



# Release Notes for Cisco ONS 15600 SDH Release 9.0

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Revised: October 2008, OL-17630-01



## 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.

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Release notes contain the new features and enhancements for the Cisco ONS 15600 and . For detailed information regarding features, capabilities, hardware, and software introduced with this release, refer to Release 9.0 of the *Cisco ONS 15600 Procedure Guide*, *Cisco ONS 15600 Reference Manual*, *Cisco ONS SONET TL1 Command Guide*, and *Cisco ONS 15600 Troubleshooting Guide*. For the latest version of the Release Notes for Cisco ONS 15600 Release 9.0, visit the following URL:

[http://www.cisco.com/en/US/products/hw/optical/ps4533/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/hw/optical/ps4533/prod_release_notes_list.html)

Cisco also provides Bug Toolkit, a web resource for tracking defects. To access Bug Toolkit, visit the following URL:

<http://tools.cisco.com/Support/BugToolKit/action.do?hdnAction=searchBugs>

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# Changes to the Release Notes

This section documents supplemental changes that have been added to the *Release Notes for Cisco ONS 15600 SDH Release 9.0* since the production of the Cisco ONS 15600 SDH System Software CD for Release 9.0.

## Using the Bug Toolkit

In Cisco ONS 15600 SDH Software Release 9.0 and later, use the Bug Toolkit to view the list of outstanding and resolved bugs in a release. This section explains how to use the Bug Toolkit.

**Step 1** Go to <http://tools.cisco.com/Support/BugToolkit/action.do?hdnAction=searchBugs> and click **Launch Bug Toolkit**.

You will be prompted to log into Cisco.com.

**Step 2** To search for a specific bug, enter the bug ID in the **Search for Bug ID** field and click **Go**.

To search for all the bugs in a specified release, enter the following search criteria:

- Select the Product Category—Select **Optical Networking**.
- Select Products—Select the products from the list. Press and hold the **Ctrl** key to select multiple products.
- Software Version—Select **9.0** to view the list of outstanding and resolved bugs in Cisco ONS 15600 SDH Software Release 9.0.
- Advanced Options—You can either perform a search using the default search criteria or define custom criteria for an advanced search. To customize the advanced search, select **Use custom settings for severity, status, and others** and provide the following information:

- Severity—Select the severity level.
- Status—Select **Open, Fixed, or Terminated**.

Select **Open** to view all the open bugs. To filter the open bugs, clear the Open check box and select the appropriate suboptions that appear below the Open check box. The suboptions are New, Held, More, Open, Waiting, Assigned, Forwarded, Postponed, Submitted, and Information Required. For example, if you want to view only new bugs in Cisco ONS 15600 SDH Software Release 9.0, only select **New**.

To view fixed bugs, select **Fixed**. To filter fixed bugs, clear the Fixed check box and select the appropriate suboptions that appear below the fixed check box. The suboptions are **Resolved or Verified**.

To view terminated bugs, select **Terminated**. To filter fixed bugs, clear the Terminated check box and select the appropriate suboptions that appear below the terminated check box. The suboptions are **Closed, Junked, and Unreproducible**. Select select multiple options as required.

- Advanced—Select the **Show only bugs containing bug details** check box to view only those bugs that contain detailed information, such as symptoms and workarounds.
- Modified Date—Select this option if you want filter bugs based on the date on which the bugs were last modified.
- Results Displayed Per Page—Select the appropriate option from the list to restrict the number of results that appear per page.

**Step 3** Click **Search**.

The Bug Toolkit displays the list of bugs based on the specified search criteria. You can filter the search results based on severity, status and/or technology.

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## New Features and Functionality

This section highlights new features and functionality for Release 9.0. For detailed documentation of each of these features, consult the user documentation.

### New Software Features and Functionality

The following new software features are added for Release 9.0:

- [Qualification of Pluggables, page 3](#)
- [Login Warning Message Window, page 3](#)
- [IPv6 Native Support, page 3](#)
- [SNMPv3 Support, page 4](#)
- [Overlay Ring Circuits, page 4](#)

#### Qualification of Pluggables

This enhancement qualifies additional pluggables on already released ONG boards across different platform. This feature includes the support for the following pluggables for ONS 15600 platform:

- ONS-SI-2G-I1 on ASAP 4PIO card
- ONS-SI-2G-L2 on ASAP 4PIO card
- ONS-XC-10G-I2 on ASAP 1PIO card
- ONS-XC-10G-30.3 to ONS-XC-10G-60.3 on ASAP 1PIO card

#### Login Warning Message Window

In Software Release 8.5 and earlier, the warning text in the CTC login screen is not displayed automatically. The user has to slide the vertical slider bar to see the warning text. A new warning message window has been added to display the warning message when you log into CTC.

#### IPv6 Native Support

Cisco ONS 15600 Software R9.0 and later supports native IPv6. ONS 15600 can be managed over IPv6 DCN networks by enabling the IPv6 feature. After you enable IPv6 in addition to IPv4, you can use CTC, TL1, and SNMP over an IPv6 DCN to manage ONS 15600. Each NE can be assigned an IPv6 address in addition to the IPv4 address. You can access the NE by entering the IPv4 address, an IPv6 address or the DNS name of the device. The IPv6 address is assigned only on the LAN interface of the NE. DCC/GCC interfaces use the IPv4 address.

