



Cisco Nexus 3000 Series NX-OS Release Notes, Release 6.0(2)U4(4)

Release Date: February 7, 2015
Current Release: Cisco NX-OS Release 6.0(2)U4(4)

This document describes the features, bugs, and limitations for Cisco Nexus 3000 Series and Cisco Nexus 3100 Series switches. Use this document in combination with documents listed in the [“Obtaining Documentation and Submitting a Service Request”](#) section on page 26.



Note

Release notes are sometimes updated with new information about restrictions and bugs. See the following website for the most recent version of the Cisco Nexus 3000 Series release notes: <http://www.cisco.com/c/en/us/support/switches/nexus-3000-series-switches/products-release-notes-list.html>



Note

[Table 1](#) shows the online change history for this document.

Table 1 **Online History Change**

Revision	Date	Description
A0	February 7, 2015	Created NX-OS Release 6.0(2)U4(4) release notes.
B0	May 12, 2015	Added Known Behaviors for this Release, page 25 .
C0	November 2, 2015	Added the following footnote: GLC-SX-MMD is supported on all Cisco Nexus 3000 Series Switches except for the Cisco Nexus 3064-T. Please refer to the comparability matrix for all the supported platforms.
D0	January 7, 2016	Removed bug Id (CSCuq92481) from “Limitations” .



Contents

This document includes the following sections:

- [Introduction, page 2](#)
- [System Requirements, page 3](#)
- [New and Changed Features, page 20](#)
- [Upgrade and Downgrade Guidelines, page 21](#)
- [Limitations, page 21](#)
- [Caveats, page 23](#)
- [Known Behaviors for this Release, page 25](#)
- [Obtaining Documentation and Submitting a Service Request, page 26](#)

Introduction

Several new hardware and software features are introduced for the Cisco Nexus 3000 Series and Cisco Nexus 3100 Series devices to improve the performance, scalability, and management of the product line. Cisco NX-OS Release 6.x also supports all hardware and software supported in Cisco NX-OS Release 5.1 and Cisco NX-OS Release 5.0.

Cisco NX-OS offers the following benefits:

- Cisco NX-OS runs on all Cisco data center switch platforms: Cisco Nexus 7000, Nexus 5000, Nexus 4000, Nexus 3000, Nexus 2000, and Nexus 1000V Series switches.
- Cisco NX-OS software interoperates with Cisco products that run any variant of Cisco IOS software and also with any networking operating system that conforms to common networking standards.
- Cisco NX-OS modular processes are triggered on demand, each in a separate protected memory space. Processes are started and system resources are allocated only when a feature is enabled. The modular processes are governed by a real-time preemptive scheduler that helps ensure timely processing of critical functions.
- Cisco NX-OS provides a programmatic XML interface that is based on the NETCONF industry standard. The Cisco NX-OS XML interface provides a consistent API for devices. Cisco NX-OS also provides support for Simple Network Management Protocol (SNMP) Versions 1, 2, and 3 MIBs.
- Cisco NX-OS enables administrators to limit access to switch operations by assigning roles to users. Administrators can customize access and restrict it to the users who require it.

Cisco Nexus 3000 Series Switches

The Cisco Nexus 3000 Series switches are high-performance, high-density, ultra-low-latency Ethernet switches that provide line-rate Layer 2 and Layer 3 switching. The Cisco Nexus 3000 Series includes the following switches:

- The Cisco Nexus 3064 switch is a 1 RU switch that supports 48 1- or 10-Gigabit downlink ports, four Quad Small Form-Factor Pluggable (QSFP+) ports that can be used as a 40 Gigabit Ethernet port or 4 x10-Gigabit Ethernet ports, one 10/100/1000 management port, and one console port.

- The Cisco Nexus 3048 switch is a 1 rack unit (RU) switch that supports 48 10/100/1000 Ethernet server-facing (downlink) ports, four 10-Gigabit network-facing (uplink) ports, one 100/1000 management port, and one console port.
- The Cisco Nexus 3016 is a 1 RU, 16-port QSFP+ switch. Each QSFP+ port can be used as a 40-Gigabit Ethernet port or 4 x 10-Gigabit Ethernet ports.

Each switch includes one or two power supply units and one fan tray module, and each switch can be ordered with either forward (port-side exhaust) airflow or reverse (port-side intake) airflow for cooling. All platforms support both AC and DC power supplies. All combinations of power (AC/DC) and airflow (forward/reverse) are available. The Cisco Nexus 3000 Series switches run the Cisco NX-OS software.

For information about the Cisco Nexus 3000 Series, see the [Cisco Nexus 3000 Series Hardware Installation Guide](#).

Cisco Nexus 3100 Series Switches

The Cisco Nexus 3100 Series switches are high-performance, high-density, ultra-low-latency Ethernet switches that provide line-rate Layer 2 and Layer 3 switching. In Cisco NX-OS Release 6.0(2)U2(2), the Cisco Nexus 3100 Series includes the Cisco Nexus 3132 and Nexus 3172 switches.

The Cisco Nexus 3172PQ switch is a 10-Gbps Enhanced Small Form-Factor Pluggable (SFP+)–based ToR switch with 48 SFP+ ports and 6 Enhanced Quad SFP+ (QSFP+) ports.

The Cisco Nexus 3172TQ switch is a 10GBASE-T switch with 48 10GBASE-T ports and 6 Quad SFP+ (QSFP+) ports.

Each SFP+ port can operate in 100-Mbps, 1-Gbps, or 10-Gbps mode, and each QSFP+ port can operate in native 40-Gbps or 4 x 10-Gbps mode. This switch is a true physical-layer-free (phy-less) switch that is optimized for low latency and low power consumption.

The Cisco Nexus 3132Q switch is a 1RU, 40-Gbps QSFP-based switch that supports 32 fixed 40-Gbps QSFP+ ports. It also has 4 SFP+ ports that can be internally multiplexed with the first QSFP port. Each QSFP+ port can operate in the default 40-Gbps mode or 4 x 10-Gbps mode, up to a maximum of 104 10-Gbps ports.

Each switch includes dual redundant power supply units, four redundant fans, one 10/100/1000 management port, and one console port. Each switch can be ordered with either forward (port-side exhaust) airflow or reverse (port-side intake) airflow for cooling. It supports both AC and DC power supplies. All combinations of power (AC/DC) and airflow (forward/reverse) are available. The Cisco Nexus 3100 Series switches run the Cisco NX-OS software.

For information about the Cisco Nexus 3100 Series, see the [Cisco Nexus 3000 Series Hardware Installation Guide](#).

System Requirements

This section includes the following topics:

- [Memory Requirements, page 4](#)
- [Hardware Supported, page 4](#)
- [Twinax Cable Support on Cisco Nexus 3000 Switches, page 19](#)
- [Cisco QSFP 40-Gbps Bidirectional Short-Reach Transceiver, page 20](#)

Memory Requirements

The Cisco NX-OS Release 6.0(2)U4(4) software requires 135 MB of flash memory.

Hardware Supported

Cisco NX-OS Release 6.0(2)U4(4) supports the Cisco Nexus 3000 Series switches. You can find detailed information about supported hardware in the *Cisco Nexus 3000 Series Hardware Installation Guide*.

[Table 2](#) shows the hardware supported by the Cisco NX-OS Release 6.x software. [Table 3](#) shows the hardware supported by the Cisco NX-OS 5.x releases.

[Table 4](#) shows the transceivers supported by the Cisco NX-OS Release 6.x software. [Table 5](#) shows transceivers supported by the Cisco NX-OS 5.x releases.

