Release Notes for Cisco ONS 15454 DWDM, Release 10.5.2.x

Revised: September 26, 2025

Release Notes

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This Release Notes document contains information about new features and enhancements, in the Cisco platforms.

Cisco also provides Bug Search Tool, a web resource for tracking defects. To access Bug Search Tool, visit the following URL: https://bst.cloudapps.cisco.com/bugsearch.

Revision History

Date	Notes
December 2016	Added Critical Bug Fix in Release 10.5.2.7, on page 4
October 2016	Added Critical Bug Fixes in Release 10.5.2.6, on page 4
July 2016	Added Critical Bug Fixes in Release 10.5.2.4, on page 5.
June 2016	Updated the TCC2/TCC2P Card Support, on page 7 section.
May 2016	• Added Critical Bug Fix in Release 10.5.2.3, on page 5. • Added Critical Bug Fixes in Release 10.5.2.2, on page 6.
April 2016	Added Software Enhancement in Release 10.5.2.1, on page 7 and Transaction Language 1 (TL1), on page 7.
January 2016	This is the first release of this publication.

Software and Hardware Requirements

Before you begin to install the software, you must check whether your system meets the following minimum software and hardware requirements:

- Hardware—Intel Core i5, i7, or faster processor. A minimum of 4 GB RAM, 100 GB hard disk with 250 MB of available hard drive space.
- One of the following operating systems:
  - Windows 7, Windows Server 2008, or later

    - Apple Mac OS X
    - UNIX workstation with Solaris Version 9 or 10 on an UltraSPARC-III or faster processor, with a minimum of 1 GB RAM and a minimum of 250 MB of available hard drive space.
    - Ubuntu 12.10
- Java Runtime Environment—JRE 1.8 and later.
- Java version 8.0
- Browser:
    - Internet Explorer
    - Mozilla Firefox
    - Safari
    - Google Chrome

Critical Bug Fix in Release 10.5.2.7

The following critical issue has been resolved in Release 10.5.2.7:

- The 200G-CK-C and 100GS-CK-C cards might show issues during boot up phase.

Critical Bug Fixes in Release 10.5.2.6

The following critical issues have been resolved in Release 10.5.2.6:

- If static routes are configured on a controller card, it undergoes multiple reboots after a switchover or reboot.
- Alarms and protection switching may not work for LAN to WAN mode services on the OTU2XP card.
- The WSE card reboots and traffic is affected after an upgrade from R10.522 to R10.524.
- The database of the node is lost due to an incorrect OCHTrail audit.
- CTC network view is blank with Java 1.8 build 101 or higher.
- When the 80-WXC COM output set-point is lower than -22 dBm, the channel VOA has an attenuation of 18~20 dB.
- SSH TL1 session clean-up is not proper upon session time-out due to which further TL1 login is not possible.
- The MR-MXP card reboots and traffic is affected after the node is upgraded to R10.522.
- The controller cards continuously reload due to an SSH task exception on a secure TL1-enabled node.

Calculation of Reversion Pulse Width on PSM Cards

The reversion pulse width range on PSM cards is from 10 to 200 seconds and is calculated in the following way:

Minimum reversion pulse width=ROADM delay + 10 seconds

ROADM delay = N x 5 x 2

Where:

N—Number of filter cards in the network between the source and destination PSM nodes on the working path.

5—Maximum startup delay in seconds

2—Bidirectional communication

For example, if a network has four ROADM nodes with the end nodes having PSM cards on the working path as depicted below:

[PSM - Node 1 - FILTER 1] ==== [FILTER 2 - Node 2 - FILTER 3] ==== [FILTER 4 - Node 3 - FILTER 5] ==== [FILTER 6 - Node 4 - PSM]

then N=6, ROADM delay=6 x 5 x 2= 60

Minimum reversion pulse width=60 + 10= 70 seconds

OpenSSH Version

The OpenSSH version that is currently supported is 3.5.9.1 and will be upgraded in a future release.

