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

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

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ENT-<MOD1PAYLOAD>

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, D1VIDEO, DV6000, EC1, ESCON, ETRCLO, GIGE, HDTV, ISC1, ISCCOMPAT, ISC3PEER2R, ISC3PEER1G, ISC3PEER2G, OC-12, OC-192, OC-3, OC-48, or T3 (ENT-<MOD1PAYLOAD> command creates a specified port.

Usage Guidelines

- When 1GFICON and 2GFICON payloads are provisioned, distance extension=B2B is the default and only valid setting. Setting distance extension (using ED-1GFICON or ED-2GFICON) to any other setting will be denied with the error message "Provisioning Rules Failed."
- Support is limited to ports with pluggable port modules (PPMs).
- See Table 28-1 for supported modifiers by platform.

Category

Ports

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

<AID>	Access identifier from the FACILITY.

ENT-<MOD_RING>

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

Note: The ONS 15600 does not support four-fiber bidirectional line switched rings (BLSRs).

Usage Guidelines

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

Here is an example of a command to create a four-fiber BLSR:

ENT-BLSR:TID:BLSR-N02ABC:CTAG:::RINGID=N02ABC,NODEID=3,MODE=4F,RVRTV=Y,
RVTM=5.0,SRVRTV=Y,SRVTM=5.0,EASTWORK=FAC-5-1,WESTWORK=FAC-6-1,
EASTPROT=FAC-12-1,WESTPROT=FAC-13-1;

Here is an example of a command to create a two-fiber BLSR:

ENT-BLSR:TID:BLSR-N04EFG:CTAG:::RINGID=N04EFG,NODEID=6,MODE=2F,RVRTV=Y,
RVTM=5.0,EASTWORK=FAC-5-1,WESTWORK=FAC-6-1;

The following actions will produce error messages:

- If RINGID is different from the string presented in the AID format, an IIAC (RingId Does Not Match With AID) error message is returned.
- Sending this command to create a BLSR with an out-of-range node ID or ring ID will return an IIAC (Invalid NodeId) or (Invalid RingId) error message.
- Sending this command to create a four-fiber BLSR on OC-12 cards, or a two-fiber BLSR on OC-3 cards will return an IIAC (Input, Invalid Work/Prot Port) error message.
- Sending this command to create a BLSR on a network element (NE) that already has five BLSRs will return a SRQN (BLSR Creation Failed) error message because only one NE can support up to five BLSRs.
- Sending this command to create a BLSR on a port with 1+1 protection will return a SRQN (BLSR Creation Failed) error message.
- If the system fails while accessing the IOR, an SROF (Get IOR Failed) error message is returned.
- If the AID is invalid, an IIAC (Invalid AID) error message is returned.
- If any facility requested in this command is in use, a SPLD (Facility is Busy) error message is returned.
- The SRQN (BLSR Creation Failed) error message is returned for an invalid creation query.
- Sending this command to provision the mode with an invalid BLSR mode will return an IIDT (Invalid BLSR Mode) error message.
- Sending this command to modify SRVRTV or SRVTM on the two-fiber BLSR will return an IDNV (Invalid Data for 2F-BLSR) error message.
- Sending this command to provision the node ID with invalid data will return an IIAC (Invalid NodeId) error message.
- Sending this command to provision the ring ID with invalid data will return an IIAC (Invalid RingId) error message.
- Sending this command with an invalid working AID will return an IIDT (Invalid BLSR Working Facility) error message.
- Sending this command with an invalid protection AID will return an IIDT (Invalid BLSR Protect

Facility) error message.
- Changing the BLSR node ID with a duplicated ID will return an SROF (Cannot Set NodeId) error message.

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

Note: The ALL AID is invalid for this command.

Category

BLSR

Security

Provisioning

Input Format

ENT-<MOD_RING>:[<TID>]:<AID>:<CTAG>:::[RINGID=<RINGID>],NODEID=<NODEID>, MODE=<MODE>,[RVRTV=<RVRTV>],[RVTM=<RVTM>],[SRVRTV=<SRVRTV>], [SRVTM=<SRVTM>],EASTWORK=<EASTWORK>,WESTWORK=<WESTWORK>, [EASTPROT=<EASTPROT>],[WESTPROT=<WESTPROT>];

Input Example

Four-fiber BLSR:

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

Two-fiber BLSR:

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

Input Parameters

<AID>	Access identifier from the AidUnionId1. Identifies the BLSR of the NE. ALL or BLSR-ALL AIDs are not allowed for editing the BLSR. This command only supports a single BLSR AID.
<RINGID>	(Optional) The BLSR ID of the NE up to six characters. Valid characters are A-Z and 0-9. RINGID is a string. The parameter defaults to the text in the AID that follows the "BLSR-".
<NODEID>	The BLSR node ID of the NE. NODEID ranges from 0 to 31. NODEID is an integer.
<MODE>	Mode with which the command is to be implemented. Identifies the BLSR mode. The parameter type is BLSR_MODE (BLSR mode).
• 2F	Two-fiber BLSR
• 4F	Four-fiber BLSR

<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. Defaults to 5.0. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	(Optional) Revertive time is 0.5 to 12.0 minutes.
<SRVRTV>	The span revertive mode for four-fiber BLSR only. Defaults to Y. The parameter type is ON_OFF (disable or enable an attribute)
• N	Disable an attribute.
• Y	Enable an attribute.
<SRVTM>	(Optional) The span revertive time for four-fiber BLSR only. Defaults to 5.0. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<EASTWORK>	East working facility. AID from the FACILITY.
<WESTWORK>	West working facility. AID from the FACILITY.
<EASTPROT>	(Optional) East protect facility. AID from the FACILITY.
<WESTPROT>	(Optional) West protect facility. AID from the FACILITY.

ENT-ALMTYPE

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter Alarm Type (ENT-ALMTYPE) command enters user-defined alarm types on the fly for environmental inputs. In addition to the system-defined alarm types, this command supports up to 50 new user-defined alarm types.

Usage Guidelines

ALMTYPE must not contain blank spaces or special characters other than the hyphen (-). The maximum ALMTYPE length allowed is 20 characters.

Entering of duplicate alarm types is not allowed. System-defined alarm types cannot be replicated as user-defined alarm type.

