



# SET Commands

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

## 23.1 SET-ALMTH-<MOD2>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA) The Set Alarm Threshold for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, D1VIDEO, DS1, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, STS9C, T1, T3, VC12, VC3, VT1, or VT2 (SET-ALMTH-<MOD2>) command sets the alarm thresholds on the following cards/ports/channels: MXP\_2.5G\_10G, TXP\_MR\_10G, optical service channel (OSC), optical amplifier, dispersion compensation unit (DCU), multiplexer, demultiplexer, and optical add/drop multiplexing (OADM).

**Usage Guidelines** The only applicable MOD2 values are CLNT, OCH, OMS, and OTS.

**Category** Fault

**Security** Provisioning

**Input Format** SET-ALMTH-<MOD2>[:<TID>]:<AID>:<CTAG>::<CONDTYPE>,<THLEV>[,,,];

**Input Example** SET-ALMTH-{MOD2}::FAC-1-1:1::OPT-LOW,10;

|                  |              |                                                                                                                                                                                                                                                     |
|------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Parameters | <AID>        | Access identifier from the “25.1 ALL” section on page 25-1. Must not be null.                                                                                                                                                                       |
|                  | <CONDTYPE>   | Condition type for an alarm or a reported event. The parameter type is ALM_THR, which is the alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B cards. |
|                  | • BATV-EHIGH | Battery Voltage—Extremely High                                                                                                                                                                                                                      |
|                  | • BATV-ELow  | Battery Voltage—Extremely Low                                                                                                                                                                                                                       |
|                  | • BATV-HIGH  | Battery Voltage—High                                                                                                                                                                                                                                |
|                  | • BATV-LOW   | Battery Voltage—Low                                                                                                                                                                                                                                 |
|                  | • GAIN-HDEG  | Gain not reached—High Degrade Threshold                                                                                                                                                                                                             |
|                  | • GAIN-HFAIL | Gain not reached—High Failure Threshold                                                                                                                                                                                                             |
|                  | • GAIN-LDEG  | Gain not reached—Low Degrade Threshold                                                                                                                                                                                                              |
|                  | • GAIN-LFAIL | Gain not reached—Low Failure Threshold                                                                                                                                                                                                              |
|                  | • LBCL-HIGH  | Laser Bias current in microA as one tenth of a percentage. High Warning Threshold, Low Warning Threshold. Measured value (0.0 percent, 100.0 percent)                                                                                               |
|                  | • OPR-HIGH   | Receive power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)                                                                                                                                                                       |
|                  | • OPR-LOW    | Receive power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)                                                                                                                                                                       |
|                  | • OPT-HIGH   | Transmit power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)                                                                                                                                                                      |
|                  | • OPT-LOW    | Transmit power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)                                                                                                                                                                      |
|                  | • OPWR-HDEG  | Optical Power—High Degrade Threshold                                                                                                                                                                                                                |
|                  | • OPWR-HFAIL | Optical Power—High Failure Threshold                                                                                                                                                                                                                |
|                  | • OPWR-LDEG  | Optical Power—Low Degrade Threshold                                                                                                                                                                                                                 |
|                  | • OPWR-LFAIL | Optical Power—Low Failure Threshold                                                                                                                                                                                                                 |
|                  | • VOA-HDEG   | VOA Attenuation—High Degrade Threshold                                                                                                                                                                                                              |
|                  | • VOA-HFAIL  | VOA Attenuation—High Failure Threshold                                                                                                                                                                                                              |
|                  | • VOA-LDEG   | VOA Attenuation—Low Degrade Threshold                                                                                                                                                                                                               |
|                  | • VOA-LFAIL  | VOA Attenuation—Low Failure Threshold                                                                                                                                                                                                               |
|                  | <THLEVEL>    | Threshold level. THLEVEL is a float.                                                                                                                                                                                                                |

## 23.2 SET-ALMTH-EQPT

(Cisco ONS 15454) The Set Alarm Threshold Equipment (SET-ALMTH-EQPT) command sets the alarm thresholds to manage the power level monitoring on an NE.