Table 2 Hardware Supported by Cisco NX-OS Release 6.x Software

Hardware	Part Number	Supported Cisco NX-OS Release	Supported Cisco NX-OS Release	Supported Cisco NX-OS Release	Supported Cisco NX-OS Release
		6.0(2)U1(3) 6.0(2)U1(2) 6.0(2)U1(1a) 6.0(2)U1(1)	6.0(2)U2(5) 6.0(2)U2(4) 6.0(2)U2(3) 6.0(2)U2(2) 6.0(2)U2(1)	6.0(2)U3(2) 6.0(2)U3(1)	6.0(2)U4(4) 6.0(2)U4(3) 6.0(2)U4(2) 6.0(2)U4(1)
Cisco Nexus 3132Q-X switch	N3K-C3132Q-40GX				X
Cisco Nexus 3172TQ switch	N3K-C3172TQ-10GT		X	X	X
Cisco Nexus 3172PQ switch	N3K-C3172PQ-10GE		X	X	X
Cisco Nexus 3132Q switch	N3K-C3132Q-40GE		X	X	X
Cisco Nexus 3016 switch	N3K-C3016Q-40GE	X	X	X	X
Cisco Nexus 3048 switch	N3K-C3048TP-1GE	X	X	X	X
Cisco Nexus 3064-TQ switch	N3K-C3064TQ-10GT	X	X	X	X
Cisco Nexus 3064-X switch	N3K-C3064PQ-10GX	X	X	X	X
Cisco Nexus 3064-E switch	N3K-C3064PQ-10GE	X	X	X	X
Cisco Nexus 3064 switch	N3K-C3064PQ	X	X	X	X
Cisco Nexus 3048 fan module with forward airflow (port-side exhaust)	N3K-C3048-FAN	X	X	X	X
Cisco Nexus 3048 fan module with reverse airflow (port-side intake)	N3K-C3048-FAN-B	X	X	X	X
Cisco Nexus 3064-T 500W forward airflow (port-side exhaust) AC power supply	NXA-PAC-500W	X	X	X	X
Cisco Nexus 3064-T 500W reverse airflow (port-side intake) AC power supply	NXA-PAC-500W-B	X	X	X	X

Hardware	Part Number	Supported Cisco NX-OS Release	Supported Cisco NX-OS Release	Supported Cisco NX-OS Release	Supported Cisco NX-OS Release
		6.0(2)U1(3) 6.0(2)U1(2) 6.0(2)U1(1a) 6.0(2)U1(1)	6.0(2)U2(5) 6.0(2)U2(4) 6.0(2)U2(3) 6.0(2)U2(2) 6.0(2)U2(1)	6.0(2)U3(2) 6.0(2)U3(1)	6.0(2)U4(4) 6.0(2)U4(3) 6.0(2)U4(2) 6.0(2)U4(1)
Cisco Nexus 3064-X forward airflow (port-side exhaust) AC power supply	N3K-C3064-X-FA-L3	X	X	X	X
Cisco Nexus 3064-X reversed airflow (port-side intake) AC power supply	N3K-C3064-X-BA-L3	X	X	X	X
Cisco Nexus 3064-X forward airflow (port-side exhaust) DC power supply	N3K-C3064-X-FD-L3	X	X	X	X
Cisco Nexus 3064-X forward airflow (port-side intake) DC power supply	N3K-C3064-X-BD-L3	X	X	X	X
Cisco Nexus 3064 fan module with forward airflow (port-side exhaust); also used in the Cisco Nexus 3016	N3K-C3064-FAN	X	X	X	X
Cisco Nexus 3064 fan module with reverse airflow (port-side intake); also used in the Cisco Nexus 3016	N3K-C3064-FAN-B	X	X	X	X
Cisco Nexus 3000 power supply with forward airflow (port-side exhaust)	N2200-PAC-400W	X	X	X	X
Cisco Nexus 3000 power supply with reverse airflow (port-side intake)	N2200-PAC-400W-B	X	X	X	X
Cisco Nexus 2000 power supply with forward airflow (port-side exhaust)	N2200-PDC-400W	X	X	X	X
Cisco Nexus 2000 DC power supply with reverse airflow (port-side intake)	N3K-PDC-350W-B	X	X	X	X

Table 3 Hardware Supported by Cisco NX-OS Release 5.x Software

Hardware	Part Number	Supported Cisco NX-OS Release						
		5.0(3)U5(1f) 5.0(3)U5(1e) 5.0(3)U5(1d) 5.0(3)U5(1c) 5.0(3)U5(1b) 5.0(3)U5(1a) 5.0(3)U5(1)	5.0(3)U4(1)	5.0(3)U3(2b) 5.0(3)U3(2a) 5.0(3)U3(2) 5.0(3)U3(1)	5.0(3)U2(2d) 5.0(3)U2(2c) 5.0(3)U2(2b)	5.0(3)U2(2a)	5.0(3)U2(2) 5.0(3)U2(1) 5.0(3)U1(2a) 5.0(3)U1(2)	5.0(3)U1(1d)
Cisco Nexus 3016 switch	N3K-C3016Q-40GE	X	X	X	X	X	—	—
Cisco Nexus 3048 switch	N3K-C3048TP-1GE	X	X	X	X	—	—	—

Table 3 Hardware Supported by Cisco NX-OS Release 5.x Software (continued)

Hardware	Part Number	Supported Cisco NX-OS Release							
		5.0(3)U5(1f) 5.0(3)U5(1e) 5.0(3)U5(1d) 5.0(3)U5(1c) 5.0(3)U5(1b) 5.0(3)U5(1a) 5.0(3)U5(1)	5.0(3)U4(1)	5.0(3)U3(2b) 5.0(3)U3(2a) 5.0(3)U3(2) 5.0(3)U3(1)	5.0(3)U2(2d) 5.0(3)U2(2c) 5.0(3)U2(2b)	5.0(3)U2(2a)	5.0(3)U2(2) 5.0(3)U2(1) 5.0(3)U1(2a) 5.0(3)U1(2)	5.0(3)U1(1d)	
Cisco Nexus 3064-TQ switch	N3K-C3064TQ-10GT	X ¹	—	—	—	—	—	—	
Cisco Nexus 3064-X switch	N3K-C3064P10GX	X	X	X	—	—	—	—	
Cisco Nexus 3064-E switch	N3K-C3064PQ-10GE	X	X	X	X	X	X	—	
Cisco Nexus 3064 switch	N3K-C3064PQ	X	X	X	X	X	X	X	
Cisco Nexus 3048 fan module with forward airflow (port-side exhaust)	N3K-C3048-FAN	X	X	X	X	—	—	—	
Cisco Nexus 3048 fan module with reverse airflow (port-side intake)	N3K-C3048-FAN-B	X	X	X	X	—	—	—	
Nexus 3064-T 500W forward airflow (port side exhaust) AC power supply	NXA-PAC-500W	X	X	—	—	—	—	—	

Table 3 Hardware Supported by Cisco NX-OS Release 5.x Software (continued)