Category

System

Security

Provisioning

Input Format

ENT-ALMTYPE:[<TID>]::<CTAG>::<ALMTYPE>;

Input Example

ENT-ALMTYPE:::1::USERDEFINEDALARM;

Input Parameters

<ALMTYPE>	Specifies user-defined alarm types associated with virtual wires in environmental alarm inputs.

ENT-BULKROLL-<OCN_TYPE>

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

Usage Guidelines

None

Category

Bridge and Roll

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

<FROM>	One of the endpoints. Access identifier from the FACILITY for line-level rolling and bulk rolling.

<RTOSTART>	The starting time slot in the destination roll port. Access identifier from the FACILITY (synchronous transport signal [STS] or Virtual Tributary [VT]). **Note:** For bulk rolling only
<RFROMSTART>	The starting time slot in the source roll port. Access identifier from the FACILITY (STS or VT). Defaults to STS-<FROMSLOT>-<FROMPORT>-1, where <FROMSLOT> and <FROMPORT> are the slot and port of the <FROM> AID. **Note:** For bulk rolling only
<RFROMEND>	The ending time slot in the source roll port. Access identifier from the FACILITY (STS and VT). Defaults to STS-<FROMSLOT>-<FROMPORT>-N, where <FROMSLOT> and <FROMPORT> are the slot and port of the <FROM> AID and N is the value of OCn (for example, with OC-48, n=48). **Note:** For bulk rolling only
<RMODE>	Indicates the mode of the rolling operation. The parameter type is RMODE (roll mode).
• AUTO	Automatic. When a valid signal is available, the roll with an AUTO mode will automatically delete the previous end-point.
• MAN	Manual. Enter the corresponding delete roll/bulkroll command to delete the previous end-point.
<CMDMDE>	Command execution mode. Defaults to NORM. The parameter type is CMDMDE, which forces the system to execute a given command regardless of any standing conditions. Normal mode is the default behavior for all commands but you can specify FRCD to force the system to override a state where the command would normally be denied.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that could make the command fail.

ENT-CRS-<PATH>

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

Usage Guidelines

See Table 28-1 for supported modifiers by platform.

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

The following guidelines also apply:

- The default cross-connection type is two-way.
- If a path is already in a connection, it cannot be in another connection even if the existing connection is one-way and the new one will be one-way in the other direction.
- This command does not support creating multiple STS cross-connections.

- The path protection STS cross-connection can be created by using "&" in the AID fields of this command.
    - The following command is used to create a one-way selector or two-way selector and bridge with F1, F2 as from points and T1 as the to point:

      ENT-CRS-{STS_PATH}:[<TID>]:F1&F2,T1:<CTAG>::[<CCT>];
    - The following command is used to create a one-way bridge or two-way selector and bridge with F1 as the from point and T1, T2 as the to points:
      ENT-CRS-{STS_PATH}:[<TID>]:F1,T1&T2:<CTAG>::[<CCT>];
    - The following command is used to create a one-way subtending path protection connection or two-way subtending path protection connection with F1, F2 as the from points and T1, T2 as the to points:
      ENT-CRS-{STS_PATH}:[<TID>]:F1&F2,T1&T2:<CTAG>::[<CCT>];
    - The following command is used to create a two-way selector and bridge with F1,F2 (F1 is the working side, F2 is the protect side) as the from points and S1, S2 (S1 is the working side, S2 is the protect side) as the selector points:
      ENT-CRS-{STS_PATH}:[<TID>]:F1&F2,S1&S2:<CTAG>::2WAY;
    - The following command is used to create a path protection integrated dual-ring interconnect (IDRI) cross-connection:
      ENT-CRS-{STS_PATH}:[<TID>]:A&B,C&D:<CTAG>::2WAYDC;
      where:
      A: Path on Ring X to which traffic from Ring Y is bridged
      B: Path on Ring X to which traffic from the same ring is bridged
      C: Path on Ring Y to which traffic from Ring X is bridged
      D: Path on Ring Y to which traffic from the same ring is bridged
      A, B, C, and D have a positional meaning. Connection type 2WAYDC is used for path protection IDRI cross-connections.
    - The following command is used to create a path protection dual-ring interconnect (DRI) cross-connection:
      ENT-CRS-{STS_PATH}:[<TID>]:A&B,C:<CTAG>::2WAYDC;
      where:
      A: Path on Ring X to which traffic from Ring Y is bridged
      B: Path on Ring X to which traffic from the same ring is bridged
      C: Traffic to and from Ring Y
      A, B, C, and D have a positional meaning. Connection type 2WAYDC is used for path protection DRI cross-connections.

- All A&B AIDs in the TL1 cross-connection command are in the WorkingAID&ProtectAID format.
- To establish a cross-connection on a two-fiber protection path or on a four-fiber protection channel, the protection channel access (PCA) connection type (1WAYPCA or 2WAYPCA) is required.
- If you send a PCA cross-connection type on the non-PCA AIDs, the IIAC error message is returned.
- If you send a non-PCA cross-connection type on the PCA AIDs, the IIAC error message is returned.
- The facility AID is only valid on slots with a G1K-4 card installed.
- The virtual facility AID (VFAC) is only valid on slots holding an ML-Series card.
- Both DRITYPE and DRINODE have been optional fields since Release 5.0 to support the BLSR-DRI feature. DRITYPE is applied only if the CCT is drop-and-continue (1WAYDC or 2WAYDC), and defaults to path protection for the DRI. DRINODE must be specified only if at least one end of the connection is on the BLSR, and defaults to NA.
- The DS3XM-12 card allows portless STS1/VT1.5 cross-connection provisioning on the DS3XM-12 PORTLESS ports (port number > = 12).
- CKTID is a string of ASCII characters. The maximum length of CKTID is 48. If the CKTID is EMPTY or NULL the field will not appear.
- STS18c and STS36c cross-connects are only supported on the FC_MR-4 card and optical cards.

- LO CCAT is not applicable for ML-100T-8 and CE-100T-8 cards.
- LO VCAT is not applicable for the ML-100T-8 card on the ONS 15310-CL.
- STS18C and STS36C cross-connects are not supported on the ONS 15310-MA.

