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Cisco Nexus 3000 Series NX-OS Release Notes, Release 5.0(3)U2(2a)

Release Date: November 17, 2011
Part Number: OL-25704-03 D0
Current Release: Cisco NX-OS Release 5.0(3)U2(2a)

This document describes the features, caveats, and limitations for Cisco Nexus 3000 Series switches. Use this document in combination with documents listed in the [“Obtaining Documentation and Submitting a Service Request”](#) section on page 10.



Note

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

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Table 1-1 Online History Change

Part Number	Revision	Date	Description
OL-25704-01	A0	August 31, 2011	Created NX-OS Release 5.0(3)U2(1) release notes.
	B0	September 29, 2011	Updated CSCts17928 .
OL-25704-02	A0	October 17, 2011	Created NX-OS Release 5.0(3)U2(2) Release Notes.
	B0	October 18, 2011	Removed the “Supported Upgrade and Downgrade Paths” section.
OL-25704-03	A0	November 17, 2011	Created NX-OS Release 5.0(3)U2(2a) Release Notes.
	B0	January 12, 2012	Added open caveat CSCtw56820 .
	C0	May 11, 2012	Added Release 5.0(3)U1(1a) and 5.0(3)U1(1b) to Table 1-3 .
	D0	November 28, 2013	Updated resolved caveat CSCuh79034 .

Contents

This document includes the following sections:



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Introduction

The Cisco NX-OS software is a data center-class operating system built with modularity, resiliency, and serviceability at its foundation. Cisco NX-OS helps ensure continuous availability and sets the standard for mission-critical data center environments. The highly modular design of Cisco NX-OS makes zero-effect operations a reality and enables exceptional operational flexibility. Cisco NX-OS software 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 running 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 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 QSFP+ ports that can be used as a 40 Gigabit Ethernet port or 4 x10-Gigabit Ethernet ports, two 10/100/1000 management ports, 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 x10-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 industry-leading Cisco NX-OS Software operating system.

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

System Requirements

This section includes the following topics:

- [Memory Requirements, page 3](#)
- [Hardware Supported, page 3](#)

Memory Requirements

The Cisco NX-OS Release 5.0(3)U2(2a) software requires 135MB of flash memory.

Hardware Supported

Cisco NX-OS Release 5.0(3)U2(2a) 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 1-2](#) shows the hardware supported by Cisco NX-OS Release 5.0(3)U2(2a) software.

[Table 1-3](#) shows the transceivers supported by Cisco NX-OS Release 5.0(3)U2(2a) software.

Table 1-2 Hardware Supported by Cisco NX-OS Release 5.0(3)Software

Hardware	Part Number	Supported Cisco NX-OS Release					
		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 3000 Series							
Cisco Nexus 3016 switch	N3K-C3016-40GE	X	—	—	—	—	—
Cisco Nexus 3064-E switch	N3K-C3064PQ-10GE	X	X	X	X	X	—
Cisco Nexus 3064 switch	N3K-C3064PQ	X	X	X	X	X	X
Cisco Nexus 3064 fan module, Forward airflow (port-side exhaust); also used in the Cisco Nexus 3016	N3K-C3064-FAN	X	X	X	X	X	X
Cisco Nexus 3064 fan module, Reverse airflow (port-side intake); also used in the Cisco Nexus 3016	N3K-C3064-FAN-B	X	X	X	X	X	X

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Table 1-2 Hardware Supported by Cisco NX-OS Release 5.0(3)Software (continued)

Hardware	Part Number	Supported Cisco NX-OS Release					
		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 3000 power supply, Forward airflow (port-side exhaust)	N2200-PAC-400W	X	X	X	X	X	X
Cisco Nexus 3000 power supply, Reverse airflow (port-side intake)	N2200-PAC-400W-B	X	X	X	X	X	X
Cisco Nexus 2000 power supply, Forward airflow (port-side exhaust)	N2200-PDC-400W	X	X	X	X	X	X
Cisco Nexus 2000 power supply, Reverse airflow (port-side intake)	N2200-PDC-400W-B	X	X	X	X	X	X

Table 1-3 Transceivers Supported by Cisco NX-OS Release 5.0(3)Software

Transceivers	Part Number	Supported Cisco NX-OS Release					
		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(1a), 5.0(3)U1(1b), 5.0(3)U1(1d)
QSFP							
40GBASE-SR4 QSFP transceiver module with mpo connector 100 m	QSFP-40G-SR4	X	X	X	X	X	X
40GBASE-CR4 passive copper cable, 1 m	QSFP-H40G-CU1M	X	X	X	X	X	X
40GBASE-CR4 passive copper cable, 3 m	QSFP-H40G-CU3M	X	X	X	X	X	X
40GBASE-CR4 passive copper cable, 5 m	QSFP-H40G-CU5M	X	X	X	X	X	X
QSFP to 4xSFP10G passive copper splitter cable, 1 m	QSFP-4SFP10G-CU1M	X	X	X	X	X	X