Hardware	Part Number	Supported Cisco NX-OS Release						
		5.0(3)U5(1f) 5.0(3)U5(1e) 5.0(3)U5(1d) 5.0(3)U5(1c) 5.0(3)U5(1b) 5.0(3)U5(1a) 5.0(3)U5(1)	5.0(3)U4(1)	5.0(3)U3(2b) 5.0(3)U3(2a) 5.0(3)U3(2) 5.0(3)U3(1)	5.0(3)U2(2d) 5.0(3)U2(2c) 5.0(3)U2(2b)	5.0(3)U2(2a)	5.0(3)U2(2) 5.0(3)U2(1) 5.0(3)U1(2a) 5.0(3)U1(2)	5.0(3)U1(1d)
Nexus 3064-T 500 W reverse airflow (port side intake) AC power supply	NXA-PAC-500W-B	X	X	—	—	—	—	—
Cisco Nexus 3064-X forward airflow (port-side exhaust) AC power supply	N3K-C3064-X-FA-L3	X	X	X	—	—	—	—
Cisco Nexus 3064-X reversed airflow (port-side intake) AC power supply	N3K-C3064-X-BA-L3	X	X	X	—	—	—	—
Cisco Nexus 3064-X forward airflow (port-side exhaust) DC power supply	N3K-C3064-X-FD-L3	X	X	X	—	—	—	—
Cisco Nexus 3064-X forward airflow (port-side intake) DC power supply	N3K-C3064-X-BD-L3	X	X	X	—	—	—	—

Table 3 Hardware Supported by Cisco NX-OS Release 5.x Software (continued)

Hardware	Part Number	Supported Cisco NX-OS Release						
		5.0(3)U5(1f) 5.0(3)U5(1e) 5.0(3)U5(1d) 5.0(3)U5(1c) 5.0(3)U5(1b) 5.0(3)U5(1a) 5.0(3)U5(1)	5.0(3)U4(1)	5.0(3)U3(2b) 5.0(3)U3(2a) 5.0(3)U3(2) 5.0(3)U3(1)	5.0(3)U2(2d) 5.0(3)U2(2c) 5.0(3)U2(2b)	5.0(3)U2(2a)	5.0(3)U2(2) 5.0(3)U2(1) 5.0(3)U1(2a) 5.0(3)U1(2)	5.0(3)U1(1d)
Cisco Nexus 3064 fan module with forward airflow (port-side exhaust); also used in the Cisco Nexus 3016	N3K-C3064-FAN	X	X	X	X	X	X	X
Cisco Nexus 3064 fan module with reverse airflow (port-side intake); also used in the Cisco Nexus 3016	N3K-C3064-FAN-B	X	X	X	X	X	X	X
Cisco Nexus 3000 power supply with forward airflow (port-side exhaust)	N2200-PAC-400W	X	X	X	X	X	X	X
Cisco Nexus 3000 power supply with reverse airflow (port-side intake)	N2200-PAC-400W-B	X	X	X	X	X	X	X

Table 3 Hardware Supported by Cisco NX-OS Release 5.x Software (continued)

Hardware	Part Number	Supported Cisco NX-OS Release						
		5.0(3)U5(1f) 5.0(3)U5(1e) 5.0(3)U5(1d) 5.0(3)U5(1c) 5.0(3)U5(1b) 5.0(3)U5(1a) 5.0(3)U5(1)	5.0(3)U4(1)	5.0(3)U3(2b) 5.0(3)U3(2a) 5.0(3)U3(2) 5.0(3)U3(1)	5.0(3)U2(2d) 5.0(3)U2(2c) 5.0(3)U2(2b)	5.0(3)U2(2a)	5.0(3)U2(2) 5.0(3)U2(1) 5.0(3)U1(2a) 5.0(3)U1(2)	5.0(3)U1(1d)
Cisco Nexus 2000 power supply with forward airflow (port-side exhaust)	N2200-PDC-400W	X	X	X	X	X	X	X
Cisco Nexus 2000 DC power supply with reverse airflow (port-side intake)	N3K-PDC-350W-B	X	X	X	X	X	X	X

1. Recommended release for Cisco Nexus 3064-TQ switch is Cisco NX-OS Release 5.0(3)U5(1c) or later releases.

Table 4 Transceivers Supported by Cisco NX-OS Release 6.x Software

Transceivers ¹	Part Number	Supported Cisco NX-OS Release		
		6.0(2)U1(3) 6.0(2)U1(2) 6.0(2)U1(1a) 6.0(2)U1(1)	6.0(2)U2(5) 6.0(2)U2(4) 6.0(2)U2(3) 6.0(2)U2(2) 6.0(2)U2(1)	6.0(2)U4(4) 6.0(2)U4(3) 6.0(2)U4(2) 6.0(2)U4(1) 6.0(2)U3(2) 6.0(2)U3(1)
QSFP				
40GBASE-LR4 QSFP40G transceiver module (SMF)	QSFP-40G-LR4			X
40GBASE-CR4 QSFP+ direct-attach copper cable, 7 meters active	QSFP-H40G-ACU7M			X
40GBASE-CR4 QSFP+ direct-attach copper cable, 8 meters active	QSFP-H40G-ACU8M			X

Table 4 Transceivers Supported by Cisco NX-OS Release 6.x Software (continued)

Transceivers ¹	Part Number	Supported Cisco NX-OS Release		
		6.0(2)U1(3) 6.0(2)U1(2) 6.0(2)U1(1a) 6.0(2)U1(1)	6.0(2)U2(5) 6.0(2)U2(4) 6.0(2)U2(3) 6.0(2)U2(2) 6.0(2)U2(1)	6.0(2)U4(4) 6.0(2)U4(3) 6.0(2)U4(2) 6.0(2)U4(1) 6.0(2)U3(2) 6.0(2)U3(1)
40GBASE-CR4 QSFP+ direct-attach copper cable, 9 meters active	QSFP-H40G-ACU9M			X
40GBASE-CR4 QSFP+ direct-attach copper cable, 10 m active	QSFP-H40G-ACU10M			X
40G QSFP direct-attach Active Optical cable, 15 m	QSFP-H40G-AOC15M			X
QSFP to 4 x SFP 10Gbps active optical cable 15 m	QSFP-4X10G-AOC15M			X
QSFP 40G Bidirectional short-reach transceiver	QSFP-40G-SR-BD	X	X	X
QSFP 40G active optical cable 1 m	QSFP-H40G-AOC1M	X	X	X
QSFP 40G active optical cable 2 m	QSFP-H40G-AOC2M	X	X	X
QSFP 40G active optical cable 3 m	QSFP-H40G-AOC3M	X	X	X
QSFP 40G active optical cable 5 m	QSFP-H40G-AOC5M	X	X	X
QSFP 40G active optical cable 7 m	QSFP-H40G-AOC7M	X	X	X
QSFP 40G active optical cable 10 m	QSFP-H40G-AOC10M	X	X	X
QSFP to 4 x SFP 10Gbps active optical cable 1 m	QSFP-4X10G-AOC1M	X	X	X
QSFP to 4 x SFP 10Gbps active optical cable 2 m	QSFP-4X10G-AOC2M	X	X	X
QSFP to 4 x SFP 10Gbps active optical cable 3 m	QSFP-4X10G-AOC3M	X	X	X
QSFP to 4 x SFP 10Gbps active optical cable 5 m	QSFP-4X10G-AOC5M	X	X	X
QSFP to 4 x SFP 10Gbps active optical cable 7 m	QSFP-4X10G-AOC7M	X	X	X
QSFP to 4 x SFP 10Gbps active optical cable 10 m	QSFP-4X10G-AOC10M	X	X	X
Active copper splitter cable 7 m	QSFP-4x10G-AC7M ²	X	X	X
Active copper splitter cable 10 m	QSFP-4x10G-AC10M ¹	X	X	X
Active copper QSFP transceiver module 7 m	QSFP-H40G-ACU7M ¹	X	X	X
Active copper QSFP transceiver module 10 m	QSFP-H40G-ACU10M ¹	X	X	X

