TL1 Commands and Autonomous Messages

This chapter describes the TL1 commands supported by the Cisco ONS 15216 EDFA3.

Each TL1 command is listed alphabetically according to the first character of the command string. Each TL1 command must be less than or equal to 255 characters in length. Any command longer than 255 characters must be split into multiple commands.

Note TL1 commands that are not entered correctly are not completed. Each TL1 command must terminate with a semicolon (;).

This chapter contains the following sections:

8.1 About TL1 Commands

The following material describes TL1 commands and autonomous messages supported by the ONS 15216 EDFA3. The ONS 15216 EDFA3 supports up to 5 simultaneous Telnet connections using the Ethernet LAN port. TL1 sessions are available using the TCP/IP port 3082 for raw TL1 and/or port 3083 for TL1 over Telnet. See Chapter 5, “Communicating with the ONS 15216 EDFA3,” for information about the various ways to connect to the ONS 15216 EDFA3.

After you have connected to a TL1 session, the ACT-USER command activates a user session.

TL1 messages are grouped into nonautonomous and autonomous types. Nonautonomous messages consist of a request command and a response from the ONS 15216 EDFA3. Autonomous messages and nonautonomous commands use a common set of parameters. Autonomous messages are generated as a result of activity on the network elements such as alarms, thresholds, alerts, and status information. No request is required in order to receive autonomous messages.

8.2 TL1 Command Rules

Commands can affect one or more entities. In general, this chapter specifies a TL1 interface where retrieval can be broad but changes are narrow in scope.

- Retrieve (requests). To allow as much bulk and flexible retrieval of information from an NE, the fields of retrieve requests permit the following values/operators.
  - Fields with default values are optional and permit the wildcard value ALL.
  - Fields are listable and rangeable wherever the syntax allows it.
  - Fields that do not allow a default indicate ALL by their absence.
  - The keyword ALL is implied, and is not required or needed.
- Other commands (requests): To ensure that changes are specific to the entities that they are intended for, the scope of provisioning commands in general is as narrow as possible.
  - Fields with defaults do NOT permit the value ALL.
  - Only fields with defaults are optional.
  - In limited circumstances, fields might be listable and rangeable.

8.3 TL1 Command Types

TL1 commands can be grouped into the following categories:

The commands in each category are outlined in the following sections.

8.3.1 Equipment Commands

Table 8-1 lists the TL1 equipment commands.

Table 8-1 TL1 Equipment Commands

Command	Description
ED-EQPT	Configures power bus mode
REPT ALM EQPT	Reports general alarm activation/clearing
REPT EVT EQPT	Reports equipment event logging
RTRV-ATTR-EQPT	Retrieves current equipment attributes
RTRV-COND-EQPT	Retrieves state of current general alarms
RTRV-EQPT	Retrieves equipment parameters
RTRV-TH-EQPT	Retrieves equipment threshold
SET-ATTR-EQPT	Changes equipment alarm severity
SET-TH-EQPT	Sets equipment threshold

8.3.2 Facility Commands

Table 8-2 lists the TL1 facility commands.

Table 8-2 TL1 Facility Commands

Command	Description
STA-LOCL-RST	Resets all parameters to manufacturer defaults

8.3.3 Fault Commands

Table 8-3 lists the TL1 fault commands.

Table 8-3 TL1 Fault Commands

Command	Description
REPT ALM DWDM	Reports optical alarm activation/clearing
REPT EVT DWDM	Reports optical event logging
REPT EVT FXFR	Reports FTP file transfer
RTRV-ALM-ALL	Retrieves all current alarms
RTRV-ATTR-ALL	Retrieves current attributes
RTRV-ALM-DWDM	Retrieves all current optical alarms
RTRV-COND-ALL	Retrieves state of all current alarms
SET-ATTR-DWDM	Changes optical alarm severity
RTRV-COND-DWDM	Retrieves state of all current optical alarms
SET-ATTR-SECUDFLT	Sets timeout values for access levels

8.3.4 Log Commands

Table 8-4 lists the TL1 log commands.

Table 8-4 TL1 Log Commands

Command	Description
RTRV-AO	Retrieves most recent autonomous output messages

8.3.5 Performance Commands

Table 8-5 lists the TL1 performance commands.

Table 8-5 TL1 Performance Commands

Command	Description
RTRV-TH-DWDM	Retrieves optical thresholds
SET-TH-DWDM	Sets optical thresholds

8.3.6 Security Commands

Table 8-6 lists the TL1 security commands.

Table 8-6 TL1 Security Commands

Command	Description
DLT-USER-SECU	Deletes a user
ED-PID	Edits a user password
ED-USER-SECU	Edits a user's name and parameters
ENT-USER-SECU	Enters a new user name
RTRV-DFLT-SECU	Retrieves timeouts for access levels
RTRV-USER-SECU	Retrieves user access levels

8.3.7 System Commands

Table 8-7 lists the TL1 system commands.

Table 8-7 TL1 System Commands

Command	Description
ACT-USER	Activates a user session (logs in)
ALW-MSG-ALL	Allows automatic messages
CANC-USER	Cancels (logs off) a user session
ED-DAT	Edits date and time

Table 8-7 TL1 System Commands (continued)

Command	Description
INH-MSG-ALL	Inhibits some automatic messages
INIT-SYS	Reboots the system
RTRV-HDR	Retrieves the header (pings the NE)
APPLY	Applies a software cutover
CANC	Automatic message transmitted to a user when a session is terminated
COPY-RFILE	Copies local or remote files to the flash file system
CPY-MEM	Copies a log file from RAM to the flash file system
DLT-RFILE	Deletes a file from the flash file system
DLT-TRAPTABLE	Deletes a specified row from the SNMP[1] Trap Destination Table
ED-NE-GEN	Edits general IP-related parameters
ED-TRAPTABLE	Edits a specified row in the SNMP Trap Destination Table
ENT-TRAPTABLE	Adds an entry to the SNMP Trap Destination Table
RTRV-INV	Retrieves inventory parameters
RTRV-NE-GEN	Retrieves IP-related parameters
RTRV-RFILE	Retrieves files on the flash file system
RTRV-STATUS	Retrieves the user logged-on status
RTRV-TOD	Retrieves the date and time
RTRV-TRAPTABLE	Retrieves a row from the Trap Table

1. SNMP = Simple Network Management Protocol

8.3.8 Other (Ungrouped) Commands

Table 8-8 lists the TL1 commands that do not belong to any group.

Table 8-8 TL1 Ungrouped Commands

Command	Description
ED-DWDM	Edits optical parameters
RTRV-DWDM	Retrieves optical parameters

8.4 TL1 Commands and Descriptions

The following subsections name each TL1 command, provide a sample of syntax and provide explanations of each command.

8.4.1 ACT-USER

Usage Guidelines

The ACT-USER command activates the user specified in the login string.

The command permits set up of a session with the NE. Until a successful login, the TL1 manager is not able to receive alarm or command responses from the NE. If a session is not established, issuing commands should generate a DENY as a command response, with no other information and a PLNA (Login Not Active) error code should be implemented for other commands.

Syntax Description

Input Format

```
ACT-USER:<tid>:<uid>:<ctag>::<pid>;
```

Input Parameters

uid	The user identifier is a string consisting of any combination of 7 to 10 characters.
pid	The user password, or private identifier is a string of 7 to 10 alphanumeric characters where at least one character is a special character (+, #, or %).

Examples

```
ACT-USER::EDFA3_USER:123::**********;

   EDFA3 2003-11-01 10:06:30
M  123 COMPLD
;
>
```

This command activates a user named “EDFA3_USER” with a password of PASSW2#000 (**********). The ctag 123 identifies any responses returned by this command.

Command Result

After a successful login, another ACT-USER command with the same <uid> and <pid> will be refused and the error code PICC (Illegal Command Code) is provided.

8.4.2 ALW-MSG-ALL

Usage Guidelines

The ALW-MSG-ALL command allows the reporting of all events.

This command permits or resumes the dispatch of automatic messages from the ONS 15216 EDFA3 that were inhibited by an INH-MSG call. All alarms in existence at the time that this command restores them are transmitted using REPT ALM and REPT EVT messages.

This command applies only to the current logged in user session. Other user sessions are not affected.

Note that if this command is used twice successively in the same session with the same parameter values, the SAAL (Already Allowed) error message will be returned.

The ALW-MSG-ALL command is valid if an alarm exists that satisfies the condition contained in the parameters <ntfcncde> and <condtype>. If one parameter is not provided, the alarms that satisfy the condition of the not null field are allowed.

Syntax Description

Input Format

```
ALW-MSG-ALL:<TID>:[<aid>]:<ctag>::[<ntfcncde>],[<Automsg>][,];
```

Input Parameters

aid	Access ID. For this command, the aid is null or ALL.
ntfcncde	Two-character notification code associated with some automatic messages. ntfcncde is of type NotificationCode. If ntfcncde is null, inhibitions are kept unchanged. If both ntfcncde and condtype are null, the command allows all messages (ALW-MSG-ALL:::123;). The notification code of the alarm or event that is to be allowed maps to the table cerent15216EdfaAlarmPriority for active alarms. A null maps to none of the codes, that is, with a null, all existing ntfcncde inhibitions are kept unchanged. Possible values are: • MJ: Major alarm • MN: Minor alarm • NA: No alarm • CL: Cleared alarm • condtype: Condition type of the alarm or event that is to be allowed. (Maps to cerent15216EdfaLogEventID.) ALL maps to all types. A null maps to none of the types, that is, with a null, all existing condtype inhibitions are kept unchanged.
Automsg	Automsg is the condition type of the allowed alarm or event. ALL maps to all types. If both ntfcncde and condtype are null, the command allows all messages (ALW-MSG-ALL:::123;).

Examples

```
ALW-MSG-ALL:::123;
EDFA3 2003-11-01 10:00:15
M  123 COMPLD
   /* ALW-MSG-ALL */
;
>
```

Command Result

All events will be reported.

8.4.3 APPLY

Usage Guidelines

The APPLY command applies a software cutover in memory.

There are two boot file entries. This command exchanges boot file entries 1 and 2 and automatically reboots the system.

Syntax Description

```
APPLY:<TID>::<ctag>;
```

Examples

```
APPLY:::123;
<IP 123
<IP 123
<

   EDFA3 2003-11-01 12:56:44
A  2 REPT EVT EQPT

"EQPT:CUTOVERRESET,TC,11-01,12-56-44,,,ONS15216Edfa3-0.4.8-003K-05.09,ONS152
1
6Edfa3-0.4.8-003K-05.09,:\"Reset After Cutover Changed \""
;

   EDFA3 2003-11-01 12:56:44
M  123 COMPLD
   /* APPLY- EDFA3 SOFTWARE UPGRADE */
;
>
```

Errors

This message can generate any of the default errors.

Command Result

When the system is restarted, it will boot with the image that was formerly the inactive entry.

8.4.4 CANC-USER

Usage Guidelines

Cancels a login session (logoff) with the ONS 15216 EDFA3.

Note This command cannot be used to delete another user session and also closes the Telnet connection, as shown in the following example:

```
>
[10.92.27.66: remote disconnect]
```

Syntax Description

Input Format

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

Input Parameters

uid	The user identifier for the session to be cancelled, in the format of a string between 7 and 10 characters long.

Examples

```
CANC-USER::EDFA3_USER:123;

   EDFA3 2003-11-01 10:11:13
M  123 COMPLD
;
>
>
[192.168.1.2: remote disconnect]
```

Errors

This message can generate any of the default errors.

Command Result

The login session with the ONS 15216 EDFA3 is cancelled.

8.4.5 COPY-RFILE

Usage Guidelines

This command copies a local or remote file to the Flash File System (FFS) on the optical amplifier (OA).

Depending on the value specified for the TYPE parameter, this command can be used to download a remote software image file to the OA as the second boot entry (to cutover-upgrade later using the APPLY command), to copy a remote or local file to the OA flash file system, or to copy a file on the ONS 15216 EDFA3 flash file system to a remote or local file.

Syntax Description

Input Format

```
COPY-RFILE:<TID>::<ctag>::TYPE=<type>,SRC=<src>,[DEST=<dest>],[OVERWRITE=<overwrite>];
```

Input Parameters

type	Specifies the type and direction of transfer. Possible values are: • RFR: Restores a file from a remote server to the ONS 15216 EDFA3 flash file system • RFBU: Backs up a file from the ONS 15216 EDFA3 flash file system to the remote server (overwrite is always YES) • SWDL: Download a software file to the ONS 15216 EDFA3 flash file system and updates the second boot entry to point to this file

src/dest	Source and destination URLs, formatted as a string.
	An FTP URL has the following format:
	`ftp:[//[<userid>[:<password>]@]<ftphost>[:<port>]]/<urlpath>`
	A file URL (referring to the local system) has the following format:
	`file://localhost/<urlpath>`
	where:
	• <userid> is the FTP user identifier.
	• <password> is the FTP password for the user.
	• <ftphost> is the IP address of the FTP server.
	• <port> is the port number to connect to. Port number (21) is optional. 21 is the only supported port number. Leaving this field blank defaults to 21.
	• <urlpath> is the path in the following format:
	`<cwd1>/<cwd2>/.../<filename>`
	where <cwd1> and <cwdn> are directory levels and <filename> is the file name.

overwrite	Possible values are: • YES: Overwrite the existing file of the same name at the destination. • NO: Do not overwrite the existing file if a file with same name exists at the destination. This is the default if overwrites null. This parameter is a string.

Examples

```
COPY-RFILE:::123::TYPE=SWDL,SRC="ftp://cisco15:password@192.9.0.11:21/ONS15216Edfa3-00.04.
17-004A-16.18",DEST="file://fd1/ONS15216Edfa3-00.04.17-004A-16.18",OVERWRITE=YES;

COPY-RFILE:::123::TYPE=SWDL,SRC="ftp://cisco15:password@192.9.0.11:21/ONS15216
Edfa3-00.04.17-004A-16.18",DEST="file://fd1/ONS15216Edfa3-00.04.17-004A-16.18",
OVERWRITE=YES;

   EDFA3 2004-01-28 16:58:23
M  123 COMPLD
   /* COPY-RFILE */
;
>

   EDFA3 2004-01-28 16:58:23
*  20 REPT ALM EQPT
   "EQPT:MN,SFTWDOWN,NSA,01-28,16-58-23,,,:\"Software Download In Progress\""
;
```

```
   EDFA3 2004-01-28 16:58:25
A  21 REPT EVT FXFR
   "ONS15216Edfa3-00.04.17-004A-16.18,START,,"
;

   EDFA3 2004-01-28 16:58:25
A  22 REPT EVT FXFR
   "ONS15216Edfa3-00.04.17-004A-16.18,IP,,"
;

   EDFA3 2004-01-28 16:59:20
A  23 REPT EVT FXFR
   "ONS15216Edfa3-00.04.17-004A-16.18,COMPLD,SUCCESS,4282718"
;

   EDFA3 2004-01-28 16:59:20
A  24 REPT ALM EQPT
   "EQPT:CL,SFTWDOWN,NSA,01-28,16-59-20,,,:\"Software Download In Progress\""
;
```

Errors

This message can generate any of the default errors.