Critical Bug Fixes in Release 10.5.2.4

The following critical issues have been resolved in Release 10.5.2.4:

- Traffic hit occurs due to drift in internal clocking of the MR-MXP card.
- MFGMEM failures on ancillary units of Cisco NCS 2015 chassis.
- The TNC card undergoes a roll reboot when the ECU2 or ECU-S unit is installed in Cisco ONS 15454 M6 shelf.
- Unexpected packet size returned through TL1 over an SSH connection.
- APC failure in a mixed network of legacy (or UTS) and flex nodes, if a RAMAN-CTP span is present between a legacy node and a flex node.
- Unexpected reload of the TNC card during connection verification operation.
- EQPT alarm raised on the SMR20 FS card during a TNC reset.
- Traffic hit occurs when a circuit is rerouted and its wavelength is changed.
- TNCS-O and TNCE cards undergo a cold reboot during an OTDR scan if the cards are installed in the same chassis.
- OCHCC circuit creation fails when link diversity is used.
- During an upgrade from R 10.3.0.2 to R 10.5.2.4, a LOS-P alarm is raised on the 16-WXC-FS card that causes a traffic hit.

Critical Bug Fix in Release 10.5.2.3

The following critical issue have been resolved in Release 10.5.2.3:

- APC fails in a mixed network of legacy or UTS nodes and flex nodes, if a RAMAN-CTP span is present between a legacy node and a flex node.

Critical Bug Fixes in Release 10.5.2.2

The following critical issues have been resolved in Release 10.5.2.2:

- Node restarts after a fiber restore event on the Raman span.
- Fan speed table modified for Cisco NCS 2015. Fan speed and temperature mapping was added.
- Incorrect TCA thresholds seen in 200G-CK-LC and 100GS-CK-LC cards when configured in the MXP_200G, MXP_10x10G_100G , or MXP_CK_100G mode.
- Power fluctuations seen on the EAD ports of the cascaded 80-WXC-C cards in linear systems with high number of spans.
- Traffic hits seen in WSE cards during soft resets and upgrades.
- Incorrect service state seen in amplifier card ports after a fiber cut event on a Raman amplified span with circuits in the out-of-service (OOS) state.
- Incorrect configuration sequence seen in the TNCS-O card after firmware upgrade.
- LOS-O alarm not cleared when the FAIL-HI alarm is raised on the EDRA card.
- Traffic hits seen during connection verification.

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New Enhancements for Release 10.5.2.1

This section highlights the new enhancements for Release 10.5.2.1. For detailed documentation about these enhancements, see the user documentation.

Software Enhancement in Release 10.5.2.1

SSH file transfer protocol is supported for software download, database backup, and database restore using TL1 commands.

For detailed information on TL1, see the .

Transaction Language 1 (TL1)

This section contains a list of new TL1 commands, command syntax changes, and command response changes that have been introduced in Release 10.5.2.1. For detailed information on TL1, see the .

New TL1 Commands

The following commands are added in Release 10.5.2.1:

- DLT-RADIUSSERVER
- ED-AAASERVERAUTH
- ED-RADIUSSERVER
- ENT-RADIUSSERVER
- RTRV-AAASERVERAUTH
- RTRV-RADIUSSERVER
- RTRV-TRAILADIT

Command Syntax Changes

The syntax of the following commands has changed in Release 10.5.2.1:

- ED-NE-GEN

Command Response Changes

The command responses of these commands have changed in Release 10.5.2.1:

- RTRV-NE-GEN
- RTRV-GIGE
- RTRV-FAC
- RTRV-CPS

Scenarios that Affect Traffic on MR-MXP Card

In Release 10.5.2.1, a traffic hit may occur on the MR-MXP card installed in the or Cisco NCS 2015 chassis in the following scenarios:

- A soft reset of the single or dual control cards.
- A hard reset of the single or dual control cards.
- A software upgrade from an earlier release to Release 10.5.2.1.

TCC2/TCC2P Card Support

Due to memory limitations, TCC2/TCC2P cards are not supported as the node controller in multi-shelf configuration. Hence, it is recommended to use TCC3 card as the node controller in multi-shelf configuration. However, the TCC2/TCC2P cards can be used as a subtended controller and also in a stand-alone configuration.

New Features for Release 10.5.2

This section highlights new features for Release 10.5.2. For detailed documentation of each of these features, see the user documentation.

