::[CRSTYPE=<CRSTYPE>][:]; where: • <AID> indicates the access identifier. It can be a facility AID, an STS AID, a VT AID, or ALL AID. The ALL AID defaults to NE, which reports all the existing cross-connections of the NE. <AID> is from the "ALL" section on page 4-9 and must not be NULL • <CRSTYPE> specifies the cross-connection type. It is STS or VT or both. It defaults to all existing cross-connections. Valid values for <CRSTYPE> are shown in the "CRS_TYPE" section on page 4-64 and a NULL value is equivalent to ALL
Input Example	RTRV-CRS:CISCO:ALL:123:::CRSTYPE=STS;
Output Format	SID DATE TIME M CTAG COMPLD "<FROM>,<TO>:<CCT>,<MOD>::<PST>,[<SST>]" ; where: • <FROM> identifies an entity at one end of the cross-connection; <FROM> is from the "ALL" section on page 4-9 • <TO> identifies an entity at the other end of the cross-connection; <TO> is from the "ALL" section on page 4-9 • <CCT> identifies the cross-connection type; valid values are shown in the "CCT" section on page 4-49 • Valid values for <MOD> are shown in the "MOD2" section on page 4-76 • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92 and <SST> is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "STS-6-1,STS-12-4:2WAY,STS3C::OOS,AINS" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.165 RTRV-CRS-<STS_PATH>: Retrieve Cross Connect (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C)

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

This command retrieves any connections associated with the entered AID(s) or AID range. The information on both ends is returned along with the type of connection.

Notes:

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

from points: F1, F2

to points: T1

the output will be:

1-way

“F1&F2,T1:CCT,STS3C”

2-way

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

If retrieved on point T1, the output will be:

“T1,F1&F2:CCT,STS3C”

b. To retrieve a 1-way bridge or 2-way selector and bridge cross-connection with:

from point: F1

to points: T1, T2

the output will be:

1-way

“F1,T1&T2:CCT,STS3C”

2-way

“T1&T2,F1:CCT,STS3C”

c. To retrieve a 1-way subtending path protection connection or 2-way subtending path protection cross-connection with:

from point: F1, F2

to points: T1, T2

the output will be:

1-way:

“F1&F2,T1&T2:CCT,STS3C”

2-way:

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

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

“T1&T2,F1&F2:CCT,STS3C”

d. To retrieve a 2-way selector and bridge cross-connection with:

ENT-CRS-<STS_PATH>::F1&F2,S1&S2:<CTAG>::2WAY;

from points: F1, F2 (F1 is the working side, F2 is the protect side)

selector: S1, S2 (s1 is the working side, S2 is the protect side)

the output will be:

If retrieved on point F1 or F2, the output will be:

“F1&F2,S1&S2:CCT,STS3C”

If retrieved on selector S1 or S2, the output will be:

“S1&S2,F1&F2:CCT,STS3C”

e. To retrieve a path protection IDRI cross-connect with:

from points: F1, F2

to points: T1, T2

the output will be:

“F1&F2,T1&T2:CCT,STS3C”

f. To retrieve a path protection DRI cross-connect with:

from points: F1, F2

to points: T1

the output will be:

“F1&F2,T1:CCT,STS3C”

2. All A&B AIDs in the TL1 cross-connection command are in the format of WorkingAID&ProtectAID.
3. <STS_PATH> does not include STS for the RTRV-CRS command because STS is not a standard designator as defined by GR-833 A-2.
4. Both the 1WAYPCA and 2WAYPCA is used to specify a PCA cross-connection.
5. The facility AID is only valid on slots with a G1000-4 card.
6. The virtual facility AID (VFAC) is only valid on slots holding the ML-series card.

Section	RTRV-CRS-<STS_PATH> Description	
Category	Cross Connections	
Security	Retrieve	
Related Messages	DLT-CRS-<STS_PATH>	ENT-CRS-<STS_PATH>
	DLT-CRS-<VT_PATH>	ENT-CRS-<VT_PATH>
	ED-CRS-<STS_PATH>	RTRV-CRS
	ED-CRS-<VT_PATH>	RTRV-CRS-<VT_PATH>
Input Format	RTRV-CRS-<STS_PATH>:[<TID>]:<SRC>:<CTAG>[::::]; where: • <AID> is from the AID “CrossConnectID” section on page 4-19	
Input Example	RTRV-CRS-STS3C:KENWOOD:STS-6-1-1:223;	

Section	RTRV-CRS-<STS_PATH> Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<CROSSCONNECTID>,<CROSSCONNECTID1>:<CCT>,<MOD>::<PST>,[<SST>]" ; where: • <CROSSCONNECTID> is the AID from the "CrossConnectID" section on page 4-19 • <CROSSCONNECTID1> is the AID from the "CrossConnectID" section on page 4-19 • <CCT> identifies the cross-connection type; valid values are shown in the "CCT" section on page 4-49 • Valid values for <MOD> are shown in the "MOD2" section on page 4-76 • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "STS-6-1-1,STS-12-1-4:2WAY,STS3C::OOS,AINS" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.166 RTRV-CRS-<VT_PATH>: Retrieve Cross Connect Virtual Tributary

This command retrieves the VT cross-connection information.

Notes:

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

      from points: F1, F2

      to points: T1

      the output will be:

      1-way:

      "F1&F2,T1:CCT"

      2-way:

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

      If retrieved on T1, the output will be:

      "T1,F1&F2:CCT"

   b. To retrieve a 1-way bridge or 2-way selector and bridge cross-connection with:

      from point: F1

to points: T1, T2

the output will be:

1-way:

“F1,T1&T2:CCT”

2-way:

“T1&T2,F1:CCT”

c. To retrieve a 1-way subtending path protection connection or 2-way subtending path protection cross-connection with:

from point: F1, F2

to points: T1, T2

the output will be:

1-way:

“F1&F2,T1&T2:CCT”

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”

d. To retrieve a 2-way selector bridge cross-connection with:

ENT-CRS-VT1::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”

If retrieved on selector S1 or S2, the output will be:

“S1&S2,F1&F2:CCT”

e. To retrieve a path protection IDIR cross-connect with:

from points: F1, F2

to points: T1, T2

The output will be:

“F1&F2,T1&T2:CCT”

f. To retrieve a path protection DRI cross-connect with:

from points: F1, F2

to points: T1

The output will be:

“F1&F2,T1:CCT”

2. All A&B AIDs in the TL1 cross-connection command are in the format of WorkingAID&ProtectAID

3. Both 1WAYPCA and 2WAYPCA is used to specify a PCA cross-connection.

Section	RTRV-CRS-<VT_PATH> Description	
Category	Cross Connections	
Security	Retrieve	
Related Messages	DLT-CRS-<STS_PATH> DLT-CRS-<VT_PATH> ED-CRS-<STS_PATH> ED-CRS-<VT_PATH>	ENT-CRS-<STS_PATH> ENT-CRS-<VT_PATH> RTRV-CRS RTRV-CRS-<STS_PATH>
Input Format	RTRV-CRS-<VT_PATH>:[<TID>]:<AID>:<CTAG>[::::]; where: • <AID> identifies VT to check for connection membership. <AID> can be Facility, VT or ALL. The ALL AID defaults to NE which reports all the existing cross-connections of the NE. <AID> is from the "ALL" section on page 4-9 and must not be null	
Input Example	RTRV-CRS-VT1:CISCO:VT1-1-1-1-1:1234;	
Output Format	SID DATE TIME M CTAG COMPLD "<VT>,<VT1>:<CCT>::<PST>,[<SST>]" ; where: • <VT> is the AID from the "VT1_5" section on page 4-33 • <VT1> is the AID from the "VT1_5" section on page 4-33 • Valid values for <CCT> are shown in the "CCT" section on page 4-49 • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92 and <SST> is optional	
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "VT1-1-1-1-1-1,VT1-4-1-4-5-2:1WAY::OOS,AINS" ;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.167 RTRV-DS1: Retrieve DS1

(Cisco ONS 15454 only)

This command retrieves the test access attributes on a DS1 layer of a DS3XM card.

Section	RTRV-DS1 Description
Category	Ports
Security	Retrieve

Section	RTRV-DS1 Description (continued)	
Related Messages	ED-<OCN_TYPE>	RST-<MOD2_IO>
	ED-DS1	RTRV-<OCN_TYPE>
	ED-EC1	RTRV-EC1
	ED-G1000	RTRV-FSTE
	ED-T1	RTRV-G1000
	ED-T3	RTRV-GIGE
	INIT-REG-G1000	RTRV-POS
	REPT	RTRV-T1
	RMV-<MOD2_IO>	RTRV-T3
Input Format	RTRV-DS1:[<TID>]:<AID>:<CTAG>[::::]; where: • <AID> is the access identifier of a DS1 layer entity on the DS3XM card; <AID> is from the "DS1" section on page 4-22 and must not be null	
Input Example	RTRV-DS1:PETALUMA:DS1-2-6-12:123;	
Output Format	SID DATE TIME M CTAG COMPLD "<AID>::[TACC=<TACC>]" ; where: • <AID> is the access identifier from the "DS1" section on page 4-22 • <TACC> defines the STS as a test access port with a selected unique TAP number. The TAP number ranges from 0–999; <TACC> is an integer and is optional	
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "DS1-2-6-12::TACC=8" ;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.168 RTRV-DWDM: Retrieve Dense Wavelength Division Multiplexing

(Cisco ONS 15454 only)

This command retrieves DWDM card-level attributes.

Section	RTRV-DWDM Description
Category	DWDM
Security	Retrieve

Section	RTRV-DWDM Description (continued)	
Related Messages	DLT-FFP-CLNT	OPR-PROTNSW-OCH
	DLT-LNK-<MOD2O>	RLS-LASER-OTS
	ED-CLNT	RLS-PROTNSW-CLNT
	ED-DWDM	RLS-PROTNSW-OCH
	ED-FFP-CLNT	RTRV-CLNT
	ED-FFP-OCH	RTRV-FFP-CLNT
	ED-LNK-<MOD2O>	RTRV-FFP-OCH
	ED-OCH	RTRV-LNK-<MOD2O>
	ED-OMS	RTRV-OCH
	ED-OTS	RTRV-OMS
	ED-TRC-CLNT	RTRV-OTS
	ED-TRC-OCH	RTRV-PROTNSW-CLNT
	ENT-FFP-CLNT	RTRV-PROTNSW-OCH
	ENT-LNK-<MOD2O>	RTRV-TRC-CLNT
	OPR-LASER-OTS	RTRV-TRC-OCH
	OPR-PROTNSW-CLNT	
Input Format	RTRV-DWDM:[<TID>]:<AID>:<CTAG>; where: • <AID> is access identifier from the "EQPT" section on page 4-23 and must not be null	
Input Example	RTRV-DWDM:VA454-22:SLOT-1:100;	

Section	RTRV-DWDM Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:<EQPTTYPE>,<EQUIP>,,[<STATUS>]:[PEERID=<PEERID>,] [NAME=<NAME>,][TERMMODE=<TERMMODE>,] [PAYLOAD=<PAYLOAD>,][CARDNAME=<CARDNAME>,][PWL=<PWL>,] [TWL1=<TWL>,][TWL2=<TWL1>,][TWL3=<TWL2>,][TWL4=<TWL3>]: [<PST>],[<SST>]" ; 1. <AIDTYPE> applies to R4.1. In R4.5 <EQPTTYPE> applies. where: • <AID> is the access identifier from the "EQPT" section on page 4-23 <EQPTTYPE> indicates the equipment type; valid values are shown in the "EQPT_TYPE" section on page 4-68 • <EQUIP> indicates if the equipment unit is physically present; valid values are shown in the "EQUIP" section on page 4-70 • <STATUS> indicates a status. SONET card status is shown on its card level; valid values are shown in the "STATUS" section on page 4-92 and <STATUS> is optional • <PEERID> is the regeneration group peer card slot. <PEERID> is the AID from the "EQPT" section on page 4-23 and is optional • <NAME> is a string and is optional • <TERMMODE> is the termination mode of the card; valid values are shown in the "TERM_MODE" section on page 4-98 and <TERMMODE> is optional • <PAYLOAD> indicates the payload for the card; valid values are shown in the "EQPT_TYPE" section on page 4-68 and <PAYLOAD> is optional • <CARDNAME> is a string and is optional • <PWL> provisioned wavelength; valid values are shown in the "OPTICAL_WLEN" section on page 4-85 and <PWL> is optional • <TWL> tunable wavelength 1; valid values are shown in the "OPTICAL_WLEN" section on page 4-85 and <TWL> is optional • <TWL1> tunable wavelength 2; valid values are shown in the "OPTICAL_WLEN" section on page 4-85 and <TWL1> is optional • <TWL2> tunable wavelength 3; valid values are shown in the "OPTICAL_WLEN" section on page 4-85 and <TWL2> is optional • <TWL3> tunable wavelength 4; valid values are shown in the "OPTICAL_WLEN" section on page 4-85 and <TWL3> is optional • <PST> primary state; valid values are shown in the "PST" section on page 4-90 and <PST> is optional • <SST> secondary state; valid values are shown in the "SST" section on page 4-92 and <SST> is optional

Section	RTRV-DWDM Description (continued)
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "SLOT-1:TXP-MR-2.5G,EQUIP,,ACT:PEERID=SLOT-2, NAME=\"NY GROUP\", TERMMODE=TRANS,PAYLOAD=OC48, CARDNAME=\"TRUNK-1\",PWL=1530.33,TWL1=1530.33,TWL2=1531.12, TWL3=1532.68,TWL4=1533.47:IS,AINS" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.169 RTRV-EC1: Retrieve EC1

(Cisco ONS 15454 only)

This command retrieves the facility status of an EC1 card.

Section	RTRV-EC1 Description	
Category	Ports	
Security	Retrieve	
Related Messages	DLT-FFP-CLNT	OPR-LNK
	DLT-LNK-<MOD2O>	OPR-PROTNSW-CLNT
	ED-CLNT	RLS-LASER-OTS
	ED-DWDM	RLS-PROTNSW-CLNT
	ED-FFP-CLNT	RTRV-CLNT
	ED-OCH	RTRV-FFP-CLNT
	ED-LNK-<MOD2O>	RTRV-OCH
	ED-OMS	RTRV-LNK-<MOD2O>
	ED-OTS	RTRV-OMS
	ED-TRC-CLNT	RTRV-OTS
	ED-TRC-OCH	RTRV-PROTNSW-CLNT
	ENT-FFP-CLNT	RTRV-TRC-CLNT
	ENT-LNK-<MOD2O>	RTRV-TRC-OCH
	OPR-LASER-OTS	
Input Format	RTRV-EC1:[<TID>]:<AID>:<CTAG>[::::];	
	where: • <AID> is from the "FACILITY" section on page 4-24 and must not be null	
Input Example	RTRV-EC1:CISCO:FAC-1-1:1234;	

Section	RTRV-EC1 Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>::[PJMON=<PJMON>,][LBO=<LBO>,][RXEQUAL=<RXEQUAL>,][SOAK=<SOAK>,][SOAKLEFT=<SOAKLEFT>,][SFBER=<SFBER>,][SDBER=<SDBER>]:<PST>,[<SST>]" ; where: • <AID> is the facility AID of an EC1 port and is from the "FACILITY" section on page 4-24 • <PJMON> is the SONET pointer monitor attribute of an EC1 port; <PJMON> is an integer and is optional • <LBO> is the line build-out value of an EC1 port; valid values for <LBO> are shown in the "E_LBO" section on page 4-66, <LBO> is optional • Valid values for <RXEQUAL> are shown in the "EXT_RING" section on page 4-73, <RXEQUAL> is optional • <SOAK> OOS-AINS to IS transition soak time measured in 15 minute intervals; <SOAK> is an integer and is optional • <SOAKLEFT> time remaining for the transition from OOS-AINS to IS measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. <SOAKLEFT> is optional Rules for <SOAKLEFT> are as follows: – When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed. – When the port is in OOS_AINS, but the countdown has not started due to fault signal the value will be SOAKLEFT=NOT-STARTED. – When the port is in OOS_AINS state and the countdown has started the value will be shown in HH-MM format. • <SFBER> identifies the port SFBER and defaults to 1E-4; valid values are shown in the "SF_BER" section on page 4-92 and <SFBER> is optional • <SDBER> identifies the port SDBER and defaults to 1E-7; valid values are shown in the "SD_BER" section on page 4-91 • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92 and <SST> is optional
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:OOS,AINS" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.170 RTRV-EQPT: Retrieve Equipment

This command retrieves protection group information and status information for all the cards.

This command returns the PRTYPE, PROTID, RVTM, and RVRTV parameters for a card inside of a protection group by the following scenario:

1. A working AID/card within a 1:1 protection group should return PRTYPE, PROTID, RVTM and RVRTV.
2. A protection/AID card within a 1:1 protection group should return PRTYPE, RVTM and RVRTV.
3. A working AID/card within a 1:N protection group should return PRTYPE, PROTID, RVTM and RVRTV=Y.
4. A protection AID/card of a 1:1 protection group should return PRTYPE, RVTM and RVRTV=Y.
5. An unprotected AID/card, the AID type, equip (equip/unequip), status (act/standby) and state (IS/OOS) values.

Error conditions:

1. The equipment is not provisioned.

Section	RTRV-EQPT Description	
Category	Equipment	
Security	Retrieve	
Related Messages	ALW-SWDX-EQPT	INH-SWTOWKG-EQPT
	ALW-SWTOPROTN-EQPT	REPT ALM EQPT
	ALW-SWTOWKG-EQPT	REPT EVT EQPT
	DLT-EQPT	RTRV-ALM-EQPT
	ED-EQPT	RTRV-COND-EQPT
	ENT-EQPT	SW-DX-EQPT
	INH-SWDX-EQPT	SW-TOPROTN-EQPT
	INH-SWTOPROTN-EQPT	SW-TOWKG-EQPT
Input Format	RTRV-EQPT:[<TID>]:<AID>:<CTAG>[::::]; where: • <AID> is from the "EQPT" section on page 4-23 and must not be null	
Input Example	RTRV-EQPT:MIRABEL:SLOT-12:230;	

Section	RTRV-EQPT Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:<AIDTYPE>,<EQUIP>,[<ROLE>],[<STATUS>]: [PROTID=<PROTID>,][PRTYPE=<PRTYPE>,] [RVRTV=<RVRTV>,][RVTM=<RVTM>,] [CARDNAME=<CARDNAME>,] [IOSCFG=<IOSCFG>]:[<PST>],[<SST>]" ; where: • <AID> is the equipment unit identifier and is from the"EQPT" section on page 4-23 • <AIDTYPE> is a string • <EQUIP> indicates if the equipment unit is physically present; valid values are shown in the "EQUIP" section on page 4-70 • <ROLE> indicates if the card is a working unit or a protecting unit; valid values are shown in the "SIDE" section on page 4-92, <ROLE> is optional • <STATUS> indicates a status. SONET card status is shown on it's line/port level. Valid values for <STATUS> are shown in the "STATUS" section on page 4-92, <STATUS> is optional • <PROTID> indicates the protecting identifier; <PROTID> is from the "PRSLOT" section on page 4-26 and is optional • <PRTYPE> indicates the protection type; valid values are shown in the "PROTECTION_GROUP" section on page 4-89, <PRTYPE> is optional • <RVRTV> indicates a revertive mode; valid values are shown in the "ON_OFF" section on page 4-83, <RVRTV> is optional • <RVTM> indicates the revertive time; valid values for <RVTM> are shown in the "REVERTIVE_TIME" section on page 4-90, <RVTM> is optional • <CARDNAME> is a string and is optional • <IOSCFG> displays the information about startup IOS config file for the ML1000-2 and ML100T-12 cards. An example of this field is "TL1,11.22.33.44//DIR/IOS.CONF,2002/1/1 9:1:1 EST". The following information is included in this field: 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 ML1000-2 and ML100T-12 cards. <IOSCFG> is a String. <IOSCFG> is optional. • <PST> primary state; valid values are shown in the "PST" section on page 4-90, <PST> is optional • <SST> secondary state; valid values are shown in the "SST" section on page 4-92, <SST> is optional

Section	RTRV-EQPT Description (continued)
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":OOS,AINS" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.171 RTRV-EXT-CONT: Retrieve External Control

This command retrieves the control state of an external control. The command can be used to audit the result of an OPR-EXT-CONT or a RLS-EXT-CONT command.

Notes:

1. If the CONTTYPE is null, the existing conttype on this AID will be returned.
2. The duration is not supported, it defaults to CONTS.

Section	RTRV-EXT-CONT Description	
Category	Environment Alarms and Controls	
Security	Retrieve	
Related Messages	OPR-ACO-ALL	RTRV-ATTR-CONT
	OPR-EXT-CONT	RTRV-ATTR-ENV
	REPT ALM ENV	RTRV-COND-ENV
	REPT EVT ENV	SET-ATTR-CONT
	RLS-EXT-CONT	SET-ATTR-ENV
	RTRV-ALM-ENV	
Input Format	RTRV-EXT-CONT:[<TID>]:<AID>:<CTAG>[::<CONTTYPE>]; where: • <AID> is from the "ENV" section on page 4-22 and must not be null. **Note** For this command only ENV-OUT-{1-2} is a valid AID. • Valid values for <CONTTYPE> are shown in the "CONTTYPE" section on page 4-64. A null value is equivalent to ALL	
Input Example	RTRV-EXT-CONT:CISCO:ENV-OUT-2:123::AIRCOND;	

Section	RTRV-EXT-CONT Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:[<CONTTYPE>],<DUR>,[<CONTSTATE>]" ; where: • <AID> identifies the external control for which control state is being retrieved and is from the "ENV" section on page 4-22 • <CONTTYPE> is the type of control for which control state is being retrieved; valid values are shown in the "CONTTYPE" section on page 4-64, <CONTTYPE> is optional • <DUR> is the duration for which the external control can be operated; valid values are shown in the "DURATION" section on page 4-66 • <CONTSTATE> is the control of the external control; valid values are shown in the "CONT_MODE" section on page 4-63, <CONTSTATE> is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "ENV-OUT-2:AIRCOND,CONTS,OPEN" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.172 RTRV-FFP-<OCN_TYPE>: Retrieve Facility Protection Group (OC3, OC12, OC48, OC192)

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

This command retrieves the optical facility protection information.