Command Result A local or remote file is copied to the FFS.

8.4.6 CPY-MEM

Usage Guidelines The Copy Memory command copies the log file from RAM to the FFS or from the FFS to an FFS with a specified name.

Syntax Description

Input Format

```
CPY-MEM:<TID>::<ctag>::[<fromfile>],[<fromdev>],[<tofile>];
```

Input Parameters

fromfile	Name of the source file, formatted as a string. A null value means LOG and null can only be used when <fromdev> is also null. The possible values are: • LOG: When <fromdev> is specified to be MEM or null • File_name: Name of the file on the FFS that is to be copied with <fromdev>
fromdev	The device on which the source file exists. A null means MEM. Possible values are: • MEM: Log file • FFS: File on flash (a string)
tofile	The name string of the destination file.

Examples

```
CPY-MEM:::123::aolog.txt,FFS,bolog.txt;

   EDFA3 2003-11-01 10:08:00
M  123 COMPLD
   /* CPY-MEM */
;
>
```

Errors

This message can generate any of the default errors.

Command Result

The log file is copied from RAM to the FFS or from the FFS to an FFS with a specified name.

8.4.7 DLT-RFILE

Usage Guidelines

The Delete RFILE command deletes a file from the FFS of the ONS 15216 EDFA3.

Syntax Description

Input Format

```
DLT-RFILE:<TID>::<ctag>::FILE=<localfilename>;
```

Input Parameters

localfilename	Name of the file on the FFS of the ONS 15216 EDFA3 that is to be deleted. File names are case sensitive. This parameter is a string.

Examples

```
DLT-RFILE:::123::FILE=bolog.txt;

   EDFA3 2003-11-01 10:08:07
M  123 COMPLD
   /* DLT-RFILE */
;
>
```

Errors

This message can generate any of the default errors.

Command Result The specified file is deleted from the FFS of the ONS 15216 EDFA3.

8.4.8 DLT-TRAPTABLE

Usage Guidelines The Delete Trap Table command is used to delete a specific row (if <aid> = IP address) or all rows (if <aid> = ALL or null) in the SNMP Trap Destination Table.

Syntax Description

Input Format

```
DLT-TRAPTABLE:[TID]:[<aid>]:<ctag>;
```

Input Parameters

aid	The aid is the IP address, formatted as a string. ALL or null deletes the entire trap table.
ip	The trap receiver IP address.

Examples

```
DLT-TRAPTABLE::192.168.1.1:123;

   EDFA3 2003-11-01 10:08:38
M  123 COMPLD
   /* DLT-TRAPTABLE */
;
>
```

Errors

This message can generate any of the default errors.

Command Result A specific row (if <aid> = IP address) or all rows (if <aid> = ALL or null) are deleted from the SNMP Trap Destination Table.

8.4.9 DLT-USER-SECU

Usage Guidelines The Delete User Security command removes a user. Only an administrator can use this command. The <aid> block contains the user identifier. This command cannot be used to delete a user who is currently logged on.

Syntax Description

Input Format

```
DLT-USER-SECU:[TID]:<uid>:<ctag>;
```

Input Parameters

uid	The user identifier, formatted as a string.

Examples

```
DLT-USER-SECU::EDFA3_USER:123;

   EDFA3 2003-11-01 10:14:08
M  123 COMPLD
   /* DLT-USER-SECU */
;
>
```

Errors

This message can generate any of the default errors.

Command Result

A specified user is removed.

8.4.10 ED-DAT

Usage Guidelines

The Edit Date and Time command edits the date and time on the NE, as defined in Telcordia GR-199.

Syntax Description

Input Format

```
ED-DAT:[<TID>]::[CTAG]::[<date>],[<time>];
```

Input Parameters

date	Change the date to this value, in the format YYYY-MM-DD.
time	Change the time to this value, in the format HH-MM-SS.

Examples

```
ED-DAT:::123::2003-11-01,10-00-00;

   EDFA3 2003-11-01 10:00:00
M  123 COMPLD
   /* ED-DAT */
;
>
```

Errors

This message can generate any of the default errors.

Command Result The specified date and time become active.

8.4.11 ED-DWDM

Usage Guidelines The Edit DWDM command configures the ONS 15216 EDFA3 optical control parameters. It includes two modes:

- Constant Output Power mode (OPWR)
- Constant Gain mode (CGAIN)

Syntax Description

Input Format

```
ED-DWDM:[<TID>]:<aid>:<ctag>:::[CTRLMODE=<ctrlmode>],
[LINE1TXPWRSP=<line1txpwrsp>],[PWROFFSET=<pwroffset>,][GAINSP=<gainsp>,]
[TILTSP=<tiltsp>,][TILTOFFSET=<tiltoffset>,][OSRI=<osri>][:];
```

Input Parameters

aid	Access identifier. Use either 1 or ALL.
ctrlmode	Amplifier control mode (of type ctrlmode). There are two possible values: • COPWR: Constant output power • CGAIN: Constant gain (default)
line1txpwrsp	Amplifier output power setpoint value related to the LINE1TX Port measured in decibels referred to 1 milliwatt (dBm).
pwroffset	Output power offset measured in decibels (dB).
gainsp	Gain setpoint measured in decibels (dB).
tiltsp	Tilt setpoint measured in decibels (dB).
tiltoffset	Tilt offset measured in decibels (dB).
osri	Optical safety remote interlock, of type OSRI. There are two possible values: • ON: Forces the laser off. • OFF: (Default) Removes the laser lock, allowing the laser to turn on.

Examples

```
ED-DWDM::1:123:::CTRLMODE=CGAIN,LINE1TXPWRSP=10,PWROFFSET=0,GAINSP=15,TILTSP=0,TILTOFFSET=
0,OSRI=ON;

   EDFA3 2003-11-01 10:26:00
A  2 REPT EVT DWDM
   "DWDM:GAINTHDHCHGD,TC,11-01,10-26-00,,,17.0dB,23.0dB,:\"Gain Degrade High Threshold
Changed \""
;

  EDFA3 2003-11-01 10:26:00
A  3 REPT EVT DWDM
   "DWDM:GAINCHGD,TC,11-01,10-26-00,,,15.0dB,21.0dB,:\"Gain Setpoint Changed \""
;
```

```
EDFA3 2003-11-01 10:26:00
A  4 REPT EVT DWDM
   "DWDM:GAINTHDLCHGD,TC,11-01,10-26-00,,,13.0dB,19.0dB,:\"Gain Degrade Low Threshold
Changed \""
;

  EDFA3 2003-11-01 10:26:00
M  123 COMPLD
   /* ED-DWDM */
;
>
```

Errors

This message can generate any of the default errors.

Command Result The ONS 15216 EDFA3 optical control parameters are configured.

8.4.12 ED-EQPT

Usage Guidelines The Edit Equipment command is used to configure the Power Bus mode.

Syntax Description

Input Format

```
ED-EQPT:[<TID>]:<aid>:<ctag>:::PWRBUSMODE=<pwrbusmode>[:];
```

Input Parameters

aid	A string. Possible values are: • PWR-A: Assigns PWRBUSMODE=SIMPLEX • PWR-B: Assigns PWRBUSMODE=DUPLEX • ALL: Assigns PWRBUSMODE=SIMPLEX or PWRBUSMODE=DUPLEX
pwrbusmode	Power Bus Mode, of type PWRBUSMODE. Possible values are: • SIMPLEX: Simplex mode requires power only to Bus A. • DUPLEX: Duplex (default) requires power to both Bus A and Bus B.

Examples

```
ED-EQPT::ALL:123:::PWRBUSMODE=DUPLEX;

EDFA3 2003-11-01 10:28:36
M  123 COMPLD
   /* ED-EQPT */
;
>
```

Errors

This message can generate any of the default errors.

Command Result The Power Bus mode is reconfigured.

8.4.13 ED-NE-GEN

Usage Guidelines The Edit Network Element GEN command is used to edit the following NE attributes: NE TID, node name, longitude, latitude, IP address, IP mask, default router, and the standby file filename. The command is also used to enable or disable the SNMP Set Request operation.

Note The IP address and IP mask must be input at the same time. After an IP address is changed, the system is restarted with the new IP address.

Syntax Description

Input Format

```
ED-NE-GEN:[TID]::<ctag>:::[NAME=<name>],[DESCR=<descr>],[LONGITUDE=<longitude>],
[LATITUDE=<latitude>],[IPADDR=<ipaddr>],[IPMASK=<ipmask>],[DEFRTR=<defrtr>], [STANDBYSW=
<standbysw>],[SNMPSETREQ=<snmpsetreq>];
```

Input Parameters

name	The system's sid/tid name is a string. The default value is EDFA3.
descr	The EDFA3 description, formatted as a string, with a maximum length of 64 characters.
longitude	Longitude of the NE location, formatted as a string.
latitude	Latitude of the NE location, formatted as a string.
ipaddr	The NE's IP address, formatted as a string. The default value is 0.0.0.0.
ipmask	The NE's subnet mask, formatted as a string, with a default value of 255.255.255.255.
defrtr	The IP address of the default router, formatted as a string with a default value of 0.0.0.0.
standbysw	The file name for standby file, formatted as a string.
snmpsetreq	A flag to enable/disable the SNMP Set Request operation, formatted as a string. There are two possible values: ENABLE (default) and DISABLE.

Examples The following example changes the IP address:

```
ED-NE-GEN:::123:::IPADDR=192.168.1.2;

   EDFA3 2003-11-01 10:29:47
M  123 COMPLD
   /* CHANGING IP, EDFA3 RESTART */
;
>
```

Errors

This message can generate any of the default errors.

Command Result The NE attributes are modified according to the values in the command.

8.4.14 ED-PID

Usage Guidelines The Edit Password command allows a user to change their own password. The changed password does not appear in the TL1 log on the NE. The password cannot be null. Other user identification and access changes can only be made by privileged/superusers with the ED-USER-SECU command.

Syntax Description

Input Format

```
ED-PID:[TID]:<uid>:<ctag>::<oldpw>,<newpw>;
```

Input Parameters

uid	The user identifier, formatted as a string.
oldpw	The password must include at least one special character (#, +, or %) and at least one nonalphabetic character besides the special character(s). The string length of the password is between 6 and 10.
newpw	The password must include at least one special character (#, +, or %) and at least one nonalphabetic character besides the special character(s). The string length of the password is between 6 and 10.

Examples

```
ED-PID::EDFA3_USER:123::**********,**********;

   EDFA3 2003-11-01 10:11:01
M  123 COMPLD
   /* ED-PID */
;
>
```

Errors

This message can generate any of the default errors.

Command Result The user's own password is modified according to the values in the command.

8.4.15 ED-TRAPTABLE

Usage Guidelines

The Edit Trap Table command allows the user to edit the values for the trap table's community string, UDP port, and version.

Syntax Description

Input Format

```
ED-TRAPTABLE:[TID]:<aid>:<ctag>:::[TRAPCOM=<community>,][TRAPPORT=<port>,]
[TRAPVER=<trap-version>][:];
```

Input Parameters

aid	The aid is the trap receiver IP address. The IP cannot be 0.0.0.0.
community	community is the community string, not less than 6 characters and not more than 32 characters. It cannot be null.
port	The UDP port number, formatted as an integer.
trap version	The trap version, formatted as a string. The possible values are v1 or v2.

Examples

```
ED-TRAPTABLE::192.168.1.1:123:::TRAPCOM=EDFA3_USER,TRAPPORT=162,TRAPVER=V1;

   EDFA3 2003-11-01 10:08:25
M  123 COMPLD
   /* ED-TRAPTABLE */
;
>
```

Errors

This message can generate any of the default errors.

Command Result

The trap table values are modified according to the values in the command.

8.4.16 ED-USER-SECU

Use the Edit User Security command to edit a user's privileges, password, or user ID. Only an administrator can use this command.

Syntax Description

Input Format

```
ED-USER-SECU:[TID]:<uid>:<ctag>::<newuid>,<newpid>,,<uap>:;
```

Input Parameters

uid	The user identifier, formatted as a string.
newuid	New user ID, formatted as a string.
newpid	The new password must include at least one special character (#, +, or %) and at least one nonalphabetic character besides the special character(s). The string length of the password is between 6 and 10.
uap	Access privilege, of type UserPrivilege.

Examples

```
ED-USER-SECU::EDFA3_USER:123::EDFA_USER,**********,,RW;

   EDFA3 2003-11-01 10:18:29
M  123 COMPLD
   /* ED-USER-SECU */
;
>
```

Errors

This message can generate any of the default errors.

Command Result

The user's userid and password are modified according to the values in the command.

8.4.17 ENT-TRAPTABLE

Usage Guidelines

The Enter Trap Table command is used to add an entry in the SNMP Trap Destination Table. Each IP address entry represents a new community string. The user defines the following fields:

- Trap receiver IP address
- UDP port number
- Community string, not less than 6 characters and not more than 32 characters
- Version

The <aid> consists of the IP address and is used by the command to identify a specific row in the SNMP Trap Destination Table (see Table 8-9). Therefore, the IP address must be unique inside the table.

The SNMP Trap destination Table can contain up to 10 rows.

Note The <aid> in the ENT-TRAPTABLE command is essential. It is used not only for the trap receiver, but also for the SNMP manager. A user will not be able to browse the MIB unless the browser workstation's IP address is entered into the trap destination table.

Table 8-9 SNMP Trap Destination Table Example

IP Address <aid>	UDP Port Number <trapport>	Community String <trapcom>	Version <trapver>
10.51.100.65	162	Community_string1	v1
10.51.100.66	163	Community_string2	v2
10.51.100.67	164	Community_string3	v1

Syntax Description

Input Format

```
ENT-TRAPTABLE:[<TID>]:<aid>:<ctag>::[TRAPCOM=<trapcom>],[TRAPPORT=<trapport>],
[TRAPVER=<trapver>];
```

Input Parameters

aid	The trap receiver IP address. It must contain a value different from 0.0.0.0.
trapcom	The community string, formatted as a string with a minimum length of 6 characters and a maximum length of 32 characters. If <trapcom> is not provided, the default value CISCO15 is assigned.
trapport	The UDP port number. If <port> is not provided, it is assigned the value 162.
trapver	The trap version. The possible value are v1 or v2. If the <trapversion> is not provided, v1 is assigned as a default value.

Examples

```
ENT-TRAPTABLE::192.168.1.1:123::TRAPCOM=EDFA3_USER,TRAPPORT=162,TRAPVER=V1;

   EDFA3 2003-11-01 10:08:15
M  123 COMPLD
   /* ENT-TRAPTABLE */
;
>
```

Errors

This message can generate any of the default errors.