Table 4 Transceivers Supported by Cisco NX-OS Release 6.x Software (continued)

Transceivers ¹	Part Number	Supported Cisco NX-OS Release		
		6.0(2)U1(3) 6.0(2)U1(2) 6.0(2)U1(1a) 6.0(2)U1(1)	6.0(2)U2(5) 6.0(2)U2(4) 6.0(2)U2(3) 6.0(2)U2(2) 6.0(2)U2(1)	6.0(2)U4(4) 6.0(2)U4(3) 6.0(2)U4(2) 6.0(2)U4(1) 6.0(2)U3(2) 6.0(2)U3(1)
40GBASE-CSR4 QSFP transceiver module with multifiber push-on (MPO) connector 300 m	QSFP-40G-CSR4 ¹	X	X	X
40GBASE-CSR4 QSFP transceiver module with MPO connector 300 m (using fiber splitter cables)	QSFP-40G-CSR4 ¹	X	X	X
40GBASE-SR4 QSFP transceiver module with MPO connector 100 m	QSFP-40G-SR4 ¹	X	X	X
40GBASE-SR4 QSFP transceiver module with MPO connector 100 m (using fiber splitter cables)	QSFP-40G-SR4 ¹	X	X	X
40GBASE-LR4 QSFP transceiver module with LC connector 10 km (using single mode fiber)	QSFP-40GE-LR4	X	X	X
QSFP to SFP/SFP+ adapter	CVR-QSFP-SFP10G	X	X	X
40GBASE-CR4 passive copper cable, 1 m	QSFP-H40G-CU1M	X	X	X
40GBASE-CR4 passive copper cable, 3 m	QSFP-H40G-CU3M	X	X	X
40GBASE-CR4 passive copper cable, 5 m	QSFP-H40G-CU5M	X	X	X
QSFP to 4xSFP10G passive copper splitter cable, 1 m	QSFP-4SFP10G-CU1M	X	X	X
QSFP to 4xSFP10G passive copper splitter cable, 3 m	QSFP-4SFP10G-CU3M	X	X	X
QSFP to 4xSFP10G passive copper splitter cable, 5 m	QSFP-4SFP10G-CU5M	X	X	X
Revision 2 copper splitter cables 3 m	QSFP-4SFP10G-CU3 (Rev. 2)	X	X	X
Revision 2 copper splitter cables 5 m	QSFP-4SFP10G-CU5 (Rev. 2)	X	X	X
10-Gigabit				
10 db attenuator	FA-920-073-12310			X
10GBASE-ZR SFP+ module (single-mode fiber [SMF])	SFP-10G-ZR			X
Cisco QSFP to SFP/SFP+ Adapter (QSA) module	CVR-QSFP-SFP10G			X

Table 4 Transceivers Supported by Cisco NX-OS Release 6.x Software (continued)

Transceivers ¹	Part Number	Supported Cisco NX-OS Release		
		6.0(2)U1(3) 6.0(2)U1(2) 6.0(2)U1(1a) 6.0(2)U1(1)	6.0(2)U2(5) 6.0(2)U2(4) 6.0(2)U2(3) 6.0(2)U2(2) 6.0(2)U2(1)	6.0(2)U4(4) 6.0(2)U4(3) 6.0(2)U4(2) 6.0(2)U4(1) 6.0(2)U3(2) 6.0(2)U3(1)
Cisco QSFP to SFP/SFP+ Adapter (QSA) module with 10GBASE-DWDM	QSA w/ DWDM			X
10GBASE-DWDM 1558.98 nm SFP+ (100-GHz ITU grid)	DWDM-SFP10G-58.98			X
10GBASE-DWDM 1539.77 nm SFP+ (100-GHz ITU grid)	DWDM-SFP10G-39.77			X
10GBASE-DWDM 1561.41 nm SFP+ (100-GHz ITU grid)	DWDM-SFP10G-61.41			X
10GBASE-DWDM 1542.94 nm SFP+ (100-GHz ITU grid)	DWDM-SFP10G-42.94			X
10GBASE-DWDM 1553.33 nm SFP+ (100-GHz ITU grid)	DWDM-SFP10G-53.33			X
10GBASE-DWDM 1537.40 nm SFP+ (100-GHz ITU grid)	DWDM-SFP10G-37.40			X
10GBASE-DWDM 1542.14 nm SFP+ (100-GHz ITU grid)	DWDM-SFP10G-42.14			X
10GBASE-DWDM 1556.55 nm SFP+ (100-GHz ITU grid)	DWDM-SFP10G-56.55			X
10GBASE-DWDM 1550.92 nm SFP+ (100-GHz ITU grid)	DWDM-SFP10G-50.92			X
10GBASE-DWDM 1531.12 nm SFP+ (100-GHz ITU grid)	DWDM-SFP10G-31.12			X
10GBASE-DWDM long-range transceiver module 80 km with single mode duplex fiber	DWDM-SFP10G-C			X
10GBASE-DWDM long-range transceiver module 80 km with single mode duplex fiber	DWDM-SFP10G	X	X	X
10GBASE-SR SFP+ module (multimode fiber [MMF])	SFP-10G-SR	X	X	X
10GBASE-LR SFP+ module (single-mode fiber [SMF])	SFP-10G-LR	X	X	X
10GBASE-ER SFP+ module (single-mode fiber [SMF])	SFP-10G-ER	X	X	X
10GBASE-ZR SFP+ module (single-mode fiber [SMF]) ³	SFP-10G-ZR ²	X	X	X

Table 4 Transceivers Supported by Cisco NX-OS Release 6.x Software (continued)

Transceivers ¹	Part Number	Supported Cisco NX-OS Release		
		6.0(2)U1(3) 6.0(2)U1(2) 6.0(2)U1(1a) 6.0(2)U1(1)	6.0(2)U2(5) 6.0(2)U2(4) 6.0(2)U2(3) 6.0(2)U2(2) 6.0(2)U2(1)	6.0(2)U4(4) 6.0(2)U4(3) 6.0(2)U4(2) 6.0(2)U4(1) 6.0(2)U3(2) 6.0(2)U3(1)
10GBASE-DWDM SFP+ module (single-mode fiber [SMF]) ²	10-2767-01 ²	X	X	X
Active Twinax cable assembly, 7 m	SFP-H10GB-ACU7M	X	X	X
Active Twinax cable assembly, 10 m	SFP-H10GB-ACU10M	X	X	X
10GBASE-CU SFP+ cable 1 m (Twinax cable)	SFP-H10GB-CU1M	X	X	X
10GBASE-CU SFP+ cable 1.5 m (Twinax cable)	SFP-H10GB-CU1-5M	X	X	X
10GBASE-CU SFP+ cable 2 m (Twinax cable) ³	SFP-H10GB-CU2M ⁴	X	X	X
10GBASE-CU SFP+ cable 3 m (Twinax cable)	SFP-H10GB-CU3M	X	X	X
10GBASE-CU SFP+ cable 5 m (Twinax cable)	SFP-H10GB-CU5M	X	X	X
10GBASE-CU SFP+ cable 2.5 m (Twinax cable) ³	SFP-H10GB-CU2-5M ³	X	X	X
Active optical cable 1 m	SFP-10G-AOC1M ⁴	X	X	X
Active optical cable 2 m	SFP-10G-AOC2M	X	X	X
Active optical cable 3 m	SFP-10G-AOC3M ⁴	X	X	X
Active optical cable 5 m	SFP-10G-AOC5M ⁴	X	X	X
Active optical cable 7 m	SFP-10G-AOC7M ⁴	X	X	X
Active optical cable 10 m	SFP-10G-AOC10M	X	X	X
1-Gigabit Ethernet				
Gigabit Ethernet SFP, LC connector SX transceiver (MMF)	GLC-SX-MMD ⁵			X
Gigabit Ethernet SFP, LC connector LX/LH transceiver (SMF)	GLC-LH-SMD			X
Cisco QSFP to SFP/SFP+ Adapter (QSA) module with GLC-T	QSA w/ GLC-T			X
1000BASE-T SFP	GLC-TE			X
Cisco QSFP to SFP/SFP+ Adapter (QSA) module with GLC-TE	QSA w/ GLC-TE			X

