Release Notes for Cisco ONS 15454 Release 8.5.1

OL-15591-01
July 17, 2008

Release notes address closed (maintenance) issues, caveats, and new features for the Cisco ONS 15454 SONET multiplexer. For detailed information regarding features, capabilities, hardware, and software introduced with this release, refer to the Release 8.5.x version of the *Cisco ONS 15454 DWDM Installation and Operations Guide*; and the Release 8.5.1 version of the *Cisco ONS 15454 Procedure Guide*; Release 8.5.x version of the *Cisco ONS 15454 Reference Manual*; Release 8.5.x version of the *Cisco ONS 15454 Troubleshooting Guide*; and Release 8.5.1 version of the *Cisco ONS 15454 SONET TL1 Command Guide*. For the most current version of the Release Notes for Cisco ONS 15454 Release 8.5.1, visit the following URL:

http://www.cisco.com/en/US/products/hw/optical/ps2006/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 information that has been added to the *Release Notes for Cisco ONS 15454 Release 8.5.1* since the production of the Cisco ONS 15454 System Software CD for Release 8.5.1.

- Added CSCsj54919, CSCsj60525, and CSCsj62382 under DWDM sub-section of the Caveats section.

Caveats

Review the notes listed below before deploying the Cisco ONS 15454. Caveats with tracking numbers are known system limitations that are scheduled to be addressed in a subsequent release. Caveats without tracking numbers are provided to point out procedural or situational considerations when deploying the product.

Note The usage of 40WXC units are supported only in the networks running software Release 8.5.1 and later.

Alarms

This section documents Alarms caveats in Release 8.5.1.

CSCsl18519

When dual failure occurs on CE-MR ports equipped with electrical Small Form-Factor Pluggables (SFPs), only one CARLOSS and TPTFAIL alarms are reported. There is no workaround for this issue.This issue will not be resolved.

CSCsm16960

AUTO RESET alarm is cleared before completing activation when upgrading software on OC-12 4-port card from Release 7.0.7 to Release 8.5.1. There is no workaround for this issue. This issue will be resolved in a future release.

CSCsm19928

AS-MT alarm on the TXP card ina subtended shelf of a multishelf is cleared when soft reset of TCC is performed. The workaround is to change the port status to IS-AINS and to OOS-MT. This issue will be resolved in a future release.

CSCsm32278

Alarms at GFP level on MXP-MR-10DME card does not trigger FLT state on port. There is no workaround for this issue. This issue will be resolved in a future release.

CSCsm32308

Roll-pend(NA) and UNEQ-P(CR) alarms move to Conditions pane when a soft reset is performed on an active TCC during the manual mode of a circuit roll. There is no workaround for this issue. This issue will be resolved in a future release.

BLSR Functionality

This section documents Bi-directional Line Switched Ring (BLSR) caveats in Release 8.5.1.

CSCdv53427

In a two-ring, two-fiber BLSR configuration (or a two-ring BLSR configuration with one two-fiber and one four-fiber ring) it is possible to provision a circuit that begins on one ring, crosses to a second ring, and returns to the original ring. Such a circuit can have protection vulnerabilities if one of the common nodes is isolated, or if a ring is segmented in such a way that two non-contiguous segments of the circuit on the same ring are each broken.

DWDM

This section documents dense wavelength division multiplexing (DWDM) caveats in Release 8.5.1.

CSCsg10008

Y-cable protection switch time is higher than 50 ms in GE_XP and 10GE_XP cards under to the following conditions:

- RX fibers is extracted from client pluggable port module (PPM).
- The Trunk pluggable port module (PPM) status is OOS,DSBLD.
- Loss of signal (LoS), both LOS-P and SIGLOSS, when extracting the RX fiber on Trunk PPM port.
- User command, *e.g.*, FORCE, is issued.

There is no workaround for this issue. This issue will be resolved in a future release.

CSCsg22669

There is a traffic hit of greater than 50 ms but less than 60 ms on MXP-2.5G-10E in Y-cable configuration when a fiber cut occurs. This issue will be resolved in a future release.

CSCsf04299

When triggering the switch of optimized 1+1 protection and the failure is cleared, the WTR condition is raised, but once the WTR time expires, the switch back of protection is not triggered. The workaround is to manually force back the protection. This issue will be resolved in a future release.

CSCse97200

On ADM-10G card, attempts to preprovision local and express orderwire circuits on trunk port are not successful. E1/E2 orderwire is not supported. This issue will be resolved in a future release.

CSCei19148

When a port is placed in-service while the conditions necessary to squelch the port are present, as in when the trunk port on a DWDM card is OOS,DSBLD and a client port is placed in-service, the client will momentarily enable, emitting light, before squelching due to the trunk OOS,DSBLD condition. The pulse is approximately 500 ms. This issue will not be resolved.

CSCei87554

When using a 1GE payload over the TXP-MR-2.5G the IfInErrors counter does not report oversized, undersized, or CRC errored frames, but rather reports frame coding only. This issue will not be resolved.

CSCsb47323

For MXP-MR-10DME-C and MXP-MR-10DME-L cards, an unexpected RFI condition might be raised along with an OTUk-BDI. When there is an LOS downstream, the node receives OTUk-BDI. Because of the placement of dual OTN and SONET wrappers, it can also receive an RFI. This issue will not be resolved.