Hardware

The hardware units introduced in Release 10.5.2 are:

Cisco NCS 2015 AC Shelf Assembly

The Cisco NCS 2015 AC shelf assembly has 18 vertical slots, numbered 1 to 18. The slot 2 to slot 16 are for line cards that provide 10 to 100 Gbps interconnections, slot 1 and slot 17 are for TNCS or TNCS-O cards (timing and control cards). Slot 18 is for the external connection unit (ECU). The NCS 2015 AC shelf is powered by AC power modules with 1+0, 1+1, 2+0, and 2+2 redundancy. The NCS 2015 AC shelf contains backup flash memory that supports the database (DB) and image backup in the single mode operation. The LCD unit is integrated with the fan tray assembly. The fiber or cable guide used in the NCS 2015 AC shelf provides improved fiber management. The air in the NCS 2015 AC shelf is drawn in through a two-inch air inlet at the bottom of the shelf, and expelled at the top-rear. A single NCS 2015 AC shelf supports both ANSI and ETSI standards.

For more information about the NCS 2015 shelf assembly, see the *Cisco ONS 15454 Hardware Installation Guide*.

ONS 15454 M6 ECU-S

The ONS 15454 M6 ECU-S is a new type of ECU for the ONS 15454 M6. It has two USB 3.0 connections and eight USB 2.0 connections. The NCS2K-MF-6RU unit, or the NCS2K-MF10-6RU unit can be connected to the ONS 15454 M6 ECU-S using the USB 3.0 port.

For more information, see the *Cisco ONS 15454 Hardware Installation Guide*.

Cards, Add/Drop and Passive Units Supported in Cisco NCS 2015 Chassis

Control Cards	Protection Cards	Amplifier Cards	Transponder and Muxponder Cards	Add/Drop and Passive Units
• TNCS-O	• PSM	• OPT-PRE • OPT-BST • OPT-BST-E • OPT-AMP-C • OPT-AMP-17-C • OSC-CSM	• AR_XP • 40E-MXP-C • TXP_MR_10E • OTU2-XP • CFP-LC • 100G-CK-C • 100G-LC-C • 10x10G-LC	• 80-WXC-C • 15216-MD-40-ODD • 15216-MD-40-EVEN • 15216-EF-40-ODD • 15216-EF-40-EVEN • 15216-MD-48-CM • SMR20 FS-CV

The line cards released before Release 10.5.2 need a new bootcode to be installed in Cisco NCS 2015 chassis. These cards upgrade to a new bootcode automatically when they are inserted in any of the slots between slots 2 to 7 in the chassis.

For more information about the bootcode upgrade, see the *Cisco ONS 15454 DWDM Network Configuration Guide, Release 10.x.x*.

Software Features for Release 10.5.2

The software enhancements introduced in Release 10.5.2 are:

Feature Enhancements

- The Squelch hold off timer can be configured for TXP_MR_10E, 40E-MXP-C, OTU2_XP, 100G-LC-C, 100G-CK-C, 100ME-CK-C, CFP-LC, 10x10G-LC, and MR-MXP cards for 10GE and 100GE client payloads in TXP and MXP operating modes.
- The Split ROADM feature is enhanced to support chassis replacement in post-split nodes.
- The following mixed MSM configurations are supported:
  - Cisco NCS 2015 as the node controller with up to 10 NCS 2015 as subtended shelves.
  - Cisco NCS 2015 as the node controller with a mix of up to 15 NCS 2015, NCS 2006, and ONS 15454 as subtended shelves.
  - Cisco NCS 2006 as the node controller with a mix of up to 15 NCS 2015, NCS 2006, and ONS 15454 shelves as subtended shelves.
  - Cisco ONS 15454 as the node controller with a mix NCS 2015, NCS 2006, and ONS 15454 shelves as subtended shelves.