Category

Cross Connections

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

<SRC>	Source access identifier from the ALL. Listable.
<DST>	Destination AID from the ALL.
<CCT>	Type of connection. Used for specifying one or two-way connections. Default is 2-way. The parameter type is CCT, which is the type of cross-connect that will be created.
• 1WAY	A unidirectional connection from a source tributary to a destination tributary.
• 1WAYDC	Path Protection multicast drop with one-way continue.
• 1WAYEN	Path Protection multicast end node with one-way continue.
• 1WAYMON	A bidirectional connection between the two tributaries. **Note:** 1WAYMON is not supported with TL1. However, it is still supported from the Cisco Transport Controller (CTC). Using CTC, you can create 1WAYMON cross-connects that can be retrieved through TL1.
• 1WAYPCA	A unidirectional connection from a source tributary to a destination tributary on the protection path/fiber.
• 2WAY	A bidirectional connection between the two tributaries.
• 2WAYDC	A bidirectional drop-and-continue connection applicable only to path protection traditional and integrated DRIs.
• 2WAYPCA	A bidirectional connection between the two tributaries on the extra protection path/fiber.
• DIAG	Diagnostic cross-connect. Supports BERT (BLSR PCA diagnostic cross-connect).

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

• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ENT-EQPT

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

Usage Guidelines

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

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

The PROTID slot must be provisioned first.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Notes:

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

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

- AID sent to a non-working slot; the working cards must be in even slots for 1:1 protection, and working cards must be in the same bank and not in Slot 3 or Slot 15 for 1:N protection.
- An invalid AID was chosen for the protection slot.
- The working AID is already in a protection group.
- The AID is a protect AID.
- The protect card has a circuit.
- The equipment type does not match the allowed AID.
- The slot is already provisioned.
- The protect slot is not provisioned.
- Multiple working AIDs were sent for 1:1 protection.
- The CARDMODE provisioning is allowed on the DS3XM-12 and ML-Series cards. Provisioning for the DS3XM-12 is based on the cross-connect type and DS3XM-12 location. The following error conditions apply:
    - ♦ The DS3XM-12 card in the lower speed input/output (I/O) slot with the XCVT card only allows the DS3XM-12-STS12 CARDMODE. Other cases allow the CARDMODE to be DS3XM-12-STS48.
    - ♦ The NE defaults to the highest available backplane rate/mode for the DS3XM-12 card if you do not specify the CARDMODE in the ENT-EQPT command.
    - ♦ The ML100T-8 card will be provisioned to MAPPER mode by default.
- The 1:N (1 <= N <= 7) protection group is allowed on the DS3XM-12 card in an ONS 15454 across two sides (A and B). All the cards in the 1:N protection group must be on the same backplane rate (or CARDMODE). The following error conditions apply:
    - ♦ For 1:N protection, the protect card must be allocated on either Slot 3 or Slot 15. For 1:1 protection, the protect card must be allocated on the odd slots.
    - ♦ The working DS3XM-12 cards on the opposite side of the shelf from the protection card (either Slot 3 or Slot 15) in a 1:N group can only have portless connections. The other working cards of the 1:N group on the same side of the shelf as the protection card do not have this limitation.

      For example, suppose that there is a DS3XM-12 card 1:N group on Slot 2, Slot 3, Slot 4, Slot 12, and Slot 16, where Slot 3 is the protect card. Slot 2, Slot 4, Slot 12, and Slot 16 are the working cards in the 1:N (1:5) protection group. According to the above limitation rule, the Slot 12 and Slot 16 cards need to have the portless provisioning only, while the Slot 2 and Slot 4 cards can be either portless or ported provisioning.

CMDMDE provisioning behaves as follows:

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

- RETIME provisioning is allowed only on the DS1/E1-56 card (ONS 15454).
- For the Cisco ONS 15310-MA, only 1:1 protection groups are supported. The protection group is automatically created when both the working and protect cards are provisioned; therefore, protection groups cannot be created using the ENT-EQPT or ED-EQPT commands. A protection group can be

deleted by deleting the protect card (DLT-EQPT). Trying to delete the working card will result in the Equipment In Use (SPLD) error.

Category

Equipment

Security

Provisioning

Input Format

ENT-EQPT:[<TID>]:<AID>:<CTAG>::<AIDTYPE>:[PROTID=<PROTID>],[PRTYPE=<PRTYPE>],[RVRTV=<RVR

Input Example

ENT-EQPT::SLOT-2:3::DS1:PROTID=SLOT-1,PRTYPE=1-1,CMDMDE=FRCD;

Input Parameters

<AID>	Access identifier from the EQPT.
<AIDTYPE>	(Optional) The type of facility, link or other addressable entity targeted by the message. The parameter type is EQUIPMENT_TYPE (equipment type).
• 10GE-XP	(ONS 15454) 2 x 10 Gbps. muxponder/L2 ethernet switch card
• 32-DMX	(ONS 15454) 32 channel optical demultiplexer
• 32-DMX-L	(ONS 15454) 32 channel optical demultiplexer for L-band
• 32-DMX-O	(ONS 15454) 32 channel unidirectional optical demultiplexer This overrides the old equipment type DMX-32 present in the 4.6 and earlier releases.
• 32-MUX-O	(ONS 15454) 32 channel unidirectional optical multiplexer This overrides the old equipment type MUX-32 present in the 4.6 and earlier releases.
• 32-WSS	(ONS 15454) 32 channel optical wavelength selective switch for C Band
• 40-DMX-C	(ONS 15454) 40 channel optical demultiplexer for C Band
• 40-MUX-C	(ONS 15454) 40 channel optical multiplexer for C Band
• 40-WSS-C	(ONS 15454) 40 channel optical wavelength switch selector for C Band
• 40-WXC-C	(ONS 15454) 40 channel optical wavelength cross-connect/wavelength router for C Band
• AD-1B	(ONS 15454) Optical add/drop multiplexed (OADM) 1 band filter