Section	RTRV-FFP-<OCN_TYPE> Description	
Category	SONET Line Protection	
Security	Retrieve	
Related Messages	DLT-FFP-<OCN_TYPE>	EX-SW-<OCN_BLSR>
	DLT-FFP-CLNT	OPR-PROTNSW-<OCN_TYPE>
	ED-FFP-<OCN_TYPE>	RLS-PROTNSW-<OCN_TYPE>
	ED-FFP-CLNT	RTRV-FFP-CLNT
	ENT-FFP-<OCN_TYPE>	RTRV-PROTNSW-<OCN_TYPE>
	ENT-FFP-CLNT	
Input Format	RTRV-FFP-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[::::]; where: • <AID> is the optical facility AID from the "FACILITY" section on page 4-24 and must not be null	
Input Example	RTRV-FFP-OC3:PETALUMA:FAC-1-1:1;	

Section	RTRV-FFP-<OCN_TYPE> Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<WORK>,<PROTECT>::[PROTID=<PROTID>,][RVRTV=<RVRTV>,] [RVTM=<RVTM>,][PSDIRN=<PSDIRN>]" ; where: • <WORK> identifies the working port and is the AID from the "FACILITY" section on page 4-24 • <PROTECT> identifies the protection port and is the AID from the "FACILITY" section on page 4-24 • <PROTID> is a protection group identifier (protection group name). It defaults to the protecting port of the protection group; <PROTID> is a string, it is optional and can have a maximum length of 32 characters • <RVRTV> identifies a revertive mode and defaults to N (non-revertive mode); valid values are shown in the "ON_OFF" section on page 4-83, <RVRTV> is optional • <RVTM> identifies the revertive time and defaults to 5.0 minutes; valid values are shown in the "REVERTIVE_TIME" section on page 4-90, <RVTM> is optional • <PSDIRN> indicates the switch mode and defaults to UNI. valid values are shown in the "UNI_BI" section on page 4-102, <PSDIRN> is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "FAC-2-1,FAC-1-1::PROTID=PROT_NAME,RVRTV=Y, RVTM=1.0,PSDIRN=BI" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.173 RTRV-FFP-CLNT: Retrieve Facility Protection Group Client

(Cisco ONS 15454 only)

This command retrieves Y cable protection on client facilities.

Section	RTRV-FFP-CLNT Description
Category	DWDM
Security	Retrieve

Section	RTRV-FFP-CLNT Description (continued)	
Related Messages	DLT-FFP-<OCN_TYPE>	OPR-PROTNSW-CLNT
	DLT-FFP-CLNT	OPR-PROTNSW-OCH
	DLT-LNK-<MOD2O>	RLS-LASER-OTS
	ED-CLNT	RLS-PROTNSW-<OCN_TYPE>
	ED-DWDM	RLS-PROTNSW-CLNT
	ED-FFP-<OCN_TYPE>	RLS-PROTNSW-OCH
	ED-FFP-CLNT	RTRV-CLNT
	ED-FFP-OCH	RTRV-DWDM
	ED-LNK-<MOD2O>	RTRV-FFP-<OCN_TYPE>
	ED-OCH	RTRV-FFP-OCH
	ED-OMS	RTRV-LNK-<MOD2O>
	ED-OTS	RTRV-OCH
	ED-TRC-CLNT	RTRV-OMS
	ED-TRC-OCH	RTRV-OTS
	ENT-FFP-<OCN_TYPE>	RTRV-PROTNSW-<OCN_TYPE>
	ENT-FFP-CLNT	RTRV-PROTNSW-CLNT
	ENT-LNK-<MOD2O>	RTRV-PROTNSW-OCH
	EX-SW-<OCN_BLSR>	RTRV-TRC-CLNT
	OPR-LASER-OTS	RTRV-TRC-OCH
	OPR-PROTNSW-<OCN_TYPE>	
Input Format	RTRV-FFP-CLNT:[<TID>]:<AID>:<CTAG>[::::];	
	where:	
	• <AID> is the access identifier from the "FACILITY" section on page 4-24 and must not be null	
Input Example	RTRV-FFP-CLNT:CISCO:FAC-1-1:100;	

Section	RTRV-FFP-CLNT Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<WORKAID>,<PROTAID>::[PROTTYPE=<PROTTYPE>,] [PROTID=<PROTID>,][RVRTV=<RVRTV>,][RVTM=<RVTM>,] [PSDIRN=<PSDIRN>]" ; where: • <WORKAID> identifies a working port and is the AID from the "FACILITY" section on page 4-24 • <PROTAID> identifies a protection port and is the AID from the "FACILITY" section on page 4-24 • <PROTTYPE> identifies the type of facility protection; valid values are shown in the "PROTTYPE" section on page 4-89 and <PROTTYPE> is optional • <PROTID> is a string and is optional • <RVRTV> identifies the revertive mode. Defaults to N (non-revertive mode); valid values are shown in the "ON_OFF" section on page 4-83 and <RVRTV> is optional • <RVTM> identifies the revertive time. Defaults to 5.0 minutes; valid values are shown in the "REVERTIVE_TIME" section on page 4-90 and <RVTM> is optional • <PSDIRN> identifies the switching mode and defaults to UNI; valid values are shown in the "UNI_BI" section on page 4-102 and <PSDIRN> is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "FAC-1-1,FAC-2-1::PROTTYPE=Y-CABLE,PROTID=\"DC-METRO\", RVRTV=N,RVTM=1.0,PSDIRN=BI" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.174 RTRV-FFP-OCH: Retrieve Facility Protection Group OCH

(Cisco ONS 15454 only)

This command retrieves the protection group information for the TXP_MR_2.5G and TXPP_MR_2.5G trunk port.

Section	RTRV-FFP-OCH Description
Category	DWDM
Security	Retrieve

Section	RTRV-FFP-OCH Description (continued)	
Related Messages	DLT-FFP-<OCN_TYPE>	OPR-PROTNSW-CLNT
	DLT-FFP-CLNT	OPR-PROTNSW-OCH
	DLT-LNK-<MOD2O>	RLS-LASER-OTS
	ED-CLNT	RLS-PROTNSW-<OCN_TYPE>
	ED-DWDM	RLS-PROTNSW-CLNT
	ED-FFP-<OCN_TYPE>	RLS-PROTNSW-OCH
	ED-FFP-CLNT	RTRV-CLNT
	ED-FFP-OCH	RTRV-DWDM
	ED-LNK-<MOD2O>	RTRV-FFP-<OCN_TYPE>
	ED-OCH	RTRV-FFP-CLNT
	ED-OMS	RTRV-LNK-<MOD2O>
	ED-OTS	RTRV-OCH
	ED-TRC-CLNT	RTRV-OMS
	ED-TRC-OCH	RTRV-OTS
	ENT-FFP-<OCN_TYPE>	RTRV-PROTNSW-<OCN_TYPE>
	ENT-FFP-CLNT	RTRV-PROTNSW-CLNT
	ENT-LNK-<MOD2O>	RTRV-PROTNSW-OCH
	EX-SW-<OCN_BLSR>	RTRV-TRC-CLNT
	OPR-LASER-OTS	RTRV-TRC-OCH
	OPR-PROTNSW-<OCN_TYPE>	
Input Format	RTRV-FFP-OCH:[<TID>]:<AID>:<CTAG>[::::];	
	where:	
	• <AID> is the access identifier from the "CHANNEL" section on page 4-18 and must not be null	
Input Example	RTRV-FFP-OCH:VA454-22:CHAN-2-2:100;	

Section	RTRV-FFP-OCH Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<WORK>,<PROTECT>::[PROTTYPE=<PROTTYPE>,][PROTID=<PROTID>,] [RVRTV=<RVRTV>,][RVTM=<RVTM>,][PSDIRN=<PSDIRN>]" ; where: • <WORK> identifies a working port and is the AID from the "CHANNEL" section on page 4-18 • <PROTECT> identifies a protection port and is the AID from the "CHANNEL" section on page 4-18 • <PROTTYPE> the protection group type and is optional • <PROTID> the protection group name and is a string and is optional • <RVRTV> the revertive mode; valid values are shown in the "ON_OFF" section on page 4-83 and <RVRTV> is optional • <RVTM> the revertive time; valid values are shown in the "REVERTIVE_TIME" section on page 4-90 and <RVTM> is optional • <PSDIRN> the direction of reversion; valid values are shown in the "UNI_BI" section on page 4-102 and <PSDIRN> is optional
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" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.175 RTRV-FSTE: Retrieve Fast Ethernet

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

This command retrieves the front end port information of the ML100T-12 Ethernet card.

Section	RTRV-FSTE Description
Category	Ports
Security	Retrieve

Section	RTRV-FSTE Description (continued)	
Related Messages	ED-<OCN_TYPE>	RTRV-<OCN_TYPE>
	ED-DS1	RTRV-DS1
	ED-EC1	RTRV-EC1
	ED-G1000	RTRV-G1000
	ED-T1	RTRV-GIGE
	ED-T3	RTRV-POS
	INIT-REG-G1000	RTRV-T1
	RMV-<MOD2_IO>	RTRV-T3
	RST-<MOD2_IO>	
Input Format	RTRV-FSTE:[<TID>]:<AID>:<CTAG>; where: • <AID> is the facility AID from the "FACILITY" section on page 4-24 and must not be null	
Input Example	RTRV-FSTE:TID:FAC-1-1:CTAG;	
Output Format	SID DATE TIME M CTAG COMPLD "<AID>::[ADMINSTATE=<ADMINSTATE>,][LINKSTATE=<LINKSTATE>,][MTU=<MTU>,][FLOWCTRL=<FLOWCTRL>,][DUPLEX=<DUPLEX>,][SPEED=<SPEED>]" ; where: • <AID> is the AID from the "FACILITY" section on page 4-24 • <ADMINSTATE> administration type; valid values are shown in the "UP_DOWN" section on page 4-103. <ADMINSTATE> is optional • <LINKSTATE> link protocol; valid values are shown in the "UP_DOWN" section on page 4-103. <LINKSTATE> is optional • <MTU> maximum transport unit; <MTU> is an integer and is optional • <FLOWCTRL> flow control; valid values are shown in the "FLOW" section on page 4-73. <FLOWCTRL> is optional • <DUPLEX> duplex mode; valid values are shown in the "ETHER_DUPLEX" section on page 4-72. <DUPLEX> is optional • <SPEED> Ethernet speed; valid values are shown in the "ETHER_SPEED" section on page 4-72. <SPEED> is optional	
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" ;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.176 RTRV-G1000: Retrieve G1000 Facility

(Cisco ONS 15454 only)

This command retrieves the G1000 facilities configuration.

Section	RTRV-G1000 Description	
Category	Ports	
Security	Retrieve	
Related Messages	ED-<OCN_TYPE>	RTRV-<OCN_TYPE>
	ED-DS1	RTRV-DS1
	ED-EC1	RTRV-EC1
	ED-G1000	RTRV-FSTE
	ED-T1	RTRV-GIGE
	ED-T3	RTRV-POS
	INIT-REG-G1000	RTRV-T1
	RMV-<MOD2_IO>	RTRV-T3
	RST-<MOD2_IO>	
Input Format	RTRV-G1000:[<TID>]:<AID>:<CTAG>; where: • <AID> is from the "FACILITY" section on page 4-24 and must not be null	
Input Example	RTRV-G1000:TID:FAC-1-1:CTAG;	

Section	RTRV-G1000 Description (continued)
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>]:[<PST>],[<SST>]" ; where: • <AID> is from the "FACILITY" section on page 4-24 • Valid values for <MFS> are shown in the "MFS_TYPE" section on page 4-76; <MFS> is optional • Valid values for <FLOW> are shown in the "ON_OFF" section on page 4-83; <FLOW> is optional • Valid values for <LAN> are shown in the "FLOW" section on page 4-73; <LAN> is optional • <OPTICS> GBIC type optics; valid values for are shown in the "OPTICS" section on page 4-86; <OPTICS> is optional • <TRANS> transponder mode; valid values are shown in the "TRANS_MODE" section on page 4-99 and <TRANS> is optional • <TPORT> transponding port; <TPORT> is from the "FACILITY" section on page 4-24 and is optional • <LOWMRK> low watermark; <LOWMRK> is an integer and is optional • <HIWMRK> high watermark: <HIWMRK> is an integer and is optional • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92; <SST> is optional
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:OOS,AINS" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.177 RTRV-GIGE: Retrieve Gigabit Ethernet

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

This command retrieves the front end port information for the ML1000-2 Ethernet card.

Section	RTRV-GIGE Description
Category	Ports
Security	Retrieve

Section	RTRV-GIGE Description (continued)	
Related Messages	ED-<OCN_TYPE> ED-DS1 ED-EC1 ED-G1000 ED-T1 ED-T3 INIT-REG-G1000 RMV-<MOD2_IO> RST-<MOD2_IO>	RTRV-<OCN_TYPE> RTRV-DS1 RTRV-EC1 RTRV-FSTE RTRV-G1000 RTRV-POS RTRV-T1 RTRV-T3
Input Format	RTRV-GIGE:[<TID>]:<AID>:<CTAG>; where: • <AID> is from the "FACILITY" section on page 4-24 and must not be null	
Input Example	RTRV-GIGE:TID:FAC-1-1:CTAG;	
Output Format	SID DATE TIME M CTAG COMPLD "<AID>::[ADMINSTATE=<ADMINSTATE>,][LINKSTATE=<LINKSTATE>,][MTU=<MTU>,][FLOWCTRL=<FLOWCTRL>,][OPTICS=<OPTICS>,][DUPLEX=<DUPLEX>,][SPEED=<SPEED>]" ; where: • <AID> is the AID from the "FACILITY" section on page 4-24 • <ADMINSTATE> administration type; valid values are shown in the "UP_DOWN" section on page 4-103. <ADMINSTATE> is optional • <LINKSTATE> link protocol; valid values are shown in the "UP_DOWN" section on page 4-103. <LINKSTATE> is optional • <MTU> maximum transport unit; <MTU> is an integer and is optional • <FLOWCTRL> flow control; valid values are shown in the "FLOW" section on page 4-73. <FLOWCTRL> is optional • <OPTICS> is the optics type; valid values are shown in "OPTICS" section on page 4-86. <OPTICS> is optional • <DUPLEX> duplex mode; valid values are shown in the "ETHER_DUPLEX" section on page 4-72. <DUPLEX> is optional • <SPEED> Ethernet speed; valid values are shown in the "ETHER_SPEED" section on page 4-72. <SPEED> is optional	
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "FAC-1-1::ADMINSTATE=DOWN,LINKSTATE=DOWN,MTU=1500,FLOWCTRL=SYMMETRIC,OPTICS=1000_BASE_SX,DUPLEX=AUTO,SPEED=AUTO" ;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.178 RTRV-HDR: Retrieve Header

This command retrieves the header of a TL1 response message. Used by TL1 clients to determine if the link to the NE is still active and if the NE is responding to commands.

Section	RTRV-HDR Description	
Category	System	
Security	Retrieve	
Related Messages	ALW-MSG-ALL	RTRV-INV
	COPY-RFILE	RTRV-MAP-NETWORK
	ED-DAT	RTRV-NE-GEN
	ED-NE-GEN	RTRV-NE-IPMAP
	ED-NE-SYNCN	RTRV-NE-SYNCN
	INH-MSG-ALL	RTRV-TOD
	INIT-SYS	SET-TOD
	REPT EVT FXFR	
Input Format	RTRV-HDR:[<TID>]::<CTAG>;	
Input Example	RTRV-HDR:SONOMA::232;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.179 RTRV-INV: Retrieve Inventory

This command retrieves a listing of the equipment inventory. For each unit in the system, it identifies the unit's firmware numbers and the unit's CLEI code.

Section	RTRV-INV Description	
Category	System	
Security	Retrieve	
Related Messages	ALW-MSG-ALL	RTRV-HDR
	COPY-RFILE	RTRV-MAP-NETWORK
	ED-DAT	RTRV-NE-GEN
	ED-NE-GEN	RTRV-NE-IPMAP
	ED-NE-SYNCN	RTRV-NE-SYNCN
	INH-MSG-ALL	RTRV-TOD
	INIT-SYS	SET-TOD
	REPT EVT FXFR	
Input Format	RTRV-INV:[<TID>]:<AID>:<CTAG>[::::];	
	where:	
	• <AID> is an access identifier from the "EQPT" section on page 4-23 and must not be null	

Section	RTRV-INV Description (continued)
Input Example	RTRV-INV:OCCIDENTAL:SLOT-15:301;
Output Format	SID DATE TIME M CTAG COMPLD "<AID>,<AIDTYPE>::[PN=<PN>,][HWREV=<HWREV>,] [FWREV=<FWREV>,][SN=<SN>,][CLEI=<CLEI>][TWL1=<TWL1>,] [TWL2=<TWL2>,][PLUGINVERNDORID=<PLUGINVERNDORID>,] [PLUGINPN=<PLUGINPN>,][PLUGINHWREV=<PLUGINHWREV>,] [PLUGINFWREV=<PLUGINFWREV>,][PLUGINSN=<PLUGINSN>,] [ILOSSREF=<ILOSSREF>]" ; where: • <AID> is the access identifier from the "EQPT" section on page 4-23 • <AIDTYPE> specifies the type of AID and is a string • <PN> is the HW part number; <PN> is a string and is optional • <HWREV> is the HW Rev; <HWREV> is a string and is optional • <FWREV> is the firmware Rev; <FWREV> is a string and is optional • <SN> is the serial number; <SN> is a string and is optional • <CLEI> is the CLEI code for the equipment, is a string and is optional • <TW1> tunable wavelength 1; valid values are shown in the "OPTICAL_WLEN" section on page 4-85 and <TW1> is optional • <TW2> tunable wavelength 2; valid values are shown in the "OPTICAL_WLEN" section on page 4-85 and <TW2> is optional • <TW3> tunable wavelength 3; valid values are shown in the "OPTICAL_WLEN" section on page 4-85 and <TW3> is optional • <TW4> tunable wavelength 4; valid values are shown in the "OPTICAL_WLEN" section on page 4-85 and <TW4> is optional • <PLUGINVERNDORID> is a third-party plug-in module HW vendor identifier. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. <PLUGINVERNDORID> is a string and is optional • <PLUGINPN> is a third-party plug-in module HW part number. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. <PLUGINPN> is a string and is optional • <PLUGINHWREV> is a third-party plug-in module hardware. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. <PLUGINHWREV> is a string and is optional • <PLUGINFWREV> is a third-party plug-in module firmware. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. <PLUGINFWREV> is a string and is optional

Section	RTRV-INV Description (continued)
	• <PLUGINSN> is a third-party plug-in module serial number. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. <PLUGINSN> is a string and is optional • <ILOSSREF> is the insertion loss reference calculated by the unit as worst insertion loss of all the unit. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. <ILOSSREF> is a string and is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "SLOT-15,OC3-IR-4::PN=87-31-00002,HWREV=004K, FWREV=76-99-00009-004A,SN=013510,CLEI=NOCLEI,TWL1=1546.12, TWL2=1546.92,TWL3=1547.72,TWL4=1548.51, PLUGINVERNDORID=012345,PLUGINPN=ABCDE, PLUGINHWREV=ABCDE,PLUGINFWREV=01-02-03, PLUGINSN=01234,ILOSSREF=1.0" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.180 RTRV-LNK: Retrieve Link

(Cisco ONS 15454 only)

This command retrieves all the (optical) links created in the NE. The ends information is returned along with the type of (optical) link.

Section	RTRV-LNK Description	
Category	DWDM	
Security	Retrieve	
Related Messages	OPR-LNK	ED-LNK-<MOD2O>
	DLT-LNK-<MOD2O>	ENT-LNK-<MOD2O>
Input Format	RTRV-LNK:[<TID>]::<CTAG>;	
Input Example	RTRV-LNK:PENNGROVE::114;	

Section	RTRV-LNK Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<FROM>,<TO>::[OLNKT=<OLNKT>,][CTYPE=<CTYPE>,] [RDIRN=<RDIRN>,][BAND=<BAND>,][WLEN=<WLEN>]:<PST>,[<SST>] ; where: • <FROM> identifies an entity at one end of the optical link and is the AID from the "ALL" section on page 4-9 • <TO> identifies an entity at the other end of the optical link and is the AID from the "ALL" section on page 4-9 • <OLNKT> identifies the optical link type; valid values are shown in the "OPTICAL_LINK_TYPE" section on page 4-84 and <OLNKT> is optional • <CTYPE> indicates if the optical link is provisioned by a user or automatically created by the NE' valid values are shown in the "CREATION_TYPE" section on page 4-64 and <CTYPE> is optional • Valid values for <RDIRN> are shown in the "RDIRN_MODE" section on page 4-90 and <RDIRN> is optional • <BAND> identifies the optical band (group of four contiguous wavelengths) for this optical link. It is present only in case of a link between two OMS entities. Valid values for <BAND> are shown in the "OPTICAL_BAND" section on page 4-83 and <BAND> is optional • <WLEN> identifies the optical wavelength. It is present only in the case of a link between two OCH entities. Valid values for <WLEN> are shown in the "OPTICAL_WLEN" section on page 4-85 and <WLEN> is optional • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the"SST" section on page 4-92
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,AINS" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.181 RTRV-LNK-<MOD2O>: Retrieve Optical Link (OCH, OMS, OTS)

(Cisco ONS 15454 only)

This command retrieves any optical link associated with the entered AIDs or AID range. The ends information is returned along with the type of optical link.