  

  Note The ONS 15454 shelves must have TCC3 cards installed for both the configurations.
- PSM Cards support automatic bi-directional traffic reversion.
- SNMP support is added for PSM Cards to retrieve the port status.
- A new sector, Auto mode, is available for OTDR scan. The common OTDR scan parameters can be configured at node level.
- OTU4 is supported in TXP-100G operating mode on the 200G-CK-LC card.
- OC192/STM64 and 10GE payloads are supported when the 10x10G-LC card is connected with the 100GS-CK-LC card.
- OC192/STM64, 10GE, and OTU2 payloads are supported when the 10x10G-LC card is connected with the 200G-CK-LC card.
- The user can filter and view internal patchcords that are directly connected to TXP cards. To enable this feature, check the TXP Only check box, available in the Provisioning > WDM-ANS > Internal Patchcords tab in CTC. By default, this feature is disabled.
- A node alias (up to 128 characters) can be configured for a node.
- The power redundancy mode of an NCS 2015 chassis can be configured using CTC or TL1 commands. The user can also unselect the power modules that are not used and avoid alarms for those power modules.
- The MR-MXP card supports the following operating modes:
  - MXP-100G
  - TXP-100G
  - 100G-B2B
- The MR-MXP card supports feature-based licensing to support high speed and low speed encryption.
- The MR-MXP card provides encryption capability at the optical layer.

- The following Amplifier (AMP) gain enhancements are introduced in the Release 10.5.2:
  - Amplifier Fail Low Threshold Check
  - Automatic Power Control (APC) Near Limit Gain Check
  - Threshold ANS Update

For more information on software enhancements, see the *Cisco ONS 15454 DWDM Control Card and Node Configuration Guide, Release 10.x.x*, *Cisco ONS 15454 DWDM Line Card Configuration Guide, Release 10.x.x*, *Cisco ONS 15454 DWDM Network Configuration Guide, Release 10.x.x*, and *Cisco ONS 15454 DWDM Licensing Configuration Guide*.

Federal Information Processing Standard 140-2 and Common Criteria (CC) Compliance

The following controller cards are FIPS and CC compliant:

- TNC
- TSC
- TNCE
- TSCE

The following chassis are FIPS and CC compliant:

- ONS 15454 M2
- ONS 15454 M6

The following encryption cards are FIPS and CC compliant:

- M-WSE

For more information, see the *Cisco ONS 15454 DWDM Line Card Configuration Guide, Release 10.x.x*.

Alarms

The alarms introduced in Release 10.5.2 are:

- CHAN-PWR-THRESHOLD-CHECK
- GAIN-NEAR-LIMIT
- WRK-PATH-RECOVERY-CHECK

For more information about feature enhancements, see the *Alarm Troubleshooting* chapter in the *Cisco ONS 15454 DWDM Troubleshooting Guide*.

Cisco Bug Search Tool

Use the Bug Search Tool (BST) to view the list of outstanding and resolved bugs in a release.

BST, the online successor to Bug Toolkit, is designed to improve the effectiveness in network risk management and device troubleshooting. The tool allows partners and customers to search for software bugs based on product, release, and keyword, and aggregates key data such as bug details, product, and version. The tool has provision to filter bugs based on credentials to provide external and internal bug views for the search input.

To search for a specific bug, go to Bug Search Tool (BST) and search the bug ID in the **Search For** field. For more information on BST, see Bug Search Help.

Search Bugs in BST

Follow the instructions below to search bugs specific to a software release in BST.

Procedure

Step 1 Go to https://bst.cloudapps.cisco.com/bugsearch/.

You will be prompted to log into Cisco.com. After successful login, the Bug Toolkit page opens.

Step 2 To search for release specific bugs, enter the following parameters in the page:

a) Search For — Enter **ONS 15454** in the text box.
b) Releases — Enter the appropriate release number.
c) Show Bugs — Select **Affecting or Fixed in these Releases**.

Step 3 Press **Enter**.

Note:

- By default, the search results include bugs with all severity levels and statuses. After you perform a search, you can filter your search results to meet your search requirements.
- An initial set of 25 search results is shown in the bottom pane. Drag the scroll bar to display the next set of 25 results. Pagination of search results is not supported.

Additional References

Related Documents

Use this document in conjunction with the other release-specific documentation listed in the table below:

Technical Assistance

Link	Description
http://www.cisco.com/support	The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies. To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds. Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.

Short Description

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