CSCsb94736

After a fault condition (trunk LOS or Y-cable switch) an MXP_MR_10DME card might fail to detect the login message and traffic might not start for some minutes (after multiple login trials). This can occur in an N-F configuration with Cisco MDS switch and MXP_MR_10DME distance extension on, where test equipment traffic is set to 2G Fibre channel (FC) full bandwidth occupancy and started. Stop traffic or keep bandwidth occupancy below 80% during the login phase to work around this issue. This issue will not be resolved.

CSCsc36494

Manual Y-cable switches with squelching turned off in the MXP-MR-10G card can cause a fibre channel link with Brocade switches to go down. SIGLOSS and GFP-CSF alarms are seen on the Cisco Transport Controller (CTC). Cisco recommends you provision squelching to be on when interworking with Brocade switches. If for some reason squelching must be off with brocade switches, Cisco recommends you use a FORCE command to perform Y-cable switches. It is not known when or if this issue will be resolved.

CSCsc60472

Cisco Transport Controller is not able to discover a TL1 OCHCC circuit provisioned over an ITU-T line card (ITU-T OC48/STM16 and ITU-T OC192/STM64). This issue can occur when, using the TL1 client interface, you create the OCHNC layer that will be used by the OCHCC circuit, then create the OCHCC connections that involve the ITU-T line cards. The result is an OCHNC and two OCHCC partial circuits, instead of an OCHNC and a single OCHCC complete circuit. This issue will not be resolved.

CSCee45443

The FICON bridge in the MXP-MR-2.5G card transitions to SERV MODE when FICON bridge does not receive the expected number of idle frames between the data packets. The workaround is not to use the MXP-MR-2.5G card with FICON bridge. This issue will not be resolved.

CSCsl70268

When an alarm raised on the port is cleared, the severity is not cleared. Workaround is to close and re-open Cisco Transport Controller Functional View. This issue will be resolved in a future release.

CSCsj54919

The switchover time is greater than 50ms when the client port is set to OOS state. This issue occurs when two Y-cable clients are configured using 10GE_XP card. This issue will be resolved in a future release.

CSCsj60525

The switchover time is greater than 50ms when the trunk port is set to OOS state. This issue occurs in 10GE_XP card with Y-cable setup. This issue will be resolved in a future release.

CSCsj62382

The switchover time is greater than 50ms when LOS-P or SIGLOSS conditions occurs on the trunk port of 10GE_XP cards with Y-cable setup. This issue will be resolved in a future release.

Hardware

This section documents Hardware caveats in Release 8.5.1.

CSCei36415

When retrieving Gigabit Interface Converter (GBIC) inventory for the FC_MR-4, nothing is returned for the CLEI code. In a future release, enhanced inventory information will be available for ONS GBICs. This will include the CLEI code. This issue will be resolved in a future release.

CSCdu82934

When you auto-route a VT circuit on an ONS 15454 node, a path is computed based on the availability of STSs on the nodes involved. This selection process, when combined with a lack of VT matrix (or STS-VT connections) on an auto-route selected node, can result in the VT circuit creation failing with the message “unable to create connection object at node.” To correct this situation, manually route VT circuits in cases when auto-routing fails. The error message will indicate which node is at issue.

CSCeb36749

In a Y-Cable configuration, if you remove the client standby RX fiber, a nonservice-affecting LOS is raised, as expected. However, if you then remove the trunk active RX fiber, a nonservice-affecting LOS-P is raised, but the previously non-service affecting LOS on the client port is now escalated to a service-affecting alarm, in spite of no traffic having been affected. This issue will not be resolved.

Maintenance and Administration

This section documents Maintenance and Administration caveats in Release 8.5.1.

Caution VxWorks is intended for qualified Cisco personnel only. Use of VxWorks by customers is not recommended, nor is it supported by Cisco's Technical Assistance Center. Inappropriate use of VxWorks commands can have a negative and service-affecting impact on your network. Please consult the troubleshooting guide for your release and platform for appropriate troubleshooting procedures. To exit without logging in, enter a Control-D (hold down the Control and D keys at the same time) at the Username prompt. To exit after logging in, type “logout” at the VxWorks shell prompt.

Note Cisco Transport Planner (CTC) does not support adding or creating more than 5 circuits in auto-ranged provisioning. This is as designed.

Note In releases prior to Cisco ONS Release 4.6 you could independently set proxy server gateway settings; however, with Cico ONS Release 4.6.x and forward, this is no longer the case. To retain the integrity of existing network configurations, settings made in a pre-4.6 release are not changed on an upgrade toCisco ONS Release 7.x. Current settings are displayed in Cisco Transport Controller (whether they were inherited from an upgrade, or they were set using the current GUI).

CSCse38590

In the RPR topology, one station reports a “remote WTR” on a space, even though the neighboring station is not advertizing Wait to Restore (WTR) state. This issue is observed after many XC pulls/switches, deleting and recreating circuits, and replacing cross-connects completely. This issue does not appear to have any real impact to traffic, but can potentially complicate troubleshooting. This problem was seen after multiple XC-pulls, XC-side-switches, circuit-deletions and circuit-creations. The workaround is to configure a forced-switch on both ends of the problem span, and then remove the forced-switch from both ends.