## SNMPv3 Support

Cisco ONS 15600 Software R9.0 and later supports SNMPv3 in addition to SNMPv1 and SNMPv2c. SNMPv3 is an interoperable standards-based protocol for network management. SNMPv3 provides secure access to devices by a combination of authentication and encryption of packets over the network based on the User Based Security Model(USM) and the View-based Access Control Model (VACM).

- **User Based Security Model**—The User based Security Model (USM) uses the HMAC algorithm for generating keys for authentication and privacy. SNMPv3 authenticates data based on its origin, and ensures that the data is received intact. SNMPv1 and v2 authenticate data based on the plain text community string which is less secure when compared to user based authentication model.
- **View-based Access Control Model**—The view-based access control model controls the access to the managed objects.

You can configure SNMPv3 on a node to allow SNMP get and set access to management information and configure a node to send SNMPv3 traps to trap destinations in a secure way. SNMPv3 can be configured in secure mode, non-secure mode, or disabled mode.

## Overlay Ring Circuits

An overlay ring configuration consists of a core ring and subtended rings (Figure 12-36). An Overlay Ring Circuit routes traffic around multiple rings in an overlay ring configuration, passing through one or more nodes more than once. This results in multiple cross-connections on the nodes connecting the core ring to the subtended rings. For example, a customer having a core ring with cross-connects provisioned using TL1 can create cross-connects on subtended rings, due to a business need, without having to hamper the existing cross-connects on the core ring. This circuit can be either protected or unprotected.

Overlay ring supports circuit sizes; STS-1, 3c, 6c, 9c, 12c, 24c, 36c, 48c, and 192cs. Both unidirectional and bidirectional circuits are supported. Overlay ring circuits are contiguous concatenated (CCAT) and not virtual concatenated (VCAT) circuits.

Manual routing is mandatory while provisioning the overlay ring circuit. Overlay ring circuits created using Transaction Language 1 (TL1) are discovered by CTC and the status "DISCOVERED" is displayed. If the overlay ring circuit is deleted, the cross-connects on the core ring and subtended rings get deleted. Cross-connects on a subtended ring can be deleted through TL1 but would reflect as a partial overlay ring circuit in CTC, i.e. core ring will continue having cross-connects.

## TL1

### TL1 Command Changes

#### Changed Commands

The following new TL1 commands are changed:

- ED-NE-GEN
- RTRV-NE-GEN
- RTRV-NE-IPMAP
- RTRV-MAP-NETWORK
- RTRV-TADRMAP

- COPY-IOSCFG
- COPY-RFILE
- ENT-TRAPTABLE
- ED-TRAPTABLE
- DLT-TRAPTABLE
- RTRV-TRAPTABLE
- ENT-FTPSERVER
- ED-FTPSERVER
- DLT-FTPSERVER
- RTRV-FTPSERVER

## Command Syntax Changes

The syntax of the following commands have changed:

- ED-APC syntax changed:

ED-APC[:<TID>]:<aid>:<CTAG>[::APCENABLE=<apcenable>][:];

To:

ED-APC[:<TID>]:<aid>:<CTAG>[::<role>][:APCENABLE=<apcenable>][:];

- ED-CRS-VC4-4c syntax changed:

ED-CRS-VC4-4c[:<TID>]:<src>,<dst>:<CTAG>[::ADD=<add>],[REMOVE=<remove>],[CKTID=<ctid>],[CMDMDE=<cmdmde>][:<pst>[,<sst>]];

To:

ED-CRS-VC4-4c[:<TID>]:<src>,<dst>:<CTAG>[::<cct>][:ADD=<add>],[REMOVE=<remove>],[CKTID=<ctid>],[CMDMDE=<cmdmde>][:<pst>[,<sst>]];

- ED-CRS-VC4-6c syntax changed:

ED-CRS-VC4-6c[:<TID>]:<src>,<dst>:<CTAG>[::ADD=<add>],[REMOVE=<remove>],[CKTID=<ctid>],[CMDMDE=<cmdmde>][:<pst>[,<sst>]];

To:

ED-CRS-VC4-6c[:<TID>]:<src>,<dst>:<CTAG>[::<cct>][:ADD=<add>],[REMOVE=<remove>],[CKTID=<ctid>],[CMDMDE=<cmdmde>][:<pst>[,<sst>]];

- ED-CRS-VC4-64c syntax changed:

ED-CRS-VC4-64c[:<TID>]:<src>,<dst>:<CTAG>[::ADD=<add>],[REMOVE=<remove>],[CKTID=<ctid>],[CMDMDE=<cmdmde>][:<pst>[,<sst>]];

To:

ED-CRS-VC4-64c[:<TID>]:<src>,<dst>:<CTAG>[::<cct>][:ADD=<add>],[REMOVE=<remove>],[CKTID=<ctid>],[CMDMDE=<cmdmde>][:<pst>[,<sst>]];

- ED-CRS-VC4-8c syntax changed:

ED-CRS-VC4-8c[:<TID>]:<src>,<dst>:<CTAG>[::ADD=<add>],[REMOVE=<remove>],[CKTID=<ctid>],[CMDMDE=<cmdmde>][:<pst>[,<sst>]];

To:



```
ED-ETH[:<TID>]:<src>:<CTAG>[::FLOW=<flow>],[EXPDUPLICATE=<expduplex>],[SELECTIVE
EAUTO=<selectiveauto>],[EXPSPEED=<expspeed>],[VLANCOS=<vlancostthreshold>],[IPTOS=
<iptosthreshold>],[NAME=<name>],[CMDMDE=<cmdmde>],[SOAK=<soak>],[LITIMER=<liti
mer>][:<pst>[,<sst>]];
```