Section	RTRV-LNK-<MOD2O> Description
Category	DWDM
Security	Retrieve

Section	RTRV-LNK-<MOD2O> Description (continued)	
Related Messages	DLT-FFP-CLNT	OPR-PROTNSW-OCH
	DLT-LNK-<MOD2O>	RLS-LASER-OTS
	ED-CLNT	RLS-PROTNSW-CLNT
	ED-DWDM	RLS-PROTNSW-OCH
	ED-FFP-CLNT	RTRV-CLNT
	ED-FFP-OCH	RTRV-DWDM
	ED-LNK-<MOD2O>	RTRV-FFP-CLNT
	ED-OCH	RTRV-FFP-OCH
	ED-OMS	RTRV-OCH
	ED-OTS	RTRV-OMS
	ED-TRC-CLNT	RTRV-OTS
	ED-TRC-OCH	RTRV-PROTNSW-CLNT
	ENT-FFP-CLNT	RTRV-PROTNSW-OCH
	ENT-LNK-<MOD2O>	RTRV-TRC-CLNT
	OPR-LASER-OTS	RTRV-TRC-OCH
	OPR-PROTNSW-CLNT	
Input Format	RTRV-LNK-<MOD2O>:[<TID>]:<AID>:<CTAG>:::[OLNKT=<OLNKT>,][CTYPE=<CTYPE>,][RDIRN=<RDIRN>]; where: • <AID> identifies facilities to check for optical link membership. It can be an OPTICAL_AID AID or ALL AID. The ALL AID defaults to NE which means to report all existing optical links of the NE. <AID> is the AID from the "BAND" section on page 4-16 and must not be null • <OLNKT> identifies the optical link type; valid values are shown in the "OPTICAL_LINK_TYPE" section on page 4-84 and <OLNKT> is optional • <CTYPE> indicates if the optical link is provisioned by a user or automatically created by the NE' valid values are shown in the "CREATION_TYPE" section on page 4-64 and <CTYPE> is optional • <RDIRN> specifies the filter on ring directionality of the optical link; valid values are shown in the "RDIRN_MODE" section on page 4-90. A null value is equivalent to ALL	
Input Example	RTRV-LNK-OMS:PENNGROVE:ALL:114:::OLNKT=HITLESS,CTYPE=AUTO,RDIRN=W-E;	

Section	RTRV-LNK-<MOD2O> Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<FROM>,<TO>::[OLNKT=<OPTICALLINKTYPE>,] [CTYPE=<CREATIONTYPE>,][RDIRN=<RDIRN>,][BAND=<BAND>,] [WLEN=<WLEN>]:<PST>,[<SST>] ; where: • < FROM> identifies an entity at one end of the optical link and is the AID from the "BAND" section on page 4-16 • <TO> identifies an entity at the other end of the optical link and is the AID from the "BAND" section on page 4-16 • <OPTICALLINKTYPE> identifies the optical link type; valid values are shown in the "OPTICAL_LINK_TYPE" section on page 4-84 and <OPTICALLINKTYPE> is optional • <CREATIONTYPE> indicates if the optical link is provisioned by a user or automatically created by the NE; valid values are shown in the "CREATION_TYPE" section on page 4-64 and <CREATIONTYPE> is optional • Valid values for <RDIRN> are shown in the "RDIRN_MODE" section on page 4-90 and <RDIRN> is optional • <BAND> identifies the optical band (group of four contiguous wavelengths) for this optical link. It is present only in case of a link between two OMS entities. Valid values for <BAND> are shown in the "OPTICAL_BAND" section on page 4-83 and <BAND> is optional • <WLEN> identifies the optical wavelength. It is present only in the case of a link between two OCH entities. Valid values for <WLEN> are shown in the "OPTICAL_WLEN" section on page 4-85 and <WLEN> is optional • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the"SST" section on page 4-92
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,WLEN=1530.32:OOS,AINS" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.182 RTRV-NE-WDMANS: Retrieve NE Wavelength Division Multiplexing Automatic Node Setup

(Cisco ONS 15454 only)

This command retrieves the optical node setup (WDMANS) application ports involved in node setup regulation.

Section	RTRV-NE-WDMANS Description	
Category	DWDM	
Security	Retrieve	
Related Messages	ALW-MSG-ALL	RTRV-INV
	ED-DAT	RTRV-NE-GEN
	ED-NE-GEN	RTRV-NE-IPMAP
	ED-NE-SYNCN	RTRV-NE-SYNCN
	INH-MSG-ALL	RTRV-TOD
	INIT-SYS	SET-TOD
	RTRV-HDR	
Input Format	RTRV-NE-WDMANS:[<TID>]::<CTAG>;	
Input Example	RTRV-NE-WDMANS:PENNGROVE::114;	
Output Format	SID DATE TIME M CTAG COMPLD "<AID>,<AIDTYPE>::[REGULATED=<REGULATED>]" ; where: • <AID> is the port regulated AID from the "ALL" section on page 4-9 • <AIDTYPE> is the type of AID of the retrieved port; valid values are shown in the "MOD2" section on page 4-76 • <REGULATED> is the status of the port after a node setup regulation that states if it was regulated or not; valid values are shown in the "ON_OFF" section on page 4-83 and <REGULATED> is optional	
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "CHAN-16-1-RX,OCH::REGULATED=Y" ;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.183 RTRV-LOG: Retrieve Log

This command retrieves the alarm log of the NE.

Note The only option reported for LOGNM is ALARM.

Section	RTRV-LOG Description
Category	Log
Security	Superuser

Section	RTRV-LOG Description (continued)
Related Messages	ALW-MSG-DBCHG INH-MSG-DBCHG REPT DBCHG
Input Format	RTRV-LOG:[<TID>]::<CTAG>::<LOGNM>; where: • <LOGNM> is the log name - ALARM; <LOGNM> is a string and must not be null
Input Example	RTRV-LOG:CISCO::123::ALARM;
Output Format	SID DATE TIME M CTAG COMPLD "<AID>,<ALMNUMBER>:CURRENT=<CURRENT>, [PREVIOUS=<PREVIOUS>,]<CONDITION>,<SRVEFF>,[TIME=<OCRTIME>,] [DATE=<OCRDAT>]:<ALMDESCR>" ; where: • <AID> is an access identifier from the "ALL" section on page 4-9 • <ALMNUMBER> is an alarm number of the log and is an integer • <CURRENT> is a current severity; valid values are shown in the "NOTIF_CODE" section on page 4-82 • <PREVIOUS> is a previous severity; valid values are shown in the "COND_EFF" section on page 4-50, <PREVIOUS> is optional • <CONDITION> is a condition; valid values are shown in the "CONDITION" section on page 4-51 • <SRVEFF> is a service effect; valid values are shown in the "SERV_EFF" section on page 4-91 • <OCRTIME> is the time an alarm is triggered and is optional • <OCRDAT> is the date an alarm is triggered and is optional • <ALMDESCR> is the alarm description and is a string
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\"" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.184 RTRV-MAP-NETWORK: Retrieve Map Network

This command retrieves all the NE attributes which are reachable from the GNE (gateway NE). The NE attributes include the node IP address (IPADDR), node name (TID), and the product type of the NE (PRODUCT).

Note The product type field in the response will be displayed as "unknown" for nodes that are not running the 4.0 version software.

Section	RTRV-MAP-NETWORK Description	
Category	Network	
Security	Retrieve	
Related Messages	ALW-MSG-ALL	RTRV-HDR
	COPY-RFILE	RTRV-INV
	ED-DAT	RTRV-NE-GEN
	ED-NE-GEN	RTRV-NE-IPMAP
	ED-NE-SYNCN	RTRV-NE-SYNCN
	INH-MSG-ALL	RTRV-TOD
	INIT-SYS	SET-TOD
	REPT EVT FXFR	
Input Format	RTRV-MAP-NETWORK:[<TID>]::<CTAG>;	
Input Example	RTRV-MAP-NETWORK:CISCO::123;	
Output Format	SID DATE TIME M CTAG COMPLD "<IPADDR>,<NODENAME>,<PRODUCT>" ; where: • <IPADDR> indicates the node IP address and is a string • <NODENAME> indicates the node name (TID) and is a string • <PRODUCT> indicates the product type of the NE; valid values are shown in the "PRODUCT_TYPE" section on page 4-89	
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "172.20.222.225,TID-000,15454" ;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.185 RTRV-NE-GEN: Retrieve Network Element General

This command retrieves the general NE attributes.

The ETHIPADDR/ETHIPMASK are used to show the Ethernet interface address and mask. Both default to the node's IP address and mask.

Section	RTRV-NE-GEN Description
Category	System
Security	Retrieve

Section	RTRV-NE-GEN Description (continued)	
Related Messages	ALW-MSG-ALL	RTRV-HDR
	COPY-RFILE	RTRV-INV
	ED-DAT	RTRV-MAP-NETWORK
	ED-NE-GEN	RTRV-NE-IPMAP
	ED-NE-SYNCN	RTRV-NE-SYNCN
	INH-MSG-ALL	RTRV-TOD
	INIT-SYS	SET-TOD
	REPT EVT FXFR	
Input Format	RTRV-NE-GEN:[<TID>]::<CTAG>;	
Input Example	RTRV-NE-GEN:CISCO::123;	
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>]" ; where: • <IPADDR> indicates the node IP address; <IPADDR> is a string and is optional • <IPMASK> indicates the node IP mask; <IPMASK> is a string and is optional • <DEFRTR> indicates the node default router; <DEFRTR> is a string and is optional • <IIOPPORT> indicates the node IIOP port; <IIOPPORT> is an integer and is optional • <NTP> indicates the node's NTP timing source address; <NTP> is a string and is optional • <ETHIPADDR> indicates the node's Ethernet IP address; <ETHIPADDR> is a string and is optional • <ETHIPMASK> indicates the node's Ethernet IP mask; <ETHIPMASK> is a string and is optional • <NAME> is the node name; <NAME> is a string and is optional • <SWVER> is the software version; <SWVER> is a string and is optional • <LOAD> is a string and is optional • <PROTSWVER> is protect software version; <PROTSWVER> is a string and is optional • <PROTLOAD> is a string and is optional • <DEFDESC> is a string and is optional • <PLATFORM> is the NE platform type; <PLATFORM> is a string and is optional	

Section	RTRV-NE-GEN Description (continued)
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" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.186 RTRV-NE-IPMAP: Retrieve Network Element IPMAP

This command retrieves the IP address and node name of the NEs that have the DCC connection with this NE.

Note This command only reports the active DCC link. If there is no active DCC link on the port (or the node), the command will return COMPLD without IPMAP information.

Section	RTRV-NE-IPMAP Description	
Category	Network	
Security	Retrieve	
Related Messages	ALW-MSG-ALL	RTRV-HDR
	COPY-RFILE	RTRV-INV
	ED-DAT	RTRV-MAP-NETWORK
	ED-NE-GEN	RTRV-NE-GEN
	ED-NE-SYNCN	RTRV-NE-SYNCN
	INH-MSG-ALL	RTRV-TOD
	INIT-SYS	SET-TOD
	REPT EVT FXFR	
Input Format	RTRV-NE-IPMAP:[<TID>]:[<AID>]:<CTAG>; where: • <AID> is the port of an NE carrying the DCC connection; <AID> is from the "FACILITY" section on page 4-24 and a null value is equivalent to ALL	
Input Example	RTRV-NE-IPMAP:CISCO:FAC-12-1:123;	

Section	RTRV-NE-IPMAP Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:<IPADDR>,<NODENAME>" ; where: • <AID> is the port of an NE carrying a DCC connection and is from the "FACILITY" section on page 4-24 • <IPADDR> indicates the NE IP address and is a string • <NODENAME> indicates the NE node name and is a string
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "FAC-12-1:172.20.208.225,NODENAME2" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.187 RTRV-NE-SYNCN: Retrieve Network Element Synchronization

This command retrieves the synchronization attributes of the NE.

Notes:

1. Although mixed mode timing is supported in this release, it is not recommended. See the "Mixed Mode Timing Support" section on page 1-20 for more information.
2. The existing external and line modes have the same functionality in all 3.x releases:
   - External mode: the node derives its timing from the BITS inputs.
   - Line mode: the node derives its timing from the SONET line(s).
   - Mixed mode: the node derives its timing from the BITS input or SONET lines.

Section	RTRV-NE-SYNCN Description
Category	Synchronization
Security	Retrieve

Section	RTRV-NE-SYNCN Description (continued)	
Related Messages	ALW-MSG-ALL	RLS-SYNCNSW
	COPY-RFILE	RTRV-ALM-BITS
	ED-BITS	RTRV-ALM-SYNCN
	ED-DAT	RTRV-BITS
	ED-NE-GEN	RTRV-COND-BITS
	ED-NE-SYNCN	RTRV-COND-SYNCN
	ED-SYNCN	RTRV-HDR
	INH-MSG-ALL	RTRV-INV
	INIT-SYS	RTRV-MAP-NETWORK
	OPR-SYNCNSW	RTRV-NE-GEN
	REPT ALM BITS	RTRV-NE-IPMAP
	REPT ALM SYNCN	RTRV-SYNCN
	REPT EVT BITS	RTRV-TOD
	REPT EVT FXFR	SET-TOD
	REPT EVT SYNCN	
Input Format	RTRV-NE-SYNCN:[<TID>]::<CTAG>[::::];	
Input Example	RTRV-NE-SYNCN:CISCO::123;	
Output Format	SID DATE TIME M CTAG COMPLD "::[TMMD=<TMMD>,][SSMGEN=<SSMGEN>,][QRES=<QRES>,] [RVRTV=<RVRTV>,][RVTM=<RVTM>]" ; where: • <TMMD> is a timing mode; valid values are shown in the "TIMING_MODE" section on page 4-98, <TMMD> is optional • <SSMGEN> is an SSM generator; valid values are shown in the "SYNC_GENERATION" section on page 4-95, <SSMGEN> is optional • <QRES> is a quality of RES; valid values are shown in the "SYNC_QUALITY_LEVEL" section on page 4-95, <QRES> is optional • <RVRTV> is a revertive mode; valid values are shown in the "ON_OFF" section on page 4-83, <RVRTV> is optional • <RVTM> is a revertive time; valid values are shown in the "REVERTIVE_TIME" section on page 4-90, <RVTM> is optional	
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "::TMMD=LINE,SSMGEN=GEN1,QRES=ABOVE-PRS,RVRTV=Y,RVTM=8.0" ;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.188 RTRV-OCH: Retrieve Optical Channel

(Cisco ONS 15454 only)

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

Note MXP_2.5G_10G/TXP_MR_10G attributes are supported starting with Release 4.0. Optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards attributes are supported starting with Release 4.5.

See the "Provisioning Rules for MXP_2.5G_10G and TXP_MR_10G Cards" section on page 1-8 and the "Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards" section on page 1-13 for specific card provisioning rules.

Section	RTRV-OCH Description	
Category	DWDM	
Security	Retrieve	
Related Messages	DLT-FFP-CLNT	OPR-PROTNSW-OCH
	DLT-LNK-<MOD2O>	RLS-LASER-OTS
	ED-CLNT	RLS-PROTNSW-CLNT
	ED-DWDM	RLS-PROTNSW-OCH
	ED-FFP-CLNT	RTRV-CLNT
	ED-FFP-OCH	RTRV-DWDM
	ED-LNK-<MOD2O>	RTRV-FFP-CLNT
	ED-OCH	RTRV-FFP-OCH
	ED-OMS	RTRV-LNK-<MOD2O>
	ED-OTS	RTRV-OMS
	ED-TRC-CLNT	RTRV-OTS
	ED-TRC-OCH	RTRV-PROTNSW-CLNT
	ENT-FFP-CLNT	RTRV-PROTNSW-OCH
	ENT-LNK-<MOD2O>	RTRV-TRC-CLNT
	OPR-LASER-OTS	RTRV-TRC-OCH
	OPR-PROTNSW-CLNT	
Input Format	RTRV-OCH:[<TID>]:<AID>:<CTAG>; where: • <AID> is an access identifier from the "CHANNEL" section on page 4-18 and must not be null	
Input Example	RTRV-OCH:PENNGROVE:CHAN-6-2:236;	

Section	RTRV-OCH Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:,,,[<STATUS>]:[RDIRN=<RDIRN>,] [OPTYPE=<OPTICALPORTTYPE>,][OPWR=<POWER>,] [EXPWLEN=<EXPWLEN>,][ACTWLEN=<ACTWLEN>,][ILOSS=<ILOSS>,] [VOAMODE=<VOAMODE>,][VOAATTN=<VOAATTN>,] [VOAPWR=<VOAPWR>,][VOAREFATTN=<VOAREFATTN>,] [VOAREFPWR=<VOAREFPWR>,][REFOPWR=<REFOPWR>,] [CALOPWR=<CALOPWR>,][CHPOWER=<CHPOWER>,] [SFBER=<SFBER>,][SDBER=<SDBER>,] [ALSMODE=<ALSMODE>,][ALSRCINT=<ALSRCINT>,] [ALSRCPW=<ALSRCPW>,][COMM=<COMM>,][GCCRATE=<GCCRATE>,] [DWRAP=<DWRAP>,][FEC=<FEC>,][OSFBER=<OSFBER>,] [OSDBER=<OSDBER>,][MACADDR=<MACADDR>,] [SYNCMSG=<SYNCMSG>,][SENDDUS=<SENDDUS>,] [LSRSTAT=<LSRSTAT>,][SOAK=<SOAK>,][SOAKLEFT=<SOAKLEFT>]: <PST>,[<SST>]" ;

Section	RTRV-OCH Description (continued)
Output Format (continued)	where: • <AID> is an access identifier and is from the "CHANNEL" section on page 4-18 • <STATUS> the port status; valid values are shown in the "STATUS" section on page 4-92 and <STATUS> is optional • <RDIRN> identifies the ring directionality of the optical channel; valid values are shown in the "RDIRN_MODE" section on page 4-90 and <RDIRN> is optional • <OPTICALPORTTYPE> identifies the optical port type. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. Valid values are shown in the "OPTICAL_PORT_TYPE" section on page 4-84 and <OPTICALPORTTYPE> is optional • <POWER> identifies the optical power measured at this port. It can be input or output power according to port type. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. <POWER> is a string and is optional • <EXPWLEN> defines the expected value of wavelength for this port. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. Valid values for <EXPWLEN> are shown in the "OPTICAL_WLEN" section on page 4-85 and <EXPWLEN> is optional • <ACTWLEN> identifies the manufacturing optical wavelength for this port. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. Valid values are shown in the "OPTICAL_WLEN" section on page 4-85 and <ACTWLEN> is optional • <ILOSS> identifies the insertion loss. It applies only to output ports. <ILOSS> is expressed in dBm. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. <ILOSS> is a string and is optional • <VOAMODE> identifies the working control mode of the VOA. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. Valid values are shown in the "VOA_CNTR_MODE" section on page 4-103 and <VOAMODE> is optional • <VOAATTN> identifies the transmit power attenuation for the variable optical attenuation (VOA). It is expressed in dBm. The range for MXP_2.5G_10G/TXP_MR_10G cards is -40.0 to +30.0 dBm. <VOAATTN> is a string and is optional • <VOAPWR> indicates the value of calibrated output power that the VOA is going to set as result of its attenuation. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. <VOAPWR> is a float expressed in dBm, is a string and is optional

Section	RTRV-OCH Description (continued)
Output Format (continued)	• <VOAREFATTN> indicates the value of reference attenuation for the VOA. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. <VOAREFATTN> is a float expressed in dBm, is a string and is optional • <VOAREFPWR> indicates the value of reference output power that the VOA is going to set as result of its attenuation. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. <VOAREFPWR> is a float expressed in dBm, is a string and is optional • <REFOPWR> indicates the value of the calculated optical power expected for the output line which is added to the user-provided calibration value to have the total expected output power. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. <REFOPWR> is a float expressed in dBm, is a string and is optional • <CALOPWR> indicates the value of the calibrated optical power expected for the output line added to the calculated value which equals the total expected output power. Applicable only to the following cards: optical service channel cards, optical amplifier cards, dispersion compensation units, multiplexor and demultiplexor cards and OADM cards. <REFOPWR> is a float expressed in dBm, is a string and is optional • <CHPOWER> indicates the value of per channel optical power expected to the OCH DROP port in an optical AD-4C unit; <CHPOWER> is a float expressed in dBm, is a string and is optional • <SFBER> identifies the SFBER for the SONET payload; valid values are shown in the "SF_BER" section on page 4-92 • <SDBER> identifies the SDBER for the SONET payload; valid values are shown in the "SD_BER" section on page 4-91 • <ALSMODE> indicates if the Automatic Laser Shutdown is enabled or disabled; valid values are shown in the "ALS_MODE" section on page 4-45 and <ALSMODE> is optional • <ALSRCINT> indicates the ALS recovery interval. Range is 20–300 seconds; <ALSRCINT> is an integer and is optional • <ALSRCPW> indicates the ALS recovery pulse width. The range is 2–100 seconds, in increments of 100ms, e.g. -30.1; <ALSRCPW> is a float and is optional

Section	RTRV-OCH Description (continued)
Output Format (continued)	• <COMM> indicates if the GCC or DCC is enabled or disabled. The GCC can be enabled only if the digital wrapper has been enabled for the card. The default is NONE. Valid values are shown in the "COMM_TYPE" section on page 4-50. Rules for an MXP_2.5G_10G/TXP_MR_10G client port are; only the DCC can be provisioned, if the termination mode is not transparent and the payload is SONET. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the DCC can be enabled only if the G.709 is not enabled and if the payload is SONET and the termination mode is not transparent. On an MXP_2.5G_10G/TXP_MR_10G DWDM port, the GCC can be enabled if there is no DCC and the G.709 flag is enabled. <COMM> is optional • <GCCRATE> indicates the data rate of the GCC traffic. Valid values are shown in the "GCCRATE" section on page 4-74. The default is 192Kbps. For MXP_2.5G_10G/TXP_MR_10G cards this applies only to the DWDM port. The 576K option is not supported for this release. <GCCRATE> is optional • <DWRAP> is the G.709 digital wrapper. It is either on or off. The system default is ON. For MXP_2.5G_10G/TXP_MR_10G cards, this applies only to the DWDM port. To enable G.709 there should be no GCC on the DWDM port. To disable G.709 there should be no GCC on the DWDM port. The FEC should be turned to off; valid values are shown in the "ON_OFF" section on page 4-83 and <DWRAP> is optional • <FEC> is the Forward Error Correction. It can be enabled only if the G.709 is turned ON. The system default is ON. For MXP_2.5G_10G/TXP_MR_10G cards this applies only to the DWDM port. The FEC level PM and thresholds apply if the FEC is turned on; valid values are shown in the "ON_OFF" section on page 4-83 and <FEC> is optional • <OSFBER> identifies the SFBER for the OTN level; valid values are shown in the "SF_BER" section on page 4-92 and <OSFBER> is optional • <OSDBER> identifies the SDBER for the OTN level; valid values are shown in the "SD_BER" section on page 4-91 and <OSDBER> is optional • <MACADDR> identifies the MAC address for the 10GE payload; <MACADDR> is a string and is optional • <SYNCMSG> indicates that the facility be enabled to provide the synchronization clock. This does not apply to a TXPD-10G card. This applies to an MXP_2.5G_10G card, only if the payload is SONET and the card termination mode is as follows: TRANSPARENT - All Client ports are available for all timing selections. All Trunk ports are not available. LINE - All ports are available for all-timing selections. Valid values for <SYNCMSG> are shown in the "ON_OFF" section on page 4-83 and <SYNCMSG> is optional • <SENDDUS> indicates that the facility send out a Do not Use for Sync message. This does not apply to a TXPD-10G card. This applies to a MXP_2.5G_10G card, only if the payload is SONET and the card termination mode is as follows: TRANSPARENT - All Client ports are available for all timing selections. All Trunk ports are not available. LINE - All ports are available for all-timing selections. Valid values are shown in the "ON_OFF" section on page 4-83 and <SENDDUS> is optional

Section	RTRV-OCH Description (continued)
Output Format (continued)	• <LSRSTAT> indicates the laser status. If the laser is shut down it shows DOWN. If it has not been shut down it shows UP. Valid values are shown in the "UP_DOWN" section on page 4-103 and <LSRSTAT> is optional • <SOAK> OOS-AINS to IS transition soak time as measured in 15–minute intervals; <SOAK> is an integer and is optional • <SOAKLEFT> time remaining for the transition from OOS-AINS to IS measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. <SOAKLEFT> is optional Rules for <SOAKLEFT> are as follows: – When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed. – When the port is in OOS_AINS, but the countdown has not started due to fault signal the value will be SOAKLEFT=NOT-STARTED. – When the port is in OOS_AINS state and the countdown has started the value will be shown in HH-MM format. • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "CHAN-6-1:,,,ACT:RDIRN=W-E,OPTYPE=DROP,OPWR=10.0, EXPWLEN=1530.33,ACTWLEN=1530.33,ILOSS=1.0,VOAMODE=ATTN, VOAATTN=0.5,VOAPWR=0.0,VOAREFATTN=3.5,VOAREFPWR=5.0, REFOPWR=10.5,CALOPWR=0.0,CHPOWER=2.0,NAME="NY PORT", SFBER=1E-4,SDBER=1E-5,ALSMODE=Y,ALSRCINT=30,ALSRCPW=40.1, COMM=GCC,GCCRATE=192K,DWRAP=Y,FEC=Y,OSFBER=1E-4, OSDBER=1E-5,MACADDR=00-0E-AA-BB-CC-FF,SYNCMSG=Y, SENDDUS=Y,LSRSTAT=UP,SOAK=52,SOAKLEFT=12-25:OOS,AINS" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.189 RTRV-OMS: Retrieve Optical Multiplex Section

(Cisco ONS 15454 only)

Note Applicable to Release 4.5 only.