CSCsd44081

A series of crashes and reboots may occur when a policy-map includes approximately 200 class-map entries and policers. This error appears to occur when the card is boots up, the field-programmable gate array (FPGA) process is attempting to download the new FPGA, the policy-map has at least 200 class-map entries, and traffic has been punted to the host. These conditions may trigger a provisioning-message timeout on the ML card that can lead to a crash. Since the system boots up in the same state, a continuous series of crashed and reboots may occur. The workaround is to remove the circuits and wait until the node boots up with the latest FPGA image before reconfiguring the circuits.

CSCse23518

The RPR SPAN-MISMATCH alarm is not reported correctly in some situations. After creating and deleting an East-to-East RPR circuit through TL-1 x-connects and creating a West-to-West RPR circuit through the TL-1 x-connects script, both within less than on second of the other, the RPR-SPAN-MISMATCH alarm is seen only on one side of the circuit and not on the other side. This problem does not occur when the operations are made manually. This alarm indicates mis-cabling or cross-connects created between two East spans or two West spans. The workaround is to ensure more than one second between the deletion of one circuit and creation of the another.

CSCse53133

RTRV-COND-STS does not display path alarms on BLSR protect path. When BLSR is switched onto protection and the protect paths have conditions on them, the TL1 retrieval command does not show those conditions on protection paths. There is no workaround for this issue. This issue will be resolved in a future release.

CSCsg10963

Connections remain in OOS-AU,FLT after roll is cancelled. This occurs under the following conditions:

1. Create OC48/OC192 2F-BLSR ring among three Cisco ONS 15454 SDHs.
2. Create five STS1 2F-BLSR circuits from Cisco ONS 15454 Node 1 to Cisco ONS 15454 Node 2. All connections enter IS-NR state.
3. Perform bulkroll to roll all connections from East port to West port. Roll is not complete. UNEQ-P alarms are raised for rollTo paths. Connection states change to OOS-AU,FLT.
4. Cancel roll.

UNEQ-P alarms clear and connection states remain OOS-AU,FLT. There is no workaround for this issue. This issue will be resolved in a future release.

CSCsg16500

ROLL-PEND condition is seen for VT circuits on the Cisco Transport Controller conditions pane.

1. Create a two-node OC12 unprotected setup among two Cisco ONS 15454 SDHs.
2. Create 1 VT circuit from Cisco ONS 15454 SDH node 1, OC3 card to Cisco ONS 15454 node 2, OC12 card.
3. Give autobulkroll to circuit on the OC12 span from STS#1 to STS#4.
4. Force the valid signal using ED-BULKROLL command to “true.” Bulkroll completes and no rolls are present on any of the nodes.

The ROLL-PEND condition is now visible on VT circuits in Cisco Transport Controller, TL1. There is no workaround for this issue. This issue will be resolved in a future release.

CSCse91968

The AINS-to-IS transition on BLSR 4F Protect is not functioning properly. When a BLSR four-fibre ring is used, the AINS-to-IS transition is not correct when protect is active (ring switched). Sometimes the wrong protect is transitioning at the IO. If the TSC card is notified incorrectly, it becomes out of sync with the IO, and becomes stuck in AINS, even when the protect switch is released. The Cisco PCA is also being incorrectly notified of an AINS-to-IS transition. This issue will be resolved in a future release.

CSCsl76684

When activating or reverting, there is delay in AIC-I card becoming active. There is no workaround for this issue. This issue will be resolved in a future release.

CSCsm04659

Cisco Transport Controller does not report TL1 circuits when the software is upgraded to Release 8.5.1. The workaround is to close and re-launch Cisco Transport Controller. This issue will be resolved in a future release.

CSCsm08019

The MXP-MR-10DME card carries traffic even if trunk port is in OOS,DSBLD state. There is no workaround for this issue. This issue will be resolved in a future release.

CSCsm14521

Inconsistency between LOCKOUT command status and switching status on Y-cable protected MXP-MR-10DME card. There is no workaround for this issue. This will be resolved in a future release.

CSCsm25619

Traffic is not restored when near-end and far-end nodes of Y-cable protected MXP-MR-10DME card are unplugged and re-plugged. There is no workaround for this issue. This issue will be resolved in a future release.

CSCsm43960

Intermediate switch to protect occurs when TIM alarm is generated on MXPP-MR-2.5G card. There is no workaround for this issue. This issue will be resolved in a future release.

CSCsm61886

The accuracy of the Link Integrity timer is less on CE-MR card compared to G1000 or CE1000 cards. There is no workaround for this issue. This will be resolved in a future release.

Optical I/O Cards

This section documents Optical I/O Cards caveats in Release 8.5.1.

CSCei26718

On the 15454-MRC-12 card, when a one-way VT/VC circuit on path protection over 1+1 protection is created, the alarm behavior is not the same as in two-way circuit creation. In particular, for the one-way circuit creation, UNEQ-V and PLM-V alarms are reported, and the circuit state remains OOS. This issue will not be resolved.

CSCin29274

When configuring the same static route over two or more interfaces, use the following command:

ip route *a-prefix a-networkmask a.b.c.d*

Where *a.b.c.d* is the address of the outgoing gateway; or, similarly, use the command:

ip route vrf *vrf-name*

Do not try to configure this type of static route using only the interface instead of the address of the outgoing gateway. This issue will not be resolved.