• AD-1C	(ONS 15454) Optical add/drop multiplexed (OADM) 1 channel filter
• AD-2C	(ONS 15454) Optical add/drop multiplexed (OADM) 2 channels filter
• AD-4B	(ONS 15454) Optical add/drop multiplexed (OADM) 4 bands filter
• AD-4C	(ONS 15454) Optical add/drop multiplexed (OADM) 4 channels filter
• ADM-10G	(ONS 15454) 16 x OC3/OC12/OC48/GIGE and OC192/Trunk ADM 10 Gbps card
• AIC	(ONS 15454) AIC card
• AICI	(ONS 15454) AICI Card
• ASAP-4	(ONS 15600) Any service any port (ASAP) carrier card with four PIM slots
• CE-1000-4	(ONS 15454) CE-1000-4 mapper card
• CE-100T-8	(ONS 15454, ONS 15310-CL, ONS 15310-MA) CE-100T-8 mapper card
• CE-MR-10	(ONS 15454, ONS 15454 SDH) CE-MR-10 data card
• CE-MR-6	(ONS 15310-MA) CE-MR-6 data card
• CTX-2500	(ONS 15310-MA) CTX card
• CXC	(ONS 15600) Cross connect card
• DS1-28-DS3-EC1-3	(ONS 15310-MA) DS1-28-DS3-EC1-3 card
• DS1-84-DS3-EC1-3	(ONS 15310-MA) DS1-84-DS3-EC1-3 card
• DS1-E1-56	(ONS 15454) DS1-E1-56 card
• DS1I	(ONS 15454) DS1I card
• DS1N	(ONS 15454) DS1N card
• DS3	(ONS 15454) DS3 card
• DS3-EC1-48	(ONS 15454) DS3-EC1-48 card type
• DS3E	(ONS 15454) DS3E card
• DS3I	(ONS 15454) DS3I card
• DS3IN	(ONS 15454) DS3IN card
	(ONS 15454) DS3N card

• DS3N	
• DS3NE	(ONS 15454) DS3NE card
• DS3XM	(ONS 15454) DS3XM card
• DS3XM-12	(ONS 15454) DS3XM-12 card
• E1-42	(ONS 15454) 42 port E1 card
• E1000T	(ONS 15454) E1000T card
• E100T	(ONS 15454) E100T card
• E3	(ONS 15454) E3 card
• EC1	(ONS 15454) EC1 card
• FC-MR-4	(ONS 15454) FC-MR-4 card
• FILLER-CARD	(ONS 15454, ONS 15600, ONS 15310-CL, ONS 15310-MA) Blank filler card
• G1000-4	(ONS 15454) A 4-port G1000 card
• GE-XP	(ONS 15454) 20 x 1 Gbps muxponder/L2 ethernet switch card
• MD-4	(ONS 15454) Four channel optical multiplexer/demultiplexer
• ML-100T-8	(ONS 15454, ONS 15310-CL, ONS 15310-MA) Exige/Elise mapper card
• ML1000-2	(ONS 15454) Daytona 2-port GigE
• ML100T-12	(ONS 15454) Daytona 12-port FSTE
• ML100X-8	(ONS 15454) 8-port 100T card with optical interface
• MRC-12	(ONS 15454) Humvee - 12-port multirate optical card
• MRC-2.5G-4	(ONS 15454) 4-port MRC 2.5G (Hummer 4 15454-ANSI card)
• MRC-2.5G-12	(ONS 15454) 12-port MRC 2.5G (Hummer 12 15454-ETSI card)
• MXP-2.5G-10E	(ONS 15454) Monviso 10G (4 * 2.5G) muxponder card with enhanced FEC
• MXP-2.5G-10EX	(ONS 15454) Cengalo 10G (4 * 2.5G) muxponder with enhanced FEC card
• MXP-2.5G-10G	(ONS 15454) Skane 10G (4 * 2.5G) muxponder card
	(ONS 15454) Bernina multirate 2.5G muxponder unprotected

• MXP-MR-2.5G	
• MXPP-MR-2.5G	(ONS 15454) Bernina multirate 2.5G muxponder protected
• MXPP-MR-10DME	(ONS 15454) Multirate 10Gbps datamux
• MXPP-MR-10DMEX	(ONS 15454) Multirate 10Gbps datamux with enhanced dispersion
• OC12	(ONS 15454, ONS 15327) OC12 card
• OC12-4	(ONS 15454) A 4-port OC12 card
• OC192	(ONS 15454) OC192 card
• OC192-XFP	(ONS 15454, ONS 15454 SDH) Mongoose - 1-port OC192 XFP
• OC192-4/STM64-4	(ONS 15600) 4-port OC192 card
• OC192-4-DWDM/STM64-4-DWDM	(ONS 15600) Leatherneck: 4-port OC192 card with tunable laser for C band
• OC3	(ONS 15454) OC3 card
• OC3-8	(ONS 15454) 8-port OC3 card
• OC48	(ONS 15454) OC48 card
• OC48-16/STM16-16	(ONS 15600) 16-port OC48 card
• OPT-AMP-17-C	(ONS 15454) Optical booster/pre-amplifier for C band 17 dBm
• OPT-AMP-23-C	(ONS 15454) Optical booster/pre-amplifier for C band 23 dBm
• OPT-AMP-L	(ONS 15454) Optical booster/pre-amplifier for L band
• OPT-AMP-C	(ONS 15454) Optical booster/pre-amplifier for C band
• OPT-BST	(ONS 15454) Optical booster amplifier
• OPT-BST-E	(ONS 15454) Optical booster enhanced amplifier for C band
• OPT-BST-L	(ONS 15454) Optical booster amplifier for L band
• OPT-PRE	(ONS 15454) Optical pre-amplifier
• OSC-CSM	(ONS 15454) Optical service channel (OSC) with combiner/separator module (SCM)
• OSCM	(ONS 15454) Optical service channel (OSC) module
	(ONS 15600) 1-port pluggable interface module