Table 4 Transceivers Supported by Cisco NX-OS Release 6.x Software (continued)

Transceivers ¹	Part Number	Supported Cisco NX-OS Release		
		6.0(2)U1(3) 6.0(2)U1(2) 6.0(2)U1(1a) 6.0(2)U1(1)	6.0(2)U2(5) 6.0(2)U2(4) 6.0(2)U2(3) 6.0(2)U2(2) 6.0(2)U2(1)	6.0(2)U4(4) 6.0(2)U4(3) 6.0(2)U4(2) 6.0(2)U4(1) 6.0(2)U3(2) 6.0(2)U3(1)
Cisco QSFP to SFP/SFP+ Adapter (QSA) module with SFP-GE-T	QSA w/SFP-GE-T			X
1000Base-BX fiber transceiver	GLC-BX-D ⁴	X	X	X
1000Base-BX fiber transceiver	GLC-BX-U ⁴	X	X	X
1000BASE-EX fiber transceiver module, SMF	GLC-EX-SMD	X	X	X
Gigabit Ethernet SFP, LC connector LX/LH transceiver (SMF)	GLC-LH-SM ⁴	X	X	X
1000BASE-LX/LH SFP transceiver module for MMF and SMF	GLC-LH-SMD ⁴	X	X	X
Gigabit Ethernet SFP, LC connector SX transceiver (MMF)	GLC-SX-MM ³	X	X	X
Gigabit Ethernet SFP, LC connector SX transceiver (MMF)	GLC-SX-MMD ⁵	X	X	X
1000BASE-T SFP ⁶	GLC-T ⁴	X	X	X
1000BASE-ZX fiber transceiver module, SMF, 1550 nm	GLC-ZX-SMD	X	X	X
1000BASE-T SFP transceiver module with extended operating temperature range	SFP-GE-T ⁴	X	X	X
100-Mbps Ethernet				
100BASE-FX SFP module for Gigabit Ethernet ports GLC-GE-100FX ⁷	10-2019-02 ⁵ GLC-GE-100FX	X	X	X

- OIR is supported for all optical modules and transceivers in Cisco NX-OS Release 6.02 and later releases.
- Supported on the Cisco Nexus 3016, Cisco Nexus 3064-X, Cisco Nexus 3064-TQ, Cisco Nexus 3064, Cisco Nexus 3064-E, and all Cisco Nexus 3100 Series switches.
- Supported on the Cisco Nexus 3064-E and Cisco Nexus 3064-X switches.
- Supported on the Cisco Nexus 3048, Cisco Nexus 3064-X, Cisco Nexus 3064, and Cisco Nexus 3064-E switches.
- GLC-SX-MMD is supported on all Cisco Nexus 3000 Series Switches except for the Cisco Nexus 3064-T. Please refer to the comparability matrix for all the supported platforms.
- Supported on the Cisco Nexus 3048, Cisco Nexus 3064-E, and Cisco Nexus 3064-X switches. Not supported on Cisco Nexus 3132Q-X

7. Supported on the Cisco Nexus 3064, Cisco Nexus 3064-E, and Cisco Nexus 3064-X switches. For the GLC-GE-100FX, only part number 10-2019-02 is supported.

**Note**

The Cisco Nexus 3000 supports 1,000 and 10,000 speeds while using SFP+ with Cisco QSA [CVR-QSFP-SFP10G] (and a maximum of 6 QSAs). The 100 speed is not supported on the SFP+ along with QSA, but using any speed 100 is supported on the SFP+.

Table 5 Transceivers Supported by Cisco NX-OS Release 5.x Software

Transceivers	Part Number	Supported Cisco NX-OS Release						
		5.0(3)U5(1f) 5.0(3)U5(1e) 5.0(3)U5(1d) 5.0(3)U5(1c) 5.0(3)U5(1b) 5.0(3)U5(1a) 5.0(3)U5(1)	5.0(3)U4(1)	5.0(3)U3(1)	5.0(3)U3(2b) 5.0(3)U3(2a) 5.0(3)U3(2) 5.0(3)U3(1)	5.0(3)U2(2c) 5.0(3)U2(2b) 5.0(3)U2(2a) 5.0(3)U2(2)	5.0(3) U2(1)	5.0(3)U1(2) 5.0(3)U1(2a)
QSFP								
Active copper splitter cable 7 m	QSFP-4x10G-AC7M ¹	X	—	—	—	—	—	—
Active copper splitter cable 10 m	QSFP-4x10G-AC10M ¹	X	—	—	—	—	—	—
Active copper QSFP transceiver module 7 m	QSFP-H40G-ACU7M ¹	X	—	—	—	—	—	—
Active copper QSFP transceiver module 10 m	QSFP-H40G-ACU10M ¹	X	—	—	—	—	—	—
40GBASE-CSR4 QSFP transceiver module with MPO connector 300 m	QSFP-40G-CSR4 ¹	X	X	—	—	—	—	—
40GBASE-CSR4 QSFP transceiver module with MPO connector 300 m (using fiber splitter cables)	QSFP-40G-CSR4 ¹	X	X	—	—	—	—	—
40GBASE-SR4 QSFP transceiver module with MPO connector 100 m	QSFP-40G-SR4 ¹	X	X	X	X	X	X	X
40GBASE-SR4 QSFP transceiver module with MPO connector 100 m (using fiber splitter cables)	QSFP-40G-SR4 ¹	X	X	X	X	X	X	X
40GBASE-CR4 passive copper cable, 1 m	QSFP-H40G-CU1M	X	X	X	X	X	X	X
40GBASE-CR4 passive copper cable, 3 m	QSFP-H40G-CU3M	X	X	X	X	X	X	X

Table 5 Transceivers Supported by Cisco NX-OS Release 5.x Software (continued)