CSCsl87931

When manual restart is performed on the OPT-BST-E card, ALS alarm is cleared and LASER-APR alarm is raised. The OPT-BST-E card is shut down as the line cannot be restored and LASER-APR alarm is cleared, however, ALS alarm is not raised. There is no workaround for this issue. This issue will be resolved in a future release.

Path Protection

This section documents Path Protection caveats in Release 8.5.1.

CSCee53579

Traffic hits can occur in an unprotected to path protection topology upgrade in unidirectional routing. If you create an unprotected circuit, then upgrade the unprotected circuit to a path protection circuit using Unprotected to path protection wizard, selecting unidirectional routing in the wizard, the circuit will be upgraded to a path protection circuit. However, during the conversion, traffic hits of the order of 300 ms should be expected. This issue will not be resolved.

TL1

This section documents TL1 caveats in Release 8.5.1.

Note To be compatible with TL1 and DNS, all nodes must have valid names. Node names should contain alphanumeric characters or hyphens, but no special characters or spaces.

CSCsc41650

Using a TL1 script to rapidly preprovision or delete various cards repeatedly in the same slot will reboot the TCC approximately 1 out of 10 times. Configure a delay of about 10 seconds between preprovisioning/deletion cycles and the node will not reboot. This issue will be resolved in a future release.

Resolved Caveats for Release 8.5.1

This section documents caveats resolved in Release 8.5.1.

Alarms

This section documents resolved Alarms caveats in Release 8.5.1.

CSCsj26750

When the card type in Cisco Transport Controller is changed from DS1_14 to DS1_E1_56 with DS1-14 physical card in the slot, the LED in DS1_14 card will show Act(Green) LED, instead of Fail(RED) LED. This issue has been resolved.

CSCsj39442

The SYNCLOSS alarm on the standby Y-cable port is reported as Minor instead of Major. This issue has been resolved.

CSCsj88469

The protect port of the Y-cable protected MXP-MR-10DME cards report SYNCLOSS alarm as Minor instead of Major. This issue has been resolved.

CSCsk15712

The trunk port of the Y-cable protected TXP-MR-2.5G card raises LOS-P alarm in Critical state. The workaround is to change the port status to OOS,DSBLD. When the port status is changed to OOS,DSBLD, the LOS-P alarm demotes to Minor from Critical state. This issue has been resolved.

CSCsl04155

Transient alarms occur under the following conditions:

- When upgrading the software from Cisco ONS Release 4.x, 5.x, 6.x, and 7.x to Cisco ONS Release 8.5, the PMI and FDI alarms are raised. These alarms disappear after all the nodes of the network are upgraded to Cisco ONS Release 8.5.
- When upgrading the software from Cico ONS Release 8.0 to Cisco ONS Release 8.5, the PMI, FDI and APC-CORR-SKIP alarms are raised. These alarms disappear after all the nodes of the network are upgraded to Cisco ONS Release 8.5.

This issue has been resolved.

CSCsl57383

The OPWR_LFAIL and OPWR_HFAIL alarms do not properly correlate the downstream alarms when Multipath Optical (MPO) ribbon is connected to the ADD port is removed from the ADD circuit passing through the WXC card. This issue has been resolved.

CSCsm00488

SYNCLOSS alarm is raised for a long time on a Y-cable switch when switching back to working card after WTR alarm is cleared for MXP-MR-10DME cards. This issue has been resolved.

CSCsm12542

LOS-P alarm is reported in Critical severity on a Y-cable protected MXP-MR-10DME card even when it is in standby mode. This issue has been resolved.

CSCsm38947

False LO-RXPOWER alarm raised on client port of a TXP-MR-2.5G card when the card is up and operational for a long time. This issue has been resolved.

Data I/O Cards

This section documents resolved Data I/O Cards caveats in Release 8.5.1.

CSCsl28270

Traffic outage occurs when Squelch is enabled on copper SFPs. This issue has been resolved.

CSCsm09512

VT1.5-64v or VT1.5-63v circuit moves to VCG degraded state following hard reset of CE-MR card resulting in about 6 to 8 members not being available for use. This issue has been resolved.

CSCsm27602

On a G1000 port, changing status from IS to OOS to DSBLD to IS may cause loss in traffic. The workaround is to change the port state to OOS-MT and then apply a facility loopback to restore traffic. Change the port state to IS to bring up the traffic. This issue has been resolved.

CSCsm64065

The Pause resolution algorithm on CE-MR card for 1000BaseX ports is not correct. The workaround is to disable the flow control on CE-MR card if the partner interface does not support symmetric flow control. This issue has been resolved.

DWDM

This section documents resolved DWDM caveats in Release 8.5.1.

CSCsk50250

When the software is upgraded from Cisco ONS Release 7.0.1 to Cisco ONS Release 8.0, the West terminals are converted to A terminals and East terminals are converted to B terminals. When the B terminal is viewed after the upgrade, the APC screen (Maintenance > DWDM > APC) for the B terminals is blank. The workaround is to refresh/reload software on side B. This issue has been resolved.

CSCsl32370

When optical mesh network with OTS PPC is provisioned on the multi degree node, the alternative optical channel path is not calculated using the side constraints within the OCHNC circuit provisioning wizard. This issue has been resolved.

CSCsm59936

Non-DWDM node type cannot be configured for a shelf where OPT-AMP-C card is used. This issue has been resolved.

