



Cisco Nexus 3548 Series NX-OS Release Notes, Release 6.0(2)A1(1e)

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Current Release: Cisco NX-OS Release 6.0(2)A1(1e)

This document describes the features, caveats, and limitations for Cisco Nexus 3548 switches. Use this document in combination with documents listed in the “[Obtaining Documentation and Submitting a Service Request](#)” section on page 8.



Note

Release notes are sometimes updated with new information about restrictions and caveats. See the following website for the most recent version of the Cisco Nexus 3548 release notes:
http://www.cisco.com/en/US/products/ps11541/prod_release_notes_list.html



Note

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

Table 1 **Online History Change**

Part Number	Revision	Date	Description
OL-29566-06	A0	April 09, 2014	Created NX-OS Release 6.0(2)A1(1e) release notes.



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Introduction

Several new hardware and software features are introduced for the Cisco Nexus 3548 switch to improve the performance, scalability, and management of the product line. Cisco NX-OS Release 6.0 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 3500 Series Switches

The Cisco Nexus 3500 platform is an extension of the Cisco Nexus 3000 Series of 100M, 1, 10, and 40 Gigabit Ethernet switches built from a switch-on-a-chip (SoC) architecture. Switches in the Cisco Nexus 3500 series include Algorithm Boost (or Algo Boost) technology that is built into the switch application-specific integrated circuit (ASIC). Algo Boost allows the Cisco Nexus 3548 switch to achieve Layer 2 and Layer 3 switching latencies of less than 200 nanoseconds (ns). In addition, Algo Boost contains several innovations for latency, forwarding features, and performance visibility, including two configurable modes for low latency:

- Normal mode: This mode is suitable for environments needing low latency and high scalability.

- Warp mode: This mode consolidates forwarding operations within the switching ASIC, lowering latency by up to an additional 20 percent compared to normal operation.

Active buffer monitoring accelerates the collection of buffer utilization data in hardware, allowing significantly faster sampling intervals. Even on the lowest-latency switches, data packets can incur a millisecond or more of latency during periods of congestion. Previous buffer utilization monitoring techniques were based entirely on software polling algorithms with polling with higher polling intervals that can miss important congestion events.

Cisco Nexus 3548 Switch

The Cisco Nexus 3548 switch is the first member of the Cisco Nexus 3500 platform. As a compact one-rack-unit (1RU) form-factor 10 Gigabit Ethernet switch, the Cisco Nexus 3548 switch provides line-rate Layer 2 and Layer 3 switching at extremely low latency. The switch runs Cisco NX-OS software that has comprehensive features and functions that are widely deployed globally. The Cisco Nexus 3548 contains no physical layer (PHY) chips, which allows low latency and low power consumption. The switch supports both forward and reversed airflow and both AC and DC power inputs.

For information about the Cisco Nexus 3500 Series, see the *Cisco Nexus 3500 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 6.0(2)A1(1e) software requires 135 MB of flash memory.

Hardware Supported

Cisco NX-OS Release 6.0(2)A1(1e) supports the Cisco Nexus 3500 Series switches. You can find detailed information about supported hardware in the *Cisco Nexus 3500 Series Hardware Installation Guide*.

[Table 2](#) shows the hardware supported by Cisco NX-OS Release 6.0(2)A1(1) software.

Table 2 **Hardware Supported by Cisco NX-OS Release 6.0(2)A1(1) Software**

Hardware	Part Number	Supported Software Release
Cisco Nexus 3500 Series		
Cisco Nexus 3548 switch	N3K-C3548P-10G	5.0(3)A1(1) and later releases

Table 2 Hardware Supported by Cisco NX-OS Release 6.0(2)A1(1) Software (continued)

Hardware	Part Number	Supported Software Release
Cisco Nexus 2000 or Nexus 3000 individual fan, forward airflow (port side exhaust)	NXA-FAN-30CFM-F	5.0(3)A1(1) and later releases
Cisco Nexus 2000 or Nexus 3000 individual fan, reversed airflow (port side intake)	NXA-FAN-30CFM-B	5.0(3)A1(1) and later releases
Cisco Nexus 2000 or Nexus 3000 400W AC power supply, forward airflow (port side exhaust)	N2200-PAC-400W	5.0(3)A1(1) and later releases
Cisco Nexus 2000 or Nexus 3000 400W AC power supply, reversed airflow (port side intake)	N2200-PAC-400W-B	5.0(3)A1(1) and later releases
Cisco Nexus 2000 or Nexus 3000 400W DC power supply, forward airflow (port side exhaust)	N2200-PDC-400W	5.0(3)A1(1) and later releases
Cisco Nexus 2000 or Nexus 3000 350W DC power supply, reversed airflow (port side intake)	N3K-PDC-350W-B	5.0(3)A1(1) and later releases
Transceivers		
10-Gigabit		
10GBASE-DWDM long-range transceiver module 80 km with single mode duplex fiber	DWDM-SFP10G	6.0(2)A1(1) and later releases
10GBASE-SR SFP+ module (multimode fiber [MMF])	SFP-10G-SR	5.0(3)A1(1) and later releases
10GBASE-LR SFP+ module (single-mode fiber [SMF])	SFP-10G-LR	5.0(3)A1(1) and later releases
Cisco 10GBASE-ER SFP+ Module for SMF	SFP-10G-ER	5.0(3)A1(1) and later releases
10GBASE-CU SFP+ cable 1 m (Twinax cable)	SFP-H10GB-CU1M	5.0(3)A1(1) and later releases
10GBASE-CU SFP+ cable 3 m (Twinax cable)	SFP-H10GB-CU3M	5.0(3)A1(1) and later releases
10GBASE-CU SFP+ cable 5 m (Twinax cable)	SFP-H10GB-CU5M	5.0(3)A1(1) and later releases
Active Twinax cable assembly, 7 m	SFP-H10GB-ACU7M	5.0(3)A1(1) and later releases
Active Twinax cable assembly, 10 m	SFP-H10GB-ACU10M	5.0(3)A1(1) and later releases
1-Gigabit Ethernet		
1000BASE-T SFP	GLC-T	6.0(2)A1(1) and later releases
Gigabit Ethernet SFP, LC connector SX transceiver (MMF)	GLC-SX-MM	5.0(3)A1(1) and later releases
Gigabit Ethernet SFP, LC connector SX transceiver (MMF)	GLC-SX-MMD	5.0(3)A1(1) and later releases