To:

```
ED-ETH[:<TID>]:<src>:<CTAG>[::FLOW=<flow>],[EXPDUPLICATE=<expduplex>],[SELECTIVE
EAUTO=<selectiveauto>],[EXPSPEED=<expspeed>],[VLANCOS=<vlancostthreshold>],[IPTOS=
<iptosthreshold>],[NAME=<name>],[CMDMDE=<cmdmde>],[SUPPRESS=<suppress>],[SOAK
=<soak>],[LITIMER=<litimer>][:<pst>[,<sst>]];
```

- ED-NE-GEN syntax changed:

```
ED-NE-GEN[:<TID>]:<CTAG>[::NAME=<name>],[IPADDR=<ipaddr>],[IPMASK=<ipmask>]
,[DEFRTR=<defrtr>],[IIOPORT=<iioport>],[NTP=<ntp>],[SUPPRESSIP=<mode>],[MODE=<
mode>],[SERIALPORTECHO=<serialportecho>];
```

To:

```
ED-NE-GEN[:<TID>]:<CTAG>[::NAME=<name>],[IPADDR=<ipaddr>],[IPMASK=<ipmask>]
,[DEFRTR=<defrtr>],[IPV6ADDR=<ipv6addr>],[IPV6PREFLEN=<ipv6preflen>],[IPV6DEFRT
R=<ipv6defrtr>],[IPV6ENABLE=<ipv6enable>],[IIOPORT=<iioport>],[NTP=<ntp>],[SUPPR
ESSIP=<suppressip>],[MODE=<mode>],[SERIALPORTECHO=<serialportecho>],[OSIROUTIN
GMODE=<osiroutingmode>],[OSIL1BUFSIZE=<osil1bufsize>],[OSIL2BUFSIZE=<osil2bufsize
>];
```

- ED-STM4 syntax changed:

```
ED-STM4[:<TID>]:<aid>:<CTAG>[::DCC=<dcc>],[AREA=<area>],[SYNCSMSG=<syncmsg>],[
SENDDUS=<senddus>],[PJMON=<pjmon>],[SFBER=<sfber>],[SDBER=<sdber>],[MODE=<mo
de>],[SOAK=<soak>],[OSPF=<ospf>],[LDCC=<ldcc>],[NAME=<name>],[CMDMDE=<cmdmd
e>],[EXPTRC=<exptrc>],[TRC=<trc>],[TRCMODE=<trcmode>],[TRCFORMAT=<trcformat>],[
ADMSSM=<admssm>],[SENDDUSFF=<senddusff>],[AISONLPBK=<aisonlpbk>],[FOREIGNF
END=<foreignFarEnd>],[FOREIGNIP=<foreignIpAddress>],[FREQ=<freq>],[LOSSB=<lossb>],
[OPRNOMINAL=<oprnomininal>][:<pst>[,<sst>]];
```

To:

```
ED-STM4[:<TID>]:<aid>:<CTAG>[::DCC=<dcc>],[AREA=<area>],[SYNCSMSG=<syncmsg>],[
SENDDUS=<senddus>],[PJMON=<pjmon>],[SFBER=<sfber>],[SDBER=<sdber>],[MODE=<mo
de>],[SOAK=<soak>],[OSPF=<ospf>],[LDCC=<ldcc>],[NAME=<name>],[CMDMDE=<cmdmd
e>],[EXPTRC=<exptrc>],[TRC=<trc>],[TRCMODE=<trcmode>],[TRCFORMAT=<trcformat>],[
ADMSSM=<admssm>],[SENDDUSFF=<senddusff>],[AISONLPBK=<aisonlpbk>],[FOREIGNF
END=<foreignFarEnd>],[FOREIGNIP=<foreignIpAddress>],[FREQ=<freq>],[LOSSB=<lossb>],
[OPRNOMINAL=<oprnomininal>],[OSISDCC=<osisdcc>],[OSILDCC=<osildcc>],[OSIROUTER=
<osirouter>][:<pst>[,<sst>]];
```

- ED-STM64 syntax changed:

```
ED-STM64[:<TID>]:<aid>:<CTAG>[::DCC=<dcc>],[AREA=<area>],[SYNCSMSG=<syncmsg>]
,[SENDDUS=<senddus>],[PJMON=<pjmon>],[SFBER=<sfber>],[SDBER=<sdber>],[MODE=<
mode>],[SOAK=<soak>],[OSPF=<ospf>],[LDCC=<ldcc>],[NAME=<name>],[CMDMDE=<cmd
mde>],[EXPTRC=<exptrc>],[TRC=<trc>],[TRCMODE=<trcmode>],[TRCFORMAT=<trcformat
>],[ADMSSM=<admssm>],[SENDDUSFF=<senddusff>],[AISONLPBK=<aisonlpbk>],[FOREIG
NFEND=<foreignFarEnd>],[FOREIGNIP=<foreignIpAddress>],[FREQ=<freq>],[LOSSB=<lossb
>],[OPRNOMINAL=<oprnomininal>][:<pst>[,<sst>]];
```

