

Release Notes for Cisco NCS 4000 Series, Cisco IOS XR Release 5.2.4.7

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The release notes contain information about the new features introduced in the Cisco NCS 4000 Series. For detailed information regarding features, capabilities, hardware, and software introduced with this release, see the guides listed in the *Additional References* section.

Revision History

Date	Notes
May 2015	This is the first release of this publication.
June 2016	Added new features for Release 5.2.4.7

Software and Hardware Requirements

Before you begin to install the software, you must check whether your system meets the 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 these operating System:
 - 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—Java Runtime Environment Version 1.8.
- Browser:
 - Internet Explorer
 - Mozilla

- Safari
- Google Chrome

New Features for Release 5.2.4.7

This section highlights new NCS 4000 features for Release 5.2.4.7. For detailed documentation of each of these features, see the user documentation

- Hardware
- New Software Features

Hardware

The following hardware is supported in Release 5.2.4.7:

2-Port 100Gbps and 10-Port 10Gbps OTN and Packet Line Card

The 2-port 100 Gbps and 10-port 10Gbps (NCS4K-2H10T-OP-KS) OTN and packet line card supports the following port configurations:

- 2-ports of 100 Gbps with CPAK optics
- 1-port of 100 Gbps with CPAK optics and 10-ports of 10 Gbps SFP+ optics

The card supports OTN and packet aggregation where both TDM switching and packet forwarding capabilities are combined in a single card. Hence, it can terminate both OTN control plane traffic as well as packet control plane traffic. The card supports up to two-level ODU4, ODU2, ODU2e, ODU1, ODU0, and ODUFlex nested switching functions by interconnecting with the centralized agnostic switch fabric; 100-Gigabit Ethernet signals are mapped using generic mapping procedure (GMP) or Generic Framing Procedure - Framed (GFP-F) over ODU4 according to ITU-T G.709 v3 (Section 17.7.5). The 10 GE signals are mapped using GFP-F mapping over ODU2 and BMP mapping over ODU2e respectively..

For more information about the card, see the Installing Route Processor Cards, Fabric Cards, and Line Cards chapter in the Cisco Network Convergence System 4000 Series Hardware Installation Guide

New Software Features

These software features have been introduced in Release 5.2.4.7:

PRBS

PRBS (Pseudo Random Binary Sequence) allow user to perform data integrity checks on their encapsulated packet data payload using a pseudo-random bit stream pattern. PRBS expects a bit pattern to be generated and sent to the peer router that will use this feature to detect either the bit pattern sent is intact or not.

Node Configuration Wizard

Node Configuration Wizard allows the user to do all the necessary configurations to make the node available in the network. After performing all these configurations, user will be able to create end to end OTN tunnels or circuits.

Unnumbered Interface

Currently the UNI interface between NCS4K and NCS4K-2H-W nodes need to have an IP address at the two ends. Unnumbered Interface enables support for UNI links between NCS4K and NCS4K-2H-W nodes.

Breakout

NCS4K-2H-O-K cards operate in 10x10G mode physically inside the hardware. Using breakout, each lane of NCS4K-2H-O-K card can be used separately and as a physical 10G port.

SNC/S Protection

Subnetwork Connection Protection with sublayer monitoring (SNC/S) allows triggering of protection switching when the signal fails or signal degrade defects detect at TCM.

Alarm Profile on Port Basis

This allows creation of alarm profile on port granularity. The fault profile will be created at card level. If the user has applied a profile to the card level then it is applicable for all the ports on that card. Using this feature, user can apply some different profiles to different ports.

LF and RF Ethernet Alarm

Local Fault (LF) and Remote Fault (RF) alarms raise by ethernet client signal. Local Fault (LF) alarm occurs when there is a fault on local OTN network. Remote Fault (RF) alarm is always a consequent action of local fault.

EJECTOR-FLAPS-OPEN Alarm

EJECTOR-FLAPS-OPEN alarm occurs when the OIR button is pressed for a card which is in operational state.

FC-REDUNDANCY-LOST Alarm

Fabric Card Redundancy Lost alarm occurs when one or more than one fabric card is removed or reloaded.

FPD-NEED-UPGRADE Alarm

FPD-NEED-UPGRADE alarm occurs when one or more FPDs are not in current state and require upgrade.

IMPROPRMVL Alarm

Improper Removal alarm occurs when the card or pluggable is physically removed or reloaded.

INSTALL-IN-PROGRESS Alarm

INSTALL-IN-PROGRESS alarm is raised when software upgrade starts or when sysadmin ISSU starts.

ISSU-IN-PROGRESS Alarm

ISSU-IN-PROGRESS alarm is raised when ISSU prepare phase starts.

MEA Alarm

MEA alarm is reported when the physical card inserted into a slot does not match the card type that is already provisioned for that slot.

RP-REDUNDANCY-LOST Alarm

The Route Processor Redundancy Lost alarm occurs in one of the following conditions.

- During ISSU, route processor (RP) is reloaded.
- RP is physically removed or reloaded.

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.

Search Bugs in BST

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- Step 1** Go to <https://tools.cisco.com/bugsearch/>. You will be prompted to log into Cisco.com. After successful login, the Bug Toolkit page open.
- Step 2** Enter the bug ID in the Search For: field. To search for release 5.2.4.7 bugs, enter the following parameters in the page:
- a) Search For – Enter NCS4k in the text box.
 - b) Releases – Enter 5.2.4.7.
 - c) Show Bugs – Select Affecting or Fixed in these Releases
- Step 3** Press Enter.
- By default, the search results include bugs with all severity levels and statuses, and bugs that were modified during the life cycle of the bug. 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.
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Additional References**Related Documents**

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

Link	Description
Cisco Network Convergence System 4000 Series Hardware Installation Guide	Provides installation information about the Cisco NCS 4009 and Cisco NCS 4016 chassis.

Cisco Network Convergence System 4000 Series Unpacking, Moving, and Securing Guide	Provides instructions for unpacking the Cisco NCS 4009 and Cisco NCS 4016 chassis, moving the chassis to its permanent location, and mounting the chassis in a rack.
Regulatory Compliance and Safety Information for the Cisco Network Convergence System 4000 Series Chassis	Provides the international agency compliance, safety, and statutory information that apply to Cisco NCS 4009 and Cisco NCS 4016 chassis.
OTN and WDM Configuration Guide for Cisco NCS 4000 Series	Provides background and reference material, procedures to configure and maintain the Cisco NCS 4009 and Cisco NCS 4016 chassis.
OTN and WDM Command Reference for Cisco NCS 4000 Series	Provides the various commands available to configure and maintain the Cisco NCS 4009 and Cisco NCS 4016 chassis.
System Setup and Software Installation Guide for Cisco NCS 4000 Series	Provides instructions to set up the system and perform software installation.

Technical Assistance

Link	Description
http://www.cisco.com/cisco/web/support/index.html	<p>The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies.</p> <p>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</p> <p>Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.</p>