**Usage Guidelines** None

**Category** Equipment

**Security** Provisioning

**Input Format** SET-ALMTH-EQPT:[<TID>]:[<AID>]:<CTAG>::<ALMTHTYPE>,<THLEV>[,,,];

**Input Example** SET-ALMTH-EQPT::1::BATV-HIGH,-53.5;  
SET-ALMTH-EQPT::SHELF-2:1::BATV-HIGH,-53.5;

|                         |              |                                                                                                                                                                                                                          |
|-------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Input Parameters</b> | <AID>        | The node or shelf access identifier from the <a href="#">“25.24 SHELF”</a> section on page 25-41. If omitted it addresses the node or first shelf of the node. Must not be null                                          |
|                         | <CONDTYPE>   | Alarm threshold type. The parameter type is ALM_THR, which is the alarm threshold list for MXP_2.5G_10G, TXP_MR_10G, OSCM, OSC-CSM, OPT-PRE, OPT-BST, MD-4, MUX-32, DMX-32, AD-1C, AD-2C, AD-4C, AD-1B, and AD-4B cards. |
|                         | • BATV-EHIGH | Battery Voltage—Extremely High                                                                                                                                                                                           |
|                         | • BATV-ELow  | Battery Voltage—Extremely Low                                                                                                                                                                                            |
|                         | • BATV-HIGH  | Battery Voltage—High                                                                                                                                                                                                     |
|                         | • BATV-LOW   | Battery Voltage—Low                                                                                                                                                                                                      |
|                         | • GAIN-HDEG  | Gain not reached—High Degrade Threshold                                                                                                                                                                                  |
|                         | • GAIN-HFAIL | Gain not reached—High Failure Threshold                                                                                                                                                                                  |
|                         | • GAIN-LDEG  | Gain not reached—Low Degrade Threshold                                                                                                                                                                                   |
|                         | • GAIN-LFAIL | Gain not reached—Low Failure Threshold                                                                                                                                                                                   |
|                         | • LBCL-HIGH  | Laser Bias current in microA as one tenth of a percentage High Warning Threshold, Low Warning Threshold. Measured value (0.0 percent, 100.0 percent)                                                                     |
|                         | • OPR-HIGH   | Receive power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)                                                                                                                                            |
|                         | • OPR-LOW    | Receive power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)                                                                                                                                            |
|                         | • OPT-HIGH   | Transmit power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)                                                                                                                                           |
|                         | • OPT-LOW    | Transmit power in one tenth of a microW. Measured value (–40.0 dBm, +30.0 dBm)                                                                                                                                           |
|                         | • OPWR-HDEG  | Optical Power—High Degrade Threshold                                                                                                                                                                                     |
|                         | • OPWR-HFAIL | Optical Power—High Failure Threshold                                                                                                                                                                                     |
|                         | • OPWR-LDEG  | Optical Power—Low Degrade Threshold                                                                                                                                                                                      |
|                         | • OPWR-LFAIL | Optical Power—Low Failure Threshold                                                                                                                                                                                      |
|                         | • VOA-HDEG   | VOA Attenuation—High Degrade Threshold                                                                                                                                                                                   |
|                         | • VOA-HFAIL  | VOA Attenuation—High Failure Threshold                                                                                                                                                                                   |

|             |                                       |
|-------------|---------------------------------------|
| • VOA-LDEG  | VOA Attenuation—Low Degrade Threshold |
| • VOA-LFAIL | VOA Attenuation—Low Failure Threshold |
| <THLEVEL>   | Threshold level. THLEV is a float.    |

## 23.3 SET-ATTR-CONT

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Set Attribute Control (SET-ATTR-CONT) command sets the attributes associated with an external control. The attributes are used when an external control is operated or released. To send the attributes, use the RTRV-ATTR-CONT command.

### Usage Guidelines

- If the CONTTYPE parameter is not specified, the control specified by AID is unprovisioned.
- A control should be unprovisioned before it is reprovisioned to another type of control.