To:

```
ED-STM64[:<TID>]:<aid>:<CTAG>[::DCC=<dcc>],[AREA=<area>],[SYNCSMSG=<syncmsg>],
,[SENDDUS=<senddus>],[PJMON=<pjmon>],[SFBER=<sfber>],[SDBER=<sdber>],[MODE=<mode>],[SOAK=<soak>],[OSPF=<ospf>],[LDCC=<ldcc>],[NAME=<name>],[CMDMDE=<cmdmde>],[EXPTRC=<exptrc>],[TRC=<trc>],[TRCMODE=<trcmode>],[TRCFORMAT=<trcformat>],[ADMSSM=<admssm>],[SENDDUSFF=<senddusff>],[AISONLPBK=<aisionlpbk>],[FOREIGNFEND=<foreignFarEnd>],[FOREIGNIP=<foreignIpAddress>],[FREQ=<freq>],[LOSSB=<lossb>],[OPRNOMINAL=<oprnominal>],[OSISDCC=<osisdcc>],[OSILDCC=<osildcc>],[OSIROUTER=<osirouter>][:<pst>[,<sst>]];
```

- ED-STM1 syntax changed:

```
ED-STM1[:<TID>]:<aid>:<CTAG>[::DCC=<dcc>],[AREA=<area>],[SYNCSMSG=<syncmsg>],[SENDDUS=<senddus>],[PJMON=<pjmon>],[SFBER=<sfber>],[SDBER=<sdber>],[MODE=<mode>],[SOAK=<soak>],[OSPF=<ospf>],[LDCC=<ldcc>],[NAME=<name>],[CMDMDE=<cmdmde>],[EXPTRC=<exptrc>],[TRC=<trc>],[TRCMODE=<trcmode>],[TRCFORMAT=<trcformat>],[ADMSSM=<admssm>],[SENDDUSFF=<senddusff>],[AISONLPBK=<aisionlpbk>],[FOREIGNFEND=<foreignFarEnd>],[FOREIGNIP=<foreignIpAddress>],[FREQ=<freq>],[LOSSB=<lossb>],[OPRNOMINAL=<oprnominal>][:<pst>[,<sst>]];
```

To:

```
ED-STM1[:<TID>]:<aid>:<CTAG>[::DCC=<dcc>],[AREA=<area>],[SYNCSMSG=<syncmsg>],[SENDDUS=<senddus>],[PJMON=<pjmon>],[SFBER=<sfber>],[SDBER=<sdber>],[MODE=<mode>],[SOAK=<soak>],[OSPF=<ospf>],[LDCC=<ldcc>],[NAME=<name>],[CMDMDE=<cmdmde>],[EXPTRC=<exptrc>],[TRC=<trc>],[TRCMODE=<trcmode>],[TRCFORMAT=<trcformat>],[ADMSSM=<admssm>],[SENDDUSFF=<senddusff>],[AISONLPBK=<aisionlpbk>],[FOREIGNFEND=<foreignFarEnd>],[FOREIGNIP=<foreignIpAddress>],[FREQ=<freq>],[LOSSB=<lossb>],[OPRNOMINAL=<oprnominal>],[OSISDCC=<osisdcc>],[OSILDCC=<osildcc>],[OSIROUTER=<osirouter>][:<pst>[,<sst>]];
```

- ED-STM16 syntax changed:

```
ED-STM16[:<TID>]:<aid>:<CTAG>[::DCC=<dcc>],[AREA=<area>],[SYNCSMSG=<syncmsg>],[SENDDUS=<senddus>],[PJMON=<pjmon>],[SFBER=<sfber>],[SDBER=<sdber>],[MODE=<mode>],[SOAK=<soak>],[OSPF=<ospf>],[LDCC=<ldcc>],[NAME=<name>],[CMDMDE=<cmdmde>],[EXPTRC=<exptrc>],[TRC=<trc>],[TRCMODE=<trcmode>],[TRCFORMAT=<trcformat>],[ADMSSM=<admssm>],[SENDDUSFF=<senddusff>],[AISONLPBK=<aisionlpbk>],[FOREIGNFEND=<foreignFarEnd>],[FOREIGNIP=<foreignIpAddress>],[FREQ=<freq>],[LOSSB=<lossb>],[OPRNOMINAL=<oprnominal>][:<pst>[,<sst>]];
```

To:

```
ED-STM16[:<TID>]:<aid>:<CTAG>[::DCC=<dcc>],[AREA=<area>],[SYNCSMSG=<syncmsg>],[SENDDUS=<senddus>],[PJMON=<pjmon>],[SFBER=<sfber>],[SDBER=<sdber>],[MODE=<mode>],[SOAK=<soak>],[OSPF=<ospf>],[LDCC=<ldcc>],[NAME=<name>],[CMDMDE=<cmdmde>],[EXPTRC=<exptrc>],[TRC=<trc>],[TRCMODE=<trcmode>],[TRCFORMAT=<trcformat>],[ADMSSM=<admssm>],[SENDDUSFF=<senddusff>],[AISONLPBK=<aisionlpbk>],[FOREIGNFEND=<foreignFarEnd>],[FOREIGNIP=<foreignIpAddress>],[FREQ=<freq>],[LOSSB=<lossb>],[OPRNOMINAL=<oprnominal>],[OSISDCC=<osisdcc>],[OSILDCC=<osildcc>],[OSIROUTER=<osirouter>][:<pst>[,<sst>]];
```