Electrical I/O Cards

This section documents resolved Electrical I/O Cards caveats in Release 8.5.1.

CSCsl28775

VT or STS crossconnects to ports above number 12 cannot be created on a DS3XM12 card. The workaround is to use A-Z circuit provisioning and use the DS3XM-12 for the transmux functionality. This issue has been resolved.

Hardware

This section documents resolved Hardware caveats in Release 8.5.1.

CSCsi64440

A traffic outage on the MRC-12, MRC-4, or DS3XM-12 could occur under certain conditions when upgrading to Cisco ONS 15454 Release 8.0.

Software upgrade from a release prior to Release 8.0 to Release 8.0 causes:

- Multi-second outage on the DS3XM-12 card in the Main slots 1, 3, 5, 12, 14, and16 when an XC or XCVT cross-connect cards are used.
- Complete outage on the DS3XM-12 card in the Protect slots 2, 4, 6, 13, 15, and 17 when an XC or XCVT cross-connect cards are used.
- Multi-second outage on the MRC-12 card when an XC or XCVT cross-connect card are used.

The MRC-4 card is first introduced in Release 8.0, so software upgrade does not apply.

Soft reset in 8.0 causes:

- Multi-second outage on the MRC-12 card when an XC or XCVT cross-connect cards are used.
- Multi-second outage on the MRC-4 card when an XC or XCVT cross-connect cards are used.
- Multi-second outage on the DS3XM-12 card in the Main slots 1,3,5,12,14,16 when the active XC or XCVT cross-connect cards is in slot 8.
- Total outage of the DS3XM-12 card in the Main slots 1,3,5,12,14,16 when the active XC or XCVT cross-connect cards is in slot 10. A hard reset will clear the problem, but a further soft reset will cause an outage again.
- Multi-second outage on the DS3XM-12 card in Protect slots 2, 4, 6, 13, 15, and 17 when the active XC or XCVT cross-connect card is in slot 10.
- Total outage of the DS3XM-12 card in Protect slots 2, 4, 6, 13, 15, and 17 when the active XC or XCVT cross-connect card is in slot 8. A hard reset will clear the problem, but a further soft reset will again cause an outage.

This issue has been resolved.

CSCsk48116

The traffic on CE-MR card is dropped when a loopback is applied on any member of the link capacity adjustment scheme (LCAS) circuit. Applying loopback potentially affects other members of the LCAS circuit as the differential delay threshold changes. This change in differential delay causes other members in the LCAS circuit to exceed the differential delay threshold raising the VCG-LOA alarm. The workaround is to assign OOS,OOG state for any member of LCAS circuit before applying loopback. This issue has been resolved.

CSCsl26125

The 40-DMX unit can lower the channel TX power upon provisioning of a new optical circuit. This problem is created by the counter-propagating light reaching the VOA module on the COM-RX port in case of wrong cabling the DWDM source with the 40-DMX unit. This additional optical power results in the VOA to increase its attenuation and the power of the already provisioned circuits to be reduced. This issue has been resolved.

CSCsl92447

The traffic in a split fiber circuit is dropped when the trunk port is shut down either by pulling the trunk port fiber or setting the admin state as OOS-DSBLD, and performing a soft reset on ML-MR card or hard reset on CE-MR-10 or CE-MR-6 card. This issue has been resolved.

Maintenance and Administration

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CSCsb88234

When a card is provisioned and a filler card is plugged in, a DBCHG with ENT-EQPT is sent, but when a filler card is plugged in without a prior provision there is no plug-in message. Similarly, there is no message upon removal of the filler card. The workaround for TL1 is to issue an inventory call and the filler card appears. For Cisco Transport Controller, the card is displayed and removed when the card is removed. This issue has been resolved.

CSCsg32263

When DBCHG messages are turned on by using the ALW-MSG-ALL command, there is no DBCHG message when creating and then deleting a proxy firewall tunnel. This issue has been resolved.

CSCsg43777

The number of rows added is inconsistent when a non-integer value is entered in the Add Rows field for the VLAN DB profile pane. This issue has been resolved.

CSCsg42366

Traffic outage of 120 seconds occurs when FPGA upgrade is done with manual switch on Y-cable and client port is in out of service.

To prevent traffic outage, follow the procedure for the FPGA upgrade:

1. Configure the following:
   - Near End (NE) node, 2 MXP-MR-10DME, Working and Protect, with the Working Active and the Protect Stdby for each protection group supported on the client ports
   - Far End (FE) node, 2 MXP-MR-10DME, Working and Protect, with the Working Active and the Protect Stdby for each protection group supported on the client ports
   - NE Working card trunk port connected to FE Working card trunk port
   - NE Protect card trunk port connected to FE Protect card trunk port

2. Ensure traffic is running on the Working cards, for each protection group is supported by the MXP-MR-10DME cards.
3. Issue a Lockout of Protect to ensure traffic does not switch to Protect. Perform this on both NE and FE protection groups.
4. Disable client ports on the Protect cards and complete Manual FPGA upgrade. The upgrade should be hitless since traffic is accommodated on the Working facilities.
5. Once the card has completed SW reset, move back client ports to IS-NR state. Ensure no unexpected alarm or condition is present on the Protect cards.
6. Release Lockout of Protection on both ends, on every protection group. This operation does not affect traffic. Traffic is still carried on Working facilities.
7. Issue a Force to Protect on both NE and FE protection groups so that traffic switches from Working to Protect facilities. Do this on every protection group supported by these cards. The Force to Protect switching affects traffic less than 50 ms.
8. Disable client ports on the Working cards and complete Manual FPGA upgrade. The upgrade should be hitless since traffic is accommodated on the Protect facilities.
9. Once the card has completed SW reset, move back client ports to IS-NR state. Ensure no unexpected alarm/condition is present on the Working cards.
10. Release Force to Protect on both ends, on every protection group. If the protection group is revertive, this operation will revert traffic to Working facilities. Less than 50ms hits are expected. The operation will keep traffic on Protect facilities if the protection group is non-revertive, hitless.