### Category

Environment

### Security

Provisioning

### Input Format

SET-ATTR-CONT:[<TID>]:<AID>:<CTAG>[:<CONTTYPE>];

### Input Example

SET-ATTR-CONT:CISCO:ENV-OUT-1:123::AIRCOND;

### Input Parameters

|            |                                                                                                                                                          |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <AID>      | Access identifier from the <a href="#">“25.13 ENV” section on page 25-30</a> . Identifies the external control for which attributes are being retrieved. |
| <CONTTYPE> | Environmental control type. A null value is equivalent to ALL. The parameter type is CONTTYPE, which is the environmental control type.                  |
| • AIRCOND  | Air conditioning                                                                                                                                         |
| • AUDIBLE  | Audible (ONS 15310-MA only)                                                                                                                              |
| • ENGINE   | Engine                                                                                                                                                   |
| • FAN      | Fan                                                                                                                                                      |
| • GEN      | Generator                                                                                                                                                |
| • HEAT     | Heat                                                                                                                                                     |
| • LIGHT    | Light                                                                                                                                                    |
| • MISC     | Miscellaneous                                                                                                                                            |
| • SPKLR    | Sprinkler                                                                                                                                                |

## 23.4 SET-ATTR-ENV

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Set Attribute Environment (SET-ATTR-ENV) command sets the attributes associated with an external control.

### Usage Guidelines

- If the NTFCNCDE, ALMTYPE, and ALMMSG parameters are omitted, the environmental alarm specified by AID is unprovisioned.
- An alarm should be unprovisioned and you should wait for any raised alarm to clear before reprovisioning the alarm to another alarm type.
- CL in NOTIF\_CODE is not valid for provisioning commands. It is only valid for autonomous messages.

### Category

Environment

### Security

Provisioning

### Input Format

SET-ATTR-ENV:[<TID>]:<AID>:<CTAG>::[<NTFCNCDE>],[<ALMTYPE>],[<ALMMSG>];

### Input Example

SET-ATTR-ENV:CISCO:ENV-IN-1:123::MJ,OPENDR,\"OPEN DOOR\";

### Input Parameters

|             |                                                                                                                                                                       |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <AID>       | Access identifier from the <a href="#">“25.13 ENV” section on page 25-30</a> . Must not be null.                                                                      |
| <NTFCNCDE>  | Two-letter notification code. Must not be null. The parameter type is NOTIF_CODE, which is the two-character notification code associated with an autonomous message. |
| • CL        | The condition causing the alarm has cleared.                                                                                                                          |
| • CR        | A critical alarm.                                                                                                                                                     |
| • MJ        | A major alarm.                                                                                                                                                        |
| • MN        | A minor alarm.                                                                                                                                                        |
| • NA        | The condition is not alarmed.                                                                                                                                         |
| • NR        | The alarm is not reported.                                                                                                                                            |
| <ALMTYPE>   | The alarm type for the environmental alarm. Must not be null. The parameter type is ENV_ALM, which is the environmental alarm type.                                   |
| • AIRCOMPR  | Air compressor failure                                                                                                                                                |
| • AIRCOND   | Air conditioning failure                                                                                                                                              |
| • AIRDRYR   | Air dryer failure                                                                                                                                                     |
| • BATDSCHRG | Battery discharging                                                                                                                                                   |
| • BATTERY   | Battery failure                                                                                                                                                       |

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

|              |                                                           |
|--------------|-----------------------------------------------------------|
| • RINGGENMJ  | Ring generator major                                      |
| • RINGGENMN  | Ring generator minor                                      |
| • RTACADSL   | AC or AC/rectifier power fail ADSL equipment              |
| • RTACCRIT   | AC or AC/rectifier power fail DCL equipment critical site |
| • RTACPWR    | AC or AC/rectifier power fail DCL equipment               |
| • RTACPWRENG | Commercial AC fail, site equipped with standby engine     |
| • RTBAYPWR   | AC power loss distributed power RT bay                    |
| • RTRVENG    | Retrieve standby engine, commercial AC restored           |
| • SMOKE      | Smoke                                                     |
| • TEMP       | High-low temperature                                      |
| • TOXICGAS   | Toxic gas                                                 |
| • TREPEATER  | T-repeater shelf                                          |
| • VENTN      | Ventilation system failure                                |
| >ALMMSG>     | Alarm message. ALMMSG is a string. Must not be null.      |

## 23.5 SET-ATTR-SECUDFLT

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Set Attribute Security Default (SET-ATTR-SECUDFLT) command sets the system-wide default values associated with several security parameters.

### Usage Guidelines

The following parameters are set on a system-wide basis for all users and all privilege levels: MXINV, DURAL, UOUT, PFRCD, POLD, PINT, and LOGIN. The PRIVLVL keyword cannot be used to set these parameters for a specific privilege level.

The following parameters are set on a privilege-level basis: PAGE, PCND, and TMOUT. If any of these values are specified, the PRIVLVL keyword must also be present. If none of these parameters are specified, the PRIVLVL keyword cannot be used.