Transceivers	Part Number	Supported Cisco NX-OS Release						
		5.0(3)U5(1f) 5.0(3)U5(1e) 5.0(3)U5(1d) 5.0(3)U5(1c) 5.0(3)U5(1b) 5.0(3)U5(1a) 5.0(3)U5(1)	5.0(3)U4(1)	5.0(3)U3(1)	5.0(3)U3(2b) 5.0(3)U3(2a) 5.0(3)U3(2)	5.0(3)U2(2c) 5.0(3)U2(2b) 5.0(3)U2(2a) 5.0(3)U2(2)	5.0(3)U2(1)	5.0(3)U1(2) 5.0(3)U1(2a)
40GBASE-CR4 passive copper cable, 5 m	QSFP-H40G-CU5M	X	X	X	X	X	X	X
QSFP to 4xSFP10G passive copper splitter cable, 1 m	QSFP-4SFP10G-CU1M	X	X	X	X	X	X	X
QSFP to 4xSFP10G passive copper splitter cable, 3 m	QSFP-4SFP10G-CU3M	X	X	X	X	X	X	X
QSFP to 4xSFP10G passive copper splitter cable, 5 m	QSFP-4SFP10G-CU5M	X	X	X	X	X	X	X
Revision 2 copper splitter cables 3 m	QSFP-4SFP10G-CU3 (Rev. 2)	X	—	—	—	—	—	—
Revision 2 copper splitter cables 5 m	QSFP-4SFP10G-CU5 (Rev. 2)	X	—	—	—	—	—	—
10-Gigabit								
10GBASE-SR SFP+ module (multimode fiber [MMF])	SFP-10G-SR	X	X	X	X	X	X	X
10GBASE-LR SFP+ module (single-mode fiber [SMF])	SFP-10G-LR	X	X	X	X	X	X	X
10GBASE-ER SFP+ module (single-mode fiber [SMF])	SFP-10G-ER	X	X	X	X	X	X	X
10GBASE-ZR SFP+ module (single-mode fiber [SMF]) ²	SFP-10G-ZR ²	X	X	X	—	—	—	—

Table 5 Transceivers Supported by Cisco NX-OS Release 5.x Software (continued)

Transceivers	Part Number	Supported Cisco NX-OS Release							
		5.0(3)U5(1f) 5.0(3)U5(1e) 5.0(3)U5(1d) 5.0(3)U5(1c) 5.0(3)U5(1b) 5.0(3)U5(1a) 5.0(3)U5(1)	5.0(3)U4(1)	5.0(3)U3(2b) 5.0(3)U3(2a) 5.0(3)U3(2) 5.0(3)U3(1)	5.0(3)U2(2c) 5.0(3)U2(2b) 5.0(3)U2(2a) 5.0(3)U2(2)	5.0(3) U2(1)	5.0(3)U1(2) 5.0(3)U1(2a)	5.0(3)U1(1a) 5.0(3)U1(1b) 5.0(3)U1(1d)	
10GBASE-DWD M SFP+ module (single-mode fiber [SMF]) ²	10-2767-01 ²	X	X	X	—	—	—	—	
10GBASE-CU SFP+ cable 1 m (Twinax cable)	SFP-H10GB- CU1M	X	X	X	X	X	X	X	
10GBASE-CU SFP+ cable 3 m (Twinax cable)	SFP-H10GB- CU3M	X	X	X	X	X	X	X	
10GBASE-CU SFP+ cable 5 m (Twinax cable)	SFP-H10GB- CU5M	X	X	X	X	X	X	X	
10GBASE-CU SFP+ cable 2 m (Twinax cable) ³	SFP-H10GB- CU2M ³	X	X	—	—	—	—	—	
10GBASE-CU SFP+ cable 2.5 m (Twinax cable) ³	SFP-H10GB- CU2-5M ³	X	X	—	—	—	—	—	
Active optical cable 1 m	SFP-10G-AOC1M ⁴	X	—	—	—	—	—	—	
Active optical cable 3 m	SFP-10G-AOC3M ⁴	X	—	—	—	—	—	—	
Active optical cable 5 m	SFP-10G-AOC5M ⁴	X	—	—	—	—	—	—	
Active optical cable 7 m	SFP-10G-AOC7M ⁴	X	—	—	—	—	—	—	
1-Gigabit Ethernet									
1000BASE-T SFP ⁴	GLC-T ⁴	X	X	X	X	X	X	X	
Gigabit Ethernet SFP, LC connector SX transceiver (MMF)	GLC-SX-MM ³	X	X	X	X	X	X	X	

Table 5 Transceivers Supported by Cisco NX-OS Release 5.x Software (continued)

Transceivers	Part Number	Supported Cisco NX-OS Release						
		5.0(3)U5(1f) 5.0(3)U5(1e) 5.0(3)U5(1d) 5.0(3)U5(1c) 5.0(3)U5(1b) 5.0(3)U5(1a) 5.0(3)U5(1)	5.0(3)U4(1)	5.0(3)U3(2b) 5.0(3)U3(2a) 5.0(3)U3(2) 5.0(3)U3(1)	5.0(3)U2(2c) 5.0(3)U2(2b) 5.0(3)U2(2a) 5.0(3)U2(2) 5.0(3)U2(1)	5.0(3)U2(1)	5.0(3)U1(2) 5.0(3)U1(2a)	5.0(3)U1(1a) 5.0(3)U1(1b) 5.0(3)U1(1d)
Gigabit Ethernet SFP, LC connector SX transceiver (MMF)	GLC-SX-MMD ⁵	X	X	—	—	—	—	—
Gigabit Ethernet SFP, LC connector LX/LH transceiver (SMF)	GLC-LH-SM ⁴	X	X	X	X	X	X	X
1000BASE-LX/LH SFP transceiver module for MMF and SMF	GLC-LH-SMD ⁴	X	—	—	—	—	—	—
1000Base-BX fiber transceiver	GLC-BX-U ⁴	X	—	—	—	—	—	—
1000Base-BX fiber transceiver	GLC-BX-D ⁴	X	—	—	—	—	—	—
1000BASE-T SFP transceiver module with extended operating temperature range	SFP-GE-T ⁴	X	—	—	—	—	—	—
100-Mbps Ethernet								
100BASE-FX SFP module for Gigabit Ethernet ports GLC-GE-100FX ⁵	10-2019-02 ⁵ GLC-GE-100FX	X	X	X	X	X	X	X

1. Supported on the Cisco Nexus 3016, Cisco Nexus 3064-X, Cisco Nexus 3064-TQ, Cisco Nexus 3064, and Cisco Nexus 3064-E switches.
2. Supported on the Cisco Nexus 3064-E and Cisco Nexus 3064-X switches.
3. Supported on the Cisco Nexus 3048, Cisco Nexus 3064-X, Cisco Nexus 3064, and Cisco Nexus 3064-E switches.
4. Supported on the Cisco Nexus 3048, Cisco Nexus 3064-E, and Cisco Nexus 3064-X switches.
5. Supported on the Cisco Nexus 3064, Cisco Nexus 3064-E, and Cisco Nexus 3064-X switches. For the GLC-GE-100FX, only part number 10-2019-02 is supported.

Twinax Cable Support on Cisco Nexus 3000 Switches

Starting with Cisco Release NX-OS 5.0(3)U1(1), the following algorithm is used to detect copper SFP+ twinax, QSFP+ twinax, and QSFP+ splitter cables on Cisco Nexus 3000 Series switches.

If the attached interconnect (transceiver) is a copper SFP+ twinax or QSFP+ twinax cable:

- Verify the transceiver SPROM to match the Cisco magic code.
- If the check succeeds, bring up the interface. Otherwise, print the following warning message appears stating that a non-Cisco transceiver is attached and that you should try to bring up the port.

```
2009 Oct 9 01:46:42 switch %ETHPORT-3-IF_NON-CISCO_TRANSCEIVER: Non-Cisco transceiver
on interface Ethernet1/18 is detected.
```

If the attached transceiver is a QSFP+ splitter cable, then no special check is performed. The Cisco NX-OS software tries to bring up the port.

The following disclaimer applies to non-Cisco manufactured and non-Cisco certified QSFP copper splitter cables:

If a customer has a valid support contract for Cisco Nexus switches, Cisco TAC will support twinax cables that are a part of the compatibility matrix for the respective switches. However, if the twinax cables are not purchased through Cisco, a customer cannot return these cables through an RMA to Cisco for replacement.