Command Result

The trap table is modified according to the values in the command.

8.4.18 ENT-USER-SECU

Usage Guidelines

Use the Enter User Security command to add a user account. Only administrators can use this command.

Syntax Description

Input Format

```
ENT-USER-SECU:[<TID>]:<uid>:<ctag>::<pid>,,<uap>:;
```

Input Parameters

uid	The user identifier, formatted as a string.
pid	This is the password or private identifier of the user, formatted as a string.
uap	This is the access privilege of the user, which is of type UserPrivilege.

Examples

```
ENT-USER-SECU::EDFA3_USER:123::**********,,RWA;

   EDFA3 2003-11-01 10:14:16
M  123 COMPLD
   /* ENT-USER-SECU */
;
>
```

Errors

This message can generate any of the default errors.

Command Result

A new user is entered into the system, including security parameters and access levels.

8.4.19 INH-MSG-ALL

Usage Guidelines

The Inhibit Message All command instructs the NE to disable the transmission of autonomous messages. This instruction can be reversed using ALW-MSG.

Note Alarms will still be generated and are available using RTRV-COND or RTRV-ALM.

If this command is used twice successively in the same session with the same parameter values (that is, without performing the ALW-MSG-ALL between the two commands), the SAIN (Already Inhibited) error message is generated.

The INH-MSG-ALL command is valid if an alarm exists that satisfies the condition contained in the parameter <ntfcncde> and <condtype>. For example, if the user inhibits a specific alarm with the notification code (ntfcncde) equal to MN and subsequently provides the same command to inhibit all the alarms with ntfcncde equal to MN, the second command is valid because the object of the second alarm is different from the object of the first.

Syntax Description

Input Format

```
INH-MSG-ALL:[<TID>]:[<aid>]:[CTAG]::[<ntfcncde>],[<condtype>][,];
```

Note If any parameter is not provided, the alarms that satisfy the condition of the not null field will be inhibited.

Input Parameters

aid	Access identifier. For this command the <aid> is ALL.
ntfcncde	A two-character notification code associated with some automatic messages. ntfcncde is of type NotificationCode. With a null value, all existing <ntfcncde> inhibitions are kept unchanged.
condtype	This is the condition type of the alarm or event that is to be inhibited. ALL maps to all types. If a null value exists in ntfcncde, inhibitions are unchanged. If both ntfcncde and condtype are null, all messages will be inhibited.

Examples

```
INH-MSG-ALL:::123;

EDFA3 2003-11-01 10:00:11
M  123 COMPLD
   /* INH-MSG-ALL */
;
>
```

Errors

This message can generate any of the default errors.

Command Result

All REPT ALM and REPT EVT autonomous messages are inhibited.

8.4.20 INIT-SYS

Usage Guidelines

The Initialize System command reboots the ONS 15216 EDFA3.

Syntax Description

Input Format:

```
INIT-SYS:[<TID>]:<aid>:<ctag>::<ph>;
```

Input Parameters

aid	The possible values are EQPT and ALL, which have the same input effect.
ph	This is the level of the initialization, routine, or function being performed. The <ph> parameter must be an integer and currently the only acceptable value is the single digit numeric value of “1” , which will cause the system to soft reboot and restart with the current default code image (same firmware).

Note INIT-SYS restarts the ONS 15216 EDFA3 with the current default code image (same firmware). To restart the system and switch to a newly downloaded code image (new firmware) see the 8.4.3 APPLY command.

Examples

```
INIT-SYS::EQPT:123::1;

   EDFA3 2003-11-01 11:55:52
A  24 REPT EVT EQPT
   "EQPT:SOFTWARERESET,TC,11-01,11-55-52,,,,:\"Software Reset \""
;

  EDFA3 2003-11-01 11:55:52
M  123 COMPLD
   /* INIT-SYS */
;
>
```

Errors

This message can generate any of the default errors.

Command Result

The system reboots.

8.4.21 RTRV-ALM-ALL

Usage Guidelines

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

Syntax Description

Input Format

```
RTRV-ALM-ALL:[TID]::<123>::[<ntfcncde>],[<alarmMsg>],[<srveff>][,,,,,];
```

Input Parameters

ntfcncde	Notification code, of type NotificationCode. A null value is equivalent to ALL.
alarmMsg	Alarm condition type, of type AlarmMsg. A null value is equivalent to ALL.
srveff	Service Effect, of type ServiceEffect. A null value is equivalent to ALL.

Output Format

```
<sid> <date> <time>
M  # COMPLD
   "<aid>,<aidtype>:<ntfcncde>,<alarmMsg>,<srveff>,<ocrdat>,<ocrtm>,,:<conddescr>"
;
```

Output Parameters

aid	The access ID, formatted as a string.
aidtype	The aid type, formatted as a string. The value can be either DWDM or EQPT.
ntfcncde	Notification code, of type NotificationCode.
alarmMsg	Alarm condition, of type AlarmMsg.
srveff	This is the effect on service caused by alarm condition, of type ServiceEffect.
ocrdat	The date when the triggered alarm occurred, in date format.
ocrtm	The time when the triggered alarm occurred, in time format
conddescr	Detailed description of alarm in string format.

Examples

```
RTRV-ALM-ALL:::123;

EDFA3 2003-11-01 11:54:40
M  123 COMPLD
   "1,DWDM:CR,LINE1RXPWRFL,SA,11-01,11-54-38,,:\"Power Fail Low LINE1RX Port \""
   "PWR-B,EQPT:MN,PWRBUSB,NSA,11-01,11-51-42,,:\"POWER BusB Alarm\""
;
>
```

Errors

This message can generate any of the default errors.

Command Result

The current status of all active alarm conditions is retrieved and displayed.

8.4.22 RTRV-ALM-DWDM

Usage Guidelines

The Retrieve Alarm DWDM command generates a report about active DWDM alarms.

Syntax Description

Input Format

```
RTRV-ALM-DWDM:[TID]::<ctag>::[<ntfcncde>],[<alarmDwdm>],[<srveff>][,,,,,];
```

Input Parameters

ntfcncde	Notification code, of type NotificationCode. A null value is equivalent to ALL.
alarmDwdm	Alarm condition, of type Alarm_DWDM. A null value is equivalent to ALL.
srveff	Service Effect, of type ServiceEffect. A null value is equivalent to ALL.

Output Format

```
<sid> <date> <time>
M <ctag> COMPLD
"1, DWDM:<ntfcode>,<alarmDwdm>,<srveff>,<ocrdat>,<ocrtm>,,:<conddescr>"
```

Output Parameters

ntfcncde	Notification code, of type NotificationCode.
alarmDwdm	Alarm Type, of type Alarm_DWDM.
srveff	Service Effect, of type ServiceEffect.
ocrdat	The date when the triggering event occurred in date format.
ocrtm	The time of day when the triggering event occurred in time format.
conddescr	A detailed description of the alarm in string format.

Examples

```
RTRV-ALM-DWDM:::123;

   EDFA3 2003-11-01 11:54:49
M  123 COMPLD
   "1,DWDM:CR,LINE1RXPWRFL,SA,11-01,11-54-38,,:\"Power Fail Low LINE1RX Port \""
;
```

Errors

This message can generate any of the default errors.

Command Result

A report about active DWDM alarms is generated.

8.4.23 RTRV-ALM-EQPT

Usage Guidelines

The Retrieve Alarm Equipment command generates a report on active equipment alarms.

Syntax Description

Input Format

```
RTRV-ALM-EQPT:[TID]::<ctag>::[<ntfcncde>],[<alarmMsg>],[<srveff>][,,,];
```

Input Parameters

ntfcncde	Notification code, of type NotificationCode. A null value is equivalent to ALL.
alarmMsg	Alarm Condition type, of type Alarm_EQPT. A null value is equivalent to ALL.
srveff	Service Effect, of type ServiceEffect. A null value is equivalent to ALL.

Output Format

```
<sid> <date> <time>
M  <ctag> COMPLD
   "EQPT,EQPT:<ntfcncde>,<alarmMsg>,<srveff>,<ocrdat>,<ocrtm>,,:<conddescr>"
;
```

Output Parameters

ntfcncde	Notification node, of type NotificationCode.
alarmMsg	Alarm condition type, of type Alarm_EQPT.
srveff	Service effect, of type ServiceEffect.
ocrdat	The date when the triggering event occurred, in date format.
ocrtm	The time of day when the triggering event occurred, in time format
conddescr	Detailed description of the alarm, in string format.

Examples

```
RTRV-ALM-EQPT:::123;

   EDFA3 2003-11-01 11:54:53
M  123 COMPLD
   "EQPT,EQPT:MN,PWRBUSB,NSA,11-01,11-51-42,,:\"POWER BusB Alarm\""
;
```

Errors

This message can generate any of the default errors.

Command Result

A report on active equipment alarms is generated.

8.4.24 RTRV-ATTR-ALL

Usage Guidelines

The Retrieve Alarm Severity command generates a report on alarm severity.

Syntax Description

Input Format

```
RTRV-ATTR-ALL:[TID]::<CTAG>::[<ntfcncde>],[<condtype>][,,,];
```

Input Parameters

ntfcncde	Notification code, of type NotificationCode. A null value is equivalent to ALL.
condtype	The condition type. A null value is equivalent to ALL.

Output Format

```
<sid> <date> <time>
M  # COMPLD
   "EQPT,EQPT:MN,CTMP,,"
    "EQPT,EQPT:MJ, DATAFLT"
```

Output Parameters

ntfcncde	Notification code, of type NotificationCode.
aid	This is EQPT or 1.
aidtype	This is one of the following: 1, PWR-A, PWR-B, or EQPT.

Examples

```
RTRV-ATTR-ALL:::123;

   EDFA3 2003-11-01 11:48:11
M  123 COMPLD
   "EQPT,EQPT:MN,BACKUPREST,,"
   "EQPT,EQPT:MJ,COMFAIL,,"
   "EQPT,EQPT:MN,CTMP,,"
   "EQPT,EQPT:MJ,DATAFLT,,"
   "EQPT,EQPT:CR,EQPT,,"
   "EQPT,EQPT:MJ,FFSFULL,,"
   "EQPT,EQPT:MN,FTMP,,"
   "1,1:NA,GAINDH,,"
   "1,1:NA,GAINDL,,"
   "EQPT,EQPT:MJ,L1BIASD,,"
   "EQPT,EQPT:CR,L1BIASF,,"
   "EQPT,EQPT:MN,L1TMP,,"
   "EQPT,EQPT:MJ,L2BIASD,,"
   "EQPT,EQPT:CR,L2BIASF,,"
   "EQPT,EQPT:MN,L2TMP,,"
   "1,1:CR,LINE1RXPWRFL,,"
   "1,1:NA,LINE1TXPWRDH,,"
   "1,1:NA,LINE1TXPWRDL,,"
   "1,1:NA,LINE1TXPWRFL,,"
   "1,1:NA,LINE2RXPWRFL,,"
   "EQPT,EQPT:MJ,MEMLOW,,"
   "PWR-A,EQPT:MN,PWRBUSA,,"
   "PWR-B,EQPT:MN,PWRBUSB,,"
   "EQPT,EQPT:MN,SFTWDOWN,,"
   "1,1:NA,VOADH,,"
   "1,1:NA,VOADL,,"
   "1,1:NA,VOAFH,,"
;
>
```

Errors

This message can generate any of the default errors.

Command Result

This command is valid if an alarm exists that satisfies the conditions contained in the parameters <ntfcncde> and <condtype>. If one parameter is not provided, the alarms that satisfy the condition of the not null field are allowed.

8.4.25 RTRV-ATTR-DWDM

Usage Guidelines

The Retrieve Optical Alarm Severity command retrieves the severity associated with an optical alarm.

Syntax Description

Input Format

```
RTRV-ATTR-DWDM:[<TID>]:[<aid>]:<ctag>::[<ntfcncde>],[<condtype>] [,,,];
```

Input Parameters

aid	1 or ALL.
ntfcncde	A null value is equivalent to ALL.
condtype	Null or ALL. A null value defaults to ALL of the condition types.

Output Format

```
   <sid> <date> <time>
M  <ctag> COMPLD
   "<aid>[,<aidtype>]:[<ntfcncde>],<condtype>,,"
;
```

Output Parameters

aid	Always 1.
aidtype	Always 1.
ntfcncde	Notification code, of type NotificationCode.
condtype	The condition type of the alarm or event that is retrieved. ALL maps to all types.

The RTRV-ATTR-DWDM is valid if an alarm exists that satisfies the condition contained in the parameter <ntfcncde> or <condtype>. If a parameter is not provided, the alarms that satisfy the condition of the not null field are allowed.

Examples

```
RTRV-ATTR-DWDM:::123;
```

```
   EDFA3 2003-11-01 11:43:08
M  123 COMPLD
   "1,1:MN,GAINDH,,"
   "1,1:MN,GAINDL,,"
   "1,1:CR,LINE1RXPWRFL,,"
   "1,1:MN,LINE1TXPWRDH,,"
   "1,1:MN,LINE1TXPWRDL,,"
   "1,1:CR,LINE1TXPWRFL,,"
   "1,1:CR,LINE2RXPWRFL,,"
   "1,1:MN,VOADH,,"
   "1,1:MN,VOADL,,"
   "1,1:CR,VOAFH,,"
;
>
```

Command Result

The severity associated with an optical alarm is retrieved.

8.4.26 RTRV-ATTR-EQPT

Usage Guidelines

The Retrieve Equipment Alarm Severity command retrieves the severity associated with an equipment alarm.

Syntax Description

Input Format

```
RTRV-ATTR-EQPT:[<TID>]:[<aid>]:<ctag>::[<ntfcncde>],[<condtype>] [,,,];
```

Input Parameters

aid	PWR-A, PWR-B, EQPT, or ALL.
ntfcncde	A null value is equivalent to ALL.
condtype	Null or ALL. A null value defaults to ALL the condition types.

Output Format

```
<sid> <date> <time>
M  <ctag> COMPLD
   "<aid>[,<aidtype>]:[<ntfcncde>],<condtype>,,"
;
```

Output Parameters

aid	EQPT
aidtype	PWR-A, PWR-B or EQPT
ntfcncde	Notification code, of type NotificationCode.
condtype	The condition type of the alarm or event that is retrieved. ALL maps to all types.

The RTRV-ATTR-EQPT command is valid if an alarm exists that satisfies the condition contained in the parameters <ntfcncde> and <condtype>. If a parameter is not provided, the alarms that satisfy the condition of the not null field will be allowed.

Examples

```
RTRV-ATTR-EQPT:::123;

    EDFA3 2003-11-01 11:48:05
M  123 COMPLD
    "EQPT,EQPT:MN,BACKUPREST,,"
    "EQPT,EQPT:MJ,COMFAIL,,"
    "EQPT,EQPT:MN,CTMP,,"
    "EQPT,EQPT:MJ,MEMLOW,,"
    "PWR-A,EQPT:MN,PWRBUSA,,"
    "PWR-B,EQPT:MN,PWRBUSB,,"
    "EQPT,EQPT:MN,SFTWDOWN,,"
;
>
```

Command Result The severity associated with an equipment alarm is retrieved.