This issue has been resolved.

CSCsj42162

Packets are corrupted with cyclic redundancy check (CRC) errors and traffic is lost when the source Ethernet signal is dropped and applied again on a chain of MXP-MR-10DME cards. This issue has been resolved.

CSCsj82440

When the ANS parameter is launched with default patchcords to regulate the ports, the 40MUX COM-TX port status is not shown correctly in the WDM-ANS->Port Status panel. Resetting the timing communication and control (TCC) card displays the 40MUX COM-TX port status correctly. This issue has been resolved.

CSCsj85066

When creating or adding members to a new Low Order (LO) circuit on an STS and VT index that has not previously carried LO traffic (since the TCC card was last rebooted), some of the VT members' state is not displayed correctly. This issue has been resolved.

CSCsk40571

Terminal loopback does not happen in FCMR-4 card and the traffic is sent to downstream side of the circuit. This issue has been resolved.

CSCsk95390

The database will get corrupted when a few among multiple VT circuits are rolled into same slot or STS. The rest of the VT circuits cannot be rolled into single slot/STS. This issue has been resolved.

CSCsl04148

When retrieving power values on Cisco Transport Controller and TL1, the LINE-TX and LINE-RX power values related to OSC-CSM card are not retrieved. This issue has been resolved.

CSCsl04173

When TCC is reset on a node that has either LOS, LOS-P, or OPWR-LFAIL alarm, active channel count is not reported correctly in Cisco Transport Controller and TL1. This issue has been resolved.

CSCsl22077

The rxTotalPkts and txTotalPkts does not increment when jumbo frames (packets of more than 1522 bytes) with MTU setting of 9700 is sent through the circuit. This issue has been resolved.

CSCsl34159

Traffic on the port with copper SFP is affected when another copper SFP or optical SFP is inserted in another port. This issue has been resolved.

CSCsl39888

Upgrading or downgrading the software from Cisco ONS Release 7.0.5 to Cisco ONS Release 7.0.7 or vice-versa causes errors on some of the ports or Y-cable protected MXP-MR-10DME card is loaded with all copper SFPs. This issue has been resolved.

CSCsl85419

Cisco Transport Controller and TL1 does not report standing alarms on MS-ISC-100T card when MS-ISC-100T cards are interconnecting multiple shelves in a multishelf node as part of a SMTP ring. This issue has been resolved.

CSCsm02122

Traffic is affected when the software is upgraded to Cisco ONS Release 8.5.1 on MXP-MR-10DME card with eight copper SFPs. This issue has been resolved.

CSCsm02773

LOS alarm on the OPT-BST card LINE-RX port is not correlated in DirLess node when a Mesh-X (4/8) node is connected to DirLess node. This issue has been resolved.

Path Protection

This section documents resolved Path Protection caveats in Release 8.5.1.

CSCsl52122

Revertive path protection circuit may not switch to protected path during activation when the path protection selector does not detect the working path as Active even if that path has errors. This issue has been resolved.

TL1

This section documents resolved TL1 caveats in Release 8.5.1.

Note To be compatible with TL1 and DNS, all nodes must have valid names. Node names should contain alphanumeric characters or hyphens, but no special characters or spaces.

CSCsm34460

The ENT-EQPT::SLOT-14&SLOT-16:81::DS3:PROTID=SLOT-15,PRTYPE=1-N,CMDMDE=FRCD; TL1 command returns a wrong response. This issue has been resolved.

New Features and Functionality

This section highlights new features and functionality for Release 8.5.1. For detailed documentation of each of these features, consult the user documentation.

New Software Features and Functionality

This section documents new software features for Release 8.5.1.

Link Integrity Soak Timer

All the mapper cards (G1000-4, CE-1000-4, CE-100-8, and CE-MR-10 cards supported on Cisco ONS 15454 platform) support end-to-end Ethernet link integrity. If any part of the end-to-end path fails, the mapper card soaks the defect for a fixed duration of 200 ms. In certain network configurations, the restoration time after a protection switch can be more than 200 ms. Such disruptions necessitates that the link integrity be initiated at an interval greater than 200 ms. The Link Integrity Soak Timer enhancement allows you to configure link integrity soak timer on per- port basis. To allow link integrity to be initiated at an interval greater than 200 ms, set the link integrity timer in the range between 200 and 5000 ms, in multiples of 100 ms.

MRC Upgrade

The MRC Upgrade feature allows you to perform an in-service upgrade of the MRC cards (MRC-12, MRC-4-2.5G, or MRC-12-2.5G card) to OC192 or OC192-XFP card provided only when the first port in MRC card is provisioned. The OC192 or OC192-XFP card can be converted back to an MRC card if the bandwidth used in OC192 or OC192-XFP card is less than the SFP Port Rate (that is, OC-12 or OC-48).