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Table 1-3 Transceivers Supported by Cisco NX-OS Release 5.0(3)Software (continued)

Transceivers	Part Number	Supported Cisco NX-OS Release					5.0(3)U1(1a), 5.0(3)U1(1b), 5.0(3)U1(1d)
		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)	
QSFP to 4xSFP10G passive copper splitter cable, 3 m	QSFP-4SFP10G-CU3M	X	X	X	X	X	X
QSFP to 4xSFP10G passive copper splitter cable, 5 m	QSFP-4SFP10G-CU5M	X	X	X	X	X	X
10-Gigabit							
10GBASE-SR SFP+ module (multimode fiber [MMF])	SFP-10G-SR	X	X	X	X	X	X
10GBASE-LR SFP+ module (single-mode fiber [SMF])	SFP-10G-LR	X	X	X	X	X	X
10GBASE-CU SFP+ cable 1 m (Twinax cable)	SFP-H10GB-CU1M	X	X	X	X	X	X
10GBASE-CU SFP+ cable 3 m (Twinax cable)	SFP-H10GB-CU3M	X	X	X	X	X	X
10GBASE-CU SFP+ cable 5 m (Twinax cable)	SFP-H10GB-CU5M	X	X	X	X	X	X
1-Gigabit Ethernet							
1000BASE-T SFP	GLC-T	X	X	X	X	X	X
Gigabit Ethernet SFP, LC connector SX transceiver (MMF)	GLC-SX-MM	X	X	X	X	X	X
Gigabit Ethernet SFP, LC connector LX/LH transceiver (SMF)	GLC-LH-SM	X	X	X	X	X	X

New and Changed Features

This section describes the new features introduced in Cisco NX-OS Release 5.0(3)U2(2a). This section includes the following topics:

- [New Hardware Features, page 6](#)
- [New Software Features, page 6](#)

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New Hardware Features

This section describes the new hardware features:

- [Cisco Nexus 3016 Switch](#)

Cisco Nexus 3016 Switch

The Cisco Nexus 3016 switch includes the following features:

- 1 RU fixed form-factor 40-Gigabit Ethernet switch offering a throughput of up to 1280 Gbps.
- 16 QSFP+ ports supporting up to 16 40-Gigabit Ethernet ports or 64 10-Gigabit Ethernet ports.
- 1 100/1000 Ethernet management ports.
- RS-232 Console port.
- 1 USB port.
- 2 power supply units ordered with forward or reverse airflow (one power supply required for operations, two required for redundancy).
- 1 Fan tray ordered with forward or reverse airflow.

New Software Features

All Cisco Nexus 3000 Series switches are supported by Cisco NX-OS Release 5.0(3)U2(2a), Release 5.0(3)U2(2), and Release 5.0(3)U2(1). Cisco NX-OS interoperates with any networking OS, including Cisco IOS software, that conforms to the networking standards mentioned in the product data sheet.

New Software Features in Cisco NX-OS Release 5.0(3)U2(2a)

Cisco NX-OS Release 5.0(3)U2(2a) includes the new software features described in this section.

This section includes the following topic:

- [Border Gateway Protocol Local AS, page 6](#)

Border Gateway Protocol Local AS

Border Gateway Protocol (BGP) is an interdomain routing protocol that provides loop-free routing between organizations or autonomous systems. When connecting to an external organization, the router creates external BGP (eBGP) peering sessions. BGP peers within the same organization exchange routing information through internal BGP (iBGP) peering sessions.

Cisco NX-OS Release 5.0(3)U2(2a) introduces the BGP local AS feature that allows a router to appear to be a member of a second autonomous system (AS), in addition to its real AS. Local AS allows two ISPs to merge without modifying peering arrangements. Routers in the merged ISP become members of the new autonomous system but continue to use their old AS numbers for their customers.

Local AS can only be used for true eBGP peers. You cannot use this feature for two peers that are members of different confederation sub-autonomous systems.

For more information about the BGP Local AS feature, see the [Cisco Nexus 3000 NX-OS Unicast Routing Configuration Guide](#).

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Limitations

There are no known limitations for Cisco NX-OS Release 5.0(3)U2(2a).

Caveats

Open and resolved caveat record numbers are provided with links to the Bug Toolkit where you can find details about each caveat.

This section includes the following topics:

- [Open Caveats, page 7](#)
- [Resolved Caveats in NX-OS Release 5.0\(3\)U2\(2a\), page 9](#)

Open Caveats

[Table 1-4](#) lists descriptions of open caveats in Cisco NX-OS Release 5.0(3)U2(2a), Release 5.0(3)U2(2), and Release 5.0(3)U2(1). The record ID links to the Cisco Bug Toolkit where you can find details about the caveat.