8.4.27 RTRV-AO

Usage Guidelines The Retrieve Autonomous Output command allows the operating system to retrieve a copy of queued autonomous messages or missing autonomous messages that cannot be sent to the operating system because of the unavailability of a communications link. Examples of autonomous messages are REPT ALM, and REPT EVT.

While a user can retrieve the latest 1000 autonomous (alarms and events) messages, normally the user should limit the retrieved messages to less than 200. Otherwise, the alarm report and other users' active sessions might be impacted. To retrieve a large number of messages, we suggest that the user retrieve the log file using FTP.

Note If atagseq is NULL, the 20 latest messages will be retrieved.

Syntax Description

Input Format

```
RTRV-AO:[<TID>]::<ctag>:::[ATAGSEQ=<atagseq>],[MSGTYPE=<msgtype>];
```

Input Parameters

atagseq	This is an integral part of the ATAG of the autonomous message to be retrieved. ATAGSEQ = a&&b, means to list ATAG range from a to b. a and b are integers. atagseq is a integer within a range. A null value is equivalent to ALL.
msgtype	This is the message type, including EVT and ALM. msgtype is of type MessageType. A null value is equivalent to ALL.

Output Parameters

If none of the stored automatic messages satisfy the selection criteria, then a complete normal response is sent. If one or more stored autonomous messages satisfies the criteria, then the messages are reported in the normal response in ATAG order.

Examples

Input Example

```
RTRV-AO:::123;
```

Output Example

```
TID-000 03-09-20 14-30-00
M  001 COMPLD
A 2 REPT EVT DWDM
"DWDM LASEARCHGD,TC,09-20,00-14:30:30,,,OV,APR,:\"Laser Status Changed\"
;
```

Errors

This message can generate any of the default errors.

Command Result

A copy of queued autonomous messages or missing autonomous messages that cannot be sent to the operating system because of the unavailability of a communications link is retrieved.

8.4.28 RTRV-COND-ALL

Usage Guidelines

The Retrieve Condition All command returns the current conditions related to the NE.

Syntax Description

Input Format

```
RTRV-COND-ALL:[<TID>]::<ctag>::[<alarmMsg>],,,;
```

Input Parameters

alarmMsg	This is the Alarm Message type. alarmMsg is of type AlarmMsg. A null value is equivalent to ALL.

Output Format

```
<sid> <date> <time>
M  <ctag> COMPLD
    "<aid>,<ccm>:<ntfcncde>,<alarmMsg>,<svreff>,<ocrdat>,<ocrtm>,,,:
        <conddescr>"
;
```

Output Parameters

aid	Use one of the following values: PWR-A, PWR-B, 1, or EQPT.
ccm	Use one of the following values: DWDM or EQPT.
ntfcncde	This is the notification code. ntfcncde is of type NotificationCode.
alarmMsg	This is the Alarm Type. alarmMsg is of type AlarmMsg.
srveff	This is the service effect. srveff is of type ServiceEffect.
ocrdat	This is the date when the triggering event occurred, in date format.
ocrtm	This is the time of day when the triggering event occurred, in time format.
conddescr	This is a detailed description of the alarm, in string format.

Examples

```
RTRV-COND-ALL:::123;

EDFA3 2003-11-01 11:54:57
M  123 COMPLD
"1,DWDM:CR,LINE1RXPWRFL,SA,11-01,11-52-39,,,:\"Power Fail Low LINE1RX Port\""
"PWR-B,EQPT:MN,PWRBUSB,NSA,11-01,11-23-34,,,:\"POWER BusB Alarm\""
;
```

Errors

This message can generate any of the default errors.

Command Result This command returns the current conditions related to the NE.

8.4.29 RTRV-COND-DWDM

Usage Guidelines The Retrieve Condition DWDM command returns the current DWDM conditions.

Syntax Description

Input Format

```
RTRV-COND-DWDM:[<TID>]::<ctag>::[<alarmDwdm>],,,;
```

Input Parameters

alarmDwdm	Alarm condition, of type Alarm_DWDM. A null value is equivalent to ALL.

Output Format

```
<sid> <date> <time>
M  <ctag> COMPLD
   "<aid>,DWDM:<ntfcncde>,<alarmDwdm>,<srveff>,<ocrdat>,<ocrtm>,,,:<conddescr>"
;
```

Output Parameters

aid	One of the following values: PWR-A, PWR-B, 1, or EQPT.
ntfcncde	Notification code, of type NotificationCode.
alarmDwdm	Alarm Type. alarmDwdm is of type Alarm_DWDM.
srveff	Service Effect. srveff is of type ServiceEffect.
ocrdat	The date when the triggering event occurred in date format.
ocrtm	The time when the triggering event occurred in time format
conddescr	Detailed description of the alarm, in string format.

Examples

```
RTRV-COND-DWDM:::123;

EDFA3 2003-11-01 11:55:11
M  123 COMPLD
"1,DWDM:CR,LINE1RXPWRFL,SA,11-01,11-52-39,,,:\"Power Fail Low LINE1RX Port\""
;
>
```

Errors

This message can generate any of the default errors.

Command Result Returns the current DWDM conditions.

8.4.30 RTRV-COND-EQPT

Usage Guidelines The Retrieve Condition Equipment command returns the current equipment conditions.

Syntax Description

Input Format

```
RTRV-COND-EQPT:[<TID>]::<ctag>::[<alarmEqpt>],,,;
```

Input Parameters

alarmEqpt	Alarm condition, of type Alarm_EQPT. A null value is equivalent to ALL.

Output Format

```
<sid> <date> <time>
M  <ctag> COMPLD
   "<aid>,<ccm>:<ntfcncde>,<alarmEqpt>,<srveff>,<ocrdat>,<ocrtm>,,,<conddescr>"
;
```

Output Parameters

aid	The access identifier for the ONS 15216 EDFA3.
ccm	Always EQPT.
ntfcncde	Notification code. ntfcncde is of type NotificationCode.
alarmEqpt	Alarm condition. alarmEqpt is of type Alarm_EQPT.
srveff	Service effect. srveff is of type ServiceEffect.
ocrdat	This is the date when the triggering event occurred, in date format.
ocrtm	is the time when the triggering event occurred, in time format.
conddescr	Detailed description of the condition, in string format.

Examples

```
RTRV-COND-EQPT:::123;

EDFA3 2003-11-01 11:55:27
M  123 COMPLD
"PWR-B,EQPT:MN,PWRBUSB,NSA,11-01,11-23-34,,,:\"POWER BusB Alarm\""
;
```

Errors

This message can generate any of the default errors.

Command Result Returns the current equipment conditions.

8.4.31 RTRV-DFLT-SECU

Usage Guidelines The Retrieve Default Security command is used to retrieve the time interval of automatic logout associated with different user security levels.

Syntax Description

Input Format

```
RTRV-DFLT-SECU:[<TID>]:<uap>:<ctag>;
```

Input Parameters

uap	User access privilege. uap is of type UserPrivilege. uap must not be null.

Output Format

```
<sid> <date> <time>
M  <ctag> COMPLD
   "<aid>:AL=<uap>,TMOUT=<tmout>"
;
```

Output Parameters

aid	Either EQPT or ALL.
tmout	Time interval of automatic logout, in string format. Value range is from 1 minute to 999 minutes.
uap	User access privilege.

Examples

```
RTRV-DFLT-SECU::ALL:123;

   EDFA3 2003-11-01 11:37:18
M  123 COMPLD
   "EQPT:AL=RWA,TMOUT=15MIN"
   "EQPT:AL=RW,TMOUT=30MIN"
   "EQPT:AL=R,TMOUT=60MIN"
;
>
```

Errors

This message can generate any of the default errors.

Command Result Retrieves the time interval of automatic logout associated with different user security levels.

8.4.32 RTRV-DWDM

Usage Guidelines The Retrieve DWDM command retrieves the ONS 15216 EDFA3 optical parameters.

Syntax Description

Input Format

```
RTRV-DWDM:[<TID>]:<aid>:<ctag>[::::];
```

Input Parameters

aid	Identifies the entity in the NE to which the command pertains. Use either 1 or ALL.

Output Format

```
<sid> <date> <time>
M  <ctag> COMPLD
"[<aid>]:[CTRLMODE=<ctrlmode>],[LINE1TXPWR=<line1txpwr>],[LINE1TXPWRSP=<line1txpwrsp>],
[LINE1RXPWR=<line1rxpwr>],[LINE2RXPWR=<line2rxpwr>],[LINE2TXPWR=<line2txpwr>], [PWROFFSET=
<pwroffset>],[GAIN=<gain>],[GAINSP=<gainsp>],[TILT=<tilt>],[TILTSP=<tiltsp>], [TILTOFFSET=
<tiltoffset>],[DCULOSS=<dculoss>],[OSRI=<on/off>],[LASTATUS=<on/off>],[VOA=<voa>]"
;
```

Output Parameters

aid	1
ctrlmode	Amplifier control mode. There are two possible values: • COPWR: Constant Output Power • CGAIN: Constant Gain
LINE1TXpwr	Amplifier output power value related to the LINE1TX Port, in dBm.
LINE1TXpwrsp	Amplifier output power setpoint value related to the LINE1TX Port, in dBm.
LINE1RXpwr	Amplifier input power value related to the LINE1RX Port, in dBm
LINE2RXpwr	Power value related to the LINE2RX Port, in dBm.
LINE2TXpwr	Power value related to the LINE2TX Port, in dBm.
pwroffset	Output power offset, in dB.
gain	Gain value, in dB.
gainsp	Gain setpoint, in dB.
tilt	Tilt value, in dB.
tiltsp	Tilt setpoint, in dB.
tiltoffset	Tilt offset, in dB.
dculoss	DCU insertion loss value, in dB.

osri	Optical safety remote interlock, of type OSRI. There are two possible values: • ON: Forces the laser off. • OFF: (Default) Removes the laser lock, allowing the laser to turn on.
lasstatus	The laser status summarizes the status (On, Off, APR) of all lasers present in the EDFA3.
voa	VOA value, in dB.

Examples

```
RTRV-DWDM::ALL:123;

   EDFA3 2003-11-01 10:20:28
M  123 COMPLD
"1:CTRLMODE=CGAIN,LINE1TXPWR=-60.0dBm,LINE1TXPWRSP=10.0dBm,LINE1RXPWR=-5.1dBm,
LINE2RXPWR=-39.1dBm,LINE2TXPWR=-60.0dBm,PWROFFSET=0.0dB,GAIN=0.0dB,GAINSP=21.0dB,
TILT=15.0dB,TILTSP=0.0dB,TILTOFFSET=0.0dB,DCULOSS=14.8dB,OSRI=ON,LASSTATUS=OFF,VOA=0.0dB"
;
>
```

Errors

This message can generate any of the default errors.

Command Result

The ONS 15216 EDFA3 optical parameters are retrieved.

8.4.33 RTRV-EQPT

Usage Guidelines

The Retrieve Equipment command retrieves the Power Bus mode.

Syntax Description

Input Format:

```
RTRV-EQPT:[<tid>]:<aid>:<ctag>[::::];
```

Input Parameters:

aid	Identifies the entity in the NE to which the command pertains. Use one of the following: • PWR-A: Retrieves PWRBUSMODE and POWERBUSAVAL • PWR-B: Retrieves PWRBUSMODE and POWERBUSBVAL • EQPT: Retrieves CASETEMP, FIBERTEMP, LASERBIAS (1 and 2), and PUMPTEMP (1 and 2) • ALL: Retrieves PWRBUSMODE, POWERBUSAVAL, POWERBUSBVAL, CASETEMP, FIBERTEMP, LASERBIAS (1 and 2), and PUMPTEMP (1 and 2)

Output Format:

```
<sid> <date> <time>
```

```
M <ctag> COMPLD
"<aid>:[PWRBUSMODE=<pwrbusmode>,][POWERBUSAVAL=<powerbusaval>,]
[POWERBUSBVAL=<powerbusbval,>][CASETEMP=<casetemp>,][FIBERTEMP=<fibertemp>,]
[LASERBIAS1=<laserbias1>,][LASERBIAS2=<laserbias2>,][PUMPTEMP1=<pumptemp1>,]
[PUMPTEMP2=<pumptemp2>]
```

Output Parameters:

aid	Retrieves PWR-A for PWRBUSMODE=SIMPLEX and POWERBUSAVAL, and PWR-B for PWRBUSMODE=DUPLEX and POWERBUSBVAL.
pwrbusmode	Power Bus mode. • SIMPLEX: Requires power only to Power Bus A • DUPLEX: Requires power to both Power Bus A and Power Bus B
powerbusaval	The Power Bus A current value.
powerbusbval	The Power Bus B current value.
casetemp	Case Temperature value.
fibertemp	Fiber Temperature value.
laserbias1	The first stage laser bias value.
laserbias2	The second stage laser bias value.
pumptemp1	The first stage pump temperature value.
pumptemp2	The second stage pump temperature value.

Examples

```
IRTRV-EQPT::ALL:123;

   EDFA3 2003-11-01 10:27:23
M  123 COMPLD

"EQPT:PWRBUSMODE=DUPLEX,POWERBUSAVAL=48.2V,POWERBUSBVAL=48.2V,CASETEMP=32.2C,FIBERTEMP=50.
0C,LASERBIAS1=0.0mA,LASERBIAS2=0.0mA,PUMPTEMP1=24.9C,PUMPTEMP2=25.0C"
;
>
```

Errors

This message can generate any of the default errors.

Command Result

The Power Bus mode is retrieved.

8.4.34 RTRV-HDR

Usage Guidelines

The Retrieve Header command is a standard keep alive message, used to ping the network element. It also returns the current time and TID of the NE. If you do not specify a TID then you can find the TID in the response to RTRV-HDR. This command is essential to NMA.

Syntax Description

```
RTRV-HDR:[TID]::[CTAG];
```

Examples

```
RTRV-HDR:::123;

   EDFA3 2003-11-01 11:49:53
M  123 COMPLD
;
>
```

Errors

This message can generate any of the default errors.

Command Result

The network element is pinged.

8.4.35 RTRV-INV

Usage Guidelines

The Retrieve Inventory command retrieves inventory information for the ONS 15216 EDFA3, including the Common Language Equipment Identifier (CLEI) code.

Syntax Description

Input Format

```
RTRV-INV:[<TID>]:<aid>:<ctag>[::::];
```

Input Parameters

aid	The aid parameter can be EQPT or ALL.