If a twinax cable that is not part of the compatibility matrix is connected into a system, Cisco TAC will still debug the problem, provided the customer has a valid support contract on the switches. However TAC may ask the customer to replace the cables with Cisco qualified cables if there is a situation that points to the cables possibly being faulty or direct the customer to the cable provider for support. Cisco TAC cannot issue an RMA against uncertified cables for replacement.

Cisco QSFP 40-Gbps Bidirectional Short-Reach Transceiver

The Cisco QSFP 40-Gbps Bidirectional (BiDi) transceiver is a short-reach pluggable optical transceiver with a duplex LC connector for 40-GbE short-reach data communications and interconnect applications by using multimode fiber (MMF). The Cisco QSFP 40-Gbps BiDi transceiver offers a solution that uses existing duplex MMF infrastructure for 40-GbE connectivity. With the Cisco QSFP 40-Gbps BiDi transceiver, customers can upgrade their network from 10-GbE to 40-GbE without incurring any fiber infrastructure upgrade cost. The Cisco QSFP 40-Gbps BiDi transceiver can enable 40-GbE connectivity in a range of up to 100 meters over OM3 fiber, which meets most data center reach requirements. It complies with the Multiple Source Agreement (MSA) QSFP specification and enables customers to use it on all Cisco QSFP 40-Gbps platforms and achieve high density in a 40-GbE network. It can be used in data centers, high-performance computing (HPC) networks, enterprise and distribution layers, and service provider transport applications.

New and Changed Features

This section describes the new features introduced in Cisco NX-OS Release 6.0(2)U4(4). This section includes the following topics:

- [New Supported Hardware, page 20](#)
- [New Software Features, page 21](#)

New Supported Hardware

Cisco NX-OS Release 6.0(2)U4(4) does not include new hardware.

New Software Features

All Cisco Nexus 3000 Series switches are supported by Cisco NX-OS Release 6.0(2)U4(4). Cisco NX-OS interoperates with any networking operating system, including Cisco IOS software, that conforms to the networking standards listed in the product data sheet.

Cisco NX-OS Release 6.0(2)U4(4) does not include new software features.

Upgrade and Downgrade Guidelines

Ensure that you use the **install all** command to upgrade the switch software from one Cisco NX-OS release to another.

Upgrade Path to Release 6.0(2)U4(4)

Cisco Nexus 3000 Series switches that use software versions older than Cisco NX-OS Release 5.0(3)U5(1) need to be updated to Cisco NX-OS Release 5.0(3)U5(1) before they are upgraded to Cisco NX-OS Release 6.0(2).

Cisco NX-OS Release 5.0(3)U3(1) does not support a software upgrade from Cisco NX-OS Release 5.0(3)U2(2c). If you want to upgrade through this path, see [CSCty75328](#) for details about how to work around this issue.



Note

It is recommended that you upgrade to Cisco NX-OS Release 6.0(2)U4(4) by using Cisco NX-OS install procedures.

In Cisco NX-OS Release 5.0(3)U3(1), support for IPv6 has been added in Control Plane Policing (CoPP). To enable redirection of IPv6 control packets to the CPU, you must configure IPv6 CoPP on the system. Entering the **write erase** command on a device that runs Release 5.0(3)U3(1) automatically applies CoPP on the device and ensures that all IPv4 and IPv6-related CoPP configuration is set up correctly.

If you upgrade from a Cisco NX-OS release that does not support the CoPP feature to a release that does support the CoPP feature, you must run the setup utility after the upgrade to enable CoPP on the device.

If you upgrade from Cisco NX-OS Release 5.0(3)U2(2), which supports the CoPP feature, to Cisco NX-OS Release 5.0(3)U3(1), which adds CoPP classes for IPv6 support, you must run the setup script to enable the IPv6 CoPP feature on the device.

In Cisco NX-OS Release 6.0(2)U2(2), the default interface name in LLDP MIB is in short form. To make it long form, you must set **lldp portid-subtype** to 1. In Cisco NX-OS Release 6.0(2)U2(3), this behavior was reversed. The default interface name in LLDP MIB is now in long form. To make it short form, you must set **lldp portid-subtype** to 0.

If you have set **lldp port-subtype** to 1 and you are upgrading to Cisco NX-OS Release 6.0(2)U2(4), ensure that you set **lldp port-subtype** to 0.

Limitations

The following are the known limitations for Cisco NX-OS Release 6.0(2)U4(4):

- While installing the NXAPI https certificate that is present in the device, the following error message can appear if the user does not have the permission to install this certificate (See [CSCup72219](#)):

```
Certificate file read error.Please re-check permissions.
```

- After configuring the NXAPI feature, the default http port (port 80) is still in the listening state even after we run the **no nxapi http** command. This results in the sandbox becoming accessible. Although the sandbox becomes accessible, HTTP requests from the sandbox to the device do not go through. Thus, the functionality is not affected. (See [CSCup77051](#)).
- Chunking is enabled while displaying XML output for any CLI, and html tags (& lt; and & gt;) are displayed instead of < and > both on the sandbox and while running the Python script (See [CSCup84801](#)).

This is expected behavior. Each chunk should be in XML format for you to parse it and extract everything inside the <body> tag. This is done so that it can be later concatenated with similar output from all the chunks of the CLI XML output. After all the chunks are concatenated to get the complete XML output for the CLI, this complete XML output can be parsed for any parameter.

The following workaround is recommended to address this issue:

- Concatenate the <body> outputs from each chunk
- Replace all the html tags (& lt; and & gt;) with < and >
- Parse for any XML tag needed
- If you use the **write erase** command, you cannot view the output for the **show startup feature** command. To view the startup configuration, you must then use the **show startup-config** command. This limitation will remain until you run the **copy running-config startup-config** command. After that, the **show startup-config feature** command will display the feature-only configuration output as expected (See [CSCuq15638](#)).
- A Python traceback is seen while running the **show xml** command by using the Python shell. The exception type is `httplib.IncompleteRead`. This happens when you use Python scripts to leverage the NXAPI for retrieving switch data through XML or JSON. You should handle the exceptions in your Python scripts (See [CSCuq19257](#)).
- While upgrading to a new release, when you create a checkpoint without running the **setup** script, the checkpoint file does not contain the **copp-s-mpls** class. After you run the **write erase** command and reload the switch, the **copp-s-mpls** class is created when the default configuration is applied. When a rollback is done to this checkpoint file, it detects a change in the CoPP policy and tries to delete all class-maps. Because you cannot delete static class-maps, this operation fails and, in turn, the rollback also fails.

This can also happen if you create a checkpoint, then create a new user-defined class and insert the new class before any other existing class (See [CSCup56505](#)).

The following workarounds are recommended to address this issue:

- Run **setup** after upgrading to a new release.
- Always insert the new classes at the end before a rollback.
- After an interface is shut down and restarted, and after the device is reloaded, the following are observed (See [CSCuh69660](#)):
 - Any trunk port in the VLAN is treated as an IGMP snooping Active Port.
 - Access ports in the VLAN are not treated as IGMP snooping Active ports.
 - The FWM multicast flood-list for VLAN contains all trunk ports and mrouter ports.