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

Section	RTRV-OMS Description
Category	DWDM
Security	Retrieve

Section	RTRV-OMS Description (continued)	
Related Messages	DLT-FFP-CLNT	OPR-PROTNSW-OCH
	DLT-LNK-<MOD2O>	RLS-LASER-OTS
	ED-CLNT	RLS-PROTNSW-CLNT
	ED-DWDM	RLS-PROTNSW-OCH
	ED-FFP-CLNT	RTRV-CLNT
	ED-FFP-OCH	RTRV-DWDM
	ED-LNK-<MOD2O>	RTRV-FFP-CLNT
	ED-OCH	RTRV-FFP-OCH
	ED-OMS	RTRV-LNK-<MOD2O>
	ED-OTS	RTRV-OCH
	ED-TRC-CLNT	RTRV-OTS
	ED-TRC-OCH	RTRV-PROTNSW-CLNT
	ENT-FFP-CLNT	RTRV-PROTNSW-OCH
	ENT-LNK-<MOD2O>	RTRV-TRC-CLNT
	OPR-LASER-OTS	RTRV-TRC-OCH
	OPR-PROTNSW-CLNT	
Input Format	RTRV-OMS:[<TID>]:<AID>:<CTAG>; where: • <AID> is the AID from the "BAND" section on page 4-16 and must not be null	
Input Example	RTRV-OMS:PENNGROVE:BAND-6-1-RX:236;	
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>]:<PST>,[<SST>] ;	

Section	RTRV-OMS Description (continued)
Output Format (continued)	where: • <AID> is an AID from the "BAND" section on page 4-16 • <RDIRN> identifies the ring directionality of the optical line; valid values are shown in the "RDIRN_MODE" section on page 4-90 • <OPTICALPORTTYPE> identifies the optical port type; valid values are shown in the "OPTICAL_PORT_TYPE" section on page 4-84 • <POWER> identifies the optical power measured at this port. It can be the input or output power according to port type. <POWER> is expressed in dBm, is a string and is optional • <EXPBAND> identifies the expected value of band for this port; valid values are shown in the "OPTICAL_BAND" section on page 4-83 and <BAND> is optional • <ACTBAND> identifies the manufacturing optical band (group of four contiguous wavelengths) for this port; valid values are shown in the "OPTICAL_BAND" section on page 4-83 and <ACTBAND> is optional
Output Format (continued)	• <ILOSS> identifies the insertion loss. It is applicable to output ports. <ILOSS> is expressed in dBm, is a string and is optional • <VOAMODE> identifies the working control mode of the VOA; valid values are shown in the "VOA_CNTR_MODE" section on page 4-103 and <VOAMODE> is optional • <VOAATTN> indicates the value of calibrated attenuation for the VOA; <VOATTN> is a float expressed in dBm, is a string and is optional • <VOAPWR> indicates the value of calibrated output power that the VOA is going to set as a result of its attenuation; <VOAPWR> is a float expressed in dBm, is a string and is optional • <VOAREFATTN> indicates the value of reference attenuation for the VOA; <VOAREFATTN> is a float expressed in dBm, is a string and is optional • <VOAREPWR> indicates the value of reference output power that the VOA is going to sent as a result of its attenuation; <VOAREPWR> is a float expressed in dBm, is a string and is optional • <REFOPWR> indicates the value of the calculated optical power expected for the output line which is added to the user-provided calibration value to have the total expected output power; <REFOPWR> is a float expressed in dBm, is a string and is optional • <CALOPWR> indicates the value of the calibrated optical power expected for the output line added to the calculated value which equals the total expected output power; <CALOPWR> is a float expressed in dBm, is a string and is optional • <CHPOWER> indicates the value of per channel optical power expected to the OMS port in an optical Mux/Demux unit; <CHPOWER> is a float expressed in dBm, is a string and is optional • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92 and <SST> is optional

Section	RTRV-OMS Description (continued)
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:OOS,AINS" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.190 RTRV-OSC: Retrieve Optical Service Channel

(Cisco ONS 15454 only)

Note Applicable to Release 4.5 only.

This command retrieves all the OSC (optical service channel) information of the NE.

Section	RTRV-OSC Description
Category	DWDM
Security	Retrieve
Related Messages	DLT-OSC ED-OSC ENT-OSC
Input Format	RTRV-OSC:[<TID>]:<AID>:<CTAG>; where: • <AID> identifies the OSC group of the NE. Only ALL or Null or a single "OSC-#" in "AID" is allowed. A null value is equivalent to ALL. <AID> is from the "OSC" section on page 4-26 and must not be null
Input Example	RTRV-OSC:PENNGROVE:OSC-1:114;

Section	RTRV-OSC Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>::[RINGID=<RINGID>,][NODEID=<NODEID>,][EAST=<EAST>,][WEST=<WEST>]" ; where: • < AID> identifies the OSC group of the NE and is from the "OSC" section on page 4-26 • <RINGID> identifies the OSC ring ID of the NE. It ranges from 1 to 9999. <RINGID> is an integer and is optional • <NODEID> identifies the OSC node ID of the NE. It ranges from 0 to 31. <NODEID> is an integer and is optional • <EAST> identifies the east OC3 facility and is the AID from the "FACILITY" section on page 4-24. In Release 4.5 only one OC3 for the east direction is supported; <EAST> is optional • <WEST> identifies the east OC3 facility and is the AID from the "FACILITY" section on page 4-24. In Release 4.5 only one OC3 for the west direction is supported; <WEST> is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "OSC-1::RINGID=10,NODEID=1,EAST=FAC-8-1,WEST=FAC-10-1" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.191 RTRV-OTS: Retrieve Optical Transport System

(Cisco ONS 15454 only)

Note Applicable to Release 4.5 only.

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

Section	RTRV-OTS Description
Category	DWDM
Security	Retrieve

Section	RTRV-OTS Description (continued)	
Related Messages	DLT-FFP-CLNT	OPR-PROTNSW-OCH
	DLT-LNK-<MOD2O>	RLS-LASER-OTS
	ED-CLNT	RLS-PROTNSW-CLNT
	ED-DWDM	RLS-PROTNSW-OCH
	ED-FFP-CLNT	RTRV-CLNT
	ED-FFP-OCH	RTRV-DWDM
	ED-LNK-<MOD2O>	RTRV-FFP-CLNT
	ED-OCH	RTRV-FFP-OCH
	ED-OMS	RTRV-LNK-<MOD2O>
	ED-OTS	RTRV-OCH
	ED-TRC-CLNT	RTRV-OMS
	ED-TRC-OCH	RTRV-PROTNSW-CLNT
	ENT-FFP-CLNT	RTRV-PROTNSW-OCH
	ENT-LNK-<MOD2O>	RTRV-TRC-CLNT
	OPR-LASER-OTS	RTRV-TRC-OCH
	OPR-PROTNSW-CLNT	
Input Format	RTRV-OTS:[<TID>]:<AID>:<CTAG>; where: • <AID> is the AID from the "LINE" section on page 4-25 and must not be null	
Input Example	RTRV-OTS:PENNGROVE:LINE-6-1-RX:236;	
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>,] [LASERST=<LASERST>,][OSRI=<OSRI>,][AMPLMODE=<AMPLMODE>,] [GAIN=<GAIN>,][EXPGAIN=<EXPGAIN>,][REFOPWR=<REFOPWR>,] [CALOPWR=<CALOPWR>,][REFTILT=<REFTILT>,][CALTILT=<CALTILT>,] [DCULOSS=<DCULOSS>,][AWGST=<AWGST>,][HEATST=<HEATST>]: <PST>,[<SST>] ;	

Section	RTRV-OTS Description (continued)
Output Format (continued)	where: • <AID> is the AID from the "LINE" section on page 4-25 • <RDIRN> identifies the ring directionality of the optical line; valid values are shown in the "RDIRN_MODE" section on page 4-90 • <OPTICALPORTTYPE> identifies the optical port type; valid values are shown in the "OPTICAL_PORT_TYPE" section on page 4-84 • <POWER> identifies the optical power measured at this port. It can be the input or output power according to port type; <POWER> is a string and is optional • <ILOSS> identifies the insertion loss. It applies only to output ports; <ILOSS> is a string and is optional • <VOAMODE> identifies the working control mode of the VOA; valid values are shown in the "VOA_CNTR_MODE" section on page 4-103 and <VOAMODE> is optional • <VOAATTN> indicates the value of calibrated attenuation for the VOA; <VOAATTN> is a float expressed in dBm, is a string and is optional • <VOAPWR> indicates the value of calibrated output power that the VOA is going to set as a result of its attenuation; <VOAPWR> is a float expressed in dBm, is a string and is optional • <VOAREFATTN> indicates the value of reference attenuation for the VOA; <VOAREFATTN> is a float expressed in db, is a string and is optional • <VOAREFPWR> indicates the value of reference output power that the VOA is going to set as a result of its attenuation; <VOAREFPWR> is a float expressed in dBm, a string and is optional • <LASERST> indicates the value of the laser status; valid values are shown in the "LASER_STATUS" section on page 4-74 and <LASERST> is optional • <OSRI> indicates the OSRI enable or disable feature. It is an optional parameter present only on a port where the safety is supported; valid values are shown in the "ON_OFF" section on page 4-83 and <OSRI> is optional • <AMPLMODE> indicates the optical amplification control mode; valid values are shown in the "AMPL_MODE" section on page 4-46 and <AMPLMODE> is optional • <GAIN> indicates the value of the gain of the amplifier; <GAIN> is a float expressed in dBm, is a string and is optional • <EXPGAIN> indicates the gain expected value to be reached from an amplifier when the node works in a DWDM access network; <EXPGAIN> is a float expressed in dBm, is a string and is optional • <REFOPWR> indicates the value of the calculated optical power expected for the output line which is added to the user-provided calibration value to have the total expected output power; <REFOPWR> is a float expressed in dBm, a string and optional

Section	RTRV-OTS Description (continued)
Output Format (continued)	• <CALOPWR> indicates the value of the calibrated optical power expected for the output line added to the calculated value which equals the total expected output power; <CALOPWR> is a float expressed in dBm, is a string and is optional • <REFTILT> indicates the calculated tilt value to be added with the user-provided calibration value; <REFTILT> is a float expressed in dBm, is a string and is optional • <CALTILT> indicates the amplifier calibration tilt offset to be added to the calculated reference value; <CALTILT> is a float expressed in dBm and is optional • <DCULOSS> indicates the value of insertion loss associated to DCU in between the two stages of a pre-amplifier unit; <DCULOSS> is a float expressed in dBm and is optional • <AWGST> indicates the status assumed by AWG; valid values are shown in the "AWG_STATUS" section on page 4-46 and <AWGST> is optional • <HEATST> indicates the status assumed by the heater; valid values are shown in the "HEATER_STATUS" section on page 4-74 and <HEATST> is optional • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92 and <SST> is optional
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,LASERST=APR,OSRI=Y,AMPLMODE=GAIN,GAIN=3.0, EXPGAIN=3.0,REFOPWR=10.0,CALOPWR=0.0,REFTILT=3.0, CALTILT=0.0,DCULOSS=1.2,AWGST=WARM-UP,HEATST=ON:OOS,AINS" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.192 RTRV-PM-<MOD2>: Retrieve Performance (CLNT, DS1, DS3I, E1, E3, E4, EC1, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STM1E, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

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

This command retrieves the values of PM parameters for a specified card type.

<MONTYPE>, <MONLEV>, <MONDAT> and <MONTM> are supported in this release.

<MONLEV> is in the format of LEV-DIRN. Valid values for <DIRN> are shown in the "DIRN" section on page 4-65.

The format of <MONDAT> is MM-DD, where MM (month of the year) ranges from 1–12 and DD (day of the month) ranges from 1–31.

The format for <MONTM> is HH-MM, where HH (hour of the day) ranges from 0–23 and MM (minute of the hour) ranges from 0–59.

Notes:

1. If there are no errors to report, the response will be COMPLD (completed).
2. If the <TMPER> is 1-DAY, <MONTM> is not applicable (null), and is treated as null if <MONTM> is not null.
3. A null value for <MONLEV> defaults to 1-UP.
4. A null value for <MONDAT> defaults to the current date (MM-DD).
5. A null value for <MONTM> defaults to the current time (HH-MM).
6. Unless otherwise stated, DS1 cards are the only cards that support the BTH, RCV, and TRMT directions. All other cards only support the RCV direction.
7. After the BLSR switching, the working path is switched out, the traffic goes through the protection path, and the IPPM can be retrieved from the protection STS path.
8. If there is a STS PCA on the protection path, during the BLSR switching, the PCA path is pre-emptive; sending this command on the protection path after BLSR switch, the command returns the PMs off the protection path, not from the PCA path.
9. Retrieve the PM data for the OCH facility.

   The rules are as follows: Client port only–Laser and SONET PM's are applicable and will be displayed. If the card payload is in SONET mode, then SONET PM's will be displayed, provided the MONLEV criteria is met.

   Trunk port Laser PM's are always available. Laser PM's are only for Near End. If G.709 is enabled, then the OTN PM's will be displayed. If G.709 is enabled and FEC is enabled, then the FEC PM's will be displayed. If the card payload is in SONET mode, then SONET PM's will be displayed. All PM MONVALUES should pass the MONLEV filter criteria.

Section	**RTRV-PM-<MOD2> Description**	
Category	Performance	
Security	Retrieve	
Related Messages	ALW-PMREPT-ALL	RTRV-PMSCHED-<MOD2>
	INH-PMREPT-ALL	RTRV-PMSCHED-ALL
	INIT-REG-<MOD2>	RTRV-TH-<MOD2>
	INIT-REG-G1000	SCHED-PMREPT-<MOD2>
	REPT PM <MOD2>	SET-PMMODE-<STS_PATH>
	RTRV-PMMODE-<STS_PATH>	SET-TH-<MOD2>

Section	RTRV-PM-<MOD2> Description (continued)
Input Format	RTRV-PM-<MOD2>:[<TID>]:<AID>:<CTAG>::[<MONTYPE>],[<MONLEV>],[<LOCN>],[<DIRN>],[<TMPER>],[<DATE>],[<TIME>]; where: • <AID> is the access identifier. All the STS, VT1, FACILITY and DS1 AIDs are supported; <AID> is from the "ALL" section on page 4-9 and must not be null • <MONTYPE> indicates the type of the monitored parameter; valid values are shown in the "ALL_MONTYPE" section on page 4-36. A null value is equivalent to ALL • <MONLEV> specifies the discriminating level for the requested monitored parameter. <MONLEV> is in the format of LEVEL-DIRN where LEVEL is the measured value of the monitored parameter (MONVAL) and valid values for DIRN are shown in the "DIRN" section on page 4-65. A null value for <MONLEV> defaults to 1-UP. <MONLEV> is a string • <LOCN> indicates the location; valid values are shown in the "LOCATION" section on page 4-75. A null value defaults to NEND • <DIRN> is the direction of PM relative to the entity identified by the AID. <DIRN> defaults to ALL, which means that the command initializes all the registers irrespective of the PM direction. Valid values for <DIRN> are shown in the "DIRECTION" section on page 4-65. • <TMPER> indicates the accumulation time period for the PM information. If the <TMPER> is 1-DAY, <MONTM> is not applicable (null), and is treated as null if <MONTM> is not null. Valid values for <TMPER> are shown in the "TMPER" section on page 4-98. A null value defaults to 15-MIN • <DATE> is 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 1–12 and DD (day of month) ranges from 1–31. A null value for <MONDAT> defaults to the current date • <TIME> is the beginning time of day of the PM or storage register period specified in <TMPER>. The format for <MONTM> is HH-MM, where HH (hour of day) ranges from 0–23 and MM (minute of hour) ranges from 0–59. A null value for <MONTM> defaults to the current time (HH-MM)
Input Example	RTRV-PM-T1:TID:FAC-2-1:123::CVL,10-UP,NEND,BTH,15-MIN,04-11,12-45;

Section	RTRV-PM-<MOD2> Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>,[<AIDTYPE>]:<MONTYPE>,<MONVAL>,[<VLDTY>], [<LOCN>],[<DIRN>],[<TMPER>],[<MONDAT>],[<MONTM>]" ; where: • <AID> is an access identifier from the "ALL" section on page 4-9 • <AIDTYPE> specifies the type of AID; valid values are shown in the "MOD2B" section on page 4-78, <AIDTYPE> is optional • <MONTYPE> indicates the type of monitored parameter; valid values are shown in the "ALL_MONTYPE" section on page 4-36 • <MONVAL> is the measured value of the monitored parameter and is a string • <VLDTY> is the validity indicator of historical monitoring information; valid values are shown in the "VALIDITY" section on page 4-103, <VLDTY> is optional • <LOCN> indicates the location; valid values are shown in the "LOCATION" section on page 4-75, <LOCN> is optional • <DIRN> is the direction of PM relative to the entity identified by the AID; valid values are shown in the "DIRECTION" section on page 4-65, <DIRN> is optional • <TMPER> indicates the accumulation time period for the PM information; valid values are shown in the "TMPER" section on page 4-98, <TMPER> is optional • <MONDAT> is 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 1–12 and DD (day of month) ranges from 1–31. <MONDAT> is a string and is optional • <MONTM> is the beginning time of the day of the PM or storage register period specified in <TMPER>. The format for <MONTM> is HH-MM, where HH (hour of day) ranges from 0– 23 and MM (minute of hour) ranges from 0–59. <MONTM> is a string and is optional.
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "FAC-2-1,DS1-14:CVL,21,COMPL,NEND,BTN,15-MIN,04-11,12-45" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.193 RTRV-PMMODE-<STS_PATH>: Retrieve Performance Mode of PM Data Collection (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C)

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

This command retrieves the type of PM mode that has been previously set in the NE. This command can be used to identify whether the PM parameters are Section, Line or Path type, and to identify whether or not the PM are being collected by the NE.

This command returns the categories that are enabled only.

The PM mode and state of an entity is set by using the SET-PMMODE command.

Notes:

1. This near end monitoring of the intermediate-path PM (IPPM) only supports OC-3, OC-12, OC-48, OC-48AS, OC-192, and EC-1 on STS Path.
2. The far end PM data collection is not supported by the current ONS 15454 in this release.
3. This release of software will support only the Path (P) mode type PM parameters with this command, that is, this command will not be applicable for Line (L) and Section (S) mode types. It should be noted that the PM monitoring for Line (L) and Section (S) are supported by the ONS 15454, and the storing PM data is always performed.
4. This command only returns the categories that are enabled (pmstate is ON), and does not return the categories that are disabled (pmstate is OFF).

Section	RTRV-PMMODE-<STS_PATH> Description	
Category	Performance	
Security	Retrieve	
Related Messages	ALW-PMREPT-ALL	RTRV-PMSCHED-<MOD2>
	INH-PMREPT-ALL	RTRV-PMSCHED-ALL
	INIT-REG-<MOD2>	RTRV-TH-<MOD2>
	INIT-REG-G1000	SCHED-PMREPT-<MOD2>
	REPT PM <MOD2>	SET-PMMODE-<STS_PATH>
	RTRV-PM-<MOD2>	SET-TH-<MOD2>
Input Format	RTRV-PMMODE-<STS_PATH>:[<TID>]:<AID>:<CTAG>::<LOCN>; where: • <AID> identifies the entity from where the PM mode is being retrieved; <AID> is from the "STS" section on page 4-27 and must not be null • <LOCN> identifies the location from where the PM mode is being retrieved; valid values are shown in the "LOCATION" section on page 4-75. <LOCN> must not be null	
Input Example	RTRV-PMMODE-STS1:CISCO:STS-4-2:123::NEND;	
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:[<LOCN>],<MODETYPE>" ; where: • <AID> identifies the entity from where the PM mode is being retrieved; <AID> is from the "STS" section on page 4-27 • <LOCN> identifies the location from where the PM mode is being retrieved; valid values are shown in the "LOCATION" section on page 4-75. <LOCN> is optional. • <MODETYPE> identifies whether or not the PM mode type is turned on or off; valid values are shown in the "PM_MODE" section on page 4-88	

Section	RTRV-PMMODE-<STS_PATH> Description (continued)
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "STS-4-2:NEND,P" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.194 RTRV-PMSCHED-<MOD2>:Retrieve Performance Monitoring Schedule (CLNT, DS1, DS3I, E1, E3, E4, EC1, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STM1E, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

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

This command retrieves the PM reporting schedule that was set for the NE by the SCHED-PMREPT command.