Output Format

```
<sid> <date> <time>
M  <ctag> COMPLD
"[<aid>]:[CLEICODE=<cleicode>],[HARDWAREREV=<hardwarerev>],[FIRMWAREREV=<firmwarerev>],
[SOFTWAREREV=<softwarerev>],[SOFTWAREUPDATE=<softwareupdate>],[SERIALNUM=<serialnum>],
[MFGNAME=<mfgname>],[MODELNAME=<modelname>]"
;
```

Output Parameters

aid	This is a fixed string. aid is optional.
cleicode	This is the CLEI code. cleicode is a string. cleicode is optional.
hardwarerev	The hardware version is a string. hardwarerev is optional.
firmwarerev	The firmware version is a string. firmwarerev is optional.
softwarerev	The software version is a string. softwarerev is optional.
softwareupdate	The software update date is a string. softwareupdate is optional.
serialnum	The serial number is a string. serialnum is optional.
mfgname	The manufacturer name is a string. mfgname is optional.
modelname	The model name is a string. modelname is optional.

Examples

```
RTRV-INV::ALL:123;

   EDFA3 2003-11-01 11:50:02
M  123 COMPLD
"EQPT:CLEI=WMM7BG0ARA,HARDWAREREV=1.0.4,FIRMWAREREV=3.11.0,SOFTWAREREV=01.00.00,
HARDWAREREV=3.11.0,SOFTWAREUPDATE=1980-01-0108-30-38,SERIALNUM=ANX00000001,
MFGNAME=Cisco Systems,MODELNAME=PEMLB0C17CS03R6"
;
>
```

Errors

This message can generate any of the default errors.

Command Result

Inventory information for the ONS 15216 EDFA3 is retrieved.

8.4.36 RTRV-NE-GEN

Usage Guidelines

The Retrieve Network Element GEN command retrieves an NE's generic information, including:

- NE TID
- Node name
- Longitude
- Latitude
- IP address
- IP subnet mask
- Gateway
- MAC address
- Boot table content

Syntax Description

Input Format

```
RTRV-NE-GEN:[<TID>]::[CTAG];
```

Output Format

```
<sid> <date> <time>
M  <ctag> COMPLD
"<aid>:NAME=<name>,DESCR=<descr>,LONGITUDE=<longitude>,LATITUDE=<latitude>,
IPADDR=<ipaddr>,IPMASK=<ipmask>,DEFRTR=<defrtr>,MACADDRESS=<macaddress>,
ACTIVESW=<activesw>,STANDBYSW=<standbysw>,SNMPSETREQ=<snmpsetreq>"
;
```

Output Parameters

aid	Always use EQPT for this command.
name	The system sid/tid, in string format.
descr	The EDFA3's description with a maximum length of 64 characters, in string format.
longitude	Longitude of the system, in string format.
latitude	Latitude of the system, in string format.
ipaddr	IP address, in string format.
ipmask	IP subnet mask, in string format.
defrtr	Gateway, in string format.
macaddress	MAC address, in string format.
activesw	The file name for the active software file, in string format.
standbysw	Standby software file, in string format.
snmpsetreq	The status of the SNMP Set Request operation (ENABLE or DISABLE), in string format.

Examples

```
RTRV-NE-GEN:::123;

   EDFA3 2004-01-28 16:28:08
M  123 COMPLD
"EQPT:NAME=EDFA3,DESCR=ONS15216EDFA3,LONGITUDE=,LATITUDE=,IPADDR=192.9.0.7,
IPMASK=255.255.255.0,DEFRTR=0.0.0.0,MACADDRESS=0010EC8042B0,
ACTIVESW=ONS15216Edfa3-00.04.17-004A-16.18,STANDBYSW=ONS15216Edfa3-00.04.17-004A-16.18,
SNMPSETREQ=ENABLE"
;
>
```

Errors

This message can generate any of the default errors.

Command Result

Network element generic information is retrieved.

8.4.37 RTRV-RFILE

Usage Guidelines

The Retrieve RFILE command lists a specific file or lists all files on the flash file system.

Syntax Description

Input Format

```
RTRV-RFILE:[<TID>]::<ctag>::[<localfilename>];
```

Input Parameters

localfilename	Name of the file on the flash file system that is to be listed. localfilename is a string. A null value is equivalent to ALL.

Output Format

```
<sid> <date> <time>
M  <ctag> COMPLD
   "<aid>:<localfilename>,<filesize>"
;
```

Output Parameters

aid	This is the aid EQPT.
localfilename	Name of the file on the flash file system that is to be listed. localfilename is a string.
filesize	File size in bytes. filesize is a string.

Examples

```
RTRV-RFILE:::123;

   EDFA3 2003-11-01 10:04:26
M  123 COMPLD
   "EQPT:ONS15216DataBase,10456"
   "EQPT:aolog.txt,7000"
   "EQPT:aologA.txt,180261"
   "EQPT:ONS15216Edfa3_01.00.00_003L_12.23,4257054"
   "EQPT:snmpNotifyLogB,200704"
   "EQPT:snmpNotifyLogA,20188"
;
>
```

Errors

This message can generate any of the default errors.

Command Result

Lists a specific file or lists all files on the flash file system.

8.4.38 RTRV-STATUS

Usage Guidelines

The Retrieve STATUS command retrieves the user logged on status for the past 1 day from the current date and time.

Syntax Description

Input Format

```
RTRV-STATUS:[TID]:<ocrdat>,<ocrtm>:<ctag>;
```

Input Parameters

ocrdat	Date. ocrdat is a string. ocrdat must not be null.
ocrtm	Time. ocrtm is a string. ocrtm must not be null.

Output Format

```
<sid> <date> <time>
M  <ctag> COMPLD
   "<ocrdat>,<ocrtm>:,<uid>"
;
```

Output Parameters

ocrdat	This is the date. ocrdat is a string.
ocrtm	This is the time. ocrtm is a string.
uid	This is the user ID. uid is a string.

Examples

```
RTRV-STATUS::2003-11-01,11-50-00:123;

   EDFA3 2003-11-01 11:50:59
M  123 COMPLD
   "2003-11-01,11-50-00:,CISCO15,"
;
>
```

Errors

This message can generate any of the default errors.

Command Result

Retrieves the user logged on status for the past 1 day from the current date and time.

8.4.39 RTRV-TH-DWDM

Usage Guidelines

The Retrieve Threshold DWDM command retrieves optical thresholds related to gain and optical power.

Syntax Description

Input Format

```
RTRV-TH-DWDM:[TID]:<aid>:<ctag>::[<thDwdm>][,,];
```

Input Parameters

aid	Access ID. For this command, the aid is AID_EDFA3. aid must not be null.
thDwdm	Threshold type. thDwdm is of type TH_DWDM. A null value is equivalent to ALL.

Output Format

```
   <sid> <date> <time>
M  <ctag> COMPLD
   "<aid>,<aidtype>:<thDwdm>,,,<thlev>"
;
```

Output Parameters

aid	Always 1.
aidtype	The aid type, either DWDM or NULL.
thDwdm	Threshold type, of type TH_DWDM.
thlev	Threshold level. thlev is a string. Possible values are: • GAINTHDL: Gain Degrade Low Threshold • GAINTHDH: Gain Degrade High Threshold • LINE1TXPWRTHDL: Power Degrade Low Threshold LINE1TX Port • LINE1TXPWRTHDH: Power Degrade High Threshold LINE1TX Port • LINE1TXPWRTHFL: Power Fail Low Threshold LINE1TX Port • LINE1RXPWRTHFL: Power Fail Low Threshold LINE1RX Port • LINE2RXPWRTHFL: Power Fail Low Threshold LINE2RX Port

Examples

```
> RTRV-TH-DWDM::ALL:124;

    2037-03-12 12:17:07
M  124 COMPLD
   "1,DWDM:GAINTHDH,,,23.0dB"
   "1,DWDM:GAINTHDL,,,19.0dB"
   "1,DWDM:LINE1RXPWRTHFL,,,10.0dBm"
   "1,DWDM:LINE1TXPWRTHDH,,,12.0dBm"
   "1,DWDM:LINE1TXPWRTHDL,,,  8.0dBm"
   "1,DWDM:LINE1TXPWRTHFL,,,-6.0dBm"
   "1,DWDM:LINE2RXPWRTHFL,,,-33.0dBm"
;
```

Errors

This message can generate any of the default errors.

Command Result Retrieves optical thresholds related to gain and optical power.

8.4.40 RTRV-TH-EQPT

Usage Guidelines The Retrieve Threshold Equipment command retrieves general threshold values for the ONS 15216 EDFA3.

Syntax Description

Input Format

```
RTRV-TH-EQPT:[<tid>]:<aid>:<ctag>::[<montype>][,][,];
```

Input Parameters

aid	Use one of the following aids: • PWR-A or PWR-B to retrieve the Power Bus A and B thresholds • EQPT to retrieve Case Temperature Thresholds • ALL to retrieve Power Bus A and B and Case Temperature thresholds
montype	Type of threshold to monitor. Use one of the following: • PWRBUSMIN to retrieve Power Bus A and B minimum voltage • PWRBUSMAX to retrieve Power Bus A and B maximum voltage • MAXCTMP to retrieve Maximum Case Temperature • MINCTMP to retrieve Minimum Case Temperature

Output Format

```
   <sid> <date> <time>
M  <ctag> COMPLD
   "<aid>:<thresholdtype>,,,<thresholdvalue>"
;
```

Output Parameters

aid	EQPT and ALL have same input effect. • EQPT: General parameters of the ONS 15216 EDFA3 (not directly affecting optical signal or power bus) • ALL: Any or all of the preceding (command input only)
threshholdtype and thresholdvalue pairs	Type of threshold or setpoint that is retrieved. Values are retrieved for the following: • MAXCTMP: Maximum case temperature (cerent15216EdfaCtmpMax), between 60 and 100, with a default of 65 degrees C. • MINCTMP: Minimum case temperature (cerent15216EdfaCtmpMin), between –10 and 30, with a default of –5 degrees C. • PWRBUSMIN: The minimum power bus value, between 0 and 47, with a default value of –40V. • PWRBUSMAX: The minimum power bus value, between 49 and 70, with a default value of –57V.

Examples

```
RTRV-TH-EQPT::ALL:1;

   EDFA3 2004-01-28 17:47:26
M  1 COMPLD
   "EQPT,EQPT:MAXCTMP,,,65.0C"
   "EQPT,EQPT:MINCTMP,,,-5.0C"
   "PWR-B,EQPT:PWRBUSMAX,,,57.0V"
   "PWR-B,EQPT:PWRBUSMIN,,,40.0V"
;
```

Command Result Power Bus A and B and Case Temperature threshold information is retrieved.

8.4.41 RTRV-TOD

Usage Guidelines The Retrieve Time of Day command retrieves the date and time of day of the ONS 15216 EDFA3.

Syntax Description

Input Format

```
RTRV-TOD:[TID]::[ctag]::;
```

Output Format

```
<sid> <date> <time>
M  <ctag> COMPLD
   "<year>,<month>,<day>,<hour>,<minute>,<second>"
;
```

Output Parameters

year	This is the year. year is an integer.
month	This is the month. month is an integer.
day	This is the day. day is an integer.
hour	This is the hour. hour is an integer.
minute	This is the minutes. minute is an integer.
second	This is the seconds. Second is an integer.

Examples

```
RTRV-TOD:::123;

   EDFA3 2003-11-01 10:00:03
M  123 COMPLD
   "2003,11,01,10,00,03"
;
>
```

Errors

This message can generate any of the default errors.

Command Result

The date and time of day of the ONS 15216 EDFA3 is retrieved.

8.4.42 RTRV-TRAPTABLE

Usage Guidelines

The Retrieve Trap Table command retrieves information about the trap table. This command can be used to retrieve a specific row (if aid = IP address) or all the rows (if aid = ALL or null) of the SNMP Trap Destination Table.

Syntax Description

Input Format

```
RTRV-TRAPTABLE:[TID]:[<aid>]:[ctag];
```

Input Parameters

aid	The aid is composed of the IP address. aid is a string. A null value is equivalent to ALL and returns all values in the table.

Output Format

```
<sid> <date> <time>
M  <ctag> COMPLD
   "<ip>,<port>,<community>,<trapversion>"
;
```

Output Parameters

ip	The trap receiver IP address. ip is a string.
port	The UDP port number. port is a integer.
community	The community string. community is a string.
trapversion	The trap version. The possible value are v1 or v2. trapversion is a string.

Examples

```
RTRV-TRAPTABLE:::123;

   EDFA3 2003-11-01 10:08:29
M  123 COMPLD
   "129.9.0.11,162,USER_01,v1"
   "192.168.1.1,162,EDFA3_USER,v1"
;
>
```

Errors

This message can generate any of the default errors.

Command Result

Provides information about the trap table.

8.4.43 RTRV-USER-SECU

Usage Guidelines

The Retrieve User Security command retrieves the privilege/security level of one or all users. It does not return a user's password. Under normal circumstances, only an administrator can invoke the general version of this command, however individual users might be able to retrieve their own information. The aid block contains the user identifier(s).

Syntax Description

Input Format

```
RTRV-USER-SECU:[TID]:<uid>:[CTAG];
```

Input Parameters

uid	The uid field is the user identifier. The <uid> field may be used to retrieve the security data for a single user by entering that users <uid>or set to ALL to retrieve the records of all users. The <uid> must not be null (empty).

Output Format

```
<sid> <date> <time>
M  <ctag> COMPLD
   "<uid>:,<uap>:LOGGEDIN=<loggedin>,[NUMSESSIONS=<numsessions>]"
;
```

Output Parameters

uid	The user identifier. uid is a string.
uap	uap is of type UserPrivilege.
loggedin	loggedin is a string. • YES: The user is logged in. • NO: The user is not logged in.
numsessions	numsessions is a string. numsessions is optional.

Examples

```
RTRV-USER-SECU::ALL:123;

   EDFA3 2003-11-01 10:13:54
M  123 COMPLD
   "CISCO15:,RWA:LOGGEDIN=YES,NUMSESSIONS=1"
   "EDFA3_USER:,RWA:LOGGEDIN=NO,NUMSESSIONS=1"
;
>
```

Errors

This message can generate any of the default errors.

Command Result

Retrieves the privilege/security level of one or more users.

8.4.44 SET-ATTR-DWDM

Usage Guidelines

The Set DWDM Attributes command changes the optical alarm severity for the ONS 15216 EDFA3. The command is valid if an alarm exists that satisfies the condition contained in the parameters <ntfcncde> and <condtype>. If a parameter is not provided, the alarms that satisfy the condition of the not null field are allowed.

When the command has been provided and the alarm is active, the alarm is cleared and then raised again with the new severity (without a reboot of the ONS 16216 EDFA3). A REPT^EVT message is generated, stating the change of the severity (SEVERITYCHGD) and containing both the old and the new severities.

Values CR, MJ, and MN are reported with the REPT^ALM message, while NA is reported with the REPT^EVT message.

The change of the severity impacts the RTRV-COND-ALL/RTRV-COND-DWDM commands that report the alarm.