Table 2 *Hardware Supported by Cisco NX-OS Release 6.0(2)A1(1) Software (continued)*

Hardware	Part Number	Supported Software Release
Gigabit Ethernet SFP, LC connector LX/LH transceiver (SMF)	GLC-LH-SM	5.0(3)A1(1) and later releases
Gigabit Ethernet SFP, LC connector LX/LH transceiver (SMF)	GLC-LH-SMD	5.0(3)A1(1) and later releases

New and Changed Features

This section describes the new features introduced in Cisco NX-OS Release 6.0(2)A1(1e). This section includes the following topics:

- [New Supported Hardware, page 5](#)
- [New Software Features, page 5](#)

New Supported Hardware

Cisco NX-OS Release 6.0(2)A1(1e) does not include new hardware.

New Software Features

The NAT functionality was enhanced to do the following:

- Reduce the minimum value of the sampling-timeout in the **ip nat translation sampling-timeout** command from 30 minutes to 15 minutes
- Support a configurable limit of NAT translations per host by using the **ip nat translation max-entries all-host** command.
- Treat the deny rule as a permit rule, and forward the packets matching the criteria mentioned in the deny rule without NAT translation.

Upgrade and Downgrade Guidelines

Upgrade Path to Cisco NX-OS Release 6.x

If a custom CoPP policy is applied after upgrading to Cisco NX-OS Release 6.0(2)A1(1) or later, and if the Nexus 3548 switch is downgraded to Cisco NX-OS Release 5.0, where changes to the CoPP policy are not permitted, the custom CoPP policy is retained and cannot be modified.

Limitations

There are no known limitations for Cisco NX-OS Release 6.0(2)A1(1e).

Caveats

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

This section includes the following topics:

- [Resolved Caveats in Cisco NX-OS Release 6.0\(2\)A1\(1e\), page 6](#)
- [Open Caveats in Cisco NX-OS Release 6.0\(2\)A1\(1e\), page 6](#)

Resolved Caveats in Cisco NX-OS Release 6.0(2)A1(1e)

Table 3 lists descriptions of resolved caveats in Cisco NX-OS Release 6.0(2)A1(1e). The record ID links to the Cisco Bug Search page where you can find details about the caveat.

Table 3 *Cisco NX-OS Release 6.0(2)A1(1e)—Resolved Caveats*

Record Number	Resolved Caveat Headline
CSCun37502	To support per host NAT translation limit.
CSCul47329	System reset due to MSDP HAP reset.
CSCum89601	NAT entry re-programming takes longer to re-converge with high scale.
CSCun46578	NAT cored when add/remove Twice NAT entries.
CSCum38893	Access-list with deny statement for NAT.
CSCun31693	NAT Hap Reset while Adding/Removing Translations.

Open Caveats in Cisco NX-OS Release 6.0(2)A1(1e)

Table 1-4 lists open caveats in Cisco NX-OS Release 6.0(2)A1(1e). The record ID links to the Cisco Bug Search page, where you can find details about the caveat.

Table 1-4 *Cisco NX-OS Release 6.0(2)A1(1e)—Open Caveats*

Record Number	Open Caveat Headline
CSCun93846	NAT-ACL not programmed in hardware when the NAT is scaled.
CSCun98470	Inside NAT translation fails, changing NAT under int outside to inside.
CSCuj43255	TACACS: Encryption not done for numeric values.
CSCuj55312	Error: AAA authorization failed AAA_AUTHOR_STATUS_METHOD=16(0x10).

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 3548 switch. The MIB Support List is available at the following FTP sites:

<ftp://ftp.cisco.com/%2Fpub/mibs/supportlists/nexus3548/Nexus3548MIBSupportList.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

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<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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