#### Note

Password aging can only be enabled/disabled for all privilege levels. The PRIVLVL keyword cannot be used with PAGE=0 to disable a specific user privilege level.

When system-level and privilege-level keywords are combined in the same command, system-level parameters are still set for all privilege levels, regardless of the value specified by PRIVLVL. Privilege-level parameters are only set for the privilege level specified by PRIVLVL.



#### Note

If PAGE and PINT both have values greater than 0, PINT must be less than PAGE.

The order of keywords is not restricted. Commas are only needed to separate keywords. If no keywords are specified, all parameters are left as-is.

### Category

Security

**Security**

Superuser

**Input Format**

SET-ATTR-SECUDFLT:[<TID>]::<CTAG>::[PAGE=<PAGE>],[PCND=<PCND>],  
 [MXINV=<MXINV>],[DURAL=<DURAL>],[TMOUT=<TMOUT>],[UOUT=<UOUT>],  
 [PFRCD=<PFRCD>],[POLD=<POLD>],[PINT=<PINT>],[LOGIN=<LOGIN>],  
 [PRIVLVL=<PRIVLVL>],[PDIF=<PDIF>];

**Input Example**

SET-ATTR-SECUDFLT:CISCO::123::PAGE=45,PCND=5,MXINV=5,DURAL=30,  
 TMOUT=0,UOUT=20,PFRCD=NO,POLD=5,PINT=20,LOGIN=MULTIPLE,  
 PRIVLVL=RTRV,PDIF=1;

**Input Parameters**

|         |                                                                                                                                                                                                                                                                                                                                                                        |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <PAGE>  | Password aging interval. It is the number of days before a user is prompted to change his/her password. 0 indicates that the policy is turned off and is the default. If PAGE is turned on for all privilege levels and is not specified for each privilege level, it defaults to 45 days. PAGE ranges from 20 to 90 days. PAGE is an integer.                         |
| <PCND>  | Number of days a password can be used before a new one is mandatory (for example, the warning period). Default is 5 days. PCND ranges from 2 to 20 days. PCND is an integer.                                                                                                                                                                                           |
| <MXINV> | Maximum number of consecutive and invalid session setup attempts allowed to occur before an intrusion attempt is suspected (for example, “Failed Logins Before Lockout” from Cisco Transport Controller [CTC]). 0 indicates the policy is turned off. Default is 5. MXINV ranges from 0 to 10. MXINV is an integer.                                                    |
| <DURAL> | Time interval (in seconds) during which a user ID is locked out when an intrusion attempt is suspected (for example, “Lockout Duration”). If the user is locked out until unlocked by a Superuser, DURAL=INFINITE. Default is 30 seconds. DURAL ranges from 0 to 600 seconds. DURAL is a string.                                                                       |
| <TMOUT> | Interval (in minutes) after which a session is terminated if no messages are exchanged between the user and the NE. 0 indicates that the session will not timeout. TMOUT ranges from 0 minutes to 999 minutes. Defaults are 0 (no timeout) for RTRV users, 60 minutes for MAINT users, 30 minutes for PROV users, and 15 minutes for SUPER users. TMOUT is an integer. |
| <UOUT>  | UID aging interval, expressed in days. If a user ID has not been used in UOUT days, the user will be forced to change his/her password (or logout) at the next login. No other command is allowed until the password has been changed. 0 indicates the policy is turned off and is the default. UOUT ranges from 0 to 99 days. UOUT is an integer.                     |
| <PFRCD> | Indicates that a password change is required when a new user establishes a session to the NE for the first time (for example, “Require password change on 1st login”). Default is NO. The parameter type is YES_NO, which indicates whether the user’s password is about to expire, the user is logged into the NE, or the user is locked out of the NE.               |