• PIM-1	
• PIM-4	(ONS 15600) 4-port pluggable interface module
• PPM-1	(ONS 15454, ONS 15600, ONS 15310-CL, ONS 15310-MA) Pluggable port module with one SFP port
• SSXC	(ONS 15600) Cross connect card
• STM1E-12	(ONS 15454 SDH) STM1E-12 card
• TCC	(ONS 15454) TCC card
• TXP-MR-10E	(ONS 15454) Skane 10G multirate transponder card with enhanced FEC
• TXP-MR-10G	(ONS 15454) Skane 10G multirate transponder card
• TXP-MR-2.5G	(ONS 15454) Rockwell multirate 2.5G unprotected
• TXPP-MR-2.5G	(ONS 15454) Rockwell multirate 2.5G protected
• XC	(ONS 15454) XC card
• XC10G	(ONS 15454) XC10G card
• XCVT	(ONS 15454) XCVT card
• XCVXC-10G	(ONS 15454) XCVXC-10G card
• XCVXC-2.5G	(ONS 15454) XCVXC-2.5G card
• XCVXL-10G	(ONS 15454) XCVXL-10G card
• XCVXL-2.5G	(ONS 15454) XCVXL-2.5G card
<PROTID>	Identifies valid protection slots for the electrical cards.
• NULL	Indicates there is no protection group. Used when trying to delete a protection group.
• SLOT-1	The No.1 slot of an NE.
• SLOT-2	The No.2 slot of an NE. (ONS 15310-MA)
• SLOT-3	The No.3 slot of an NE.
• SLOT-5	The No.5 slot of an NE.
• SLOT-6	The No.6 slot of an NE. (ONS 15310-MA)
• SLOT-13	The No.13 slot of an NE.

• SLOT-15	The No.15 slot of an NE.
• SLOT-17	The No.17 slot of an NE.
<PRTYPE>	Identifies the protection group type values.
• 1-1	1 to 1 protection
• 1-N	1 to N protection
<RVRTV>	(Optional) Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. Only applies to SNCP. The parameter type is ON_OFF, which disables or enables an attribute.
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	(Optional) Revertive time. RVTM is not allowed to be set while RVRTV is N. Only applies to SNCP. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state where the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that might make the command fail.

ENT-FFP-<MOD2DWDMPAYLOAD>

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

Usage Guidelines

None

Category

DWDM

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

<SRC>	Source access identifier from the FACILITY.
<DST>	Destination access identifier from the FACILITY.
<PROTTYPE>	The type of facility protection. The parameter type is PROTTYPE (protection type for dense wavelength division multiplexing [DWDM] client facilities).
• Y-CABLE	Y-cable protection for the client ports on TXP_MR_10G, MXP_2.5G_10G, and TXP_MR_2.5G/TXPP_MR_2.5G cards.
<PROTID>	Protection group identifier. Defaults to the protect port AID of the protection group. The identifier is a string that can have a maximum length of 32 characters.
<RVRTV>	Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. Defaults to 5.0 minutes. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	Protection switch operation. Identifies the switching mode. Defaults to UNI. **Note:** TXP_MR_10G and MXP_2.5G_10G cards do not support bidirectional switching. Parameter type is UNI_BI (unidirectional and bidirectional switch operations).
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching

ENT-FFP-<OCN_TYPE>

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter Facility Protection Group for OC-3, OC-12, OC-48, or OC-192 (ENT-FFP-<OCN_TYPE>) command creates optical 1+1 protection.

Usage Guidelines

See Table 28-1 for supported modifiers by platform.

Notes:

- The protect AID must not be provisioned with traffic.
- The working AID can be provisioned with traffic.
- PROTID is a string and can have a maximum length of 32 characters.
- Optimized 1+1 protection and related attributes are only applicable to the ONS 15454.
- The following parameters are supported in Software Release 6.0 and later: OPOTYPE, VRGRDTM, DTGRDTM, and RCGRDTM.
- The following 1+1 protection group rules apply to the MRC-12 card:
    - A 1+1 protection group can only be created between MRC-12 cards. You cannot create a 1+1 protection group between an MRC-12 card and an OC-48 card, for example.
    - A 1+1 protection group can be created only using the same port number. For example, a protection group cannot be created between Port 1 of Slot 5 and Port 4 of Slot 12 (assuming that Slot 5 and Slot 12 both contain MRC-12 cards).
    - A 1+1 protection group cannot be created between ports on the same card. For example, protection groups cannot be created between Port 1 of Slot 5 and Port 4 of Slot 5 (assuming that Slot 5 contains a MRC-12 card).
    - Both the cards in the protection group must be placed in the same type of slot. Both MRC-12 cards must be in drop slots (Slots 1 to 4, 14 to 17) or both cards must be in trunk slots (Slots 5 to 6, 12 to 13). You cannot create a protection group between an MRC-12 card in a drop slot and another MRC-12 card in a trunk slot.
- The following 1+1 protection group rules apply to the OC192-XFP cards:
    - A 1+1 protection group can be created between two OC192-XFP cards in trunk slots (Slots 5 to 6, 12 to 13).
    - A 1+1 protection group can be created between an OC192-XFP card and an OC192LR/STM64LH card in trunk slots (Slots 5 to 6, 12 to 13).
- The PROTTYPE parameter is only applicable to optical DWDM cards.

Category

Protection

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

<WORK>	Working port from the FACILITY.
<PROTECT>	Protection port from the FACILITY.
<PROTTYPE>	Protection group type. Y-CABLE is the only applicable value (for optical DWDM cards only).
<PROTID>	Protection group identifier. Defaults to the protect port AID of the protection group. If the name has an embedded double quote character, that double quote character has to be escaped with a backslash \". The double quotes are special characters that delimit the protection group name and they must be balanced (paired). PROTID is a string that has a maximum length of 32 characters.
<RVRTV>	Revertive mode. The value Y indicates that protection switching system reverts service to the original line after restoration. The value N indicates that protection switching system does not revert service to the original line after restoration. RVRTV is applicable only for 1+1 protection switching. Null defaults to N. The parameter type is ON_OFF (disable or enable an attribute).
• N	Does not revert service to original line after restoration.
• Y	Reverts service to original line after restoration.
<RVTM>	Revertive time. Defaults to 5.0 minutes. The parameter type is REVERTIVE_TIME (revertive time).
• 0.5 to 12.0	Revertive time is 0.5 to 12.0 minutes.
<PSDIRN>	Protection switch operation. Identifies the switch mode. The parameter type is UNI_BI (unidirectional and bidirectional switch operations)
• BI	Bidirectional protection switching
• UNI	Unidirectional protection switching
<OPOTYPE>	1+1 protection type. Can be either standard or optimized 1+1 protection. The parameter type is ONE_PLUS_ONE (1+1 protection type).
• Optimized	Optimized 1+1. **Note:** Only applicable to the ONS 15454. The port must be in SDH mode.
• Standard	Standard 1+1
<VRGRDTM>	Verification guard timer. Only applicable to optimized 1+1. The parameter type is VERIFICATION_GUARD_TIMER (optimized 1+1 verification guard timer).
• 0.5	500 ms
	1 second

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

• 9.0	
• 10.0	10 seconds

ENT-FTPSERVER

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter FTP Server (ENT-FTPSERVER) command creates FTP server entries.