Syntax Description

Input Format

```
SET-ATTR-DWDM:[<TID>]:[<aid>]:<ctag>::[<ntfcncde>],[<condtype>][,,,];
```

Input Parameters

aid	Use either 1 or ALL.
ntfcncde	A null value defaults to NA.[1]
condtype	Null or ALL. A null value defaults to ALL.

1. Not reported when the event occurs, information is retained in the NE.

Examples

```
SET-ATTR-DWDM::ALL:123::CR,LINE1RXPWRFL;

   EDFA3 2003-11-01 11:47:46
M  123 COMPLD
   /* SET-ATTR-DWDM */
;
>
```

Command Result

Changes the severity associated with an optical alarm.

8.4.45 SET-ATTR-EQPT

Usage Guidelines

The Set Equipment Attributes command changes the equipment alarm severity. the command is valid if an alarm exists that satisfies the condition contained in the parameters <ntfcncde> and <condtype>. If a parameter is not provided, the alarms that satisfy the condition of the not null field are allowed.

When the command has been issued and the alarm is active, the alarm is cleared and then raised again with the new severity (without a reboot of the EDFA3). A REPT^EVT message is generated, stating the change of the severity (SEVERITYCHGD) and containing both the old and the new severity.

Values CR, MJ, and MN are reported with the REPT^ALM message, while NA is reported with the REPT^EVT message.

The change of the severity impacts the RTRV-ALM-ALL/RTRV-ALM-EQPT and RTRV-COND-ALL/RTRV-COND-EQPT commands that report the alarm.

Syntax Description

Input Format

```
SET-ATTR-EQPT:[<TID>]:[<aid>]:<ctag>::[<ntfcncde>],[<condtype>][,,,];
```

Input Parameters

aid	Use one of the following values: PWR-A, PWR-B, EQPT, or ALL.
ntfcncde	A null value defaults to NA.[1]
condtype	Null or ALL. A null value defaults to ALL.

1. Not reported when the event occurs, information is retained in the NE.

Examples

```
SET-ATTR-EQPT::ALL:123::MJ,COMFAIL;

   EDFA3 2003-11-01 11:49:02
M  123 COMPLD
   /* SET-ATTR-EQPT */
;
>
```

Command Result Changes the severity associated with an equipment alarm.

8.4.46 SET-ATTR-SECUDFLT

Usage Guidelines The Set Attribute Security Default command is used to set the time interval for automatic logout associated with different user security levels.

The default settings are:

- 15 minutes for the RWA user
- 30 minutes for the RW user
- 60 minutes for the R user

If no communication occurs during the specified time, the user session is closed by the EDFA3 TL1 agent, generating a CANC event.

Users affected by changes to the timeout must log out and log in again for the change to take effect.

Syntax Description

Input Format

```
SET-ATTR-SECUDFLT:[TID]::[CTAG]::AL=<al>,TMOUT=<tmout>,,,,;
```

Input Parameters

al	User privilege. al is of type UserPrivilege, and must not be null.
tmout	The time interval of automatic logout. Value range is from 1 to 99 minutes. tmout is an integer. A value of 0 disables the automatic logout feature.

Examples

```
SET-ATTR-SECUDFLT:::123::AL=RWA,TMOUT=10;
```

```
   EDFA3 2003-11-01 11:39:06
M  123 COMPLD
   /* SET-ATTR-SECUDFLT */
;
>
```

Errors

This message can generate any of the default errors.

Command Result Sets the time interval for auto logout associated with different user security levels.

8.4.47 SET-TH-DWDM

Usage Guidelines The Set Threshold DWDM command sets the optical threshold values for the ONS 15216 EDFA3.

Related Commands RTRV-TH-DWDM

Syntax Description

Input Format

```
SET-TH-DWDM:[TID]:<aid>:[CTAG]::<thresholdDWDM>,<thlev>[,,];
```

Input Parameters

aid	Access ID. 1 and ALL have the same effect.
thresholdDWDM	Type of threshold that is to be set. thresholdDWDM is of type TH_DWDM. Possible values are: • LINE1TXPWRTHFL: Power Fail Low Threshold LINE1 TX port • LINE1RXPWRTHFL: Power Fail Low Threshold LINE1 RX port • LINE2RXPWRTHFL: Power Fail Low Threshold LINE2 RX port
thlev	Threshold level. thlev is a float.

Examples

```
SET-TH-DWDM::ALL:123::LINE1TXPWRTHFL,-5;

   EDFA3 2003-11-01 11:41:20
A  1 REPT EVT DWDM
   "DWDM:LINE1TXPWRTHFLCHGD,TC,11-01,11-41-20,,,-5.0dBm,-6.0dBm,:\"Power Fail Low
Threshold Changed, LINE1TX Port \""
;

  EDFA3 2003-11-01 11:41:20
M  123 COMPLD
   /* SET-TH-DWDM */
;
>
```

Errors

This message can generate any of the default errors.

Command Result Sets optical threshold values for the ONS 15216 EDFA3.

8.4.48 SET-TH-EQPT

Usage Guidelines The **Set Threshold Equipment command s**ets general threshold values for the ONS 15216 EDFA3.

Syntax Description

Input Format

```
SET-TH-EQPT:[<tid>]:<aid>:<ctag>::<thEQPT>,<thLEV>[,,];
```

Input Parameters

aid	Possible values are EQPT, PWR-A, PWR-B and ALL, which are used as follows: • PWR-A or PWR-B to set Power Bus A and B thresholds • EQPT: General parameters of the ONS 15216 EDFA3 (not directly affecting optical signal or power bus). • ALL: Any or all of the preceding (command input only).
thEQPT and thLEV pairs	Type of threshold that is to be set. The threshold is set to the thLEV or thEQPT value that follows the comma. It is possible to specify values for one or more of the following: • PWRBUSMIN: Power Bus A and B minimum voltage. • PWRBUSMAX: Power Bus A and B maximum voltage. • MAXCTMP: Maximum case temperature (cerent15216EdfaCtmpMax), between 60 and 100, with a default of 65 degrees C. • MINCTMP: Minimum case temperature (cerent15216EdfaCtmpMin), between –10 and 30, with a default of –5 degrees C.

Examples

```
SET-TH-EQPT::EQPT:123::MINCTMP,0;

   EDFA3 2003-11-01 11:42:51
A  2 REPT EVT EQPT
   "EQPT:MINCTMPCHGD,TC,11-01,11-42-51,,, 0.0C,-5.0C,:\"Min Case Temperature Changed \""
;

  EDFA3 2003-11-01 11:42:51
M  123 COMPLD
   /* SET-TH-EQPT */
;
>
```

Command Result Sets general threshold values for the ONS 15216 EDFA3.

8.4.49 STA-LOCL-RST

Usage Guidelines The Start LOCL Restore command restores all the manufacturing default settings. These include:

- Resetting the IP address
- Deleting the user and password database
- Reverting CISCO15 to the default username and blank to the password
- Resetting other parameters to restore the unit to its state as shipped from manufacturing

The files on the FFS, the date and time, and the values of manufacturing calibration are not affected.

This command must be followed by the INIT-SYS command in order for the restoration to take effect.

Syntax Description

```
STA-LOCL-RST:[TID]::[CTAG];
```

Examples

```
STA-LOCL-RST:::123;

   EDFA3 2003-11-01 11:55:23
M  123 COMPLD
   /* STA-LOCL-RST */
;
>
```

Errors

This message can generate any of the default errors.

Command Result Restores all the manufacturing default settings

8.5 Autonomous Messages

The following subsections name each TL1 autonomous message, provide a sample of syntax and provide examples of each command.

8.5.1 CANC

Usage Guidelines The Cancel message is an automatic message transmitted by the network element (NE) to a user when a session that was established by that user is terminated because no messages were exchanged for a defined period of time (a timeout).

The timeout period is set based on the user privilege and can be configured with the SET-ATTR-SECUDFLT command. The default timeout settings are:

- 15 minutes for the RWA user
- 30 minutes for the RW user
- 60 minutes for the R user

Use the RTRV-DFLT-SECU command to retrieve the timeout values.

When a timeout occurs, the corresponding port must drop, so the next session initiation at that port requires the regular login procedure. The following message is visible.

```
>
[10.92.27.66: remote disconnect]
```

In the above example, 10.92.27.66 indicates the node IP address.

Syntax Description

Output Format

```
<sid> <date> <time>
A  <ATAG> CANC
   "<uid>"
;
```

Output Parameters

uid	uid is a string that identifies the user whose session is terminated due to a timeout.

Examples

```
   EDFA3 03-06-20 14-30-00
A  001 CANC
    CISCO19
;
.
```

8.5.2 REPT ALM DWDM

Usage Guidelines

The Report Alarm DWDM message reports when a DWDM alarm is generated or cleared.

Syntax Description

Output Format

```
<SID> <DATE> <TIME>
** <ATAG> REPT ALM DWDM
   "DWDM:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,,<monval>,:<conddescr>"
;
```

Output Parameters

ntfcncde	Notification code. ntfcncde is of type NotificationCode.
condtype	Alarm condition type. alarmMsg is of type Alarm_DWDM.
srveff	Service effect. srveff is of type ServiceEffect.
ocrdat	This is the date when the event occurred in date format.
ocrtm	This is the time when the event occurred in time format
monval	This is the measured value of a monitored parameter. monval is a string.
conddescr	This is a detailed description of the alarm. conddescr is a string.

Examples

```
EDFA3 2003-11-01 11:43:23
A  10 REPT ALM DWDM
   "DWDM:CL,LINE2RXPWRFL,SA,11-01,11-43-23,,0.0dBm,:\"Power Fail Low, LINE2RX Port \""
;
```

8.5.3 REPT ALM EQPT

Usage Guidelines

The Report Alarm Equipment message reports when a general alarm (one not directly affecting the optical signal or power bus) is generated or cleared.

Syntax Description

Output Format

```
<sid> <date> <time>
** <ATAG> REPT ALM EQPT
   "<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,,<monval>,<conddescr>"
;
```

Output Parameters

aid	aid is a string.
ntfcncde	Notification code. ntfcncde is of type NotificationCode.
condtype	Alarm condition type, of type Alarm_EQPT.
srveff	Service effect. srveff is of type ServiceEffect.
ocrdat	This is the date when the event occurred in date format.
ocrtm	This is the time when the event occurred in time format
monval	This is the measured value of a monitored parameter. monval is a string.
conddescr	This is the detailed description of alarm. conddescr is a string.

Examples

```
EDFA3 2003-11-01 11:51:42
*  18 REPT ALM EQPT
   "PWR-B:MN,PWRBUSB,NSA,11-01,10-29-57,,0.0V,\"Power BusB Alarm \""
;
```

8.5.4 REPT EVT DWDM

Usage Guidelines

The Report Event DWDM message reports changes related to DWDM threshold settings and tilt or gain configuration.

Syntax Description

Output Format

```
<SID> <DATE> <TIME>
A  <ATAG> REPT EVT DWDM
   "DWDM:<crtlmode>,[<condeff>],[<ocrdat>],[<ocrtm>],,,[<newval>],[<oldval>],:<conddescr>"
;
```

Output Parameters

crtlmode	This is the control mode. crtlmode is of type Evt_DWDM.
condeff	This indicates the effect of the event on the condition of the NE. condeff is of type ConditionEffect.
ocrdat	This is the date when the event occurred, in date format
ocrtm	This is the time of day when event occurred, in time format.
newval	This is the new threshold for the parameter. newval is a string.
oldval	This is the old threshold value for the parameter. oldval is a string.
conddescr	This is a detailed description of an alarm condition. conddescr is a string.

Examples

```
EDFA3 2003-11-01 10:26:00
A  2 REPT EVT DWDM
   "DWDM:GAINTHDHCHGD,TC,11-01,10-26-00,,,17.0dB,23.0dB,:\"Gain Degrade High Threshold
Changed \""
;
```

8.5.5 REPT EVT EQPT

Usage Guidelines

The Report Event Equipment message reports changes related to equipment threshold settings and software reset.

Syntax Description

Output Format

```
<SID> <DATE> <TIME>
A  <ATAG> REPT EVT EQPT
   "<aid>:<EvtEqpt>,[<condeff>],[<octdat>],[<ocrtm>],,,[<newval>],[<oldval>],:<conddescr>"
;
```

Output Parameters

aid	Choose one of the following: • PWR-A: If PWRBUSMODE has been changed to SIMPLEX • PWR-B: If PWRBUSMODE has been changed to DUPLEX • EQPT: For CUTOVERRESET or SOFTWARERESTET
EvtEqpt	Event condition, of type Evt_EQPT.
condeff	Condition effect, of type ConditionEffect.
octdat	The date when the event occurred, in date format.
ocrtm	The time when the event occurred, in time format
newval	The new threshold for the parameter. newval is a string.
oldval	The old threshold for the parameter. oldval is a string.
conddescr	Detailed description of alarm. conddescr is a string.

Examples

```
EDFA3 2003-11-01 11:42:51
A  2 REPT EVT EQPT
   "EQPT:MINCTMPCHGD,TC,11-01,11-42-51,,, 0.0C,-5.0C,:\"Min Case Temperature Changed \""
;
```

8.5.6 REPT EVT FXFR

Usage Guidelines

The Report Event File Transfer message reports events related to software download.

Syntax Description

Output Format

```
<sid> <date> <time>
A  <ATAG> REPT EVT FXFR
   "<filename>,<fxfrStatus>,[<fxfrRslt>],[<Bytesxfrd>]"
;
```

Output Parameters

filename	This parameter identifies the name of the file that is being transferred. filename is a string.
fxfrStatus	This parameter indicates the file transferred status. fxfrStatus is of type Evt_fxfrStatus.
fxfrRslt	The file transfer result parameter indicates success or failure of the file transfer. This is displayed only when the file transfer has completed. fxfrRslt is of type Evt_fxfrrslt.
Bytesxfrd	This parameter reports the transferred byte count. Bytesxfrd is a string.

Examples

```
EDFA3 2003-11-01 12:42:51
A  3 REPT EVT FXFR
   "ONS15216Edfa3-0.4.6-003J-22.17,COMPLD,SUCCESS,4180222"
;
```

8.6 Parameter Types

Various types of parameters can be added to TL1 commands to return specific values. The following sections describe the TL1 parameters that can be used with the ONS 15216 EDFA3.

8.6.1 Access Identifiers

Access identifiers (AID) direct input commands to their intended physical or data entity inside the NE. Equipment modules and facilities are typical examples of entities addressed by the access code. AID_EDFA3 can have multiple patterns, described in Table 8-10.

Table 8-10 AID_EDFA3 Pattern Descriptions

Pattern	Description
1	Optical channel related.
ALL	Any or all of the preceding (command input only).
DWDM	Optical channel related.
EQPT	General parameters of the ONS 15216 EDFA3 (not directly affecting optical signal or power bus).
<IP Address>	AID for trap table.
PWR-A	Power Bus A.
PWR-B	Power Bus B.