Section	RTRV-PMSCHED-<MOD2> Description	
Category	Performance	
Security	Retrieve	
Related Messages	ALW-PMREPT-ALL	RTRV-PMMODE-<STS_PATH>
	INH-PMREPT-ALL	RTRV-PMSCHED-ALL
	INIT-REG-<MOD2>	RTRV-TH-<MOD2>
	INIT-REG-G1000	SCHED-PMREPT-<MOD2>
	REPT PM <MOD2>	SET-PMMODE-<STS_PATH>
	RTRV-PM-<MOD2>	SET-TH-<MOD2>
Input Format	RTRV-PMSCHED-<MOD2>:[<TID>]:<AID>:<CTAG>; where: • <AID> is an access identifier from the "ALL" section on page 4-9; <AID> must not be null	
Input Example	RTRV-PMSCHED-OC3:CISCO-NODE:FAC-3-1:123;	

Section	RTRV-PMSCHED-<MOD2> Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>,[<AIDTYPE>]:<REPTINVL>,<REPTDAT>,<REPTTM>, [<NUMINVL>],,[<MONLEV>],<LOCN>,,[<TMPER>],[<TMOFST>], [<INHMODE>]" ; where: • <AID> access identifier from the "ALL" section on page 4-9 • <AIDTYPE> type of access identifier; valid values are shown in the "MOD2" section on page 4-76. <AIDTYPE> is optional • <REPTINVL> interval between PM reports; <REPTINVL> is a string • <REPTDAT> date for the next report; <REPTDAT> is a string • <REPTTM> the time of day for the next PM report; <REPTTM> is a string • <NUMINVL> remaining number of intervals over which PM is being reported; <NUMINVL> is and integer and is optional • <MONLEV> discriminating level for the requested monitored parameter; <MONLEV> is a string and is optional • <LOCN> location being performance-monitored and refers to the entity identified by the AID; valid values are shown in the "LOCATION" section on page 4-75 • <TMPER> accumulation time period for the PM information; valid values are shown in the "TMPER" section on page 4-98 and <TMPER> is optional • <TMOFST> is the time offset from the end of the last complete accumulation time period to the beginning of the accumulation period specified by TMPER parameter. <TMOFST> is a string and is optional • <INHMODE> describes whether the reporting of PM data is inhibited (via the INH-PMREPT-ALL command) or is allowed (via the ALW-PMREPT-ALL command); valid values are shown in the "INH_MODE" section on page 4-74
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" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.195 RTRV-PMSCHED-ALL: Retrieve Performance Schedule All

This command retrieves all the PM reporting schedules that were set for the NE by the SCHED-PMREPT command.

Section	RTRV-PMSCHED-ALL Description
Category	Performance
Security	Retrieve

Section	RTRV-PMSCHED-ALL Description (continued)	
Related Messages	ALW-PMREPT-ALL	RTRV-PMMODE-<STS_PATH>
	INH-PMREPT-ALL	RTRV-PMSCHED-<MOD2>
	INIT-REG-<MOD2>	RTRV-TH-<MOD2>
	INIT-REG-G1000	SCHED-PMREPT-<MOD2>
	REPT PM <MOD2>	SET-PMMODE-<STS_PATH>
	RTRV-PM-<MOD2>	SET-TH-<MOD2>
Input Format	RTRV-PMSCHED-ALL:[<TID>]::<CTAG>;	
Input Example	RTRV-PMSCHED-ALL:CISCO-NODE::123;	
Output Format	SID DATE TIME M CTAG COMPLD "<AID>,[<AIDTYPE>]:<REPTINVL>,<REPTDAT>,<REPTTM>, [<NUMINVL>],,[<MONLEV>],<LOCN>,,[<TMPER>],<TMOFST>, [<INHMODE>]" ; where: • <AID> access identifier from the "ALL" section on page 4-9 • <AIDTYPE> type of access identifier; valid values are shown in the "MOD2" section on page 4-76. <AIDTYPE> is optional • <REPTINVL> interval between PM reports; <REPTINVL> is a string • <REPTDAT> date for the next report; <REPTDAT> is a string • <REPTTM> the time of day for the next PM report; <REPTTM> is a string • <NUMINVL> remaining number of intervals over which PM is being reported; <NUMINVL> is and integer and is optional • <MONLEV> discriminating level for the requested monitored parameter; <MONLEV> is a string and is optional • <LOCN> location being performance-monitored and refers to the entity identified by the AID; valid values are shown in the "LOCATION" section on page 4-75 • <TMPER> accumulation time period for the PM information; valid values are shown in the "TMPER" section on page 4-98 and <TMPER> is optional • <TMOFST> is the time offset from the end of the last complete accumulation time period to the beginning of the accumulation time period specified by the TMPER parameter; <TMOFST> is a string • <INHMODE> describes whether the reporting of PM data is inhibited (via the INH-PMREPT-ALL command) or is allowed (via the ALW-PMREPT-ALL command); valid values are shown in the "INH_MODE" section on page 4-74	
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" ;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.196 RTRV-POS: Retrieve Packet Over SONET

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

This command retrieves the back end port information for the ML-series Ethernet cards when the back end port is working in POS mode.

Note Because the back end port is virtual, the Virtual Facility (VFAC) AID should be used when issuing the command.

Section	RTRV-POS Description	
Category	Ports	
Security	Retrieve	
Related Messages	ED-<OCN_TYPE>	RTRV-<OCN_TYPE>
	ED-DS1	RTRV-DS1
	ED-EC1	RTRV-EC1
	ED-G1000	RTRV-FSTE
	ED-T1	RTRV-G1000
	ED-T3	RTRV-GIGE
	INIT-REG-G1000	RTRV-T1
	RMV-<MOD2_IO>	RTRV-T3
	RST-<MOD2_IO>	
Input Format	RTRV-POS:[<TID>]:<AID>:<CTAG>; where: • <AID> is the access identifier from the "FACILITY" section on page 4-24 and must not be null	
Input Example	RTRV-POS:TID:VFAC-1-1:CTAG;	
Output Format	SID DATE TIME M CTAG COMPLD "<AID>::[ADMINSTATE=<ADMINSTATE>,][LINKSTATE=<LINKSTATE>,][MTU=<MTU>]" ; where: • <AID> is the access identifier from the "FACILITY" section on page 4-24 • <ADMINSTATE> administration speed; valid values are shown in the "UP_DOWN" section on page 4-103 and <ADMINSTATE> is optional • <MTU> maximum transport unit; <MTU> is an integer and is optional	
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "VFAC-1-1::ADMINSTATE=DOWN,LINKSTATE=DOWN,MTU=1500" ;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.197 RTRV-PROTNSW-<OCN_TYPE>: Retrieve Protection Switch (OC3, OC12, OC48, OC192)

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

This command retrieves the switching state of a SONET line specified in the AID.

Section	RTRV-PROTNSW-<OCN_TYPE> Description	
Category	SONET Line Protection	
Security	Retrieve	
Related Messages	DLT-FFP-<OCN_TYPE> DLT-FFP-CLNT ED-FFP-<OCN_TYPE> ED-FFP-CLNT ENT-FFP-<OCN_TYPE> ENT-FFP-CLNT	EX-SW-<OCN_BLSR> OPR-PROTNSW-<OCN_TYPE> RLS-PROTNSW-<OCN_TYPE> RTRV-FFP-<OCN_TYPE> RTRV-FFP-CLNT
Input Format	RTRV-PROTNSW-<OCN_TYPE>:[<TID>]:<AID>:<CTAG>[::::]; where: • <AID> indicates the entity in the NE and is from the "FACILITY" section on page 4-24; <AID> must not be null	
Input Example	RTRV-PROTNSW-OC48:CISCO:FAC-5-1:123;	
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:<SC>,[<SWITCHTYPE>]" ; where: • <AID> indicates the entity in the NE and is from the "FACILITY" section on page 4-24 • <SC> is the switch operation on the path/AID; valid values are shown in the "SW" section on page 4-94 • Valid values for <SWITCHTYPE> are shown in the "SWITCH_TYPE" section on page 4-94: <SWITCHTYPE> is optional	
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "FAC-5-1:MAN,MANWKSWBK" ;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.198 RTRV-PROTNSW-<STS_PATH>: Retrieve Protection Switch (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C)

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

This command retrieves the switching state of a SONET path protection STS path specified in the AID. Because the GR-1400 does not allow the LOCKOUT_OF_WORKING on the path protection WORKING path/AID, the "AID:LOCKOUT,LOCKOUTOFWK" is not presented in this protection switch retrieval result.

Section	RTRV-PROTNSW-<STS_PATH> Description
Category	Path Protection Switching
Security	Retrieve
Related Messages	OPR-PROTNSW-<STS_PATH> RLS-PROTNSW-<STS_PATH> REPT SW
Input Format	RTRV-PROTNSW-<STS_PATH>:[<TID>]:<AID>:<CTAG>[::::]; where: • <AID> indicates the entity in the NE and is from the "STS" section on page 4-27; <AID> must not be null
Input Example	RTRV-PROTNSW-STS1:CISCO:STS-5-1:123;
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:<SC>,[<SWITCHTYPE>]" ; where: • <AID> is from the "STS" section on page 4-27 • <SC> is the switch operation on the path/AID; valid values are shown in the "SW" section on page 4-94 • Valid values for <SWITCHTYPE> are shown in the "SWITCH_TYPE" section on page 4-94: <SWITCHTYPE> is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "STS-5-1:MAN,MANWKSWBK" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.199 RTRV-PROTNSW-<VT_PATH>: Retrieve Protection Switch (VT1, VT2)

This command retrieves the switching state of a SONET path protection VT path specified in the AID. Because the GR-1400 does not allow the LOCKOUT_OF_WORKING on the path protection WORKING path/AID, the "AID:LOCKOUT,LOCKOUTOFWK" is not presented in this protection switch retrieval result.

Section	RTRV-PROTNSW-<VT_PATH> Description
Category	Path Protection Switching
Security	Retrieve

Section	RTRV-PROTNSW-<VT_PATH> Description (continued)	
Related Messages	DLT-FFP-CLNT	OPR-LNK
	DLT-LNK-<MOD2O>	OPR-PROTNSW-CLNT
	ED-CLNT	RLS-LASER-OTS
	ED-DWDM	RLS-PROTNSW-CLNT
	ED-FFP-CLNT	RTRV-CLNT
	ED-LNK-<MOD2O>	RTRV-DWDM
	ED-OCH	RTRV-FFP-CLNT
	ED-OMS	RTRV-OCH
	ED-OTS	RTRV-LNK-<MOD2O>
	ED-TRC-CLNT	RTRV-OMS
	ED-TRC-OCH	RTRV-OTS
	ENT-FFP-CLNT	RTRV-TRC-CLNT
	ENT-LNK-<MOD2O>	RTRV-TRC-OCH
	OPR-LASER-OTS	
Input Format	RTRV-PROTNSW-<VT_PATH>:[<TID>]:<AID>:<CTAG>[::::]; where: • <AID> indicates the entity in the NE and is from the "VT1_5" section on page 4-33; <AID> must not be null	
Input Example	RTRV-PROTNSW-VT1:CISCO:VT1-5-1-1-2:123;	
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:<SC>,[<SWITCHTYPE>]" ; where: • <AID> indicates the entity in the NE and is from the "VT1_5" section on page 4-33 • <SC> is the switch operation on the path/AID; valid values are shown in the "SW" section on page 4-94 • Valid values for <SWITCHTYPE> are shown in the "SWITCH_TYPE" section on page 4-94: <SWITCHTYPE> is optional	
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "VT1-5-1-1-2:MAN,MANWKSWBK" ;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.200 RTRV-PROTNSW-CLNT: Retrieve Protection Switch Client

(Cisco ONS 15454 only)

This command retrieves protection switch status of client facilities.

Section	RTRV-PROTNSW-CLNT Description	
Category	DWDM	
Security	Retrieve	
Related Messages	DLT-FFP-CLNT	OPR-PROTNSW-OCH
	DLT-LNK-<MOD2O>	RLS-LASER-OTS
	ED-CLNT	RLS-PROTNSW-CLNT
	ED-DWDM	RLS-PROTNSW-OCH
	ED-FFP-CLNT	RTRV-CLNT
	ED-FFP-OCH	RTRV-DWDM
	ED-LNK-<MOD2O>	RTRV-FFP-CLNT
	ED-OCH	RTRV-FFP-OCH
	ED-OMS	RTRV-LNK-<MOD2O>
	ED-OTS	RTRV-OCH
	ED-TRC-CLNT	RTRV-OMS
	ED-TRC-OCH	RTRV-OTS
	ENT-FFP-CLNT	RTRV-PROTNSW-OCH
	ENT-LNK-<MOD2O>	RTRV-TRC-CLNT
	OPR-LASER-OTS	RTRV-TRC-OCH
	OPR-PROTNSW-CLNT	
Input Format	RTRV-PROTNSW-CLNT:[<TID>]:<AID>:<CTAG>[::::]; where: • <AID> is from the "FACILITY" section on page 4-24 and must not be null	
Input Example	RTRV-PROTNSW-CLNT:CISCO:FAC-1-1:100;	
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:<SC>,[<SWITCHTYPE>]" ; where: • <AID> is from the "FACILITY" section on page 4-24 • Valid values for <SC> are shown in the "SW" section on page 4-94 • Valid values for <SWITCHTYPE> are shown in the "SWITCH_TYPE" section on page 4-94 and <SWITCHTYPE> is optional	
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "FAC-1-1:FRCD,MANWKSWBK" ;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.201 RTRV-PROTNSW-OCH: Retrieve Protection Switch OCH

(Cisco ONS 15454 only)

This command retrieves the protection switch status of a TXPP_MR_2.5G card.

Section	RTRV-PROTNSW-OCH Description	
Category	DWDM	
Security	Retrieve	
Related Messages	DLT-FFP-CLNT	OPR-PROTNSW-OCH
	DLT-LNK-<MOD2O>	RLS-LASER-OTS
	ED-CLNT	RLS-PROTNSW-CLNT
	ED-DWDM	RLS-PROTNSW-OCH
	ED-FFP-CLNT	RTRV-CLNT
	ED-FFP-OCH	RTRV-DWDM
	ED-LNK-<MOD2O>	RTRV-FFP-CLNT
	ED-OCH	RTRV-FFP-OCH
	ED-OMS	RTRV-LNK-<MOD2O>
	ED-OTS	RTRV-OCH
	ED-TRC-CLNT	RTRV-OMS
	ED-TRC-OCH	RTRV-OTS
	ENT-FFP-CLNT	RTRV-PROTNSW-CLNT
	ENT-LNK-<MOD2O>	RTRV-TRC-CLNT
	OPR-LASER-OTS OPR-PROTNSW-CLNT	RTRV-TRC-OCH
Input Format	RTRV-PROTNSW-OCH:[<TID>]:<AID>:<CTAG>; where: • <AID> is from the "CHANNEL" section on page 4-18 and must not be null	
Input Example	RTRV-PROTNSW-OCH:VA454-22:CHAN-2-2:100;	
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:<SW>,<SWTYPE>" ; where: • <AID> is from the "CHANNEL" section on page 4-18 • <SW> indicates the switch operation; valid value are shown in the "SW" section on page 4-94 • <SWTYPE> indicates the switch type operation; valid values are shown in the "SWITCH_TYPE" section on page 4-94	

Section	RTRV-PROTNSW-OCH Description (continued)
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "CHAN-2-2:FRCD,FRCDWKSWBK" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.202 RTRV-PTHTRC-<STS_PATH>: Retrieve Path Trace (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C)

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

This command retrieves the contents of the SONET path trace message that is transported in the J1 byte of the SONET STS Path.

The path trace message is a 64-character string with the last two characters reserved for the terminating CR (carriage return) and the LF (line feed). The message can be an incoming path trace message, an expected incoming path trace message, or an outgoing path trace message which is inserted into the path overhead of the outgoing signal.

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

When the expected string is queried under the OFF path trace mode, the expected string is a copy of the provisioned string or NULL. When an expected string is queried under the MANUAL path trace mode, the expected string is a copy of the user-entered string. When an expected string is queried under the AUTO path trace mode, the expected string is a copy of the acquired received string or NULL if the string has not been acquired.

When the incoming string is queried under the OFF path trace mode, the incoming string is NULL. When an incoming string is queried under the MANUAL or AUTO path trace mode, the incoming string is a copy of the received string or NULL if the string has not been received.

When the transmitted string is queried under the OFF, MANUAL or AUTO path trace mode, the transmitted string is the provisioned transmit string.

Notes:

1. A null value for the <MSGTYPE> defaults to INCTRC.
2. Only the NEND of the <LOCN> value is supported. A null value of the <LOCN> defaults to NEND.
3. Sending a FEND of the <LOCN> with this command, an "unsupported locn value" error message will display.
4. J1 (EXPTRC/INCTRC) is implemented on the DS1/DS1N, DS3E/DS3NE, DS3XM, EC1, OC3, OC48AS and OC192 cards.
5. TRC is supported only on DS1(N), DS3(N)E, and DS3XM cards.

Section	RTRV-PTHTRC-<STS_PATH> Description
Category	STS Paths
Security	Retrieve
Related Messages	ED-<STS_PATH> RTRV-<STS_PATH>
Input Format	RTRV-PTHTRC-<STS_PATH>:[<TID>]:<AID>:<CTAG>:: [<MSGTYPE>][:<LOCN>]; where: • <AID> is an access identifier from the "STS" section on page 4-27 and must not be null • <MSGTYPE> is the type of trace message to be retrieved; valid values are shown in the "MSGTYPE" section on page 4-81 and a null value defaults to INCTRC. A null value is equivalent to ALL. • <LOCN> is the location of the trace message; valid values are shown in the "LOCATION" section on page 4-75. A null value is equivalent to ALL.
Input Example	RTRV-PTHTRC-STS1:CISCO:STS-2-1:123::EXPTRC:NEND;
Output Format	SID DATE TIME M CTAG COMPLD "<TRACMSG>" ; where: • <TRACMSG> is the Path Trace message returned to the requester. The message should be up 64 characters in length.The user is allowed to enter up to 62 characters, the last two characters are reserved for the terminating CR (carriage return) and LF (line feed); <TRACMSG> is a string
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "TRACMSG" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.203 RTRV-SYNCN: Retrieve Synchronization

This command retrieves the synchronization reference list used to determine the sources for the NE's reference clock and the BITS output clock. For each clock, up to three synchronization sources may be specified (e.g. PRIMARY, SECOND, THIRD).

Notes:

1. To retrieve/set the timing mode, SSM message Set or Quality of RES information, use the RTRV-NE-SYNCN and ED-NE-SYNCN commands.
2. The output example shown here is under line timing mode.

Section	RTRV-SYNCN Description	
Category	Synchronization	
Security	Retrieve	
Related Messages	ED-BITS	RLS-SYNCNSW
	ED-NE-SYNCN	RTRV-ALM-BITS
	ED-SYNCN	RTRV-ALM-SYNCN
	OPR-SYNCNSW	RTRV-BITS
	REPT ALM BITS	RTRV-COND-BITS
	REPT ALM SYNCN	RTRV-COND-SYNCN
	REPT EVT BITS	RTRV-NE-SYNCN
	REPT EVT SYNCN	
Input Format	RTRV-SYNCN:[<TID>]:<AID>:<CTAG>[::::]; where: • <AID> identifies the synchronization reference to retrieve; <AID> is from the "SYNC_REF" section on page 4-30, is listable and must not be null	
Input Example	RTRV-SYNCN:BOYES:SYNC-NE:234;	
Output Format	SID DATE TIME M CTAG COMPLD "<AID>:<REF>,<REFVAL>,[<QREF>],[<STATUS>],[<PROTECTSTATUS>]" ; where: • <AID> is the synchronization reference to be modified and is from the "SYNC_REF" section on page 4-30 • <REF> is the rank of the synchronization reference and is from the "SYNCSW" section on page 4-31 • <REFVAL> is the value of the synchronization reference and is from the "SYN_SRC" section on page 4-29 • <QREF> is the quality of the reference source; valid values are shown in the "SYNC_CLOCK_REF_QUALITY_LEVEL" section on page 4-95, <QREF> is optional • <STATUS> is the active status of the synchronization source; valid values are shown in the "STATUS" section on page 4-92, <STATUS> is optional • <PROTECTSTATUS> indicates whether the working or protect card (in a protection group) provides timing. This parameter has no significance if the reference source is BITS or INTERNAL and is left blank. Valid values are shown in the "SIDE" section on page 4-92 and <PROTECTSTATUS> is optional	
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "SYNC-NE:PRI,FAC-1-2,PRS,ACT,WORK" ;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.204 RTRV-T1: Retrieve T1 Facility

This command retrieves the DS-1 facilities configuration.

(The facilities are on the XTC card for the ONS 15327)

Section	RTRV-T1 Description	
Category	Ports	
Security	Retrieve	
Related Messages	ED-<OCN_TYPE>	RTRV-<OCN_TYPE>
	ED-DS1	RTRV-DS1
	ED-EC1	RTRV-EC1
	ED-G1000	RTRV-FSTE
	ED-T1	RTRV-G1000
	ED-T3	RTRV-GIGE
	INIT-REG-G1000	RTRV-POS
	RMV-<MOD2_IO>	RTRV-T3
	RST-<MOD2_IO>	
Input Format	RTRV-T1:[<TID>]:<AID>:<CTAG>[::::];	
	where:	
	• <AID> is an access identifier from the "FACILITY" section on page 4-24 and must not be null	
Input Example	RTRV-T1:TID:FAC-2-1:1223;	

Section	RTRV-T1 Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>::[LINECDE=<LINECDE>,][FMT=<FMT>,][LBO=<LBO>,] [TACC=<TAP>,][SOAK=<SOAK>,][SOAKLEFT=<SOAKLEFT>,] [SFBER=<SFBER>,][SDBER=<SDBER>]:<PST>,[<SST>]" ; where: • <AID> is an access identifier from the "FACILITY" section on page 4-24 • <LINECDE> is a line code; valid values are shown in the "LINE_CODE" section on page 4-75, <LINECDE> is optional • <FMT> is a frame format; valid values are shown in the "FRAME_FORMAT" section on page 4-73, <FMT> is optional • <LBO> is a line buildout; valid values are shown in the "LINE_BUILDOUT" section on page 4-74, <LBO> is optional • <TAP> defines the STS as a test access port with a selected unique TAP number. The TAP number ranges from 1–999. When TACC is 0, the TAP is deleted. <TAP> is from the "TACC" section on page 4-32 and <TAP> is optional • <SOAK> OOS-AINS to IS transition soak time measured in 15 minute intervals; <SOAK> is an integer and is optional • <SOAKLEFT> time remaining for the transition from OOS-AINS to IS measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. <SOAKLEFT> is optional Rules for <SOAKLEFT> are as follows: – When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed. – When the port is in OOS_AINS, but the countdown has not started due to fault signal the value will be SOAKLEFT=NOT-STARTED. – When the port is in OOS_AINS state and the countdown has started the value will be shown in HH-MM format. • <SFBER> identifies the port SFBER and defaults to 1E-4; valid values are shown in the "SF_BER" section on page 4-92 and <SFBER> is optional • <SDBER> identifies the port SDBER and defaults to 1E-7; valid values are shown in the "SD_BER" section on page 4-91 • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92 and <SST> is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "FAC-2-1::LINECDE=AMI,FMT=ESF,LBO=0-131,TACC=8,SOAK=52, SOAKLEFT=12-25,SFBER=1E-4,SDBER=1E-7:OOS,AINS" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.205 RTRV-T3: Retrieve T3

This command retrieves the facility properties of a DS3 and a DS3XM card.

