

Release Notes for Cisco ONS 15454 DWDM, Release 10.5

Cisco ONS 15454 DWDM Release Notes 2

Revision History 2

Software and Hardware Requirements 2

New Features for Release 10.5 3

Cisco Bug Search Tool 6

Search Bugs in BST 6

Additional References 7

Short Description 8

Revised: September 26, 2025

Cisco ONS 15454 DWDM Release Notes

Note Explore the Content Hub, the all new portal that offers an enhanced product documentation experience.

- Use faceted search to locate content that is most relevant to you.
- Create customized PDFs for ready reference.
- Benefit from context-based recommendations.

Get started with the Content Hub at content.cisco.com to craft a personalized documentation experience.

Do provide feedback about your experience with the Content Hub.

This Release Notes document contains information about new features and enhancements, in the Cisco ONS 15454 DWDM platforms.

For the latest version of the Release Notes for Cisco ONS 15454, visit the following URL:

http://www.cisco.com/en/US/products/ps13234/prod_release_notes_list.html

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
June 2016	Added the TCC2/TCC2P Card Support, on page 6 section.
July 2015	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

New Features for Release 10.5

This section highlights new features for Release 10.5. For detailed documentation of each of these features, see the user documentation.

Hardware

The hardware units introduced in Release 10.5 are:

Cisco NCS 2015 Shelf Assembly

The Cisco NCS 2015 shelf assembly has 18 vertical slots numbered 1 to 18. While slot 2 to slot 16 is for line cards that provide 10 to 100 Gbps interconnections, slot 1 and slot 17 is for the TNCS cards (timing and control cards). Slot 18 is for the external connection unit (ECU). The NCS 2015 system can be powered by redundant DC power modules. The NCS 2015 system 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 shelf provides improved fiber management. The air in the NCS 2015 chassis is drawn in through a 2-inch air inlet at the bottom of the chassis, and expelled at the top-rear. A single NCS 2015 shelf assembly supports both ANSI and ETSI standards.

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

TNCS Card

The TNCS cards can be provisioned as active and standby cards in the NCS 2015 shelf. The TNCS cards serve as the processor card for the node. The TNCS cards can be installed in slots 1 and 17 on the NCS 2015 shelf. If the active TNCS card fails, system traffic switches to the redundant TNCS card.

For more information about the TNCS card, see the Installing the Control Cards chapter in the *Cisco ONS 15454 DWDM Control Card and Node Configuration Guide, Release 10.x.x*.

17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS and SMR20 FS Cards

The 17 SMR9 FS, 24 SMR9 FS, 34 SMR9 FS, and SMR20 FS cards are tunable over 96 channels in the C-band, at 50-GHz spacing on the ITU-T grid. The card provides the flex spectrum capability, which allows the user the flexibility to allocate the channel bandwidth, to increase the network scalability. The channel bandwidth is not fixed, but can be defined arbitrarily, with a given granularity and within a given range. Attenuation and power values are defined for each sub-range. The central frequency ranges from 191350 Ghz (1566 .72 nm) to 196100 Ghz (1528 .77 nm). The 17 SMR9 FS, 24 SMR9 FS, and 34 SMR9 FS cards support up to 9 directions for each ROADM node. The SMR20 FS card supports up to 20 directions for each ROADM node. The cards support count based licensing and can be installed in any service slots in the chassis.

For more information about the cards, see the Provisioning Reconfigurable Optical Add/Drop Cards chapter in the *Cisco ONS 15454 DWDM Line Card Configuration Guide, Release 10.x.x*.

12-AD-FS and 16-AD-FS Cards

The 12-AD-FS card is an add/drop card that provides contentionless, colorless, omnidirectional, and flex spectrum capability on 4 channels over 4 directions. The 16-AD-FS card provides contentionless, colorless, omnidirectional, and flex spectrum capability on 16 channels over more than 4 directions using upgrade ports. The cards can be installed in any service slots in the Cisco ONS 15454 M6 and NCS 2015 chassis.

For more information about the cards, see the Provisioning Multiplexer and Demultiplexer Cards chapter in the *Cisco ONS 15454 DWDM Line Card Configuration Guide, Release 10.x.x*.

Passive Optical Modules

A new generation of passive optical modules can be used to accommodate the ROADM nodes built with the SMR FS and AD-FS cards. Two types of modules are available: interconnection modules, and add/drop modules.

The passive modules are:

- MPO-16 to 16-LC fan-out module (NCS2K-MF-MPO-16LC=)
- Double MPO-16 to two MPO-8 adapter module (NCS2K-MF-2MPO-ADP=)
- 8-degree mesh patch panel with 5 add/drop ports (NCS2K-PPMESH8-5AD=)
- 16-port add/drop module with express capability (NCS2K-MF-16AE-CFS=)
- 10-port add/drop module (NCS2K-MF-10AD-CFS=)

All the modules except the 8-degree mesh patch panel module are installed using the 15216-HD-EXT-PNL= rack mounting bracket. The 8-degree mesh patch panel module is installed using the rack mounting bracket that is two rack units high.