|            |                                                                                                                                                                                                                                                                                                                                                                                 |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| • NO       | No                                                                                                                                                                                                                                                                                                                                                                              |
| • YES      | Yes                                                                                                                                                                                                                                                                                                                                                                             |
| <POLD>     | Number of prior passwords that cannot be reused (for example, “Prevent reusing last X passwords”). Default is 1. POLD ranges from 1 to 10. POLD is an integer.                                                                                                                                                                                                                  |
| <PINT>     | Number of days that must pass before a password can be changed. If PINT is 0, the policy is turned off. Default is off. PINT ranges from 20 to 95 days. PINT is an integer.                                                                                                                                                                                                     |
| <LOGIN>    | Number of times a user can log into an NE. LOGIN is either SINGLE or MULTIPLE. If LOGIN is SINGLE, a user can only log into an NE one time with any given user ID, regardless of the method of login (for example, CTC, TL1, etc.). Default is MULTIPLE. The parameter type is USER_LOGINS, which is the number of times a user can log into the same NE with the same user ID. |
| • MULTIPLE | A user can log into the same NE many times.                                                                                                                                                                                                                                                                                                                                     |
| • SINGLE   | A user can log into the NE only once (includes both CTC and TL1 sessions).                                                                                                                                                                                                                                                                                                      |
| <PRIVLVL>  | User’s access privilege. The parameter type is PRIVILEGE, which is the security level.                                                                                                                                                                                                                                                                                          |
| • MAINT    | Maintenance security level. 60 minutes of idle time.                                                                                                                                                                                                                                                                                                                            |
| • PROV     | Provision security level. 30 minutes of idle time.                                                                                                                                                                                                                                                                                                                              |
| • RTRV     | Retrieve security level. Unlimited idle time.                                                                                                                                                                                                                                                                                                                                   |
| • SUPER    | Superuser security level. 15 minutes of idle time.                                                                                                                                                                                                                                                                                                                              |
| <PDIF>     | Indicates how many characters must differ between the old and new password. Default minimum character difference is 1. PDIF ranges from 1 to 5 characters. PDIF is a rangeable integer.                                                                                                                                                                                         |

## 23.6 SET-PMMODE-<STS\_PATH>

(Cisco ONS 15454) The Set Performance Mode of PM Data Collection for STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C, STS48C, STS6C, or STS9C (SET-PMMODE-<STS\_PATH>) command sets the mode and turns the performance monitoring (PM) data collection mode on or off.

### Usage Guidelines

See [Table 27-1 on page 27-1](#) for supported modifiers by platform.



#### Note

- The PM mode and state of an entity are retrieved by using the RTRV-PMMODE command.
- The near-end monitoring of the intermediate-path performance monitoring (IPPM) only supports OC3, OC12, OC48, OC192, and EC-1 on STS Path.
- The far-end IPPM data collection is supported by the MRC-12 card only.

- This release of software will support only the Path (P) mode type PM parameters with this command, that is, this command is not applicable for Line (L) and Section (S) mode types. PM monitoring for Line (L) and Section (S) are supported by the ONS 15454, and the storing PM data is always performed.

|                  |                                                                            |                                                                                                                                                                                                                                                           |
|------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category         | Performance                                                                |                                                                                                                                                                                                                                                           |
| Security         | Provisioning                                                               |                                                                                                                                                                                                                                                           |
| Input Format     | SET-PMMODE-<STS_PATH>:[<TID>]:<SRC>:<CTAG>::<LOCN>,<MODETYPE>,[<PMSTATE>]; |                                                                                                                                                                                                                                                           |
| Input Example    | SET-PMMODE-ST51:CISCO:STS-4-1-2:123::NEND,P,ON;                            |                                                                                                                                                                                                                                                           |
| Input Parameters | <SRC>                                                                      | Source access identifier from the “25.10 CrossConnectId” section on page 25-20.                                                                                                                                                                           |
|                  | <LOCN>                                                                     | Location associated with a particular command. Identifies the location from which the PM mode is to be retrieved. Only near-end PM data collection is supported. The parameter type is LOCATION, which is the location where the action is to take place. |
|                  | • NEND                                                                     | Action occurs on the near end of the facility.                                                                                                                                                                                                            |
|                  | <MODETYPE>                                                                 | The type of PM parameters that the entity or the sub entity is to store as a result of an attribute change. Only the path (P) PM parameter is supported. The parameter type is PM_MODE, which is the type of PM parameter.                                |
|                  | • P                                                                        | Transport Path PM parameters                                                                                                                                                                                                                              |
|                  | <PMSTATE>                                                                  | Directs the named PM mode type to turn on or off. A null value defaults to on. The parameter type is PM_STATE, which directs the named PM mode type (P) state.                                                                                            |
|                  | • OFF                                                                      | Disable the mode                                                                                                                                                                                                                                          |
|                  | • ON                                                                       | Enable the mode                                                                                                                                                                                                                                           |
|                  |                                                                            |                                                                                                                                                                                                                                                           |

## 23.7 SET-PMMODE-<VT\_PATH>

(Cisco ONS 15310-MA) The Set Performance Mode of PM Data Collection for VT1 and VT2 (SET-PMMODE-<VT\_PATH>) command sets the mode and turns the performance monitoring (PM) data collection mode on or off.