- ED-E1 syntax changed:

```
ED-E1[:<TID>]:<aid>:<CTAG>[::LINECDE=<linecde>],[FMT=<fmt>],[LBO=<lbo>],[TACC=<tacc>],[TAPTYPE=<taptype>],[SOAK=<soak>],[SFBER=<sfber>],[SDBER=<sdber>],[SYNCSMSG=<syncmsg>],[SENDDUS=<senddus>],[NAME=<name>],[CMDMDE=<cmdmde>],[AISONLPBK=<aisionlpbk>],[MODE=<mode>],[SYNCSMAP=<syncmap>],[ADMSSM=<admssm>],[VTM
```



AP=<vtmap>],[AISVONAIIS=<aisvonais>],[AISONLOF=<aisonlof>],[INHFELPBK=<inhfelpbk>],[BERTMODE=<bertmode>],[BERTPATTERN=<bertpattern>],[BERTERRCOUNT=<berterrcount>][:<pst>[,<sst>]]];

To:

ED-E1[:<TID>]:<aid>:<CTAG>[:::LINECDE=<linecde>],[FMT=<fmt>],[LBO=<lbo>],[TACC=<tacc>],[TAPTYPE=<taptype>],[SOAK=<soak>],[SFBER=<sfber>],[SDBER=<sdber>],[SYNCMSG=<syncmsg>],[SENDDUS=<senddus>],[NAME=<name>],[CMDMDE=<cmdmde>],[AISONLPBK=<aisonlpbk>],[MODE=<mode>],[SYNCMAP=<syncmap>],[ADMSSM=<admssm>],[VTMAP=<vtmap>],[AISVONAIIS=<aisvonais>],[AISONLOF=<aisonlof>],[INHFELPBK=<inhfelpbk>],[INHFEBPLPBK=<inhfebplpbk>],[BERTMODE=<bertmode>],[BERTPATTERN=<bertpattern>],[BERTERRCOUNT=<berterrcount>][:<pst>[,<sst>]]];

- ED-VLAN syntax changed:

ED-VLAN[:<TID>]:<aid>:<CTAG>[:::NAME=<name>],[PROTN=<protn>][:];

To:

ED-VLAN[:<TID>]:<aid>:<CTAG>[:::NAME=<name>],[PROTN=<protn>],[MACLEARNING=<maclearning>],[IGMPENABLE=<igmpenable>],[IGMPFASTLEAVE=<igmpfastleave>],[IGMPSUPP=<igmpsapp>][:];

- ENT-FTPSERVER syntax changed:

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

To:

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

AVE=<igmpfastleave>],[IGMPSUPP=<igmpsapp>][:];

## Command Response Changes

The following TL1 command responses have changed:

- RTRV-ALM-BITS response changes:

<aid>,[<condtype>]:<condeff>,,[<locn>],[<dirn>],,;

To:

<aid>,[<aidtype>]:<ntfcncde>,<condtype>,<srveff>,[<ocrdat>],[<ocrtm>],[<location>],[<direction>]:[<desc>],

- RTRV-ALS response changes:

<slot>,[<rslt>]:[<diagtype>],[<peer>],[<aid>],[<aidtype>]

To:

[:<TID>]:<aid>:<CTAG>[:::]

> rtrv-apc::all:1

- RTRV-BLSR response changes:

[<UID>]:[<aid>]:[<ntfcncde>],[<secualmtype>],[<time>],[<date>],[<source>],[<userid>],[<dbchseq>],[<command>],[<aid>],,

To:

[<aid>]:[<ringid>],[<nodeid>],[<mode>],[<rvrtv>],[<rvtm>],[<srvrtv>],[<srvtm>],[<eastwork>],[<westwork>],[<eastprot>],[<westprot>]

- RTRV-GIGE response changes:

<aid>.:,[<role>],[<status>]:[<adminstate>],[<linkstate>],[<mtu>],[<mfs>],[<flow>],[<flowctrl>],[<autoneg>],[<hiwmrk>],[<lowmrk>],[<optics>],[<duplex>],[<speed>],[<name>],[<macaddr>],[<bcl>],[<opt>],[<opr>],[<freq>],[<lossb>],[<suppress>],[<soak>],[<soakleft>],[<sqlch>],[<cir>],[<cbs>],[<ebs>],[<lienable>],[<litimer>]:<pst>,<sst>

To:

<aid>.:,[<role>],[<status>]:[<adminstate>],[<linkstate>],[<mtu>],[<mfs>],[<flow>],[<flowctrl>],[<autoneg>],[<hiwmrk>],[<lowmrk>],[<optics>],[<duplex>],[<speed>],[<name>],[<macaddr>],[<bcl>],[<opt>],[<opr>],[<freq>],[<lossb>],[<suppress>],[<soak>],[<soakleft>],[<sqlch>],[<cir>],[<cbs>],[<ebs>],[<lienable>],[<litimer>],[<actflow>],[<actduplex>],[<actspeed>]:<pst>,<sst>

- RTRV-NE-GEN response changes:

[<ipaddr>],[<ipmask>],[<defrtr>],[<iiopprt>],[<ntp>],[<name>],[<swver>],[<load>],[<protswver>],[<protload>],[<defdesc>],[<platform>],[<secumode>],[<suppressip>],[<mode>],[<autopm>],[<serialportecho>]

To:

[<ipaddr>],[<ipmask>],[<defrtr>],[<ipv6addr>],[<ipv6preflen>],[<ipv6defrtr>],[<ipv6enable>],[<iiopprt>],[<ntp>],[<name>],[<swver>],[<load>],[<protswver>],[<protload>],[<defdesc>],[<platform>],[<secumode>],[<suppressip>],[<mode>],[<autopm>],[<serialportecho>],[<osiroutingmode>],[<osil1bufsize>],[<osil2bufsize>]

- RTRV-E1 response changes:

<aid>.: [<linecde>],[<fmt>],[<lbo>],[<tacc>],[<tatype>],[<soak>],[<soakleft>],[<sfber>],[<sdber>],[<name>],[<syncmsg>],[<senddus>],[<retime>],[<aisonlypbk>],[<aisvonais>],[<aisonlyof>],[<mode>],[<syncmap>],[<admssm>],[<providesync>],[<vtmap>],[<inhfelpbk>],[<bertmode>],[<bertpattern>],[<berterrcount>],[<berterrrate>]:<bertsyncstatus>,<pst>

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## TL1 ENUM Changes

### CARDMODE

The following CARDMODE enum items are added:

- CARDMODE\_MLMR\_AUTO => "MLMR-AUTO"
- CARDMODE\_MLMR\_MANUAL => "MLMR-MANUAL"

CARDMODE is used in the following commands:

- ED-EQPT
- ED-OCH
- ENT-EQPT
- RTRV-EQPT
- RTRV-OCH

## EQPT\_TYPE

The following EQPT\_TYPE enum items are added:

- EQPT\_TYPE\_EQPT\_ID\_FMEC\_155E\_CARD\_1TO1 => "FMEC-155E-1TO1"
- EQPT\_TYPE\_EQPT\_ID\_OPT\_RAMP\_C => "OPT-RAMP-C"
- EQPT\_TYPE\_EQPT\_ID\_PSM => "PSM"
- EQPT\_TYPE\_EQPT\_ID\_WBE\_21 => "E1-21-DS3-E3-3"
- EQPT\_TYPE\_EQPT\_ID\_WBE\_63 => "E1-63-DS3-E3-3"
- EQPT\_TYPE\_EQPT\_ID\_XP\_4\_10G => "OTU2-XP"

The following EQPT\_TYPE is used in the following commands:

- REPT-ALM-EQPT
- REPT-ALM-MOD2ALM
- REPT-ALM-SYNCN
- REPT-EVT-EQPT
- REPT-EVT-MOD2ALM
- REPT-EVT-SYNCN

## EQUIPMENT\_TYPE

The following EQUIPMENT\_TYPE enum items are added:

- EQUIPMENT\_TYPE\_ET\_OPT\_RAMP\_C => "OPT-RAMP-C"
- EQUIPMENT\_TYPE\_ET\_PSM => "PSM"
- EQUIPMENT\_TYPE\_ET\_WBE\_21 => "E1-21-DS3-E3-3"
- EQUIPMENT\_TYPE\_ET\_WBE\_63 => "E1-63-DS3-E3-3"
- EQUIPMENT\_TYPE\_ET\_XP\_4\_10G => "OTU2-XP"

EQUIPMENT\_TYPE is used in the following commands:

- CHG-EQPT
- ENT-EQPT

## ETH\_AISACTION

The following ETH\_AISACTION enum items are added:

- ETH\_AISACTION\_NONE => "AIS-NONE"
- ETH\_AISACTION\_PROPAGATION => "AIS-PROPAGATION"
- ETH\_AISACTION\_SQUELCH => "AIS-SQUELCH"

ETH\_AISACTION is used in the following commands:

- ED-L2-ETH
- RTRV-L2-ETH

## ETH\_IGMPROUTER

The following ETH\_IGMPROUTER enum items are added:

- ETH\_IGMPROUTER\_NONE => "NONE"
- ETH\_IGMPROUTER\_STATIC => "STATIC"

ETH\_IGMPROUTER is used in the following commands:

- ED-L2-ETH
- RTRV-L2-ETH

## ETH\_INGRESSCOS

The following ETH\_INGRESSCOS enum items are added:

- ETH\_INGRESSCOS\_0 => "0"
- ETH\_INGRESSCOS\_1 => "1"
- ETH\_INGRESSCOS\_2 => "2"
- ETH\_INGRESSCOS\_3 => "3"
- ETH\_INGRESSCOS\_4 => "4"
- ETH\_INGRESSCOS\_5 => "5"
- ETH\_INGRESSCOS\_6 => "6"
- ETH\_INGRESSCOS\_7 => "7"
- ETH\_INGRESSCOS\_DSCP => "DSCP"
- ETH\_INGRESSCOS\_TRUST => "TRUST"
- ETH\_INGRESSCOS\_VLAN => "VLAN"

ETH\_INGRESSCOS is used in the following commands:

- ED-L2-ETH
- ED-QNQ-ETH
- ENT-QNQ-ETH
- RTRV-L2-ETH
- RTRV-QNQ-ETH

## ETH\_PROTECTION

The following ETH\_PROTECTION enum items are added:

- ETH\_PROTECTION\_NONE => "PROT-NONE"
- ETH\_PROTECTION\_SQUELCH => "PROT-SQUELCH"

ETH\_PROTECTION is used in the following commands:

- ED-L2-ETH
- RTRV-L2-ETH

## ETH\_RULE

The following ETH\_RULE enum items are added:

- ETH\_RULE\_DOUBLE\_ADD => "DOUBLE-ADD"
- ETH\_RULE\_XLTE\_ADD => "XLTE-ADD"

ETH\_RULE is used in the following commands:

- ED-QNQ-ETH
- ENT-QNQ-ETH
- RTRV-QNQ-ETH

## ETH\_VLANALM

The following ETH\_VLANALM enum items are added:

- ETH\_VLANALM\_AIS => "VLAN-AIS"
- ETH\_VLANALM\_NONE => "NONE"

ETH\_VLANALM is used in the following commands:

- RTRV-VLAN-ETH

## MOD1PAYLOA

The following MOD1PAYLOAD enum items are added:

- MOD1PAYLOAD\_E3 => "E3"

## MOD2

The following MOD2 enum items are added:

- MOD2\_M2\_RAMAN => "RAMAN"

MOD2 is used in the following commands:

- RTRV-FFP
- RTRV-NE-APC
- RTRV-NE-WDMANS
- RTRV-PMSCHED-ALL
- RTRV-PMSCHED-MOD2
- RTRV-TRC-MOD2
- RTRV-TRC-OCH

## MTU\_TYPE

The following MTU\_TYPE enum items added:

- MTU\_64 => "64"
- MTU\_9700 => "9700"

MTU\_TYPE is used in the following commands:

- ED-GIGE

## ODUTRANSMODE

The following ODUTRANSMODE enum items are added:

- ODUTRANSMODE\_CISCOEXT => "CISCO-EXT"
- ODUTRANSMODE\_TRANSSTD => "TRANS-STD"

ODUTRANSMODE is used in the following commands:

- ED-OCH
- RTRV-OCH

## OPTICAL\_PORT\_TYPE

The following OPTICAL\_PORT\_TYPE enum items are added:

- OPTICAL\_PORT\_TYPE\_OPT\_PORT\_IN\_PROT => "IN-PROT"
- OPTICAL\_PORT\_TYPE\_OPT\_PORT\_IN\_RAMAN => "IN-RAMAN"
- OPTICAL\_PORT\_TYPE\_OPT\_PORT\_IN\_WORK => "IN-WORK"
- OPTICAL\_PORT\_TYPE\_OPT\_PORT\_OUT\_PROT => "OUT-PROT"
- OPTICAL\_PORT\_TYPE\_OPT\_PORT\_OUT\_RAMAN => "OUT-RAMAN"
- OPTICAL\_PORT\_TYPE\_OPT\_PORT\_OUT\_WORK => "OUT-WORK"

OPTICAL\_PORT\_TYPE is used in the following commands:

- RTRV-OCH
- RTRV-OMS
- RTRV-OTS

## OPTICS

The following OPTICS enum items added:

- OPTICS\_OP\_1000\_BASE\_T => "1000\_BASE\_T"
- OPTICS\_OP\_100\_BASE\_BX\_D => "100\_BASE\_BX\_D"
- OPTICS\_OP\_100\_BASE\_BX\_U => "100\_BASE\_BX\_U"

OPTICS is used in the following commands:

- ED-GIGE
- RTRV-ETH
- RTRV-FSTE
- RTRV-G1000
- RTRV-GIGE

## OSIMODE

The following OSIMODE enum items are added:

- AITS => "AITS"
- UITS => "UITS"

OSIMODE is used in the following commands:

- ED-LAPD
- RTRV-LAPD



### Note

In Software Release 9.0, OSI TL1 parameters/enum are not supported in commands.

## OSIRIB

The following OSIRIB enum items are added:

- ES\_IS => "ESIS"
- IS\_IS => "ISIS"

OSIRIB is used in the following commands:

- RTRV-OSIRIB



**Note**

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In Software Release 9.0, OSI TL1 parameters/enum are not supported in commands.

---

## OSIROLE

The following OSIROLE enum items are added:

- NETWORK => "NW"
- USER => "USR"

OSIROLE is used in the following commands:

- ED-LAPD
- RTRV-LAPD



**Note**

---

In Software Release 9.0, OSI TL1 parameters/enum are not supported in commands.

---

## OSISUBNET

The following OSISUBNET enum items are added:

- GCC => "GCC"
- INTERNAL => "INT"
- LAN => "LAN"
- LDCC => "LDCC"
- OSC => "OSC"
- SDCC => "SDCC"

OSISUBNET is used in the following commands:

- RTRV-OSIRIB



**Note**

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In Software Release 9.0, OSI TL1 parameters/enum are not supported in commands.

---

## OSI\_LEVEL

The following OSI\_LEVEL enum items are added:

- LEVEL1 => "L1"
- LEVEL2 => "L2"

OSI\_LEVEL is used in the following commands:

- DLT-MAT
- ED-MAT
- RTRV-MAT

**Note**


---

In Software Release 9.0, OSI TL1 parameters/enum are not supported in commands.

---

**OSI\_ROUTING\_MODE**

The following OSI\_ROUTING\_MODE enum items are added:

- ES => "ES"
- IS1 => "IS1"
- IS2 => "IS2"

OSI\_ROUTING\_MODE is used in the following commands:

- ED-NE-GEN
- RTRV-NE-GEN

**Note**


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In Software Release 9.0, OSI TL1 parameters/enum are not supported in commands.