(The facilities are on the XTC card for the ONS 15327)

Notes:

1. CTC can set the FMT attribute of a DS3(N)E line to autoprovision to set the framing based on the framing is coming in. This would result in the FMT field being blanked out for a few seconds blanked forever for a preprovisioned DS3(N)E card on CTC.
2. The autoprovision is not considered a valid DS3 framing type. It is used only to trigger an autosense and subsequent autoprovisioning of a valid DS3 framing type (unframed, M23, C-BIT).
3. TL1 does not have the autoprovision mode according to GR-199. TL1 maps/returns the autoprovision to be the unframed framing type.

Section	RTRV-T3 Description	
Category	Ports	
Security	Retrieve	
Related Messages	ED-<OCN_TYPE>	RTRV-<OCN_TYPE>
	ED-DS1	RTRV-DS1
	ED-EC1	RTRV-EC1
	ED-G1000	RTRV-FSTE
	ED-T1	RTRV-G1000
	ED-T3	RTRV-GIGE
	INIT-REG-G1000	RTRV-POS
	RMV-<MOD2_IO>	RTRV-T1
	RST-<MOD2_IO>	
Input Format	RTRV-T3:[<TID>]:<AID>:<CTAG>[::::]; where: • <AID> is the access identifier from the "FACILITY" section on page 4-24 and must not be null	
Input Example	RTRV-T3:CISCO:FAC-1-2:123;	

Section	RTRV-T3 Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>::[FMT=<FMT>,][LINECDE=<LINECDE>,][LBO=<LBO>,] [TACC=<TAP>,][SOAK=<SOAK>,][SOAKLEFT=<SOAKLEFT>,] [SFBER=<SFBER>,][SDBER=<SDBER>]:<PST>,[<SST>]" ; where: • <AID> is an access identifier from the "FACILITY" section on page 4-24 • <FMT> is a frame format; valid values are shown in the "DS_LINE_TYPE" section on page 4-65, <FMT> is optional • <LINECDE> is a line code; valid values are shown in the "DS_LINE_CODE" section on page 4-65, <LINECDE> is optional • <LBO> is a line buildout; valid values are shown in the "E_LBO" section on page 4-66, <LBO> is optional • <TAP> defines the STS as a test access port with a selected unique TAP number. The TAP number ranges from 1–999. When TACC is 0, the TAP is deleted. <TAP> is from the "TACC" section on page 4-32 and is optional • <SOAK> OOS-AINS to IS transition soak time measured in 15 minute intervals; <SOAK> is an integer and is optional • <SOAKLEFT> time remaining for the transition from OOS-AINS to IS measured in 1 minute intervals. The format is HH-MM where HH ranges from 00 to 48 and MM ranges from 00 to 59. <SOAKLEFT> is optional Rules for <SOAKLEFT> are as follows: – When the port is in OOS, OOS_MT or IS state, the parameter will not be displayed. – When the port is in OOS_AINS, but the countdown has not started due to fault signal the value will be SOAKLEFT=NOT-STARTED. – When the port is in OOS_AINS state and the countdown has started the value will be shown in HH-MM format. • <SFBER> identifies the port SFBER and defaults to 1E-4; valid values are shown in the "SF_BER" section on page 4-92 and <SFBER> is optional • <SDBER> identifies the port SDBER and defaults to 1E-7; valid values are shown in the "SD_BER" section on page 4-91 • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "FAC-1-2::FMT=C-BIT,LINECDE=B3ZS,LBO=0-225,TACC=8,SOAK=52, SOAKLEFT=12-25,SFBER=1E-4,SDBER=1E-7:OOS,AINS" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.206 RTRV-TACC: Retrieve Test Access

This command retrieves details associated with a TAP. The TAP is identified by the TAP number. The ALL input TAP value means that the command will return all the configured TACCs in the NE.

Section	RTRV-TACC Description
Category	Test Access
Security	Retrieve
Related Messages	CHG-ACCMD-<MOD_TACC> CONN-TACC-<MOD_TACC> DISC-TACC
Input Format	RTRV-TACC:[<TID>]:<TAP>:<CTAG>; where: • <TAP> indicates the assigned numeric number for the AID being used as a TAP. The TAP number must be an integer with a range of 1–999. The ALL TAP value means that the command will return all the configured TACCs in the NE. <TAP> is a string and must not be null
Input Example	RTRV-TACC:CISCO:241:CTAG;
Output Format	SID DATE TIME M CTAG COMPLD "<TAP>:<TACC_AID1>,<TACC_AID2>,[<MD>],[<E_CONN>],[<F_CONN>]" ; where: • <TAP> indicates the assigned numeric number for the AID being used as a TAP; <TAP> is a string • <TACC_AID1> is the STS or VT AID that was designated as a test access point and assigned to the TAP; <TACC_AID1> is from the "ALL" section on page 4-9 • <TACC_AID2> is the STS or VT AID that was designated as a test access point and assigned to the TAP+1; <TACC_AID2> is from the "ALL" section on page 4-9 • <MD> indicates the test access mode. It identifies the status of the circuit connected to the TACC. Valid values are shown in the "TACC_MODE" section on page 4-97 • <E_CONN> indicates the E side STS or VT AID of a circuit connected to the TACC or under test; <E_CONN> is from the "ALL" section on page 4-9 and is optional • <F_CONN> indicates the F side STS or VT AID of a circuit connected to the TACC or under test; <F_CONN> is from the "ALL" section on page 4-9
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "241:STS-2-1,STS-2-2,MONE,STS-12-1,STS-13-1" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.207 RTRV-TH-<MOD2>: Retrieve Threshold (CLNT, DS1, DS3I, E1, E3, E4, EC1, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STM1E, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

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

This command retrieves the threshold level of one or more monitored parameters.

Notes:

1. After the BLSR switching, the working path is switched out, the traffic goes through the protection path and the threshold can be retrieved from the protection path.
2. If there is a STS PCA on the protection path, during the BLSR switching, the PCA path is pre-emptive; sending this command on the protection path after BLSR switch, the command returns the PMs off the protection path, not from the PCA path.

   The message is issued to retrieve the thresholds for PM and the alarm thresholds. If it is used to retrieve the alarm thresholds, the time-period is not applicable.

   The presentation rules are as follows: Client port only–Laser, Alarm and SONET Thresholds are applicable and will be displayed. Laser and alarm thresholds are only for Near End. If the card payload is in SONET mode, then SONET Thresholds will be displayed. The Receiver Temperature Montypes (RXT) are only applicable to the Trunk Port. The Transceiver Voltage Montypes (XCVR) are not applicable, though it is displayed or handled.

   Laser and Alarm thresholds are always available. Laser and alarm thresholds are only for Near End. If G.709 is enabled, then the OTN thresholds will be displayed. If G.709 is enabled and FEC is enabled, then the FEC thresholds will be displayed. If the card payload is in SONET mode, then SONET Thresholds will be displayed. The Transceiver Voltage Montypes (XCVR) are not applicable, though it is displayed or handled.

See the "Provisioning Rules for MXP_2.5G_10G and TXP_MR_10G Cards" section on page 1-8 and the "Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards" section on page 1-13 for specific card provisioning rules.

Section	RTRV-TH-<MOD2> Description	
Category	Performance	
Security	Retrieve	
Related Messages	ALW-PMREPT-ALL	RTRV-PMMODE-<STS_PATH>
	INH-PMREPT-ALL	RTRV-PMSCHED-<MOD2>
	INIT-REG-<MOD2>	RTRV-PMSCHED-ALL
	INIT-REG-G1000	SCHED-PMREPT-<MOD2>
	REPT PM <MOD2>	SET-PMMODE-<STS_PATH>
	RTRV-PM-<MOD2>	SET-TH-<MOD2>

Section	RTRV-TH-<MOD2> Description (continued)
Input Format	RTRV-TH-<MOD2>:[<TID>]:<AID>:<CTAG>:: [<MONTYPE>],[<LOCN>],<TMPER>[::]; where: • <AID> is an access identifier from the "ALL" section on page 4-9 and must not be null • <MONTYPE> is the monitored type and defaults to CVL; valid values are shown in the "ALL_MONTYPE" section on page 4-36. A null value is equivalent to ALL. **Note** <MONTYPE> defaults to: CVL for OCN, EC1 and DSN, ESP for STSp, UASV for VT1, AISSP for DS1 layer of DS3XM. LOCN defaults to NEND. TMPER defaults to 15 minutes. • <LOCN> is the location; valid values are shown in the "LOCATION" section on page 4-75. A null value is equivalent to ALL • <TMPER> indicates the accumulation time period; valid values are shown in the "TMPER" section on page 4-98 and <TMPER> must not be null
Input Example	RTRV-TH-T3:CISCO:FAC-1-3:1234::CVL,NEND,15-MIN;
Output Format	SID DATE TIME M CTAG COMPLD "<AID>,[<AIDTYPE>]:<MONTYPE>,[<LOCN>],,<THLEV>,[<TMPER>]" ; where: • <AID> is from the "ALL" section on page 4-9 • <AIDTYPE> specifies the type of AID; valid values are shown in the "MOD2B" section on page 4-78, <AIDTYPE> is optional • <MONTYPE> indicates the monitored type; valid values are shown in the "ALL_MONTYPE" section on page 4-36 • <LOCN> is a location; valid values are shown in the "LOCATION" section on page 4-75, <LOCN> is optional • <THLEV> is the threshold value and is a float; <THLEV> is an integer • <TMPER> is the accumulation time period for the PM information; valid values are shown in the "TMPER" section on page 4-98, <TMPER> is optional
Output Example	TID-0001998-06-20 14:30:00 M 001 COMPLD "FAC-1-3,DS3:CVL,NEND,,1,15-MIN" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.208 RTRV-TOD: Retrieve Time of Day

This command retrieves the system date and time at the instant when the command was executed. The time returned is in Coordinated Universal Time (UTC).

Section	RTRV-TOD Description	
Category	System	
Security	Retrieve	
Related Messages	ALW-MSG-ALL	RTRV-HDR
	COPY-RFILE	RTRV-INV
	ED-DAT	RTRV-MAP-NETWORK
	ED-NE-GEN	RTRV-NE-GEN
	ED-NE-SYNCN	RTRV-NE-IPMAP
	INH-MSG-ALL	RTRV-NE-SYNCN
	INIT-SYS	SET-TOD
	REPT EVT FXFR	
Input Format	RTRV-TOD:[<TID>]::<CTAG>;	
Input Example	RTRV-TOD:CAZADERO::230;	
Output Format	SID DATE TIME M CTAG COMPLD "<YEAR>,<MONTH>,<DAY>,<HOUR>, <MINUTE>,<SECOND>,<TMTYPE>" ; where: • <YEAR> is the current calendar year and is a string • <MONTH> is the month of the year and ranges from 01–12; <MONTH> is a string • <DAY> is the day of the month and ranges from 01–31; <DAY> is a string • <HOUR> is the hour of the day and ranges from 00–23; <HOUR> is a string • <MINUTE> is the minute of the hour and ranges from 00–59; <MINUTE> is a string • <SECOND> is the second of the minute and ranges from 00–59; <SECOND> is a string • <TMTYPE> identifies the time zone and is a string	
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "1998,05,08,17,01,33,UTC" ;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.209 RTRV-TRC-<OCN_BLSR>: Retrieve Trace Client (OC12, OC192, OC48)

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

This command retrieves the valid J1 expected trace string, retrieved trace string, trace mode, C2 byte, and STS bandwidth of the OCn port only if the port has a BLSR.

Note This command only applies to OC48AS and OC192 cards.

Note Sending this command over unsupported BLSR path trace cards, or unequipped cards will result in a J1 Trace Not Supported On This Card (IIAC) error.

Section	RTRV-TRC-<OCN_BLSR> Description
Category	BLSR
Security	Retrieve
Related Messages	RTRV-PTHTRC-<STS_PATH>
Input Format	RTRV-TRC-<OCN_BLSR>:[<TID>]:<AID>:<CTAG>; where: • <AID> is the AID from the "FACILITY" section on page 4-24 and must not be null
Input Example	RTRV-TRC-OC48:CISCO:FAC-6-1:238;
Output Format	SID DATE TIME M CTAG COMPLD "<AID>::[LEVEL=<LEVEL>,][EXPTRC=<EXPTRC>,][INCTRC=<INCTRC>,] [TRCMODE=<TRCMODE>,][C2=<C2>]" ; where: • <AID> is an access identifier from the "STS" section on page 4-27 • <LEVEL> indicates the rate of the cross connected channel; valid values are shown in the "STS_PATH" section on page 4-93. <LEVEL> is optional • <EXPTRC> indicates the expected path trace message (J1) contents. <EXPTRC> is any 64-character string, including the terminating CR (carriage return) and LF (line feed). <EXPTRC> is a string and is optional • <INCTRC> indicates the incoming path trace message contents. <INCTRC> is any 64-character string, including the CR and LF. <INCTRC> is a string and is optional • <TRCMODE> indicates the trace mode; valid values are shown in the "TRCMODE" section on page 4-100 and <TRCMODE> is optional • <C2> indicates C2 Byte Hex Code; valid values are shown in the "C2_BYTE" section on page 4-48 and <C2> is optional
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" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.210 RTRV-TRC-CLNT: Retrieve Trace Client

(Cisco ONS 15454 only)

This command retrieves the SONET J0 Section sent trace string, expected trace string, received trace string, trace mode, and the trace level for the client facility.

The following rules apply: Client port–only J0 Section trace applies. The J0 Section trace applies only if the card termination mode is not transparent and the payload is SONET/SDH.

Depending on the settings, the following filtering applies: If no TRCLEVEL is provided, all TRCLEVELS are reported as applicable. If TRCLEVEL is provided and no MSGTYPE is provided, all applicable MSGTYPES for the given level is displayed. If no MSGTYPE is provided, all MSGTYPES are reported as applicable. If a MSGTYPE is provided without a TRCLEVEL, then the given MSGTYPE for all TRCLEVELS are displayed.

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

Section	RTRV-TRC-CLNT Description (continued)
Input Format	RTRV-TRC-CLNT:[<TID>]:<SRC>:<CTAG>::[<MSGTYPE>], [<TRCLEVEL>][::]; where: • <SRC> is the AID from the "FACILITY" section on page 4-24 and must not be null • <MSGTYPE> is the type of trace message to be retrieved; valid values for are shown in the "MSGTYPE" section on page 4-81. A null value is equivalent to ALL • <TRCLEVEL> is the level at which the trace information is handled; valid values are shown in the "TRCLEVEL" section on page 4-99 and a null value is equivalent to ALL
Input Example	RTRV-TRC-CLNT:CISCO:FAC-2-1:100::EXPTRC,J0;
Output Format	SID DATE TIME M CTAG COMPLD "<AID>,<MOD>::[TRCLEVEL=<TRCLEVEL>,][EXPTRC=<EXPTRC>,] [TRC=<TRC>,][INCTRC=<INCTRC>,][TRCMODE=<TRCMODE>,] [TRCFORMAT=<TRCFORMAT>]" ; where: • <AID> is from the "FACILITY" section on page 4-24 • <MOD> indicates the AID type which is CLNT in this instance; valid values are shown in the "MOD2" section on page 4-76 • Valid values for <TRCLEVEL> are shown in the "TRCLEVEL" section on page 4-99 and <TRCLEVEL> is optional • <EXPTRC> is a string and is optional • <TRC> is a string and is optional • <INCTRC> is a string and is optional • <TRCMODE> identifies the trace mode; valid values are shown in the "TRCMODE" section on page 4-100 and <TRCMODE> is optional • <TRCFORMAT> identifies the trace format; valid values are shown in the "TRCFORMAT" section on page 4-99 and <TRCFORMAT> is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "FAC-2-1,CLNT::TRCLEVEL=J0,EXPTRC=\"AAA\",TRC=\"AAA\", INCTRC=\"AAA\",TRCMODE=MAN,TRCFORMAT=16-BYTE" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.211 RTRV-TRC-OCH: Retrieve Trace Optical Channel

(Cisco ONS 15454 only)

This command retrieves the sent trace string, expected trace string, received trace string, trace mode, and the trace level for the SONET J0 Section, the TTI PATH and SECTION monitoring levels of the DWDM facility.

The following rules apply: Client port–only the J0 Section trace applies. The J0 Section trace applies only if the card termination mode is not transparent and the payload is SONET/SDH. On the DWDM port the J0 Section trace, the TTI Path, Section trace monitoring point traces are allowed. The J0 Section trace is allowed only if the payload for the card is set to SONET/SDH. The J0 Section trace is allowed only if the card termination mode is not transparent. The TTI Path, Section trace is allowed only if the G.709 (DWRAP) is enabled.

Depending on the settings, the following filtering applies: If no TRCLEVEL is provided, all TRCLEVELS are reported as applicable. If TRCLEVEL is provided and no MSGTYPE is provided, all applicable MSGTYPES for the given level is displayed. If no MSGTYPE is provided, all MSGTYPES are reported as applicable. If a MSGTYPE is provided with out a TRCLEVEL, then the given MSGTYPE for all TRCLEVELS are displayed.

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

Section	RTRV-TRC-OCH Description (continued)
Input Format	RTRV-TRC-OCH:[<TID>]:<SRC>:<CTAG>::[<MSGTYPE>],[<TRCLEVEL>][::]; where: • <SRC> is the AID from the "CHANNEL" section on page 4-18 and must not be null • <MSGTYPE> is the type of trace message to be retrieved. Valid values for <MSGTYPE> are shown in the "MSGTYPE" section on page 4-81. A null value is equivalent to ALL • <TRCLEVEL> is the level at which the trace information is handled. Valid values are shown in the "TRCLEVEL" section on page 4-99 and a null value is equivalent to ALL
Input Example	RTRV-TRC-OCH:CISCO:CHAN-2-2:100::EXPTRC,TTI-PM;
Output Format	SID DATE TIME M CTAG COMPLD "<CHANNEL>,<MOD>::[TRCLEVEL=<TRCLEVEL>,] [EXPTRC=<EXPTRC>,][TRC=<TRC>,][INCTRC=<INCTRC>,] [TRCMODE=<TRCMODE>,][TRCFORMAT=<TRCFORMAT>]" ; where: • <CHANNEL> is the AID from the "CHANNEL" section on page 4-18 • <MOD> indicates the AID type; valid values are shown in the "MOD2" section on page 4-76 • Valid values for <TRCLEVEL> are shown in the "TRCLEVEL" section on page 4-99 and <TRCLEVEL> is optional • <EXPTRC> is a string and is optional • <TRC> is a string and is optional • <INCTRC> is a string and is optional • <TRCMODE> indicates the trace mode; valid values are shown in the "TRCMODE" section on page 4-100 and <TRCMODE> is optional • <TRCFORMAT> is the size of the trace message. In SONET mode, only 1 or 16 bytes are applicable for the J0 section trace. The TT1 level trace is only 64 bytes. Valid values are shown in the "TRCFORMAT" section on page 4-99 and <TRCFORMAT> is optional
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" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.212 RTRV-UCP-CC: Retrieve Unified Control Plane Control Channel

(Cisco ONS 15454 only)

This command creates a UCP IP control channel attributes.

The ALL AID is used for UCP retrieving command input only. A NULL AID in the IPCC's retrieval command defaults to the ALL AID, which returns all the IPCCs of the node.

Retrieve all of the UCP IPCCs example:

RTRV-UCP-CC:::A;

Notes:

1. If the control channel is not found, a SRQN (Status, Invalid Request) error message is returned.
2. If the IPCC type is ROUTED (CCTYPE=ROUTED), both MTU and CRCMD fields are grayed out.