**Usage Guidelines****Note**

- The PM mode and state of an entity is retrieved by using the RTRV-PMMODE command.
- This release of software will support only the Path (P) mode type PM parameters with this command, that is, this command will not be applicable for Line (L) and Section (S) mode types.

**Category**

Performance

**Security**

Provisioning

**Input Format**

SET-PMMODE-&lt;VT\_PATH&gt;:[&lt;TID&gt;]:&lt;SRC&gt;:&lt;CTAG&gt;::&lt;LOCN&gt;,&lt;MODETYPE&gt;,[&lt;PMSTATE&gt;];

**Input Example**

SET-PMMODE-VT1:CISCO:VT1-1-1-2-2:123::NEND,P,ON;

**Input Parameters**

|            |                                                                                                                                                                                                                                                                             |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <SRC>      | Source access identifier from the <a href="#">“25.11 CrossConnectId1” section on page 25-24</a> . Must not be null.                                                                                                                                                         |
| <LOCN>     | Location associated with a particular command. Identifies the location from which the PM mode is to be set. Only near end (NEND)PM data collection is supported. The parameter type is LOCATION, which is the location where the action is to take place. Must not be null. |
| • NEND     | Action occurs on the near end of the facility.                                                                                                                                                                                                                              |
| <MODETYPE> | The type of PM parameters that the entity or the subentity is to store as a result of an attribute change. Only the path (P) type is supported. The parameter type is PM_MODE, which is the type of PM parameters.                                                          |
| • P        | Transport Path PM parameters.                                                                                                                                                                                                                                               |
| <PMSTATE>  | Directs the named PM mode type to turn on or off. A null value defaults to on. The parameter type is PM_STATE, which directs the named PM mode type (P) state.                                                                                                              |
| • OFF      | Disable the mode                                                                                                                                                                                                                                                            |
| • ON       | Enable the mode                                                                                                                                                                                                                                                             |

## 23.8 SET-TH-<MOD2>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Set Threshold for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, CLNT, D1VIDEO, DS1, DS3I, DV6000, E1, E3, E4, EC1, ESCON, ETRCLO, FSTE, G1000, GFPOS, GIGE, HDTV, ISC1, OC12, OC192, OC3, OC48, OCH, OMS, OTS, POS, STM1E, STS1, STS12C, STS18C, STS192C, STS24C, STS36C, STS3C,

STS48C, STS6C, STS9C, T1, T3, VC11, VC12, VC3, VT1, or VT2 (SET-TH-<MOD2>) command sets the threshold for PMs and sets the alarm thresholds for the MXP\_2.5G\_10G and TXP\_MR\_10G cards. If this command is used to set the alarm thresholds, the time period is not applicable.

### Usage Guidelines

See [Table 27-1 on page 27-1](#) for supported modifiers by platform.

The rules are as follows:

- The PM Thresholds have a default of NEND for the location. The Alarm Thresholds do not require or interpret the location.
- The TMPER is not applicable to alarm thresholds. The TMPER default is 15-MIN.
- The client ports only accept SONET, Laser, and alarm MONTYPES. The trunk ports accept SONET, Laser, alarm, FEC, OTN, and 8B10B MONTYPES.

Refer to the [Cisco ONS SONET TL1 Reference Guide](#) for specific card provisioning rules.