8.6.2 Alarm_DWDM

The values described in Table 8-11 are for alarms related to the optical signal.

Table 8-11 Alarm_DWDM Value Descriptions

Value	Description
GAINDH	Gain Degrade High
GAINDL	Gain Degrade Low
LINE1RXPWRFL	Power Fail Low COM RX Port
LINE1TXPWRDH	Power Degrade High LINE1TX Port
LINE1TXPWRDL	Power Degrade Low LINE1TX Port
LINE1TXPWRFL	Power Fail Low LINE1TX Port
LINE2RXPWRFL	Power Fail Low DC RX Port
VOADH	VOA Degrade High
VOADL	VOA Degrade Low
VOAFH	VOA Fail High

8.6.3 Alarm_EQPT

The values described in Table 8-12 are for alarms related to the equipment.

Table 8-12 Alarm_EQPT Value Descriptions

Value	Description
COMFAIL	Module Communication Failure
CTMP	Case Temperature Out of Range
DATAFLT	Data Failure
EQPT	Equipment Failure
FFSLOW	Flash File System Capacity Very Low
FTMP	Fiber Temperature Out of Range
L1BIASD	Laser 1 Bias Degrade
L2BIASD	Laser 2 Bias Degrade
L1BIASF	Laser 1 Bias Fail
L2BIASF	Laser 2 Bias Fail
L1TMP	Excessive Pump 1 Temperature
L2TMP	Excessive Pump 2 Temperature
MEMLOW	Free Memory on System Very Low
PWRBUSA	Power Bus A
PWRBUSB	Power Bus B

8.6.4 AlarmMsg

The values in Table 8-13 relate to the EDFA alarm messages type.

Table 8-13 AlarmMsg Value Descriptions

Value	Description
COMFAIL	Module Communication Failure
CTMP	Case Temperature Out of Range
DATAFLT	Data Failure
EQPT	Equipment Failure
FFSLOW	Exceeding Memory Capacity
FTMP	Fiber Temperature Out of Range
GAINDH	Gain Degrade High
GAINDL	Gain Degrade Low
LBIASD	Laser Bias Degrade
LBIASF	Laser Bias Fail
LINE1RXPWRFL	Power Fail Low COM RX Port

Table 8-13 AlarmMsg Value Descriptions (continued)

Value	Description
LINE1TXPWRDH	Power Degrade High LINE1TX Port
LINE1TXPWRDL	Power Degrade Low LINE1TX Port
LINE1TXPWRFL	Power Fail Low LINE1TX Port
LINE2RXPWRFL	Power Fail Low DC RX Port
LTMP	Excessive Pump Temperature
MEMLOW	Exceeding Memory Capacity
PWRBUSA	Power Bus A Alarm
PWRBUSB	Power Bus B Alarm
VOADH	VOA degrade High
VOADL	VOA Degrade Low
VOAFH	VOA Fail High

8.6.5 Autologoutinterval

The values in Table 8-14 reflect the inactive time interval for automatic logout.

Table 8-14 Autologoutinterval Value Descriptions

Value	Description
10MIN	10 minutes
1MIN	1 minute
30MIN	30 minutes
5MIN	5 minutes
60MIN	60 minutes

8.6.6 Automsg

The values in Table 8-15 relate to EDFA3 autonomous messages type.

Table 8-15 Automsg Value Descriptions

Value	Description
COMFAIL	Module Communication Failure
COMPLD	File Transfer Completed
CTMP	Case Temperature Out of Range
CTRLMODE	Control Mode Changed
CUTOVERRESET	Reset After Cutover
DATAFLT	Data Failure
EQPT	Equipment Failure

Table 8-15 Automsg Value Descriptions (continued)

Value	Description
FFSSLOW	Flash File System Capacity Very Low
FTMP	Fiber Temperature Out of Range
GAINCHGD	Gain Setpoint Changed
GAINDH	Gain Degrade High
GAINDL	Gain Degrade Low
GAINTHDHCHGD	Gain Degrade Low Threshold Changed
GAINTHDLCHGD	Gain Degrade High Threshold Changed
IP	File Transfer In Progress
LASERCHGD	Laser Status Changed
LBIASD	Laser Bias Degrade
LBIASF	Laser Bias Fail
LINE1RXPWRFL	Power Fail Low COM RX Port
LINE1RXPWRTHFLCHGD	Power Fail Low Threshold Changed COM RX Port
LINE1TXPWRCHGD	Power set point Changed LINE1TX Port
LINE1TXPWRDH	Power Degrade High LINE1TX Port
LINE1TXPWRDL	Power Degrade Low LINE1TX Port
LINE1TXPWRFL	Power Fail Low LINE1TX Port
LINE1TXPWRTHDHCHGD	Power Degrade High Threshold Changed LINE1TX Port
LINE1TXPWRTHDLCHGD	Power Degrade Low Threshold Changed LINE1TX Port
LINE1TXPWRTHFLCHGD	Power Degrade High Threshold Changed LINE1TX Port
LINE2RXPWRFL	Power Fail Low DC RX Port
LINE2RXPWRTHFLCHGD	Power Fail Low Threshold Changed DC RX Port
LTMP	Excessive Pump Temperature
MEMLOW	Free Memory On System Very Low
OPOFFSET	Output Power Offset Changed
OSRICHGD	OSRI Changed
PWRBUSA	Power Bus A Alarm
PWRBUSB	Power Bus B Alarm
PWRBUSMODE	Power Supply Bus Mode
SOFTWARERESET	Software Reset
START	File Transfer Start
TILTCHGD	Tilt Setpoint Changed
TILTOFFSETCHGD	Tilt Offset Changed
VOADH	VOA Degrade High
VOADL	VOA Degrade Low
VOAFH	VOA Fail High

8.6.7 ConditionEffect

The values in Table 8-16 reflect the effect of a condition on the NE. A null value defaults to a transient condition (TC).

Table 8-16 ConditionEffect Value Descriptions

Value	Description
CL	Standing Condition Cleared
SC	Standing Condition Raised
TC	Transient Condition

8.6.8 ctrlmode

The values in Table 8-17 reflect the Pump1 or Pump2 control mode.

Table 8-17 ctrlmode Value Descriptions

Value	Description
CGAIN	Constant Gain Mode
COPWR	Constant Output Power

8.6.9 Evt_DWDM

The values in Table 8-18 reflect EDFA3 events related to the optical signal.

Table 8-18 Evt_DWDM Value Descriptions

Value	Description
CTRLMODE	Control Mode Changed
GAINCHGD	Gain Setpoint Changed
GAINTHDHCHGD	Gain Degrade High Threshold Changed
GAINTHDLCHGD	Gain Degrade Low Threshold Changed
LASERCHGD	Laser Status Changed
LINE1RXPWRTHFLCHGD	Power Fail Low Threshold Changed COM RX Port
LINE1TXPWRCHGD	Power Setpoint Changed LINE1TX Port
LINE1TXPWRTHDHCHGD	Power Degrade High Threshold Changed LINE1TX Port
LINE1TXPWRTHDLCHGD	Power Degrade Low Threshold Changed LINE1TX Port
LINE1TXPWRTHFLCHGD	Power Fail Low Threshold Changed LINE1TX Port
LINE2RXPWRTHFLCHGD	Power Fail Low Threshold Changed DC RX Port
OPOFFSET	Output Power Offset Changed
OSRICHGD	OSRI Changed

Table 8-18 Evt_DWDM Value Descriptions (continued)

Value	Description
TILTCHGD	Tilt Setpoint Changed
TILTOFFSETCHGD	Tilt Offset Changed

8.6.10 Evt_EQPT

The values in Table 8-19 reflect the events related to equipment.

Table 8-19 Evt_EQPT Value Descriptions

Value	Description
CUTOVERRESET	Reset After Cutover
PWRBUSMODE	Power Bus Mode
SOFTWARERESET	Software Reset

8.6.11 Evt_fxfrrslt

The values in Table 8-20 reflect the file transfer results.

Table 8-20 Evt_fxfrrslt Value Descriptions

Value	Description
FAILURE	Transfer Failure
SUCCESS	Transfer Success

8.6.12 Evt_fxfrStatus

The values in Table 8-21 reflect the file transfer status.

Table 8-21 Evt_fxfrStatus Value Descriptions

Value	Description
COMPLD	Complete
IP	In Progress
START	Start

8.6.13 LogName

The values in Table 8-22 allow the user to manually specify the name of a log file that can be used for specific message categories. Values for LogName include TL1 identifiers and text strings.

Table 8-22 LogName Value Descriptions

Value	Description
ALL	All logs
ALM	Alarm log
EVT	Event logs

8.6.14 MessageType

The values in Table 8-23 specify the type of autonomous message to be retrieved. Valid values are modifiers of any valid TL1 autonomous message, for example ALM and EVT. These values might be used together with ATAGSEQ or NULL.

Table 8-23 MessageType Value Descriptions

Value	Description
ALM	Alarm message
EVT	Event message

8.6.15 NotificationCode

The values in Table 8-24 are used to indicate the alarm level.

Table 8-24 NotificationCode Value Descriptions

Value	Description
CL	Cleared Alarm
CR	Critical Alarm
MJ	Major Alarm
MN	Minor Alarm
NA	Not Alarmed
NR	Not Reported

8.6.16 OSRI

The values in Table 8-25 relate to the optical safety remote interlock (OSRI).

Table 8-25 OSRI Value Descriptions

Value	Description
ON	Forces the laser off.
OFF	Removes the laser lock, allowing the laser to turn on.

8.6.17 PWRBUSMODE

The values in Table 8-26 relate to the Power Bus mode.

Table 8-26 PWRBUSMODE Value Descriptions

Value	Description
DUPLEX	Duplex Mode
SIMPLEX	Simplex Mode

8.6.18 ServiceEffect

The values in Table 8-27 indicate the effect of a reported alarm on service.

Table 8-27 ServiceEffect Value Descriptions

Value	Description
NSA	Non-service-affecting condition
SA	Service-affecting condition

8.6.19 TH_DWDM

The values in Table 8-28 relate to the threshold value selected for the optical signal.

Table 8-28 TH_DWDM Value Descriptions

Value	Description
GAINTHDH	Gain Degrade High Threshold
GAINTHDL	Gain Degrade Low Threshold
LINE1RXPWRTHFL	Power Fail Low Threshold COM RX Port
LINE1TXPWRTHDH	Power Degrade High Threshold LINE1TX Port
LINE1TXPWRTHDL	Power Degrade Low Threshold LINE1TX Port
LINE1TXPWRTHFL	Power Fail Low Threshold LINE1TX Port
LINE2RXPWRTHFL	Power Fail Low Threshold DC RX Port

8.6.20 Transfer_type

The values in Table 8-29 relate to the file transfer type and direction.

Table 8-29 Transfer_type Value Descriptions

Value	Description
RFBU	Back up a file from the OA's FFS to the remote server. Overwrite is always YES for this type.
RFR	Restore a file from remote server to the OA's FFS.
SWDL	Download a software image file to the OA's FFS and update the second boot entry to point to this file.

8.6.21 UserPrivilege

There are four possible privileges or permissions for an ONS 15216 EDFA3 user.

Note A fuller security policy would allow individual messages (commands) to be controlled per user as opposed to this more generic policy. Even the right to access individual resources could be controlled. Few NEs, however, implement individual resource access as its administration becomes too complex for network operators.

Table 8-30 describes each existing UserPrivilege value. An RWA user can change these values, add a category, or delete a category.

Table 8-30 UserPrivilege Value Descriptions

Value	Description
NULL	User has no access rights.
R	Report only and Retrieve user. The R user can monitor the state of an NE but cannot issue provisioning commands.
RW	An RW user can receive notifications, read information and provision the NE. However, the user cannot carry out system administrator tasks including NE management.
RWA	An RWA user can perform all operations, including receiving notifications, reading information and provisioning the NE, including NE management. Items provisioned for management include the TID, the date for the NE as a whole, and the addition and management of other users.

8.7 TL1 Errors

This section describes the TL1 errors for the ONS 15216 EDFA3.

8.7.1 TL1 Error Format

TL1 errors can be generated by any command or command response message. The format of a TL1 error message is as follows:

```
<sid> <date> <time>
```

```
M ctag DENY
<errcde>
/* <errmsg> */
;
```

8.7.2 Default Errors

The ONS 15216 EDFA3 generates a set of default TL1errors. Table 8-31 lists the default errors for the ONS 15216 EDFA3.

Table 8-31 Default TL1 Errors

Error Code (errcde)	Error Type	Error Message (errmsg)
EATN	EQUIPAGE	Not Valid for Access Type
ENAD	EQUIPAGE	Not Equipped with Audit Capability
ENAR	EQUIPAGE	Not Equipped with Automatic Reconfiguration
ENDG	EQUIPAGE	Not Equipped with Diagnostic Capability
ENDS	EQUIPAGE	Not Equipped with Duplex Switching
ENEA	EQUIPAGE	Not Equipped with Error Analysis Capability
ENEQ	EQUIPAGE	Not Equipped
ENEX	EQUIPAGE	Not Equipped with Exercise Capability
ENFL	EQUIPAGE	Not Equipped for Fault Locating
ENMD	EQUIPAGE	Not Equipped with Memory Device
ENPM	EQUIPAGE	Not Equipped for Performance Monitoring
ENPS	EQUIPAGE	Not Equipped with Protection Switching
ENRI	EQUIPAGE	Not Equipped for Retrieving Specified Information
ENRS	EQUIPAGE	Not Equipped for Restoration
ENSA	EQUIPAGE	Not Equipped for Scheduling Audit
ENSI	EQUIPAGE	Not Equipped for Setting Specified Information
ENSS	EQUIPAGE	Not Equipped with Synchronization Switching
EQWT	EQUIPAGE	Invalid Parameter, Value
IBEX	INPUT	Block Extra
IBMS	INPUT	Block Missing
IBNC	INPUT	Block Not Consistent
ICNC	INPUT	Command Not Consistent
ICNV	INPUT	Command Not Valid
IDMS	INPUT	Data Missing
IDNC	INPUT	Data Not Consistent
IDNV	INPUT	Data Not Valid
IDRG	INPUT	Data Range Error
IIAC	INPUT	Invalid Access Identifier (AID)

Table 8-31 Default TL1 Errors (continued)