TL1

This section documents new TL1 features for Release 8.5.1.

TL1 Command Changes

This section documents TL1 command changes for Release 8.5.1.

Command Syntax Changes

The syntax of the following TL1 commands are changed:

- **ED-ETH** syntax changed from:

  ED-ETH:[<TID>]:<src>:<CTAG>:::[FLOW=<flow>],[EXPDUPLEX=<expduplex>],[SELECTIVEAUTO=<selectiveauto>],[EXPSPEED=<expspeed>],[VLANCOS=<vlancosthreshold>],[IPTOS=<iptosthreshold>],[NAME=<name>],[CMDMDE=<cmdmde>],[SOAK=<soak>]:[<pst>[,<sst>]];

  To:

  ED-ETH:[<TID>]:<src>:<CTAG>:::[FLOW=<flow>],[EXPDUPLEX=<expduplex>],[SELECTIVEAUTO=<selectiveauto>],[EXPSPEED=<expspeed>],[VLANCOS=<vlancosthreshold>],[IPTOS=<iptosthreshold>],[NAME=<name>],[CMDMDE=<cmdmde>],[SOAK=<soak>],[LITIMER=<litimer>]:[<pst>[,<sst>]];

- **ED-FSTE** syntax changed from:

  ED-FSTE:[<TID>]:<src>:<CTAG>:::[FLOW=<flow>],[EXPDUPLEX=<expduplex>],[EXPSPEED=<expspeed>],[SELECTIVEAUTO=<selectiveauto>],[VLANCOS=<vlancosthreshold>],[IPTOS=<iptosthreshold>],[NAME=<name>],[CMDMDE=<cmdmde>],[SUPPRESS=<suppress>],[SOAK=<soak>]:[<pst>[,<sst>]];

  To:

  ED-FSTE:[<TID>]:<src>:<CTAG>:::[FLOW=<flow>],[EXPDUPLEX=<expduplex>],[EXPSPEED=<expspeed>],[SELECTIVEAUTO=<selectiveauto>],[VLANCOS=<vlancosthreshold>],[IPTOS=<iptosthreshold>],[NAME=<name>],[CMDMDE=<cmdmde>],[SUPPRESS=<suppress>],[SOAK=<soak>],[LITIMER=<litimer>]:[<pst>[,<sst>]];

- **ED-G1000** syntax changed from:

  ED-G1000:[<TID>]:<aid>:<CTAG>:::[MFS=<mfs>],[FLOW=<flow>],[LOWMRK=<int>],[HIWMRK=<int>],[AUTONEG=<autoneg>],[NAME=<name>],[CMDMDE=<cmdmde>],[SOAK=<soak>]:[<pst>[,<sst>]];

  To:

ED-G1000:[<TID>]:<aid>:<CTAG>:::[MFS=<mfs>],[FLOW=<flow>],[LOWMRK=<int>],
[HIWMRK=<int>],[AUTONEG=<autoneg>],[NAME=<name>],[CMDMDE=<cmdmde>],
[SOAK=<soak>],[LIENABLE=<lienable>],[LITIMER=<litimer>]:[<pst>[,<sst>]];

- **ED-GIGE** syntax changed from:

  ED-GIGE:[<TID>]:<aid>:<CTAG>:::[ADMINSTATE=<adminstate>],[LINKSTATE=<linkstate>],
  [MTU=<mtu>],[MFS=<mfs>],[FLOW=<flow>],[FLOWCTRL=<flowctrl>],
  [AUTONEG=<autoneg>],[HIWMRK=<int>],[LOWMRK=<int>],[OPTICS=<optics>],
  [DUPLEX=<duplex>],[SPEED=<speed>],[NAME=<name>],[CMDMDE=<cmdmde>],
  [MACADDR=<macaddr>],[FREQ=<freq>],[LOSSB=<lossb>],[SUPPRESS=<suppress>],
  [SOAK=<soak>][SQUELCH=<squelch>],[CIR=<cir>],[CBS=<cbs>],[EBS=<ebs>]:[<pst>[,<sst>
  ]];

  To:

  ED-GIGE:[<TID>]:<aid>:<CTAG>:::[ADMINSTATE=<adminstate>],[LINKSTATE=<linkstate>],
  [MTU=<mtu>],[MFS=<mfs>],[FLOW=<flow>],[FLOWCTRL=<flowctrl>],
  [AUTONEG=<autoneg>],[HIWMRK=<int>],[LOWMRK=<int>],[OPTICS=<optics>],
  [DUPLEX=<duplex>],[SPEED=<speed>],[NAME=<name>],[CMDMDE=<cmdmde>],
  [MACADDR=<macaddr>],[FREQ=<freq>],[LOSSB=<lossb>],[SUPPRESS=<suppress>],
  [SOAK=<soak>],[SQUELCH=<squelch>],[CIR=<cir>],[CBS=<cbs>],[EBS=<ebs>],
  [LIENABLE=<lienable>],[LITIMER=<litimer>]:[<pst>[,<sst>]];

Command Response Changes

The response of the following TL1 commands are changed:

- **RTRV-ETH** response changed from:

  <aid>::[<adminstate>],[<linkstate>],[<mtu>],[<flowctrl>],[<optics>],[<duplex>],[<speed>],
  [<flow>],[<expduplex>],[<expspeed>],[<vlancosthreshold>],[<iptosthreshold>],[<name>],
  [<soak>],[<soakleft>],[<selectiveauto>]:<pst>,[<sst>]

  To:

  <aid>::[<adminstate>],[<linkstate>],[<mtu>],[<flowctrl>],[<optics>],[<duplex>],[<speed>],
  [<flow>],[<expduplex>],[<expspeed>],[<vlancosthreshold>],[<iptosthreshold>],[<name>],
  [<soak>],[<soakleft>],[<selectiveauto>]:[<litimer>]:<pst>,[<sst>]

- **RTRV-FSTE** response changed from:

  <aid>::[<adminstate>],[<linkstate>],[<mtu>],[<flowctrl>],[<optics>],[<duplex>],[<speed>],
  [<flow>],[<expduplex>],[<expspeed>],[<vlancosthreshold>],[<iptosthreshold>],[<name>],
  [<suppress>],[<soak>],[<soakleft>],[<selectiveauto>]:<pst>,[<sst>]

  To:

  <aid>::[<adminstate>],[<linkstate>],[<mtu>],[<flowctrl>],[<optics>],[<duplex>],[<speed>],
  [<flow>],[<expduplex>],[<expspeed>],[<vlancosthreshold>],[<iptosthreshold>],[<name>],
  [<suppress>],[<soak>],[<soakleft>],[<selectiveauto>],[<litimer>]:<pst>,[<sst>]

- **RTRV-G1000** response changed from:

  <aid>::[<mfs>],[<flow>],[<lan>],[<optics>],[<soak>],[<trans>],[<tport>],<lowmrk>,<hiwmrk>,
  [<buff>],[<soakleft>],[<autoneg>],[<name>],[<encap>]:<pst>,[<sst>]

  To:

  <aid>::[<mfs>],[<flow>],[<lan>],[<optics>],[<soak>],[<trans>],[<tport>],<lowmrk>,<hiwmrk>,
  [<buff>],[<soakleft>],[<autoneg>],[<name>],[<encap>],[<lienable>],[<litimer>]:<pst>,[<sst>]

- **RTRV-GIGE** response changed from:

<aid>:,,<role>,<status>:[<adminstate>],[<linkstate>],[<mtu>],[<encap>],[<flowctrl>],
[<autoneg>],[<hiwmrk>],[<lowmrk>],[<optics>],[<duplex>],[<speed>],[<name>],[<freq>],
[<lossb>],[<soak>],[<soakleft>]:<pst>,<sst>

To:

<aid>:,,<role>,<status>:[<adminstate>],[<linkstate>],[<mtu>],[<encap>],[<flowctrl>],
[<autoneg>],[<hiwmrk>],[<lowmrk>],[<optics>],[<duplex>],[<speed>],[<name>],[<freq>],
[<lossb>],[<soak>],[<soakleft>],[<lieanble>],[litimer]:<pst>,<sst>

Related Documentation

Release-Specific Documents

- *Release Notes for the Cisco ONS 15454, Release 8.5*
- *Release Notes for the Cisco ONS 15454 SDH, Release 8.5.1*
- *Release Notes for the Cisco ONS 15310-CL, Release 8.5.1*
- *Release Notes for the Cisco ONS 15310-MA, Release 8.5.1*
- *Cisco ONS 15454 Software Upgrade Guide, Release 8.5.x*

Platform-Specific Documents

- *Cisco ONS 15454 Procedure Guide*
  Provides installation, turn up, test, and maintenance procedures
- *Cisco ONS 15454 Reference Manual*
  Provides technical reference information for SONET/SDH cards, nodes, and networks
- *Cisco ONS 15454 DWDM Installation and Operations Guide*
  Provides technical reference information for DWDM cards, nodes, and networks
- *Cisco ONS 15454 Troubleshooting Guide*
  Provides a list of SONET alarms and troubleshooting procedures, general troubleshooting information, transient conditions, and error messages
- *Cisco ONS SONET TL1 Command Guide*
  Provides a comprehensive list of TL1 commands
- *Cisco ONS SONET TL1 Reference Guide*
  Provides general information, procedures, and errors for TL1
- *Cisco ONS 15454 and Cisco ONS 15454 SDH Ethernet Card Software Feature and Configuration Guide*
  Provides software feature and operation information for Ethernet cards

Obtaining Optical Networking Information

This section contains information that is specific to optical networking products. For information that pertains to all of Cisco, refer to the Obtaining Documentation, Obtaining Support, and Security Guidelines section.

Where to Find Safety and Warning Information

For safety and warning information, refer to the *Cisco Optical Transport Products Safety and Compliance Information* document that accompanied the product. This publication describes the international agency compliance and safety information for the Cisco ONS 15454 system. It also includes translations of the safety warnings that appear in the ONS 15454 system documentation.

Cisco Optical Networking Product Documentation CD-ROM

Optical networking-related documentation, including Cisco ONS 15xxx product documentation, is available in a CD-ROM package that ships with your product. The Optical Networking Product Documentation CD-ROM is updated periodically and may be more current than printed documentation.

Obtaining Documentation, Obtaining Support, and Security Guidelines

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

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS Version 2.0.

This document is to be used in conjunction with the documents listed in the "Related Documentation" section.