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Table 1-4 Cisco NX-OS Release 5.0(3)U2(2a), Release 5.0(3)U2(2a), and Release 5.0(3)U2(1)—Open Caveats

Record Number	Open Caveat Headline
CSCtl94539	SVI counters do not display values in the show interface vlan xyz counters command output even when member ports show the packet counts correctly in the show interface ethernet xyz counters command output.
CSCtn10660	When a monitor session is created with a source interface on the STP blocked source port, the transmitted packets are spanned when no packets are actually transmitted out of the STP blocked port.
CSCtn99196	The show spanning tree command output shows ports which are not part of the VLAN.
CSCto07020	The transmit SPAN is always tagged even when egress is untagged it will show tagged with VLAN 1.
CSCto26494	The clear mac command clears some MAC addresses from the hardware and not in the software; the MAC addresses in hardware and software are not synchronized.
CSCto26707	The mac add count and show mac add commands do not show MAC addresses learned on some interfaces.
CSCto27430	CRC errors are not seen when packets larger than the programmed MTU value traverse from a 12 trunk port to an other port.
CSCto32375	When untagged packets are sent with a packet size greater than the system MTU, they are not truncated to the programmed MTU value.
CSCto48220	The banner motd configuration change is not reflected in the running configuration.
CSCto62445	Packets on the TX SPAN destination are incorrectly trunked for untagged traffic if the packet size is greater than an MTU of +22.
CSCto67340	There are forwarding issues on Layer 3 subinterfaces with HSRP enabled.
CSCtq24116	SNMP version 3 INFORMS messages are not sent.
CSCtq88324	ECMP and Layer 2 orphans cause multicast and unicast traffic to drop.
CSCtr48622	ERROR: Police config. failed thrown - while changing default/l2/l3 vice.
CSCtr91916	Interface counter does not increment for jumbo multicast packets.
CSCts07589	IGMP entries not getting aged out.
CSCts13752	The no speed command creates an error for a port channel on the Cisco Nexus 3064 switch.
CSCts17928	In vPC topologies, a small number of duplicate multicast packets occur when connecting a new source.
CSCts17944	Queue is not released when class-map is removed from policy-map.
CSCts18157	Duplicate multicast packets received on reloading a vpc switch.
CSCts31393	ARP entry resolved, but no route entry for host in hardware.
CSCts37106	The fan speed is out of range after stopping one of the fans.
CSCts49537	Supporting ECMP in proxy register feature.
CSCts91133	Default/unsupported parameters should not be displayed in running-config.
CSCtu07007	Cisco Nexus 3000 Series switch packet loss occurred during a Cisco Nexus 7000 Series switch VPC port-channel restore.

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Table 1-4 Cisco NX-OS Release 5.0(3)U2(2a), Release 5.0(3)U2(2a), and Release 5.0(3)U2(1)—Open Caveats (continued)

Record Number	Open Caveat Headline
CSCtu20558	High PDV correction when PTP master port has data traffic congestion.
CSCtu36685	A spontaneous bfdc hap reset occurred.
CSCtu42623	Sync TIE spike was found when multiple PTP clients are up simultaneously.
CSCtu57982	Could not add PTP port to a different PTP VLAN.
CSCtu68315	The negotiate auto command is not functioning.
CSCtw56820	1G Cisco Nexus 3000 switch: bootup fan speed out-of-range error.

Resolved Caveats in NX-OS Release 5.0(3)U2(2a)

Table 1-5 lists descriptions of resolved caveats in Cisco NX-OS Release 5.0(3)U2(2a). The record ID links to the Cisco Bug Toolkit where you can find details about the caveat.

Table 1-5 Cisco NX-OS Release 5.0(3)U2(2a)—Resolved Caveats

Record Number	Resolved Caveat Headline
CSCtr06121	Layer 3 port channel shows huge counter values.
CSCts58414	Route-map removed from running-config when set community modified
CSCtt33576	Format issue in “show interface counters”
CSCtt34919	QSFP LED behaves incorrectly in certain scenarios.
CSCtt37815	Route-map multicast entry changes in pim rp-address config.
CSCtt05310	N3K: Local-as feature enhancement for BGP
CSCtt71115	Port goes to error disable state after multiple flaps.
CSCtu16900	Monitor process core caused a Cisco Nexus 3000 switch to fail.
CSCtu07984	1G SFP module validation failed.
CSCtu29771	Indiscard segregation CLI (show hardware internal command) is not working.
CSCuh79034	High CPU utilization due to bcm_usd and syslogd causing protocol flaps.
	 Note This caveat was resolved in Cisco NX-OS Release 5.0(3)U5(1g)

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:

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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

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