Section	RTRV-UCP-CC Description	
Category	UCP	
Security	Retrieve	
Related Messages	DLT-UCP-CC	ENT-UCP-NBR
	DLT-UCP-IF	REPT ALM UCP
	DLT-UCP-NBR	REPT EVT UCP
	ED-UCP-CC	RTRV-ALM-UCP
	ED-UCP-IF	RTRV-COND-UCP
	ED-UCP-NBR	RTRV-UCP-IF
	ED-UCP-NODE	RTRV-UCP-NBR
	ENT-UCP-CC	RTRV-UCP-NODE
	ENT-UCP-IF	
Input Format	RTRV-UCP-CC:[<TID>]:[<AID >]:<CTAG>[::::]; where: <AID> indicates an individual IPCC ID. The ALL AID is used for UCP retrieving command input only. A NULL AID in the IPCCs retrieval command defaults to the ALL AID which returns all the IPCCs of the node. <AID> is from the "IPCC" section on page 4-25 and a null value is equivalent to ALL	
Input Example	RTRV-UCP-CC:CISCO:CC-9:CTAG;	

Section	RTRV-UCP-CC Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "[<AID>]::NBRIX=<NBRIX>,CCTYPE=<CCTYPE>,[PORT=<PORT>,] LOCALCCID=<LOCALCCID>,LOCALIPCC=<LOCALIPCC>, REMOTECCID=<REMOTECCID>,[REMOTEIPCC=<REMOTEIPCC>,] LMPHELLOINT=<LMPHELLOINT>, OPERLMPHELLOINT=<OPERLMPHELLOINT>, LMPHELLODEADINT=<LMPHELLODEADINT>, OPERLMPHELLODEADINT=<OPERLMPHELLODEADINT>, [TUNMD=<TUNMD>,][MTU=<MTU>,][CRCMD=<CRCMD>]" ; where: • <AID> indicates an individual IPCC ID; <AID> is from the "IPCC" section on page 4-25 and <AID> is optional • <NBRIX> indicates the neighbor node index and is an integer • <CCTYPE> indicates the type of the control channel; valid values are shown in the "UCP_IPCC_TYPE" section on page 4-102 • <PORT> indicates the port which the control channel is configured, while the CCTYPE is the type of SDCC; <PORT> is from the "FACILITY" section on page 4-24 and is optional • <LOCALCCID> indicates the local control channel ID and is an integer • <LOCALIPCC> indicates the local IP address of the control channel and is a string • <REMOTECCID> indicates the remote control channel ID and is an integer • <REMOTEIPCC> indicates the remote IP address of the control channel; <REMOTEIPCC> is a string and is optional • <LMPHELLOINT> indicates the provisioned interval between hello messages sent by this node. <LMPHELLOINT> has a range of 1–10 seconds with a default of 5 seconds; <LMPHELLOINT> is an integer • <OPERLMPHELLOINT> indicates the LMP hello interval negotiated between a node and it's neighbor and the negotiated value is used during operation. This value is the negotiated, operational value of LMP Hello interval. This value is initialized to the hello Interval at the time of IPCC creation and is updated after the negotiation is done with the neighbor; <OPERLMPHELLOINT> is a float • <LMPHELLODEADINT> indicates the control channel time-out interval (in milliseconds) by the neighbor if the neighbor does not receive the hello message, and defaults to 15 (with the range of 3–30). This interval has to be at least as large as the hello interval and is normally set to 3 times the hello interval. Its range is 3 seconds to 30 seconds with a default of 15 seconds. <LMPHELLODEADINT> is an integer • <OPERLMPHELLODEADINT> indicates the operational value of the LMP interval negotiated between this node and its neighbor. This value is initialized to the helloDeadInterval at the time of IPCC creation and is updated after the negotiation is done with the neighbor; <OPERLMPHELLODEADINT> is a float

Section	RTRV-UCP-CC Description (continued)
Output Format (continued)	• <TUNMD> indicates the IP tunneling option. It defaults to disabled; valid values are shown in the "UCP_CC_TUN_MD" section on page 4-101 and <TUNMD> is optional • <MTU> indicates the MTU size of this control channel; <MTU> is an integer and is optional • <CRCMD> indicates the CRC mode for this control channel. It is applicable to IPCCs in SDCC type; valid values are shown in the "UCP_CRC_MODE" section on page 4-102 and <CRCMD> is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "CC-9::NBRIX=8,CCTYPE=SDCC,PORT=FAC-2-1,LOCALCCID=9, LOCALIPCC=172.20.209.31,REMOTECCID=2, REMOTEIPCC=172.20.209.15,LMPHELLOINT=10, OPERLMPHELLOINT=10.00,LMPHELLODEADINT=30, OPERLMPHELLODEADINT=30.00,TUNMD=DISABLED, MTU=1500,CRCMD=16-BIT" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.213 RTRV-UCP-IF: Retrieve Unified Control Plane Interface

(Cisco ONS 15454 only)

This command retrieves UCP interface attributes.

The local interface ID (LOCALIFID) is used by LMP/RSVP (Line Management Protocol/Resource reservation Protocol). If zero is passed in as the local Interface ID of the data link, then the node assigns a value for it. If the user specifies a non-zero value, then the node checks if that Interface ID is available and uses it.

If the UCP interface/data link control channel type is SDCC type, the local interface ID should be same as CCID.

Retrieve all of the UCP interfaces example:

RTRV-UCP-IF:::A;

Note If this command is sent twice or inputs invalid data, as SRQN (Status, Invalid Request) error message is returned.

Section	RTRV-UCP-IF Description
Category	UCP
Security	Retrieve

Section	RTRV-UCP-IF Description (continued)	
Related Messages	DLT-UCP-CC	REPT ALM UCP
	DLT-UCP-IF	REPT EVT UCP
	DLT-UCP-NBR	RTRV-ALM-UCP
	ED-UCP-CC	RTRV-CKT-ORIG
	ED-UCP-IF	RTRV-CKT-TERM
	ED-UCP-NBR	RTRV-COND-UCP
	ED-UCP-NODE	RTRV-UCP-CC
	ENT-UCP-CC	RTRV-UCP-NBR
	ENT-UCP-IF	RTRV-UCP-NODE
	ENT-UCP-NBR	
Input Format	RTRV-UCP-IF:[<TID>]:[<AID>]:<CTAG>[::::]; where: • <AID> indicates the interface port index of the data link; <AID> is from the "FACILITY" section on page 4-24 and a null value is equivalent to ALL	
Input Example	RTRV-UCP-IF:CISCO:FAC-2-1:CTAG;	
Output Format	SID DATE TIME M CTAG COMPLD "[<AID>]::NBRIX=<NBRIX>,CCID=<CCID>,LOCALIFID=<LOCALIFID>, REMOTEIFID=<REMOTEIFID>,TNATYPE=<TNATYPE>, TNAADDR=<TNAADDR>,CORENETWORKID=<CORENETWORKID>" ; where: • <AID> indicates the interface port index of the data link; <AID> is from the "FACILITY" section on page 4-24 and is optional • <NBRIX> indicates a neighbor within the local node; <NBRIX> is an integer • <CCID> indicates the control channel ID and is an integer • <LOCALFID> indicates the local interface ID used by LMP/RSVP (line management protocol/resource reservation protocol); <LOCALFID> is an integer • <REMOTEFID> indicates the interface ID on the neighbor's side and in an integer • <TNATYPE> indicates the TNA (transport network administered) type; valid values are shown in the "UCP_TNA_TYPE" section on page 4-102 • <TNAADDR> indicates the TNA IP address and is a string • <CORENETWORKID> indicates the core network ID and is an integer	
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "FAC-2-1::NBRIX=12,CCID=16,LOCALIFID=16,REMOTEIFID=5, TNATYPE=IPV4,TNAADDR=172.20.209.73,CORENETWORKID=9" ;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.214 RTRV-UCP-NBR: Retrieve Unified Control Plane Neighbor

(Cisco ONS 15454 only)

This command retrieves a UCP neighbor.

The default value of the node name can be overwritten by the TL1 user to a string in a maximum size of 20 characters. If the node name includes non-identified TL1 characters (e.g. space), the text string format with the double quotes is required.

The ALL AID is used for UCP retrieving command input only. A NULL AID in the retrieval command defaults to the ALL AID, which returns all the UCP neighbors of the node.

Retrieve all the UCP neighbors example:

RTRV-UCP-NBR:::A;

Section	RTRV-UCP-NBR Description	
Category	UCP	
Security	Retrieve	
Related Messages	DLT-UCP-CC	ENT-UCP-NBR
	DLT-UCP-IF	REPT ALM UCP
	DLT-UCP-NBR	REPT EVT UCP
	ED-UCP-CC	RTRV-ALM-UCP
	ED-UCP-IF	RTRV-COND-UCP
	ED-UCP-NBR	RTRV-UCP-CC
	ED-UCP-NODE	RTRV-UCP-IF
	ENT-UCP-CC	RTRV-UCP-NODE
	ENT-UCP-IF	
Input Format	RTRV-UCP-NBR:[<TID>]:[<AID>]:<CTAG>[::::];	
	where:	
	• <AID> indicates an individual neighbor AID of the UCP; <AID> is from the "NBR" section on page 4-26 and a null value is equivalent to ALL	
Input Example	RTRV-UCP-NBR:CISCO:NBR-8:CTAG;	

Section	RTRV-UCP-NBR Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>::[NBRIX=<NBRIX>,][NODEID=<NODEID>,][NAME=<NAME>,] [NDEN=<NDEN>,][HELLOEN=<HELLOEN>,][HELLOINT=<HELLOINT>,] [REFREDEN=<REFREDEN>,][NUMRXMTS=<NUMRXMTS>]" ; where: • <AID> indicates an individual neighbor AID of the UCP. The ALL AID and NODEID (IP address, e.g. "AAA.BB.CC.D") are used for UCP retrieving command input only; <AID> is from the "NBR" section on page 4-26 • <NBRIX> indicates a neighbor within the local node; <NBRIX> is an integer and is optional • <NODEID> indicates the neighbor node ID as received in RSVP, LMP messages from that node; <NODEID> is a string and is optional • <NAME> is a string and is optional • <NDEN> indicates if the neighbor discovery is enabled or not for this neighbor; valid values are shown in the "ON_OFF" section on page 4-83 and <NDEN> is optional • <HELLOEN> indicates if the RSVP hello is enabled to this neighbor or not; valid values are shown in the "ON_OFF" section on page 4-83 and <HELLOEN> is optional • <HELLOINT> indicates the interval between hello messages to the neighbor; <HELLOINT> is an integer and is optional • <REFREDEN> indicates if the refresh reduction is enabled or not; valid values are shown in the "ON_OFF" section on page 4-83 and <REFREDEN> is optional • <NUMRXMTS> indicates the maximum number of retransmits of each message; <NUMRXMTS> is not editable, is an integer and is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "NBR-8::NBRIX=8,NODEID=192.168.100.52,NAME=NODE-B, NDEN=Y,HELLOEN=Y,HELLOINT=20,REFREDEN=N,NUMRXMTS=3" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.215 RTRV-UCP-NODE: Retrieve Unified Control Plane Node

(Cisco ONS 15454 only)

This command retrieves UCP node level attributes.

The NODEID is the unique number used to identify the local node in LMP, RSVP messages sent to the neighbors. It defaults to the local ethernet interface address (ISA).

The retry initial interval (in seconds) is used for that have been released by the net work side. This interval has a range of 60 seconds (1 minute) to 1800 seconds (30 minutes), with a default value of 180 seconds.

The retry max interval (in seconds) is used for released circuits. The node will back off exponentially from the initial retry interval to this maximum value of 600 seconds (10 minutes).

The restart time is used to be signaled to neighbors. It indicates the time taken by this node (in seconds) to restart. This timer has a range of 1 second to 10 seconds with a default of 5 seconds.

The recovery time is used to be signaled to neighbors. It indicates the time taken by this node (in seconds) to re-sync path, reservation state with a given neighbor. This timer has a range of 300 seconds (5 minutes) to 1800 seconds (30 minutes) and a default value of 600 seconds (10 minutes).

The transmit interval is used to retransmit un-acknowledged messages. This timer has a range of 1 second to 7 seconds with a default value of 1 second.

The refresh interval is used to refresh path, reservation state. This interval has a range of 30 seconds to 4060800 seconds (47 days) with a default value of 30 seconds.

The timeout RESV interval is used to wait for a reservation message in response to a PATH message. This interval has a range of 10–180 seconds with a default value of 60 seconds.

The timeout RESV CONF interval is used to wait for a RESV CONF message in response to a RESV message. This interval has a range of 10–180 seconds with a default value of 60 seconds.

The Source Deletion in progress is a timeout interval while the source is in the progress of cleanly deleting a call. This interval has a range of 10–180 seconds with a default of 60 seconds.

The Destination Deletion progress is a timeout interval while the destination is in the progress of cleanly deleting a call. This interval has a range of 10–180 seconds with a default value of 60 seconds.

Notes:

1. If the retry initial interval is set to zero, it will be interpreted as having the retry procedure disable.
2. The retry maximum interval has to be set to a higher value than the initial retry interval.

Section	RTRV-UCP-NODE Description	
Category	UCP	
Security	Retrieve	
Related Messages	DLT-UCP-CC	ENT-UCP-NBR
	DLT-UCP-IF	REPT ALM UCP
	DLT-UCP-NBR	REPT EVT UCP
	ED-UCP-CC	RTRV-ALM-UCP
	ED-UCP-IF	RTRV-COND-UCP
	ED-UCP-NBR	RTRV-UCP-CC
	ED-UCP-NODE	RTRV-UCP-IF
	ENT-UCP-CC	RTRV-UCP-NBR
	ENT-UCP-IF	
Input Format	RTRV-UCP-NODE:[<TID>]::<CTAG>[::::];	
Input Example	RTRV-UCP-NODE:CISCO::CTAG;	

Section	RTRV-UCP-NODE Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "::[NODEID=<NODEID>,][INITRETRY=<INITRETRY>,] [MAXRETRY=<MAXRETRY>,][RESTARTTM=<RESTARTTM>,] [RECOVTM=<RECOVTM>,][RXMTINT=<RXMTINT>,] [RFRSHINT=<RFRSHINT>,][RESVTIMEOUT=<RESVTIMEOUT>,] [RESVCONFTIMEOUT=<RESVCONFTIMEOUT>,] [SOURCEDIP=<SOURCEDIP>,][DESTINATIONDIP=<DESTINATIONDIP>]" ; where: • <NODEID> indicates the node IP address, is a string and is optional • <INITRETRY> indicates the circuit retry initial interval (in seconds); <INITRETRY> is an integer and is optional • <MAXRETRY> indicates the circuit retry maximum retry interval (in seconds); <MAXRETRY> is an integer and is optional • <RESTARTTM> indicates the restart time taken by the local node; <RESTARTTM> is an integer and is optional • <RECOVTM> indicates the time taken by the local node to re-synchronize the path, reservation state with a given neighbor; <RECOVTM> is an integer and is optional • <RXMTINT> indicates the interval for re-transmitting un-acknowledged messages; <RXMTINT> is an integer and is optional • <RFRSHINT> indicates the interval for refreshing path, reservation state; <RFRSHINT> is an integer and is optional • <RESVTIMEOUT> indicates the timeout interval for waiting for a reservation message in response to a PATH message; <RESVTIMEOUT> is an integer and is optional • <RESVCONFTIMEOUT> indicates the timeout interval for waiting for a RESV CONF message in response to a RESV message; <RESVCONFTIMEOUT> is an integer and is optional • <SOURCEDIP> indicates the timeout interval of the SourceDip (Source Deletion in Progress) while the source is in the process of cleanly deleting a call; <SOURCEDIP> is an integer and is optional • <DESTINATIONDIP> indicates the timeout interval of the DestinationDip (Destination Deletion in Progress) while the destination is in the process of cleanly deleting a call; <DESTINATIONDIP> is an integer and is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "::NODEID=192.168.100.52,INITRETRY=180,MAXRETRY=600, RESTARTTM=5,RECOVTM=600,RXMTINT=1,RFRSHINT=30, RESVTIMEOUT=60,RESVCONFTIMEOUT=60, SOURCEDIP=60,DESTINATIONDIP=60"
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.216 RTRV-USER-SECU: Retrieve User Security

This command retrieves the security information of a specified user or list of users. The keyword ALL can be used to obtain a list of all users. For security reasons the password cannot be retrieved.

A Superuser can retrieve any user's security information. A user with MAINT, PROV, or RTRV privileges can only retrieve their own information.

Note When using the keyword ALL, all users created for the system are displayed. This includes users created via CTC that are not legal and valid TL1 users (i.e., userids/passwords greater than 20 characters in length). Although displayed via the RTRV-USER-SECU command, these users will not be able to log into the TL1 environment.

Section	RTRV-USER-SECU Description	
Category	Security	
Security	Superuser	
Related Messages	ACT-USER	ED-USER-SECU
	ALW-MSG-SECU	ENT-USER-SECU
	CANC	INH-MSG-SECU
	CANC-USER	REPT EVT SECU
	DLT-USER-SECU	REPT EVT SESSION
	ED-PID	
Input Format	RTRV-USER-SECU:[<TID>]:<UID>:<CTAG>; where: • <UID> the user ID or the keyword ALL. A non-superuser can only specify their own user ID; <UID> is a string and must not be null	
Input Example	RTRV-USER-SECU::CISCO15:1;	
Output Format	SID DATE TIME M CTAG COMPLD "<UID>:,<UAP>:LOGGEDIN=<LOGGEDIN> [,NUMSESSIONS=<NUMSESS>],LOCKEDOUT=<LOCKEDOUT>" ; where: • <UID> the user ID that was retrieved; <UID> is a string • <UAP> the privilege of the user; valid values are shown in the "PRIVILEGE" section on page 4-89 • <LOGGEDIN> indicates if the user is logged in to the NE; valid values are shown in the "YES_NO" section on page 4-105 • <NUMSESS> the number of active sessions for that user (the number of times the user is currently logged into the NE). If <LOGGEDIN> is NO, then <NUMSESS> is not present. <NUMSESS> is an integer and is optional • <LOCKEDOUT> indicates if the user is locked out of the NE; valid values are shown in the "YES_NO" section on page 4-105	

Section	RTRV-USER-SECU Description (continued)
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "CISCO15:,SUPER:LOGGEDIN=YES,NUMSESSIONS=1,LOCKEDOUT=NO" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.217 RTRV-WDMANS: Retrieve Wavelength Division Multiplexing Automatic Node Setup

(Cisco ONS 15454 only)

This command edits the automatic optical node setup (AONS) application attributes.

Section	RTRV-WDMANS Description
Category	DWDM
Security	Retrieve
Related Messages	ED-WDMANS OPR-AONS RTRV-NE-WDMANS
Input Format	RTRV-WDMANS:[<TID>]:<AID>:<CTAG>; where: • <AID> is the AID from the "WDMANS" section on page 4-34 and must not be null
Input Example	RTRV-WDMANS:PENNGROVE:AONS-W:114;

Section	RTRV-WDMANS Description (continued)
Output Format	SID DATE TIME M CTAG COMPLD "<AID>::[POWER-IN=<POWERIN>,][POWER-OUT=<POWEROUT>,] [POWER-EXP=<POWEREXP>,][POWER-DROP=<POWERDROP>,] [SYS-TYPE=<SYSTYPE>,][APC-ENABLE=<APCENABLE>,] [RING-TYPE=<RINGTYPE>]" ; where: • <AID> is the WDMANS AID from the "WDMANS" section on page 4-34 • <POWERIN> input power for the OADM section of an OADM optical network element; <POWERIN> is a float expressed in dBm, is a string and is optional • <POWEROUT> is the output power for OADM or Mux/Demux of HUB, TERMINAL or OADM optical NE; <POWEROUT> is a float expressed in dBm, is a string and is optional • <POWEREXP> is the express power for the Mux/Demux section of HUB or TERMINAL optical NE; <POWEREXP> is a float expressed in dBm, is a string and is optional • <POWERDROP> is the drop power for the Mux/Demux section of a HUB or TERMINAL optical NE; <POWERDROP> is a float expressed in dBm, is a string and is optional • <STSYPE> is the type of interconnected fiber between two adjacent nodes and the length category between them; valid values are shown in the "SYS_TYPE" section on page 4-96 and <SYSTYPE> is optional • <APCENABLE> is the enable/disable of the automatic power control application; valid values are shown in the "EXT_RING" section on page 4-73 and <APCENABLE> is optional • <RINGTYPE> is the type of the network where the DWDM node is installed; valid values are shown in the "DWDM_RING_TYPE" section on page 4-66 and <RINGTYPE> is optional
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "WDMANS-W::POWER-IN=10.0,POWER-OUT=10.0,POWER-EXP=10.0, POWER-DROP=10.0, SYS-TYPE=SMF-28-SR,APC-ENABLE=Y, RING-TYPE=METRO-CORE" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.218 RTRV-WLEN: Retrieve Wavelength

(Cisco ONS 15454 only)

Note Applicable to Release 4.5 only.

This command retrieves the wavelength provisioning information.

Section	RTRV-WLEN Description
Category	DWDM
Security	Retrieve
Related Messages	DLT-WLEN ED-WLEN ENT-WLEN
Input Format	RTRV-WLEN:[<TID>]:<AID>:<CTAG>; where: • <AID> is the wavelength AID from the "WLEN" section on page 4-34 and must not be null
Input Example	RTRV-WLEN:PENNGROVE:WLEN-W-ADD-1530.33:114;
Output Format	SID DATE TIME M CTAG COMPLD "<AID>::[SIZE=<SIZE>]:[<PST>],[<SST>]" ; where: • <AID> is the wavelength AID from the "WLEN" section on page 4-34 • <SIZE> is the circuit size allocates on this wavelength; valid values are shown in the "CIRCUIT_SIZE" section on page 4-50 and <SIZE> is optional • <PST> primary state; valid values are shown in the "PST" section on page 4-90 • <SST> secondary state; valid values are shown in the "SST" section on page 4-92
Output Example	TID-000 1998-06-20 14:30:00 M 001 COMPLD "WLEN-W-ADD-1530.33::SIZE=MULTI-RATE:OOS,AINS" ;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.219 SCHED-PMREPT-<MOD2>: Schedule Performance Monitoring Report (CLNT, DS1, DS3I, E1, E3, E4, EC1, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STM1E, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

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

This command schedules/reschedules the NE to report the performance monitoring data for a line facility or for an STS/VT path periodically, using the automatic REPT PM message. This command can also remove the previously created schedule.

The automatic performance monitoring reporting scheduled by this command is inhibited by default. ALW-PMREPT-ALL can be used to allow the NE to send the performance monitoring report. INH-PMREPT-ALL can be used to stop the NE from sending the performance monitoring report. The schedules created for the NE can be retrieved by RTRV-PMSCHED command.

The deletion of the schedule for the automatic performance monitoring reporting can be done by issuing SCHED-PMREPT-<MOD2> with the <NUMREPT> parameter equal to zero.

Notes:

1. The current maximum number of schedules allowed to be created for a NE is 1000. If this number of schedules has been created for the NE, an error message "Reach Limits Of MAX Schedules Allowed. Can Not Add More" will be returned if another schedule creation is attempted on the NE. Frequent use of automatic performance monitoring reporting will significantly degrade the performance of the NE.
2. A schedule cannot be created if the card associated with the schedule is not provisioned, or if the cross-connection associated with the schedule has not been created. However, a schedule is allowed to be deleted even if a card is not provisioned, or if the cross-connection has not been created.
3. The number of outstanding performance monitoring reports counter <NUMREPT> will not be decremented, and the scheduled automatic performance monitoring reporting will not start if the card associated with the schedule is not physically plugged into the slot.
4. An expired schedule would not be automatically removed. The SCHED-PMREPT command has to be issued with the <NUMREPT> parameter equal to zero in order to delete the expired schedule.
5. Identical schedules for an NE is not allowed. Two schedules are considered identical if they have the same AID, MOD2 type, performance monitor type, performance monitor level, location, direction and time period.

   An error message "Duplicate Schedule" is returned when trying to create a schedule which is a duplicate of a existing schedule. However, if the existing schedule expires (with the parameter <NUMINVL> equal to zero when retrieved by the RTRV-PMSCHED command, i.e., no more performance monitoring reporting sent) the new schedule with the identical parameter will replace the existing schedule.
6. When a electrical or optical card is unprovisioned by the DLT-EQPT command, or a cross-connection is deleted by the DLT-CRS command, the schedules associated with that card or that cross-connection will be removed silently by the NE. This removal prevents another type of card or cross-connection with the same AID to be provisioned on the NE, and prevents the NE from trying to send automatic performance monitoring reports based on the existing schedules.