Releases prior to 8.5 provided limited FTP support to ENEs on enabling proxy/firewall. This implied that the database backup and IOS config file backup (COPY-RFILE, COPY-IOSCFG) to ENEs could not be performed because of security considerations.

Provisioning a list of legal FTP hosts using ENT/ED/DLT/RTRV-FTPSERVER commands overcome the above limitations and allows database backup/restore and software download to an ENE even on enabling proxy/firewall.

You can provision the FTP hosts configured in the ACL to elapse after a specified interval of time. You can then use the COPY-RFILE command to perform database backup/restore or software download to and from this list of legal FTP hosts provisioned to the ENEs.

Additionally, TL1 supports the TID to IP address translation for the GNE TID specified in the FTP URL of COPY-RFILE and COPY-IOSCFG commands.

Disabling firewall (Proxy only) allows all FTP operations (software download, database backup/restore and IOS config file backup/restore) to ENEs.

Usage Guidelines

The default value of the TIMER, 0, denotes infinite timeout. The TIMER cannot be set with ENABLE=N.

Category

ENE

Security

Superuser

Input Format

ENT-FTPSERVER:[<TID>]::<CTAG>:::IPADDR=<IPADDR>,IPMASK=<IPMASK>, ENABLE=<ENABLE>,[TIMER=<TIMER>];

Input Example

ENT-FTPSERVER:::A:::IPADDR=10.20.30.40,IPMASK=255.0.0.0,ENABLE=Y,TIMER=30;

Input Parameters

<IPADDR>	Specifies the IP address of the FTP server.

<IPMASK>	Specifies the subnet mask of the FTP server.
<ENABLE>	Specifies the enable/disable option of the FTP server. The parameter type is ON_OFF (disable or enable an attribute).
• N	Disable an attribute.
• Y	Enable an attribute.
<TIMER>	(Optional) Specifies the timeout value of the FTP server in minutes. Timer is an integer that can be set between 0 and 60 minutes.

ENT-LMP-CTRL

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

Usage Guidelines

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

Category

LMP

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

<SRC>	The LMP control channel AID value
• CTRL-ALL	Specifies all the control channels
• CTRL-{1-4}	Specifies an individual control channel
<LOCALPORT>	LOCALPORT is the pathway that the LMP control channel will use to send and receive messages.

<REMOTENE>	Remote IP address used by the far-end LMP control channel
<REMOTEIP>	Remote IP address with which the LMP control channel sends and receives messages
<HELLO>	The time interval in which the LMP protocol sends HELLO messages
<HELLOMIN>	Minimum hello time within which the LMP control channels can send out HELLO messages to the remote node
<HELLOMAX>	The maximum amount of time that the LMP control channel can wait between HELLO messages
<DEAD>	Time interval an LMP control channel will wait for a HELLO message from the remote side before listing the control channel as down
<DEADMIN>	The minimum amount of time that an LMP control channel can wait before listing the control channel status as down
<DEADMAX>	The maximum amount of time that the LMP control channel can wait before listing the control channel as down
<PST>	Primary state. This parameter indicates the current overall service condition of an entity.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. This parameter provides additional information pertaining to PST and PSTQ.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ENT-LMP-DLINK

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

Usage Guidelines

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

Category

LMP

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

<SRC>	Access identifier from the FACILITY.
<LINKTYPE>	The type of LMP data link
• PORT	Port data link
• COMPONENT	Component data link
<TELINK>	Maps LMP data links to LMP TE links
<REMOTEID>	The remote LMP data link ID

ENT-LMP-TLINK

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

Usage Guidelines

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

Category

LMP

Security

Provisioning

Input Format

ENT-LMP-TLINK:[<TID>]:<SRC>:<CTAG>:::REMOTEID=<REMOTEID>,

REMOTETE=<REMOTETELINK>, [MUXCAP=<MUXCAP>]:[<PST>[,<SST>]];

Input Example

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

Input Parameters

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

• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading
• UAS	Unassigned
• UEQ	Unequipped

ENT-LNK

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

The optical links can be established between:

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

Usage Guidelines

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

Category

DWDM

Security

Provisioning

Input Format

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

Input Example

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

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

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

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

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

Input Parameters

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

ENT-LNKTERM

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

Usage Guidelines

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

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

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

Category

Provisionable Patchcords

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

<AID>	Access identifier from the LNKTERM. Indicates a link (provisionable patchcord) termination on the local node.
<PORT>	The local port corresponding to this provisionable patchcord termination from the CHANNEL.

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

ENT-NNI-ETH

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

Usage Guidelines

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

Category

Ethernet

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

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

ENT-OCHCC

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

Usage Guidelines

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

Category

DWDM

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

<AID>	Access identifier from the FACILITY.
<CKTID>	Cross-connect ID. The default is Blank or None. It is a string of ASCII characters. The maximum length is 48. If CKTID is empty or null the CKTID field will not appear.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state in which the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that may make the command fail.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity. The default is IS.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ. The default is AINS.
• AINS	Automatic in-service
• DSBLD	Disabled