The following workarounds are recommended to address this issue:

- Use the **show ip igmp snooping vlan x** command to see the Active Ports.
- Use the **show platform fwm info vlan x** command to see the flood-list.
- When both the **ip icmp-errors source** and **ip source intf icmp error** commands are configured, then the command that is configured last takes effect.
Thereafter, if the last configured command is removed, the switch does not get configured with the command that was configured first.
- Link Level Flow Control (LLFC) is not supported on Cisco Nexus 3000 series and Cisco Nexus 3100 series switches.

Caveats

The open and resolved bugs for this release are accessible through the [Cisco Bug Search Tool](#). This web-based tool provides you with access to the Cisco bug tracking system, which maintains information about bugs and vulnerabilities in this product and other Cisco hardware and software products.



Note You must have a Cisco.com account to log in and access the Cisco Bug Search Tool. If you do not have one, you can [register for an account](#).

For more information about the Cisco Bug Search Tool, see the [Bug Search Tool Help & FAQ](#).

This section includes the following topics:

- [Resolved Bugs in this Release, page 23](#)
- [Open Bugs for this Release, page 25](#)
- [Known Behaviors for this Release, page 25](#)

Resolved Bugs in this Release

Table 6 lists the resolved caveats in the Cisco NX-OS Release 6.0(2)U4(4) release. Click the bug ID to access the Bug Search tool and see additional information about the bug.

Table 6 *Resolved Caveats in Cisco NX-OS Release 6.0(2)U4(4)*

Bug ID	Description
CSCua67460	A Nexus 3k or 5k switch may see a crash in the "ipqosmgr" process due to a memory leak.
CSCuc75266	The Nexus3000 vPC gets DISPUTE with a vPC connecting other switches when one of the Nexus3000s comes back online.
CSCun17396	The PIM crashes after "write erase" and "reload."
CSCur32090	The SNMPD crashes due to memory leak while polling CISCO-ENTITY-SENSOR-MIB. This is specifically for OIDs and indexes collecting SFP thresholds.
CSCur46396	Some random links stay down after reloading the switch or peer.
CSCur64321	The TCP "established" keyword is not working for IPv6 ACL. It works fine for IPv4.

Table 6 **Resolved Caveats in Cisco NX-OS Release 6.0(2)U4(4) (continued)**

Bug ID	Description
CSCur67361	When adding a particular MAC for an IPSG, an internal error is received, which causes the MAC addition to the database to fail. Deleting the MAC entry during an IPSG operation fails because the entry is not present in the FWM database.
CSCur67888	Nexus 3K (Nexus 3064) crashes while sending traffic over all the ports.
CSCur68605	OSPF cost is 7 times higher than expected in 6.0(2)A4(2).
CSCur69543	IPFIB crashes on <code>ufib_obj_get_name</code> when a large number of LPM routes change their next hops from one set to another.
CSCus04099	The SSH/telnet connection is refused.
CSCus08317	Multiple parity error callbacks being seen for same index.
CSCus09871	N3172 status LED turned off after booted but should stay solid green when online.
CSCus16030	A memory leak is seen for each trigger of a SER injection, which is the manual way of triggering parity error.
CSCus26875	Cisco Nexus 3000 Switches include a version of NTPd that is affected by the vulnerabilities identified by the following Common Vulnerability and Exposures (CVE) IDs: CVE-2014-9293, CVE-2014-9294, CVE-2014-9295 and CVE-2014-9296.
CSCus34355	N3k continues to forward traffic to a failed HA box due to egress port not getting updated.
CSCus34881	The NX-OS SNMPd process crashes with a HAP reset.
CSCus62896	After a " copy file start " with a configuration containing port-channels with PFC configured, the members interfaces of these port-channels will lose their port-channel assignments. This is due to the PFVC config coming after the port-channel config on the physical interface causing the port-channel assignment to fail.
CSCus68770	<p>On January 27, 2015, a buffer overflow vulnerability in the GNU C library (glibc) was publicly announced. This vulnerability is related to the various <code>gethostbyname</code> functions included in glibc and affect applications that call these functions. This vulnerability may allow an attacker to obtain sensitive information from an exploited system or, in some instances, perform remote code execution with the privileges of the application being exploited. This vulnerability is documented in CVE-2015-0235.</p> <p>A Cisco Security Advisory has been published to document this vulnerability at: http://tools.cisco.com/security/center/content/CiscoSecurityAdvisory/cisco-sa-20150128-ghost</p> <p>This bug has been opened to address the potential impact on this product.</p>
CSCus70917	When the copy bootflash:<file> startup-config command is followed by a reload command, the "ip tftp source-interface loopback0" cli is missing from the running-config file when the system comes up.
CSCus74195	Incorrect parity handling for certain tables on T2.
CSCus80110	Some mroute entries are not getting immediately synced to the MSDP peer.

Open Bugs for this Release

Table 7 lists descriptions of open bugs in Cisco NX-OS Release 6.0(2)U4(4). You can use the record ID to search the [Cisco Bug Search Tool](#) for details about the bug.

Table 7 Cisco NX-OS Release 6.0(2)U4(4) – Open Bugs

Record Number	Open Bug Headline
CSCuq01107	Traffic flooded when VPC Po is down with a static MAC entry configured for it.
CSCuq89687	40G Spirent test center connected port sometimes goes to linkFlapErrDisabled.

Known Behaviors for this Release

Large core files are split into 3 or more files. For example:

- 1405964207_0x101_fwm_log.3679.tar.gzaa
- 1405964207_0x101_fwm_log.3679.tar.gzab
- 1405964207_0x101_fwm_log.3679.tar.gzac

To decode the multiple core files, first club the files to a single file as demonstrated below:

```
$ cat 1405964207_0x101_fwm_log.3679.tar.gz* > 1405964207_0x101_fwm_log.3679.tar.gz
```

MIB Support

The Cisco Management Information Base (MIB) list includes Cisco proprietary MIBs and many other Internet Engineering Task Force (IETF) standard MIBs. These standard MIBs are defined in Requests for Comments (RFCs). To find specific MIB information, you must examine the Cisco proprietary MIB structure and related IETF-standard MIBs supported by the Cisco Nexus 3000 Series switch. The MIB Support List is available at the following FTP sites:

<ftp://ftp.cisco.com/pub/mibs/supportlists/nexus3000/Nexus3000MIBSupportList.html>

Related Documentation

Documentation for the Cisco Nexus 3000 Series Switch is available at the following URL:

http://www.cisco.com/en/US/products/ps11541/tsd_products_support_series_home.html

The documentation set is divided into the following categories:

Release Notes

The release notes are available at the following URL:

http://www.cisco.com/en/US/products/ps11541/prod_release_notes_list.html

Installation and Upgrade Guides

The installation and upgrade guides are available at the following URL:

http://www.cisco.com/en/US/products/ps11541/prod_installation_guides_list.html

Command References

The command references are available at the following URL:

http://www.cisco.com/en/US/products/ps11541/prod_command_reference_list.html

Technical References

The technical references are available at the following URL:

http://www.cisco.com/en/US/products/ps11541/prod_technical_reference_list.html

Configuration Guides

The configuration guides are available at the following URL:

http://www.cisco.com/en/US/products/ps11541/products_installation_and_configuration_guides_list.html

Error and System Messages

The system message reference guide is available at the following URL:

http://www.cisco.com/en/US/products/ps11541/products_system_message_guides_list.html

Documentation Feedback

To provide technical feedback on this document, or to report an error or omission, please send your comments to nexus3k-docfeedback@cisco.com. We appreciate your feedback.

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>

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.

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: www.cisco.com/go/trademarks. 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. (1110R)

© 2015 Cisco Systems, Inc. All rights reserved.