### Category

Performance

### Security

Provisioning

### Input Format

SET-TH-<MOD2>:[<TID>]:<AID>:<CTAG>::<MONTYPE>,<THLEV>,[<LOCN>],[<TMPER>];

### Input Example

SET-TH-T3:CISCO:FAC-1-1:123::CVL,12,NEND,,15-MIN;

### Input Parameters

|           |                                                                                                                                         |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <AID>     | Access identifier from the <a href="#">“25.1 ALL” section on page 25-1</a> . All of the STS, VT1, Facility, and DS1 AIDs are supported. |
| <MONTYPE> | Monitored type. The parameter type is ALL_MONTYPE, which is the monitoring type list.                                                   |
| • AISSP   | Alarm Indication Signal Seconds—Path                                                                                                    |
| • ALL     | All possible values                                                                                                                     |
| • BBE-PM  | OTN—Background Block Errors—Path Monitor Point                                                                                          |
| • BBE-SM  | OTN—Background Block Errors—Section Monitor Point                                                                                       |
| • BBER-PM | OTN—Background Block Error Ratio—Path monitor point expressed as one tenth of a percentage                                              |
| • BBER-SM | OTN—Background Block Error Ratio—Section monitor point expressed as one tenth of a percentage                                           |
| • BIEC    | FEC—Bit Errors Corrected                                                                                                                |
| • BIT-EC  | The number of bit errors corrected by the FEC algorithm                                                                                 |
| • CGV     | 8B10B—Code Group Violations                                                                                                             |
| • CSSP    | Controlled Slip Seconds—Path (DSXM-12 FDL/T1.403 PM count)                                                                              |
| • CVCPP   | Coding Violations—CP-Bit Path                                                                                                           |

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

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

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

|             |                                                                                                                                         |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| • PSC-R     | Protection Switching Count—Ring                                                                                                         |
| • PSC-S     | Protection Switching Count—Span                                                                                                         |
| • PSC-W     | Protection Switching Count—Working                                                                                                      |
| • PSD       | Protection Switching Duration                                                                                                           |
| • PSD-R     | Protection Switching Duration—Ring                                                                                                      |
| • PSD-S     | Protection Switching Duration—Span                                                                                                      |
| • PSD-W     | Protection Switching Duration—Working                                                                                                   |
| • SASCPP    | Severely Errored Framing/AIS Second—CP-Bit Path                                                                                         |
| • SASP      | Severely Errored Framing/AIS Seconds Path                                                                                               |
| • SEFS      | Severely Errored Framing Seconds                                                                                                        |
| • SEFSP     | Severely Errored Framing Seconds—Path (DS3XM-12 DS1 PM count)                                                                           |
| • SESCOPP   | Severely Errored Second—CP-Bit Path                                                                                                     |
| • SESL      | Severely Errored Second—Line                                                                                                            |
| • SESNPFE   | Severely Errored Second—Network Path (DS3XM-12 DS1 PM count)                                                                            |
| • SESP      | Severely Errored Second—Path                                                                                                            |
| • SES-PM    | OTN—Severely Errored Second—Path                                                                                                        |
| • SESR-PM   | OTN—Severely Errored Second Ratio—Path Monitor Point expressed as one tenth of a percentage                                             |
| • SESR-SM   | OTN—Severely Errored Second Ratio—Section Monitor Point expressed as one tenth of a percentage                                          |
| • SESS      | Severely Errored Second—Section                                                                                                         |
| • SES-SM    | OTN—Severely Errored Second—Section Monitor Point                                                                                       |
| • SESV      | Severely Errored Second—VT Path                                                                                                         |
| • UASCPP    | Unavailable Second—CP-Bit Path                                                                                                          |
| • UASL      | Unavailable Second—Line                                                                                                                 |
| • UASNPFE   | Unavailable Second—Network Path (DS3XM-12 DS1 PM count)                                                                                 |
| • UASP      | Unavailable Second—Path                                                                                                                 |
| • UAS-PM    | OTN—Unavailable Second—Path Monitor Point                                                                                               |
| • UAS-SM    | OTN—Unavailable Second—Section Monitor Point                                                                                            |
| • UASV      | Unavailable Second—VT Path                                                                                                              |
| • UNC-WORDS | FEC—Uncorrectable Words                                                                                                                 |
| • VPC       | Valid Packet Count                                                                                                                      |
| <THELV>     | Threshold level. THLEV is a float.                                                                                                      |
| <LOCN>      | Location associated with a particular command. The parameter type is LOCATION, which is the location where the action is to take place. |
| • FEND      | Action occurs on the far end of the facility                                                                                            |
| • NEND      | Action occurs on the near end of the facility                                                                                           |