---

**PAYLOAD\_MAPPING**

The following PAYLOAD\_MAPPING enum items are added:

- PAYLOAD\_MAPPING\_NOFIXEDSTUFF => "NOOPU2FIXEDSTUFF"

PAYLOAD\_MAPPING is used in the following commands:

- ED-OCH
- RTRV-OCH
- ED-OTU2
- RTRV-OTU2

**PRODUCT\_TYPE**

The following PRODUCT\_TYPE enum items are added:

- PRODUCT\_TYPE\_NE\_15310\_MA\_SDH => "ONS15310-MA-SDH"

PRODUCT\_TYPE is used in the following commands:

- RTRV-MAP-NETWORK

**PROTOTYPE**

The following PROTOTYPE enum items are added:

- PROTOTYPE\_PRT\_ONEPLUSONEL2 => "ONEPLUSONEL2"

PROTOTYPE is used in the following commands:

- ENT-FFP-MOD2
- RTRV-FFP



## RAMAN\_ACTION

The following RAMAN\_ACTION enum items are added:

- ACCEPTPARAMS => "ACCEPT"
- DOCALCPARAMS => "DO-CALCPAR"
- DOMEAS => "DO-MEASURE"
- DORSTSM => "DO-RSTSM"
- DOTEST => "DO-TEST"
- RSTAFTERTEST => "RESTORE"

RAMAN\_ACTION is used in the following commands:

- OPR-RAMAN

## RAMAN\_QUALITY

The following RAMAN\_QUALITY enum items are added:

- RAMAN\_QUAL\_SETUP\_FORCED => "SETUP-FORCED"
- RAMAN\_QUAL\_SETUP\_GOOD => "SETUP-GOOD"
- RAMAN\_QUAL\_SETUP\_NEED\_ACCEPT => "SETUP-NEED-ACCEPT"
- RAMAN\_QUAL\_SETUP\_UNACCEPT => "SETUP-UNACCEPT"

RAMAN\_QUALITY is used in the following commands:

- RTRV-OTS

## RAMAN\_RESTORE\_FC

The following RAMAN\_RESTORE\_FC enum items added:

- RAMAN\_RESTORE\_FC\_FAILED => "FAILED"
- RAMAN\_RESTORE\_FC\_NOT\_EXECUTED => "NOTEXEC"
- RAMAN\_RESTORE\_FC\_OK => "OK"
- RAMAN\_RESTORE\_FC\_PENDING => "PENDING"

RAMAN\_RESTORE\_FC is used in the following commands:

- RTRV-OTS

## RAMAN\_SETUP

The following RAMAN\_SETUP enum items are added:

- BYPASS\_NODE => "BYPASS"
- MEASURE\_NODE => "MEASURE"
- START\_NODE\_BOOSTER => "ST-BOOSTER"
- START\_NODE\_MUX => "ST-MUX"

RAMAN\_SETUP is used in the following commands:

- OPR-RAMAN

## RAMAN\_STATUS

The following RAMAN\_STATUS enum items are added:

- RAMAN\_STATUS\_ACCEPTED\_TUNED => "ACCEPTED-TUNED"
- RAMAN\_STATUS\_FORCE\_TUNED => "FORCE-TUNED"
- RAMAN\_STATUS\_NOT\_TUNED => "NOT-TUNED"
- RAMAN\_STATUS\_TUNED => "TUNED"
- RAMAN\_STATUS\_TUNED\_VERIFIED => "TUNED-VERIFIED"
- RAMAN\_STATUS\_TUNING => "TUNING"

RAMAN\_STATUS is used in the following commands:

- RTRV-OTS

## SLV\_TYPE

The following SLV\_TYPE enum items added:

- SLV\_TYPE\_ACTIVE\_CHANNEL => "ACTIVE-CHANNEL"
- SLV\_TYPE\_OSC => "OSC"

SLV\_TYPE is used in the following commands:

- RTRV-SLV-WDMANS

## STM1E\_MODE

The following STM1E\_MODE enum items are added:

- PAYLOAD\_PT\_E3 => "E3"
- PAYLOAD\_PT\_STM4 => "STM4"
- PAYLOAD\_PT\_STM1 => "STM1"
- PAYLOAD\_PT\_STM16 => "STM16"

STM1E\_MODE is used in the following commands:

- ED-FAC

# Related Documentation

## Release-Specific Documents

- Release Notes for the Cisco ONS 15454, Release 9.0
- Release Notes for the Cisco ONS 15454 SDH, Release 9.0
- Release Notes for the Cisco ONS 15310-CL, Release 9.0
- Release Notes for the Cisco ONS 15310-MA, Release 9.0
- Release Notes for the Cisco ONS 15310-MA SDH, Release 9.0
- Release Notes for the Cisco ONS 15600, Release 9.0

- Release Notes for the Cisco ONS 15600 SDH, Release 9.0
- Cisco ONS 15600 SDH Software Upgrade Guide, Release 9.0

## Platform-Specific Documents

- *Cisco ONS 15600 SDH Procedure Guide*  
Provides installation, turn up, test, and maintenance procedures
- *Cisco ONS 15600 SDH Reference Manual*  
Provides technical reference information for SONET/SDH cards, nodes, and networks
- *Cisco ONS 15600 SDH Troubleshooting Guide*  
Provides a list of SONET alarms and troubleshooting procedures, general troubleshooting information, and hardware replacement procedures
- *Cisco ONS 15454 SDH and Cisco ONS 15600 SDH TL1 Command Guide*  
Provides a comprehensive list of TL1 commands

## Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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