The xx SMR9 FS or SMR20 FS and the 12-AD-FS or 16-AD-FS cards can be interconnected by the NCS2K-MF-MPO-16LC=, NCS2K-MF-2MPO-ADP= or the NCS2K-PPMESH8-5AD= module. The NCS2K-MF-16AE-CFS= and the NCS2K-MF-10AD-CFS= modules are only used as passive add/drop modules in the Not DWDM (TDM) networks.

For more information about the passive modules, see the *Installing the Cisco ONS 15454 DWDM Passive Optical Modules* document.

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

Control Cards	Amplifier Cards	Transponder and Muxponder Cards	Add/Drop and Passive Units
• TNCS	• EDRA-1-xx • EDRA-2-xx • OPT-EDFA-17 • OPT-EDFA-24 • RAMAN-CTP • RAMAN-COP \	• 100G-LC-C • 100ME-CKC • 100G-CK-C • 100GS-CK-LC • 200G-CK-LC • 100G-ME-C • WSE • MR-MXP • 10x10G-LC • AR_MXP • AR_XPE	• 17 SMR9 FS • 24 SMR9 FS • 34 SMR9 FS • SMR20 FS • 12-AD-FS • 16-AD-FS • 16-WXC-FS • MF-DEG-5 • MF-UPG-4 • MF-16AD-CFS • MF-4x4-COFS • MF-MPO-8LC • MF-MPO-16LC • MF-2MPO-ADP • MF-16AE-CFS • MF-10AD-CFS • PPMESH8-5AD

The line cards released before R10.5 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*.

New Software Features

The software enhancements introduced in Release 10.5 are:

Feature Enhancements

- The RAMAN-CTP card supports the Automatic Raman Pump Calculation (ARPC) tuning procedure.
- The 10x10G-LC card supports Splitter Protection in the TXPP-10G operating mode.
- The linear impairments in full coherent networks follow the full Local Optimization Global Optimization (LOGO) model that is applicable to 100G full coherent networks.

- The transponder and muxponder cards support the Optical Channel Client Connections (OCHCC) circuit creation using Wavelength Switched Optical Network (WSON) except AR-MXP and AR-XPE cards. OCHCC circuits can be configured on the AR-XP card only in the TXP-MR, TXPP-MR, MXP-MR-S, and MXPP-MR-S operating modes.
- HD-FEC with 7% overhead can be provisioned on the 100GS-CK-LC and 200G-CK-LC cards. This FEC mode is available for all 100G operating modes.
- The GE client interfaces on the AR-XPE card interoperate with NCS 4000 platform when ODU2 is multiplexed on a 100G trunk interface with both the 100GS-CK-LC and 200G-CK-LC cards in the MXP-10X10G operating mode.
- The new user name in Cisco Transport Controller (CTC) can be up to 40 characters and up to 39 characters for the TACACS and RADIUS authentication. The allowed special characters are @, "-" (hyphen), "."(dot), and alphanumeric characters.

For more information about feature enhancements, see the Node Reference, Provisioning Transponder and Muxponder Cards, and Creating Optical Channel Circuits and Provisionable Patchcords chapters.

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.

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:

Link	Description
Cisco ONS Documentation Roadmap	Provides quick access to publications of Cisco ONS releases.
Cisco ONS 15454 DWDM Configuration Guides	Provides background and reference material, procedures for installation, turn up, provisioning, and maintenance of Cisco ONS 15454 dense wavelength division multiplexing (DWDM) systems.
Cisco ONS 15454 DWDM Troubleshooting Guide	Provides general troubleshooting instructions, alarm troubleshooting instructions, and a list of error messages that apply to the Cisco ONS 15454 DWDM systems.
Cisco ONS 15454 Hardware Installation Guide	Provides installation information about the Cisco ONS 15454 (ANSI and ETSI) DWDM hardware.
Installing the Cisco ONS 15454 M2 and ONS 15454 M6 Passive Optical Modules	Provides installation information about the Cisco ONS 15454 DWDM passive optical modules.
Cisco ONS 15454 DWDM Licensing Configuration Guide	Provides information about installing and managing Cisco ONS 15454 DWDM licenses.
Cisco ONS SONET TL1 Command Guide and Cisco ONS SDH TL1 Command Guide	Provides a comprehensive list of TL1 commands.
Installing the GBIC, SFP, SFP+, XFP, CXP, CFP, and CPAK Optical Modules in Cisco ONS Platforms	Provides information about the Pluggable Port Modules support.

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

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: https://www.cisco.com/c/en/us/about/legal/trademarks.html. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1721R)

© 2016 Cisco Systems, Inc. All rights reserved.

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA 95134-1706
USA

Asia Pacific Headquarters
CiscoSystems(USA)Pte.Ltd.
Singapore

Europe Headquarters
CiscoSystemsInternationalBV
Amsterdam,TheNetherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.