|            |                                                                                                                                                                                                       |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <TMPER>    | (Optional) Accumulation time period for performance counters. The parameter type is TMPER, which is the accumulation time period for the performance management center.                               |
| • 1-DAY    | Performance parameter accumulation interval length; every 24-hours. For SONET PM data, only one day of history data is available. For RMON managed PM data, seven days of history data are available. |
| • 1-HR     | Performance parameter accumulation interval length; every 1 hour. This is only applicable to RMON managed PM data. There are 24 hours of history data available.                                      |
| • 1-MIN    | Performance parameter accumulation interval length; every 1 minute. This is only applicable to RMON managed PM data. There are 60 minutes of history available.                                       |
| • 15-MIN   | Performance parameter accumulation interval length; every 15 minutes. There are 32 15-MIN buckets of history data available for this accumulation interval length.                                    |
| • RAW-DATA | Performance parameter accumulation interval length; starting from the last time the counters were cleared. This is only applicable to RMON managed PMs.                                               |

## 23.9 SET-TOD

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Set Time of Day (SET-TOD) command sets the system date and time for the NE. The year should be entered using four digits while the hour should be entered using a 24-hour time period (for example, military time).

|                         |                                                                                                                                                                                                                                                                                                                          |        |                                                |         |                                                                   |       |                                                                |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------------------------------------------|---------|-------------------------------------------------------------------|-------|----------------------------------------------------------------|
| <b>Usage Guidelines</b> | None                                                                                                                                                                                                                                                                                                                     |        |                                                |         |                                                                   |       |                                                                |
| <b>Category</b>         | System                                                                                                                                                                                                                                                                                                                   |        |                                                |         |                                                                   |       |                                                                |
| <b>Security</b>         | Provisioning                                                                                                                                                                                                                                                                                                             |        |                                                |         |                                                                   |       |                                                                |
| <b>Input Format</b>     | SET-TOD:[<TID>]::<CTAG>:<YEAR>,<MONTH>,<DAY>,<HOUR>,<MINUTE>,<SECOND>,<DIFFERENCE>[:DST=<DST>];                                                                                                                                                                                                                          |        |                                                |         |                                                                   |       |                                                                |
| <b>Input Example</b>    | SET-TOD:CAZADERO::240::1998,05,08,13,18,55,480:DST=Y;                                                                                                                                                                                                                                                                    |        |                                                |         |                                                                   |       |                                                                |
| <b>Input Parameters</b> | <table> <tr> <td>&lt;YEAR&gt;</td><td>The current calendar year. YEAR is an integer.</td></tr> <tr> <td>&lt;MONTH&gt;</td><td>The month of the year. Ranges from 01 to 12. MONTH is an integer.</td></tr> <tr> <td>&lt;DAY&gt;</td><td>The day of the month. Ranges from 01 to 31. DAY is an integer.</td></tr> </table> | <YEAR> | The current calendar year. YEAR is an integer. | <MONTH> | The month of the year. Ranges from 01 to 12. MONTH is an integer. | <DAY> | The day of the month. Ranges from 01 to 31. DAY is an integer. |
| <YEAR>                  | The current calendar year. YEAR is an integer.                                                                                                                                                                                                                                                                           |        |                                                |         |                                                                   |       |                                                                |
| <MONTH>                 | The month of the year. Ranges from 01 to 12. MONTH is an integer.                                                                                                                                                                                                                                                        |        |                                                |         |                                                                   |       |                                                                |
| <DAY>                   | The day of the month. Ranges from 01 to 31. DAY is an integer.                                                                                                                                                                                                                                                           |        |                                                |         |                                                                   |       |                                                                |

|                                                     |                                                                                       |
|-----------------------------------------------------|---------------------------------------------------------------------------------------|
| <HOUR>                                              | The hour of the day. Ranges from 00 to 23. HOUR is an integer.                        |
| <MINUTE>                                            | The minute of the hour. Ranges from 00 to 59. MINUTE is an integer.                   |
| <SECOND>                                            | The second of the minute. Ranges from 00 to 59. SECOND is an integer.                 |
| <DIFFERENCE>                                        | The number of minutes off UTC. DIFFERENCE is an integer.                              |
| <DST>                                               | Daylight savings time. The parameter type is ON_OFF (disable or enable an attribute). |
| <ul style="list-style-type: none"><li>• N</li></ul> | Disable an attribute.                                                                 |
| <ul style="list-style-type: none"><li>• Y</li></ul> | Enable an attribute.                                                                  |