   The card or cross connect can be unprovisioned or deleted through CTC. The schedules associated with that card or that cross-connection will also be removed silently by the NE.
7. When creating schedules on an ONS 15327 XTC card, only schedules against the working XTC card (in Slot 6) are allowed. An error message "Can Not Create Schedule On Protect Card" will be returned if you try to create a schedule on protect XTC card in Slot 5.
8. When you create a PM schedule, the minimum report interval should not be less than five minutes.

Section	SCHED-PMREPT-<MOD2> Description	
Category	Performance	
Security	Maintenance	
Related Messages	ALW-PMREPT-ALL	RTRV-PMMODE-<STS_PATH>
	INH-PMREPT-ALL	RTRV-PMSCHED-<MOD2>
	INIT-REG-<MOD2>	RTRV-PMSCHED-ALL
	INIT-REG-G1000	RTRV-TH-<MOD2>
	REPT PM <MOD2>	SET-PMMODE-<STS_PATH>
	RTRV-PM-<MOD2>	SET-TH-<MOD2>

Section	SCHED-PMREPT-<MOD2> Description (continued)
Input Format	SCHED-PMREPT-<MOD2>:[<TID>]:<SRC>:<CTAG>::[<REPTINVL>], [<REPTSTATM>],[<NUMREPT>],,[<MONLEV>],[<LOCN>],,[<TMPER>], [<TMOFST>]; where: • <SRC> is from the "ALL" section on page 4-9 • <REPTINVL> specifies how often a performance monitoring report is generated. The format for <REPTINVL> is VAL-UN; valid values for VAL (value) are: – 1–31 if UN (units of time) is DAY – 1–24 if UN is HR – 1–1440 if UN is MIN Examples are: 10-DAY, 12-HR, or 100-MIN. A null value for the input would default to 15-MIN. <REPTINVL> is a string **Note** The minimum time for processing PM schedules is every five minutes. A <REPTINVL> value of less than five minutes will process every five minutes. • <REPTSTATM> starting time for the performance monitoring report. The format is HOD-MOH, where HOD (hour of day) ranges from 0–23, and MOH (minute of hour) ranges from 0–59. If the input value of the starting time is smaller than the current time; for example, the input value is 5-30 (5:30 in the morning) and the current time is 10:30, then the reporting will be scheduled to start at 5:30 the next day. A null value defaults to the current time of day; <REPTSTATM> is a string

Section	SCHED-PMREPT-<MOD2> Description (continued)
Input Format (continued)	• <NUMREPT> the number of reports that the schedule is expected to produce. A value of 0 is used to delete an existing identical schedule (see Note 5 above). If <NUMREPT> is null the schedule will be in effect forever until it is deleted. The value of <NUMREPT> will continue to be decremented even though the automatic performance monitoring reporting is inhibited; <NUMREPT> is an integer • <MONLEV> discriminating level for the requested monitored parameter. It applies to all MONTYPE of the scheduled performance monitoring report. The format is LEV-DIRN; valid values for LEV are decimal numbers, and valid values for DIRN are as follows: UP Monitored parameter with values equal to or greater than the value of LEV will be reported. DN Monitored parameter with values equal to or less than the value of LEV will be reported. The null input defaults to 1-UP; <MONLEV> is a string • <LOCN> the location being performance-monitored. The valid value is NEND or FEND. A null input defaults to NEND. FEND is not supported by all MOD2 types; valid values are shown in the "LOCATION" section on page 4-75 • <TMPER> the accumulation time period. It defaults to 15-MIN; valid values are shown in the "TMPER" section on page 4-98 • <TMOFST> the time offset from the end of the last complete accumulation time period to the beginning of the accumulation time period specified in TMPER. The format for is DAY-HR-MIN, where DAYS (days) range from 0–99, HR (hours) range from 0–23, and MIN (minutes) range from 0–59. A null value defaults to 0-0-0. Grouping of this parameter is not supported. <TMOFST> is a String.
Input Example	SCHED-PMREPT-OC3:NE-NAME:FAC-3-1: 123::60-MIN,15-30,100,,1-UP,NEND,,15-MIN,0-0-15;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.220 SET-ALMTH-<MOD2>: Set Alarm Threshold (CLNT, DS1, DS3I, E1, E3, E4, EC1, G1000, OC12, OC192, OC3, OC48, OCH, OMS, OTS, STM1E, STS1, STS12C, STS192C, STS24C, STS3C, STS48C, STS6C, STS9C, T1, T3, VT1, VT2)

(Cisco ONS 15454 only)

This command sets the alarm thresholds on the following cards/ports/channels: MXP_2.5G_10G/TXP_MR_10G, optical service channel, optical amplifier, dispersion compensation units, multiplex/demultiplex and OADM.

The only applicable MOD2 values are CLNT/OCH/OMS/OTS.

Section	SET-ALMTH-<MOD2> Description
Category	DWDM
Security	Provisioning
Related Messages	RTRV-ALMTH-<MOD2>

Section	SET-ALMTH-<MOD2> Description (continued)
Input Format	SET-ALMTH-<MOD2>:[<TID>]:<AID>:<CTAG>::<CONDTYPE>,<TACC>[,,,]; where: • <AID> is from the "ALL" section on page 4-9 • <CONDTYPE> is the alarm threshold montype; valid values are shown in the "ALM_THR" section on page 4-44 • <TACC> is from the "TACC" section on page 4-32
Input Example	SET-ALMTH-<MOD2>::FAC-1-1:1::OPT-LOW,10;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.221 SET-ATTR-CONT: Set Attribute Control

This command sets the attributes associated with an external control. The attributes are used when an external control is operated or released. To send the attributes, use the RTRV-ATTR-CONT command.

Notes:

1. If the <CONTTYPE> parameter is not specified, the control specified by <AID> is unprovisioned.
2. A control should be unprovisioned before it is reprovisioned to another type of control.

Section	SET-ATTR-CONT Description	
Category	Environment Alarms and Controls	
Security	Provisioning	
Related Messages	OPR-ACO-ALL	RTRV-ATTR-CONT
	OPR-EXT-CONT	RTRV-ATTR-ENV
	REPT ALM ENV	RTRV-COND-ENV
	REPT EVT ENV	RTRV-EXT-CONT
	RLS-EXT-CONT	SET-ATTR-ENV
	RTRV-ALM-ENV	
Input Format	SET-ATTR-CONT:[<TID>]:<AID>:<CTAG>[::<CONTTYPE>]; where: • <AID> identifies the external control for which attributes are being retrieved and is from the "ENV" section on page 4-22 • <CONTTYPE> is the type of control for which the attribute is being retrieved; valid values are shown in the "CONTTYPE" section on page 4-64. The default value is MISC	
Input Example	SET-ATTR-CONT:CISCO:ENV-OUT-1:123::AIRCOND;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.222 SET-ATTR-ENV: Set Attribute Environment

This command sets the attributes associated with an external control.

Notes:

1. If the <NTFCNCDE>, <ALMTYPE>, and <ALMMSG> parameters are omitted, the environmental alarm specified by <AID> is unprovisioned.
2. An alarm should be unprovisioned and you should wait for any raised alarm to clear before reprovisioning the alarm to another alarm type.

Section	SET-ATTR-ENV Description	
Category	Environment Alarms and Controls	
Security	Provisioning	
Related Messages	OPR-ACO-ALL	RTRV-ATTR-CONT
	OPR-EXT-CONT	RTRV-ATTR-ENV
	REPT ALM ENV	RTRV-COND-ENV
	REPT EVT ENV	RTRV-EXT-CONT
	RLS-EXT-CONT	SET-ATTR-CONT
	RTRV-ALM-ENV	
Input Format	SET-ATTR-ENV:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<ALMTYPE>],[<ALMMSG>]; where: • <AID> is an access identifier from the "ENV" section on page 4-22 and must not be null • <NTFCNCDE> is a notification code; valid values are shown in the "NOTIF_CODE" section on page 4-82. A null value is equivalent to ALL • <ALMTYPE> is an alarm type for the environmental alarm; valid values are shown in the "ENV_ALM" section on page 4-66. A null value is equivalent to ALL • <ALMMSG> is an alarm message and is a string. A null value is equivalent to ALL	
Input Example	SET-ATTR-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR,\"OPEN DOOR\"	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.223 SET-PMMODE-<STS_PATH>: Set Performance Mode of PM Data Collection (STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C)

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

This command sets the mode and turns the PM data collection mode on or off. The Cisco ONS 15454 is capable of collecting and storing section, line and path PM data.

The PM mode and state of an entity are retrieved by using the RTRV-PMMODE command.

Notes:

1. The near end monitoring of the intermediate-path PM (IPPM) only supports OC-3, OC-12, OC-48, OC-48AS, OC-192, and EC-1 on STS Path.
2. The far end PM data collection is not supported for the ONS 15454 in this release.

3. This release of software will support only the Path (P) mode type PM parameters with this command, that is, this command is not applicable for Line (L) and Section (S) mode types.

   The PM monitoring for Line (L) and Section (S) are supported by the ONS 15454, and the storing PM data is always performed.

Section	SET-PMMODE-<STS_PATH> Description	
Category	Performance	
Security	Provisioning	
Related Messages	ALW-PMREPT-ALL	RTRV-PMMODE-<STS_PATH>
	INH-PMREPT-ALL	RTRV-PMSCHED-<MOD2>
	INIT-REG-<MOD2>	RTRV-PMSCHED-ALL
	INIT-REG-G1000	RTRV-TH-<MOD2>
	REPT PM <MOD2>	SCHED-PMREPT-<MOD2>
	RTRV-PM-<MOD2>	SET-TH-<MOD2>
Input Format	SET-PMMODE-<STS_PATH>:[<TID>]:<AID>:<CTAG>::<LOCN>,<MODETYPE>,[<PMSTATE>]; where: • <AID> identifies the entity where the PM mode is being set; <AID> is from the "STS" section on page 4-27 • <LOCN> identifies the location to which the PM mode is to be set and only supports near end PM data collection; valid values are shown in the "LOCATION" section on page 4-75 • <MODETYPE> identifies the type of PM parameters; only the Path (P) PM parameter is supported and valid values are shown in the "PM_MODE" section on page 4-88 • <PMSTATE> directs the named PM mode type to turn On or Off and a null value defaults to On; valid values are shown in the "PM_STATE" section on page 4-88	
Input Example	SET-PMMODE-STS1:CISCO:STS-4-2:123::NEND,P,ON;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.224 SET-TH-<MOD2>: Set Threshold (CLNT, DS1, EC1, OC3, OC12,OC48, OC192, OCH, STS1, STS3C, STS6C, STS9C, STS12C, STS24C, STS48C, STS192C,T1, T3, VT1)

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

This command sets the threshold for PM and sets the alarm thresholds for the MXP_2.5G_10G/TXP_MR_10G cards. If this command is used to set the alarm thresholds, the time-period is not applicable.

The rules are as follows: The PM Thresholds have a default of NEND for the location. The Alarm Thresholds do not require or interpret the location. The TMPER is not applicable to alarm thresholds. The TMPER default is 15-MIN. The client ports only accept SONET, Laser and alarm MONTYPES. The

trunk ports accept SONET, Laser, alarm, FEC, OTN MONTYPES. The Receiver Temperature Montypes (RXT) are only applicable to the trunk port. The Transceiver Voltage Montypes (XCVR) is not applicable, though it is displayed or handled.

See the "Provisioning Rules for MXP_2.5G_10G and TXP_MR_10G Cards" section on page 1-8 and the "Provisioning Rules for TXP_MR_2.5G and TXPP_MR_2.5G Cards" section on page 1-13 for specific card provisioning rules.

Section	SET-TH-<MOD2> Description	
Category	Performance	
Security	Provisioning	
Related Messages	ALW-PMREPT-ALL	RTRV-PMMODE-<STS_PATH>
	INH-PMREPT-ALL	RTRV-PMSCHED-<MOD2>
	INIT-REG-<MOD2>	RTRV-PMSCHED-ALL
	INIT-REG-G1000	RTRV-TH-<MOD2>
	REPT PM <MOD2>	SCHED-PMREPT-<MOD2>
	RTRV-PM-<MOD2>	SET-PMMODE-<STS_PATH>
Input Format	SET-TH-<MOD2>:[<TID>]:<AID>:<CTAG>:: <MONTYPE>,<THLEV>,[<LOCN>],,[<TMPER>]; where: • <AID> indicates the access identifier. All the STS, VT1, Facility and DS1 AIDs are supported and <AID> is from the "ALL" section on page 4-9 • <MONTYPE> is the monitored value; valid values are shown in the "ALL_MONTYPE" section on page 4-36 • <THLEV> is the threshold value and is a float; <THLEV> is an integer • <LOCN> is the location; valid values are shown in the "LOCATION" section on page 4-75 • <TMPER> indicates the accumulation time period for the PM information; valid values are shown in the "TMPER" section on page 4-98	
Input Example	SET-TH-T3:CISCO:FAC-1-1:123::CVL,12,NEND,,15-MIN;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.225 SET-TOD: Set Time of Day

This command sets the system date and time for the NE. The year should be entered using four digits while the hour should be entered using a 24-hour time period (i.e., military time).

Section	SET-TOD Description
Category	System
Security	Provisioning

Section	SET-TOD Description (continued)	
Related Messages	ALW-MSG-ALL	RTRV-INV
	ED-DAT	RTRV-NE-GEN
	ED-NE-GEN	RTRV-NE-IPMAP
	ED-NE-SYNCN	RTRV-NE-SYNCN
	INH-MSG-ALL	RTRV-NE-WDMANS
	INIT-SYS	RTRV-TOD
	RTRV-HDR	
Input Format	SET-TOD:[<TID>]::<CTAG>::<YEAR>,<MONTH>,<DAY>,<HOUR>, <MINUTE>,<SECOND>,[<DIFFERENCE>][:DST=<DST>]; where: • <YEAR> is the current calendar year and is an integer • <MONTH> is the month of the year and ranges from 01–12; <MONTH> is an integer • <DAY> is the day of the month and ranges from 01–31; <DAY> is an integer • <HOUR> is the hour of the day and ranges from 00–23; <HOUR> is an integer • <MINUTE> is the minute of the hour and ranges from 00–59; <MINUTE> is an integer • <SECOND> is the second of the minute and ranges from 00–59; second is an integer • <DIFFERENCE> is the number of minutes off UTC and is an integer • <DST> identifies if the time is a Daylight Saving Time (Y) or not (N); valid values are shown in the "ON_OFF" section on page 4-83	
Input Example	SET-TOD:CAZADERO::240::1998,05,08,13,18,55,480:DST=Y;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.226 SW-DX-EQPT: Switch Duplex Equipment

(Cisco ONS 15454 only)

This command switches an XC/XCVT/XC10G card with the mate card within the NE.

Note If sending a mode parameter with a value other than NORM, FRCD, or NULL, the IDNV (Input, Data Not Valid) error message will be returned.

Section	SW-DX-EQPT Description
Category	Equipment
Security	Maintenance

Section	SW-DX-EQPT Description (continued)	
Related Messages	ALW-SWDX-EQPT	INH-SWTOWKG-EQPT
	ALW-SWTOPROTN-EQPT	REPT ALM EQPT
	ALW-SWTOWKG-EQPT	REPT EVT EQPT
	DLT-EQPT	RTRV-ALM-EQPT
	ED-EQPT	RTRV-COND-EQPT
	ENT-EQPT	RTRV-EQPT
	INH-SWDX-EQPT	SW-TOPROTN-EQPT
	INH-SWTOPROTN-EQPT	SW-TOWKG-EQPT
Input Format	SW-DX-EQPT:[<TID>]:<AID>:<CTAG>::[<MODE>][,];	
	where: • <AID> identifies the equipment (XC/XCVT/XC10G) unit in the NE that is to be switched with its mate unit; <AID> is from the "EQPT" section on page 4-23 • Valid values for <MODE> are shown in the "CMD_MODE" section on page 4-50	
Input Example	SW-DX-EQPT:CISCO:SLOT-1:123::FRCD;	
Errors	Errors are listed in Table 7-32 on page 7-18.	

3.4.227 SW-TOPROTN-EQPT: Switch to Protection Equipment

(Cisco ONS 15454 only)

This command performs an equipment unit protection switch.

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

This command will switch the traffic from the working card specified in the AID to the protect card.

There is a priority for the switch to protection commands. In a 1:N protection group with N > 1, consider two working cards - A and B. Card A is switched to the protect card with the SW-TOPROTN command. If card B is pulled from the system, the protect card will carry the traffic of card B and card A will raise the FAILTOSW condition and carry traffic. When card B is replaced and the revert timer expires, card B will carry traffic and card A will switch to the protect card. The FAILTOSW condition on card A will be cleared. Note:1:N protection groups in the system are always revertive.

In a revertive protection group, the unit specified by the AID will raise the standing condition of WKSWPR if the command were executed without an error. In a non-revertive protection group, the unit specified by the AID will raise the transient condition of WKSWPR if the command were executed without an error.

Notes:

1. The default PROTID is the protecting unit if there is only one protection unit per protection group in the NE, otherwise a DENY error message will be responsed.
2. This command only supports one value of the <DIRN> parameter - BTH or null. A command with any other value is considered an incorrect use of the command. An IDNV (Input, Data Not Valid) error message will be responsed.

3. This command is not used for the common control (TCC+/TCC2 or XC/XCVT/XC10G) cards. A command on a common control card will generate an IIAC (Input, Invalid Access Identifier) error message. To use the common control card switching commands, use the SW-DX-EQPT and ALW-SWDX-EQPT commands.
4. This command is not used for SONET (OCN) cards. A command on a SONET card will generate an IIAC (Input, Invalid Access Identifier) error message. To use a SONET card switching command, use the OPR-PROTNSW and RLS-PROTNSW commands.
5. If this command is used on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message will be responsed.
6. If this command is sent to a missing working card, the SWFA (Status, Working Unit Failed) error message will be responsed.
7. If this command is used on a protection card, the IIAC (Input, Invalid Access Identifier) error message will be responsed.
8. If sending a mode parameter with a value other than NORM, FRCD, or null, the IDNV (Input, Data Not Valid) error message will be responsed.
9. If sending the SW-TOPROTN command to a working card when the working card has raised INHSWPR, the SWLD (Status, Working Unit Locked) error message will be responsed.
10. If sending the SW-TOPROTN command to a working card when the protection card has raised INHSWPR, the SPLD (Status, Protection Unit Locked) error message will be responsed.
11. If sending the SW-TOPROTN command to an active working card when the protect card is already carrying traffic. This only occurs in a 1:N protection group with N greater than one, the SNVS (Status, Not in Valid State) error message will be responsed.
12. If sending the SW-TOPROTN command to an active working card when the protect card is failed or missing, the SPFA (Status, Protection Unit Failed) error message will be responsed.
13. If sending this command to a standby working card, the SNVS (Status, Not in Valid State) error message will be responsed.

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

Section	SW-TOPROTN-EQPT Description (continued)
Input Format	SW-TOPROTN-EQPT:[<TID>]:<AID>:<CTAG>::[<MODE>], [<PROTID>],[<DIRN>]; where: • <AID> is the parameter that specifies the working unit which will have traffic switched to protection and is from the "EQPT" section on page 4-23 • <MODE> is the parameter that will only support the NORM value. The null value for <MODE> will default to NORM. Sending the FRCD value for <MODE> will generate the same switching behavior as sending the NORM value. Valid values are shown in the "CMD_MODE" section on page 4-50 • <PROTID> identifies the protection unit to be switched when there is more than one protection unit within the NE; <PROTID> is from the "PRSLOT" section on page 4-26 • <DIRN> is the direction of transmission in which switching is to be made. The command only supports one value of the <DIRN> parameter - BTH. This parameter defaults to BTH; valid values for <DIRN> are shown in the "DIRECTION" section on page 4-65
Input Example	SW-TOPROTN-EQPT:CISCO:SLOT-1:123::FRCD,SLOT-3,BTH;
Errors	Errors are listed in Table 7-32 on page 7-18.

3.4.228 SW-TOWKG-EQPT: Switch to Working Equipment

(Cisco ONS 15454 only)

This command switches the protected working unit back to working unit.

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

This command will switch the traffic from the protection card to the working card specified by the AID.

In a revertive protection group, the unit specified by the AID will clear the standing condition of WKSWPR if the command were executed without an error. In a non-revertive protection group, the unit specified by the AID will raise the transient condition of WKSWBK if the command were executed without an error.

Notes:

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

4. If this command is used on a card that is not in a protection group, the SNVS (Status, Not in Valid State) error message will be responsed.
5. If this command is sent to a missing working card, the SWFA (Status, Working Unit Failed) error message will be responsed.
6. If this command is used on a protection card, the IIAC (Input, Invalid Access Identifier) error message will be responsed.
7. If sending a mode parameter with a value other than NORM, FRCD, or null, the IDNV (Input, Data Not Valid) error message will be responsed.
8. If sending the SW-TOWKG command to a working card when the working card has raised INHSWWKG, the SWLD (Status, Working Unit Locked) error message will be responsed.
9. If sending the SW-TOWKG command to a working card when the protection card has raised INHSWWKG, the SPLD (Status, Protection Unit Locked) error message will be responsed.
10. If sending the SW-TOWKG command to an active working card, the SNVS (Status, Not in Valid State) error message will be responsed.

Section	SW-TOWKG-EQPT Description	
Category	Equipment	
Security	Maintenance	
Related Messages	ALW-SWDX-EQPT	INH-SWTOWKG-EQPT
	ALW-SWTOPROTN-EQPT	REPT ALM EQPT
	ALW-SWTOWKG-EQPT	REPT EVT EQPT
	DLT-EQPT	RTRV-ALM-EQPT
	ED-EQPT	RTRV-COND-EQPT
	ENT-EQPT	RTRV-EQPT
	INH-SWDX-EQPT	SW-DX-EQPT
	INH-SWTOPROTN-EQPT	SW-TOPROTN-EQPT
Input Format	SW-TOWKG-EQPT:[<TID>]:<AID>:<CTAG>::[<MODE>],[<DIRN>]; where: • <AID> identifies the working unit that is to be released from protection. <AID> is from the "PRSLOT" section on page 4-26 • <MODE> will only support the NORM value. The null value will default to NORM. Sending the FRCD value will generate the same switching behavior as sending the NORM value. Valid values for <MODE> are shown in the "CMD_MODE" section on page 4-50 • <DIRN> is the direction of transmission. The command only supports one value of the <DIRN> parameter - BTH. This parameter defaults to BTH; valid values for <DIRN> are shown in the "DIRECTION" section on page 4-65	
Input Example	SW-TOWKG-EQPT:CISCO:SLOT-2:123::FRCD,BTH;	
Errors	Errors are listed in Table 7-32 on page 7-18.	