Error Code (errcde)	Error Type	Error Message (errmsg)
IICM	INPUT	Invalid Command
IICT	INPUT	Invalid Correlation Tag
IIDT	INPUT	Invalid Data Parameter
IIFM	INPUT	Invalid Data Format
IIPG	INPUT	Invalid Parameter Grouping
IISP	INPUT	Invalid Syntax or Punctuation
IITA	INPUT	Invalid Target Identifier
INAC	INPUT	Invalid Access Number
INDV	STATUS	Invalid AID
INUP	INPUT	Non-Null Unimplemented Parameter
IPEX	INPUT	Parameter Extra
IPMS	INPUT	Parameter Missing
IPNC	INPUT	Parameter Not Consistent
IPNV	INPUT	Parameter Not Valid
ISCH	INPUT	Syntax Invalid Character
ISPC	INPUT	Syntax Punctuation
ITSN	INPUT	Invalid/Inactive Test Session Number
MERR	STATUS	Multiple Error
PICC	PRIVILEGE	Illegal Command Code
PIFC	PRIVILEGE	Illegal Field Code
PIMA	PRIVILEGE	Invalid Memory Address
PIMF	PRIVILEGE	Invalid Memory File
PIRC	PRIVILEGE	Illegal Record Control
PIUC	PRIVILEGE	Illegal User Code
PIUI	PRIVILEGE	Illegal User Identity, Invalid UID
PLNA	PRIVILEGE	Login Not Active
SAAL	STATUS	Already Allowed
SAAS	STATUS	Already Assigned
SABT	STATUS	Aborted
SAIN	STATUS	Already Inhibited
SAIS	STATUS	Already In-Service
SAOP	STATUS	Already Operated
SAPR	STATUS	Already in Protection State
SARB	STATUS	All Resources Busy
SATF	STATUS	Automatic Test Failed
SCNA	STATUS	Command Cannot Be Aborted

Table 8-31 Default TL1 Errors (continued)

Error Code (errcde)	Error Type	Error Message (errmsg)
SCNF	STATUS	Command Not Found
SDAS	STATUS	Diagnosis Already Started
SDFA	STATUS	Duplex Unit Failed
SDLD	STATUS	Duplex Unit Locked
SDNA	STATUS	Duplex Unit Not Available
SDNC	STATUS	Data Not Consistent
SDNR	STATUS	Data Not Ready
SDNS	STATUS	Diagnosis Not Started Yet
SFAS	STATUS	Fault Locating Already Started
SFNS	STATUS	Fault Locating Not Started yet
SLBM	STATUS	List Below Minimum
SLEM	STATUS	List Exceeds Maximum
SLNS	STATUS	Log Not Started Yet
SNOS	STATUS	NTE is Out-of-Service
SNPR	STATUS	Not in Protection State
SNRM	STATUS	System Not in Restoration Mode
SNSR	STATUS	No Switch Request Outstanding
SNVS	STATUS	Not in Valid State
SPFA	STATUS	Protection Unit Failed
SPLD	STATUS	Protection Unit Locked
SPNA	STATUS	Process Cannot be Aborted
SPNF	STATUS	Process Not Found
SRCI	STATUS	Requested Command(s) Inhibited
SROF	STATUS	Requested Operation Failed
SSRD	STATUS	Switch Request Denied
SSRE	STATUS	System Resources Exceeded
SSTP	STATUS	Stopped
STAB	STATUS	Test Aborted
SVNS	STATUS	Not in Valid State
SWFA	STATUS	Working Unit Failed
SWLD	STATUS	Working Unit Locked

8.8 TL1/SNMP Mapping Tables

Table 8-32 shows the mappings between TL1 and SNMP parameters.

Table 8-32 TL1/SNMP Command Mapping

TL1 Parameter	SNMP Attribute
LINE1RXPWR	cerent15216EdfaGenericEdfa3Line1RXPwr
LINE1TXPWR	cerent15216EdfaGenericEdfa3Line1TXPwr
LINE2RXPWR	cerent15216EdfaGenericEdfa3Line2RXPwr
LINE2TXPWR	cerent15216EdfaGenericEdfa3Line2TXPwr
GAIN	cerent15216EdfaGenericEdfa3Gain
TILT	cerent15216EdfaGenericEdfa3Tilt
LASSTATUS	cerent15216EdfaGenericEdfa3AmpLaserStatus
DCULOSS	cerent15216EdfaGenericEdfa3DcuLoss
CTRLMODE	cerent15216EdfaGenericEdfa3ControlMode
GAINSP	cerent15216EdfaGenericEdfa3GainSetpoint
GAINTHDL	cerent15216EdfaGenericEdfa3GainThDegLow
GAINTHDH	cerent15216EdfaGenericEdfa3GainThDegHigh
PWROFFSET	cerent15216EdfaGenericEdfa3PwrOffset
LINE1TXPWRSP	cerent15216EdfaGenericEdfa3Line1TXPwrSetpoint
LINE1TXPWRTHDL	cerent15216EdfaGenericEdfa3Line1TXPwrThDegLow
LINE1TXPWRTHDH	cerent15216EdfaGenericEdfa3Line1TXPwrThDegHigh
LINE1TXPWRTHFL	cerent15216EdfaGenericEdfa3Line1TXPwrThFailLow
LINE1RXPWRTHFL	cerent15216EdfaGenericEdfa3Line1RXPwrThFailLow
LINE2RXPWRTHFL	cerent15216EdfaGenericEdfa3Line2RXPwrThFailLow
TILTSP	cerent15216EdfaGenericEdfa3TiltSetpoint
TILTOFFSET	cerent15216EdfaGenericEdfa3TiltOffset
OSRI	cerent15216EdfaGenericEdfa3Osri
IPADDR	cerent15216EdfaGenericIpAddress
IPMASK	cerent15216EdfaGenericIpNetMask
DEFRTR	cerent15216EdfaGenericIpDefaultGateway
MACADDR	ipPhysAddress (RFC 2233)
NAME	sysName (RFC 1213)
LONGITUDE	sysLocation (RFC 1213)
LATITUDE	sysLocation (RFC 1213)
CLEI	cerent15216EdfaGenericCleiCode
DESCR	sysDescription (RFC 1213)
HARDWAREREV	entPhysicalHardwareRev (RFC 2737)
FIRMWAREREV	entPhysicalFirmwareRev (RFC 2737)
SOFTWAREREV	entPhysicalSoftwareRev (RFC 2737)
SWUPDATE	cerent15216EdfaGenericSoftwareTimeStamp
SERIALNUM	entPhysicalSerialNumber (RFC 2737)

Table 8-32 TL1/SNMP Command Mapping (continued)

TL1 Parameter	SNMP Attribute
MFGNAME	entPhysicalMfgName (RFC 2737)
MODELNAME	entPhysicalModelName (RFC 2737)
SNMPSETREQ	cerent15216EdfaGenericEnableSetRequestProcessing
ACTIVESW	cerent15216EdfaGenericSoftwareStatus—Active (10)
STANDBYSW	cerent15216EdfaGenericSoftwareStatus—Standby (20)

8.9 TL1/SNMP Alarm Mapping

Table 8-33 shows the mapping between TL1 and SNMP alarms.

Table 8-33 TL1/SNMP Alarm Mapping

TL1 Condition	SNMP Trap
PWRBUSA	cerent15216EdfaGenericEdfa3PwrAlarmBusA
PWRBUSB	cerent15216EdfaGenericEdfa3PwrAlarmBusB
MEMLOW	cerent15216EdfaGenericEdfa3FreeMemoryOnSystemVeryLow
FFSLOW	cerent15216EdfaGenericEdfa3FFSCapacityVeryLow
EQPT	cerent15216EdfaGenericEdfa3EqptFailure
COMFAIL	cerent15216EdfaGenericEdfa3ModuleCommFailure
CTMP	cerent15216EdfaGenericEdfa3CaseTempOutOfRange
FTMP	cerent15216EdfaGenericEdfa3FiberTempOutOfRange
LTMP	cerent15216EdfaGenericEdfa3ExcessivePumpTemperature
LBIASD	cerent15216EdfaGenericEdfa3LaserBiasDegrade
LBIASF	cerent15216EdfaGenericEdfa3LaserBiasFail
LINE1RXPWRFL	cerent15216EdfaGenericEdfa3PwrFailureLowLine1Rx
GAINDH	cerent15216EdfaGenericEdfa3GainDegradeHigh
GAINDL	cerent15216EdfaGenericEdfa3GainDegradeLow
LINE1TXPWRFL	cerent15216EdfaGenericEdfa3PwrFailLowLine1Tx
LINE1TXPWRDH	cerent15216EdfaGenericEdfa3PwrDegradeHighLine1Tx
LINE1TXPWRDL	cerent15216EdfaGenericEdfa3PwrDegradeLowLine1Tx
LINE2RXPWRFL	cerent15216EdfaGenericEdfa3PwrFailLowLine2Rx
VOADH	cerent15216EdfaGenericEdfa3VoaDegradeHigh
VOADL	cerent15216EdfaGenericEdfa3VoaDegradeLow
VOAFH	cerent15216EdfaGenericEdfa3VoaFailHigh
DATAFLT	cerent15216EdfaGenericEdfa3DataIntegrityFault
BACKUPREST	cerent15216EdfaGenericBackupRestoreInProgress
SFTWDOWN	cerent15216EdfaGenericSoftwareDownloadInProgress

8.10 TL1/SNMP Event Mapping

Table 8-34 shows the mapping between the TL1 and SNMP events.

Table 8-34 TL1/SNMP Event Mapping

TL1 Condition	SNMP Trap
CTRLMODE	cerent15216EdfaGenericEdfa3ControlModeChanged
GAINCHGD	cerent15216EdfaGenericEdfa3GainSetpointChanged
GAINTHDLCHGD	cerent15216EdfaGenericEdfa3GainDegradeLowThresholdChanged
GAINTHDHCHGD	cerent15216EdfaGenericEdfa3GainDegradeHighThresholdChanged
OPOFFSET	cerent15216EdfaGenericEdfa3OutputPwrOffsetChanged
LINE1TXPWRCHGD	cerent15216EdfaGenericEdfa3PwrsetpointChangedLine1Tx
LINE1TXPWRTHDLCHGD	cerent15216EdfaGenericEdfa3PwrDegradeLowThresholdChangedLine1Tx
LINE1TXPWRTHDHCHGD	cerent15216EdfaGenericEdfa3PwrDegradeHighThresholdChangedLine1Tx
LINE1TXPWRTHFLCHGD	cerent15216EdfaGenericEdfa3PwrFailLowThresholdChangedLine1Tx
LINE1RXPWRTHFLCHGD	cerent15216EdfaGenericEdfa3PwrFailLowThresholdChangedLine1Rx
LINE2RXPWRTHFLCHGD	cerent15216EdfaGenericEdfa3PwrFailLowThresholdChangedLine2Rx
TILTCHGD	cerent15216EdfaGenericEdfa3TiltSetpointChanged
TILTOFFSETCHGD	cerent15216EdfaGenericEdfa3TiltOffsetChanged
LASERCHGD	cerent15216EdfaGenericEdfa3LaserStatusChanged
OSRICHGD	cerent15216EdfaGenericEdfa3OsriChanged
CUTOVERRESET	cerent15216EdfaGenericResetAfterCutover
SOFTWARERESET	cerent15216EdfaGenericSoftwareReset
IP (File Transfer Status)	cerent15216EdfaGenericSoftwareDownloadInProgress
COMPLD (File Transfer Status) SUCCES (File Transfer Result)	cerent15216EdfaGenericSoftwareDownloadComplete
COMPLD (File Transfer Status) FAILURE (File Transfer Result)	cerent15216EdfaGenericSoftwareDownloadFailed
SEVERITYCHANGED	cerent15216EdfaGenericEventProfileChanged
PWRBUSMAXCHGD	cerent15216EdfaGenericEdfa3PwrBusVoltageMax
PWRBUSMINCHGD	cerent15216EdfaGenericEdfa3PwrBusVoltageMin
MAXCTMPCHGD	cerent15216EdfaGenericEdfa3CaseTempMax
MINCTMPCHGD	cerent15216EdfaGenericEdfa3CaseTempMin

8.11 TL1 Errors Supported by Each Command

Table 8-35 contains the TL1 errors supported by each command.

Table 8-35 TL1 Errors Supported by Each Command

Command	Error Code
ACT-USER	PICC
ALW-MSG-ALL	IIAC, IICT, IISP, IITA, SAAL, SROF
APPLY	IICT, IITA, SROF
CANC-USER	IICT, IITA,IISP, SROF
COPY-RFILE	IIAC, IICT, SROF
CPY-MEM	IIAC, IICT, SROF
DLT-RFILE	IIAC, IICT, SROF
DLT-TRAPTABLE	IITA, IISP, IICT, PICC, SROF
DLT-USER-SECU	IICT, IISP, IITA, PICC, PIUC, SROF
ED-DAT	IICT, IISP, IITA, SROF
ED-DWDM	IITA, IISP, IIAC, IICT, SROF
ED-EQPT	IITA, IISP, IIAC, IICT, SROF
ED-NE-GEN	IITA, IISP, IICT, SROF
ED-PID	IITA, IISP, IICT, SROF
ED-TRAPTABLE	IITA, IISP, IICT, SROF
ED-USER-SECU	IITA, IISP, IICT, SROF
ENT-TRAPTABLE	IITA, IISP, IICT, SROF
ENT-USER-SECU	IITA, IISP, IICT, SROF
INH-MSG-ALL	IITA, IISP, IICT, SAIN, SROF
INIT-SYS	IITA, IISP, IIAC, IICT, SROF
RTRV-ALM-ALL	IITA, IISP, IICT, SROF
RTRV-ALM-DWDM	IITA, IISP, IICT, SROF
RTRV-ALM-EQPT	IITA, IISP, IICT, SROF
RTRV-ATTR-ALL	IITA, IISP, IICT, SROF
RTRV-AO	IITA, IISP, IICT, SROF
RTRV-COND-ALL	IITA, IISP, IICT, SROF
RTRV-COND-DWDM	IITA, IISP, IICT, SROF
RTRV-COND-EQPT	IITA, IISP, IICT, SROF
RTRV-DFLT-SECU	IITA, IISP, IIAC, IICT, SROF
RTRV-DWDM	IITA, IISP, IIAC, IICT, SROF
RTRV-EQPT	IITA, IISP, IIAC, IICT, SROF
RTRV-HDR	IITA, IISP, IICT, SROF
RTRV-NE-GEN	IITA, IISP, IIAC, IICT, SROF
RTRV-RFILE	IITA, IISP, IICT, SROF
RTRV-TH-DWDM	IITA, IISP, IIAC, IICT, SROF
RTRV-TH-EQPT	IITA, IISP, IIAC, IICT, SROF

Table 8-35 TL1 Errors Supported by Each Command (continued)

Command	Error Code
RTRV-TOD	IITA, IISP, IICT, SROF
RTRV-TRAPTABLE	IITA, IISP, IICT, SROF
RTRV-USER-SECU	IITA, IISP, IICT, SROF
SET-ATTR-ALL	IITA, IISP, IICT, SROF
SET-ATTR-SECUDFLT	IITA, IISP, IICT, SROF
SET-TH-DWDM	IITA, IISP, IIAC, IICT, SROF
SET-TH-EQPT	IITA, IISP, IIAC, IICT, SROF
STA-LOCL-RST	IITA, IISP, IICT, SROF