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

ENT-OCHNC

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

Usage Guidelines

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

Category

DWDM

Security

Provisioning

Input Format

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

Input Example

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

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

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

Input Parameters

<SRC>	Source access identifier from the CHANNEL. In 2-way wavelength connection sources both directions need to be indicated.
<DST>	Destination access identifier from the LINEWL. In 2-way wavelength connection sources both directions need to be indicated.
<WCT>	Wavelength connection type. The parameter type is WCT. The default is 1WAY.
• 1WAY	A unidirectional wavelength connection for one specified ring direction.
• 2WAY	A bidirectional wavelength connection for both the ring directions.
<CKTID>	Cross-connect ID. The default is Blank or None. It is a string of ASCII characters. The maximum length is 48. If CKTID is empty or null the CKTID field will not appear.
<CMDMDE>	The parameter type is command mode (CMDMDE). Normal (NORM) mode is the default behavior for all commands but you can specify forced (FRCD) mode to force the system to override a state where the command would normally be denied. The FRCD mode of operation is applicable to delete a virtual concatenated (VCAT) member cross-connect in IS-NR or OOS-AU,AINS service states.
• FRCD	Force the system to override a state in which the command would normally be denied.
• NORM	Execute the command normally. Do not override any conditions that may make the command fail.
<WLOPWR>	The value of calibrated output power that the VOA is going to set as a result of its attenuation. WLOPWR is a float.
<VOAATTN>	The value of calibrated attenuation for the VOA expressed in dBm. The range is 0.0 to +30.0. VOAATTN is a float.
<PST>	Primary state. The parameter type is PST, which indicates the current overall service condition of an entity. The default is IS.
• IS	In service
• OOS	Out of service
<SST>	Secondary state. The parameter type is SST, which provides additional information pertaining to PST and PSTQ. The default is AINS.
• AINS	Automatic in-service
• DSBLD	Disabled
• LPBK	Loopback
• MEA	Mismatch of equipment and attributes
• MT	Maintenance mode
• OOG	Out of group
• SWDL	Software downloading

• UAS	Unassigned
• UEQ	Unequipped

ENT-QNQ-ETH

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

Usage Guidelines

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

Category

Ethernet

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

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

<RULE>	Used to represent the rules allowed for the VLAN tagging operations. The default value is ADD.
• ADD	The S-VLAN tag is added to the CE-VLAN tag.
• XLTE	The S-VLAN tag replaces the CE-VLAN tag (single Q).

ENT-RMONTH-<MOD2_RMON>

(Cisco ONS 15454, ONS 15310-CL, ONS 15310-MA) The Enter Remote Monitoring Threshold for 10GFC, 10GIGE, 1GFC, 1GFICON, 2GFC, 2GFICON, 4FGC, 4GFICON, FSTE, G1000, GIGE, ETH, GFPOS, GIGE, ISCCOMPAT, POS (ENT-RMONTH-<MOD2_RMON>) command creates an entry in the remote monitoring (RMON) alarm table for the threshold of data statistics (for example, GIGE or FC) managed by the RMON engine. After creating the RMON threshold (RMONTH), a threshold crossing alert (TCA) event will be generated and reported to the TL1 session when the threshold is crossed. More than one threshold can be created with different parameters for each data statistic type.

Usage Guidelines

See Table 28-1 for supported modifiers by platform.

Category

Performance

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

<SRC>	Source access identifier from the FACILITY. AID for the facility that manages the data statistics.
<MONTYPE>	Monitored type. Type of RMON data statistics. The parameter type is ALL_MONTYPE (monitoring type list).
• AISSP	Alarm Indication Signal Seconds-Path
• ALL	All possible values
• BBE-PM	OTN-Background Block Errors-Path Monitor Point

• BBE-SM	OTN-Background Block Errors-Section Monitor Point
• BBER-PM	OTN-Background Block Error Ratio-Path Monitor Point expressed as one tenth of a percentage
• BBER-SM	OTN-Background Block Error Ratio-Section Monitor Point expressed as one tenth of a percentage
• BIEC	FEC-Bit Errors Corrected
• CGV	8B10B-Code Group Violations
• CSSP	Controlled Slip Seconds-Path (DSXM-12 FDL/T1.403 PM count)
• CVCPP	Coding Violations-CP-Bit Path
• CVL	Coding Violations-Line
• CVP	Coding Violations-Path
• CVS	Coding Violations-Section
• CVV	Coding Violations-Section
• DCG	8B10B-Data Code Groups
• ESAP	Errored Second Type A-Path (DS3XM-12 DS1 PM count)
• ESBP	Errored Second Type B-Path (DS3XM-12 DS1 PM count)
• ESCPP	Errored Seconds-CP-Bit Path
• ESL	Errored Seconds-Line
• ESNPFE	Errored Second-Network Path (DS3XM-12 DS1 PM count)
• ESP	Errored Seconds-Path
• ES-PM	OTN-Errored Seconds-Path Monitor Point
• ES-SM	OTN-Errored Seconds-Section Monitor Point
• ESR	Errored Second-Ratio
• ESR-PM	Errored Seconds Ratio-Path monitor Point expressed as one tenth of a percentage
• ESR-SM	Errored Seconds Ratio-Section monitor Point expressed as one tenth of a percentage
• ESS	Errored Seconds-Section
	Errored Seconds-VT Path

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

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

• ifOutPayloadCrcErrors	
• 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
	Low-Order Path Severely Errored Period Intensity

• LP-SEPI	
• LP-SES	Low-Order Path Severely Errored
• LP-UAS	Low-Order Path Unavailable Seconds
• MS-PSC	Protection switch count
• MS-PSD	Protection switch duration
• NIOS	8B10B-Non Idle Ordered Sets
• NPJC-PDET	Negative Pointer Justification Count- Path Detected
• NPJC-PGEN	Negative Pointer Justification Count- Path Generated
• OPR-AVG	Average Receive Power in tenths of a microW
• OPR-MAX	Maximum Receive Power in tenths of a microW
• OPR-MIN	Minimum Receive Power in tenths of a microW
• OPRN	Normalized Optical Receive Power for OC3-8 card
• OPRN-MAX	Maximum value for OPRN
• OPRN-MIN	Minimum value for OPRN
• OPT-AVG	Average Transmit Power in tenths of a microW
• OPT-MAX	Maximum Transmit Power in tenths of a microW
• OPT-MIN	Minimum Transmit Power in tenths of a microW
• OPTN	Normalized value for Optical Power Transmitted for the OC3-8 card
• OPTN-MAX	Maximum value for OPTN
• OPTN-MIN	Minimum value for OPTN
• OPWR-AVG	Optical Power-Average Interval Value in tenths of a dBm
• OPWR-MAX	Optical Power-Maximum Interval Value in tenths of a dBm
• OPWR-MIN	Optical Power-Minimum Interval Value in tenths of a dBm
• PPJC-PDET	Positive Pointer Justification Count - Path Detected
	Positive Pointer Justification Count - Path Generated

• PPJC-PGEN	
• PSC	Protection Switching Count
• PSC-R	Protection Switching Count-Ring
• PSC-S	Protection Switching Count-Span
• PSC-W	Protection Switching Count-Working
• PSD	Protection Switching Duration
• PSD-R	Protection Switching Duration-Ring
• PSD-S	Protection Switching Duration-Span
• PSD-W	Protection Switching Duration-Working
• SASCPP	Severely Errored Framing/AIS Second-CP-Bit Path
• SASP	Severely Errored Framing/AIS Seconds Path
• SEFS	Severely Errored Framing Seconds
• SEFSP	Severely Errored Framing Seconds-Path (DS3XM-12 DS1 PM count)
• SESCPP	Severely Errored Second-CP-Bit Path
• SESL	Severely Errored Second-Line
• SESNPFE	Severely Errored Second-Network Path (DS3XM-12 DS1 PM count)
• SESP	Severely Errored Second-Path
• SES-PM	OTN-Severely Errored Second-Path
• SESR-PM	OTN-Severely Errored Second Ratio-Path Monitor Point expressed as one tenth of a percentage
• SESR-SM	OTN-Severely Errored Second Ratio-Section Monitor Point expressed as one tenth of a percentage
• SESS	Severely Errored Second-Section
• SES-SM	OTN-Severely Errored Second-Section Monitor Point
• SESV	Severely Errored Second-VT Path
• UASCPP	Unavailable Second-CP-Bit Path
	Unavailable Second-Line

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

ENT-ROLL-<MOD_PATH>

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

Note: STS18C and STS36C are not supported in this release.

Usage Guidelines

None

Category

Bridge and Roll

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

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

ENT-ROUTE

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

Usage Guidelines

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

Category

System

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

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

ENT-ROUTE-GRE

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

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

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

ENT-TADRMAP

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

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

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

ENT-TRAPTABLE

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

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

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

Input Example

ENT-TRAPTABLE::1.2.3.4:1::COMMUNITY="PRIVATE",TRAPPORT=162,TRAPVER=SNMPV1;

Input Parameters

<AID>	

	IP address identifying the trap destination. Only a numeric IP address is allowed. Access identifier from the IPADDR.
<COMMUNITY>	Community associated with the trap destination. Community name is a string with up to 32 characters.
<TRAPPORT>	UDP port number associated with the trap destination. The UDP port number default is 162. TRAPPORT is an integer.
<TRAPVER>	SNMP version number. Defaults to SNMPv1. The parameter type is SNMP_VERSION (SNMP Version).
• SNMPV1	(Default) SNMP Version 1
• SNMPV2	SNMP Version 2

ENT-TUNNEL-FIREWALL

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

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

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

ENT-TUNNEL-PROXY

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

Usage Guidelines

None

Category

System

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

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

ENT-USER-SECU

(Cisco ONS 15454, ONS 15327, ONS 15310-CL, ONS 15310-MA, ONS 15600) The Enter User Security (ENT-USER-SECU) command adds a user account. Only a Superuser can use the ENT-USER-SECU command. Each user created by the Superuser has one of these four privilege levels:

1. Retrieve [RTRV]: Users with this security level can retrieve information from the node, but cannot modify anything. The default idle time for a Retrieve user is unlimited.
2. Maintenance [MAINT]: Users with this security level can retrieve information from the node and perform limited maintenance operations such as card resets, Manual/Force/Lockout on cross-connects or in protection groups, and BLSR maintenance. The default idle time for a Maintenance user is 60 minutes.
3. Provisioning [PROV]: Users with this security level can perform all maintenance actions, and all provisioning actions except those restricted to Superusers. The default idle time for a Provisioning user is 30 minutes.
4. Superuser [SUPER]: Users with this security level can perform all provisioning user actions, plus creating and deleting user security profiles, setting basic system parameters such as time, date, node

name, and IP address, and doing database backup and restoration. The default idle time for a Superuser is 15 minutes.

Usage Guidelines

- Passwords are masked for the following security commands: ACT-USER, ED-PID, ENT-USER-SECU, and ED-USER-SECU. Access to a TL1 session by any means will have the password masked. The CTC Request History and Message Log will also show the masked commands. When a password-masked command is reissued by double-clicking the command from CTC Request History, the password will still be masked in the CTC Request History and Message Log. The actual password that was previously issued will be sent to the NE. To use a former command as a template only, single-click the command in CTC Request History. The command will be placed in the Command Request text box, where you can edit the appropriate fields prior to reissuing it.
- The user ID can be any combination of up to 10 alphanumeric characters.
- The password ID is a string of up to 10 characters where at least 2 characters are nonalphabetic with at least one special character (+, %, or #).
- Although the CTC allows both a UID and a PID of up to 20 characters, the CTC-entered users (UID and PID) might not be valid TL1 users. For example, if you issue an ACT-USER command using a CTC-entered UID that is greater than 10 characters long, TL1 will respond with DENY (Cannot Login) error message.
- The TL1 password security is enforced as follows:
    - The PID cannot be the same as or contain the UID. For example, if the userid is CISCO25 the password cannot be CISCO25#.
    - The PID must have one nonalphabetic and one special (+, %, or #) character.
    - PID toggling is not permitted; for example, if the current password is CISCO25#, the new password cannot be CISCO25#.

Category

Security

Security

Superuser

Input Format

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

Input Example

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

Input Parameters

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

• PROV	Provision security level
• RTRV	Retrieve security level
• SUPER	Superuser security level

ENT-VCG

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

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

Note: Set the member state to OOG for CE-MR-6 and CE-MR-10 cards during the following conditions:

- Hardware LCAS circuit creation, member addition, member deletion, or before circuit deletion.
- When changing member state from or to OOS, DSBLD. In this condition first set the state to OOS, OOG.

Usage Guidelines

None

Category

VCAT

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

<SRC>	Source access identifier from the FACILITY. ML1000-2 and ML100T-12 cards use the VFAC AID. The FC_MR-4 card uses the FAC AID.

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

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

ENT-VLAN

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

Usage Guidelines

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

Category

Ethernet

Security

Provisioning

Input Format

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

Input Example

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

Input Parameters

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

ENT-WDMSIDE

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

Usage Guidelines

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

Category

DWDM

Security

Maintenance

Input Format

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

Input Example

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

Input Parameters

<AID>	The AID is used to access the WDM side of a DWDM node.

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