



Cisco Nexus 9000 Series NX-OS Release Notes, Release 7.0(3)I7(5)

This document describes the features, caveats, and limitations of Cisco NX-OS Release 7.0(3)I7(5) software for use on the following switches:

- Cisco Nexus 9000 Series
- Cisco Nexus 31128PQ
- Cisco Nexus 3164Q
- Cisco Nexus 3232C
- Cisco Nexus 3264Q

Use this document with documents listed in *Related Documentation*.

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

Table 1 Online History Change

Date	Description
July 21, 2019	Updated Limitations and Table 3 .
April 23, 2019	Updated Transceiver Module Group URL.
January 2, 2019	Updated the Upgrade Instructions regarding BGP EVPN into OSPF.
December 14, 2018	Added Licensing Information .
October 30, 2018	Added CSCvm96774 to Open Caveats .
September 13, 2018	Updated the Upgrade Instructions regarding upgrades from Release 7.0(3)I2(2b).
September 12, 2018	Updated Open Caveats .
August 28, 2018	Created the release notes for Release 7.0(3)I7(5).

Introduction

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Introduction

Cisco NX-OS software is a data center-class operating system designed for performance, resiliency, scalability, manageability, and programmability at its foundation. The Cisco NX-OS software provides a robust and comprehensive feature set that meets the requirements of virtualization and automation in mission-critical data center environments. The modular design of the Cisco NX-OS operating system makes zero-impact operations a reality and enables exceptional operational flexibility.

Licensing Information

Temporary licenses with an expiry date are available for evaluation and lab use purposes. They are strictly not allowed to be used in production. Please use a permanent or subscription license that has been purchased through Cisco for production purposes.

For more information, see the [Cisco NX-OS Licensing Guide](#).

System Requirements

This section includes the following sections:

- Supported Device Hardware
- Supported Optics
- Supported FEX Modules

Supported Device Hardware

The following tables list the Cisco Nexus 9000 Series hardware that Cisco NX-OS Release 7.0(3)I7(5) supports. For additional information about the supported hardware, see the *Hardware Installation Guide* for your Cisco Nexus 9000 Series device.

- [Table 2](#) lists the Cisco Nexus 9000 Series fabric modules
- [Table 3](#) lists the Cisco Nexus 9000 Series fans and fan trays
- [Table 4](#) lists the Cisco Nexus 9500 Series line cards
- [Table 5](#) lists the Cisco Nexus 9000 Series power supplies
- [Table 6](#) lists the Cisco Nexus 9500 Series supervisor modules
- [Table 7](#) lists the Cisco Nexus 9000 Series switches
- [Table 8](#) lists the Cisco Nexus 9000 Series uplink modules
- [Table 9](#) lists the Cisco Nexus 9500 Series System Controller
- [Table 10](#) lists the 3232C and 3264Q switch hardware
- [Table 11](#) lists the Cisco Nexus 3164Q switch hardware
- [Table 12](#) lists the Cisco Nexus 31128PQ switch hardware

Table 2 Cisco Nexus 9000 Series Fabric Modules

Product ID	Hardware	Quantity for Maximum Bandwidth
N9K-C9504-FM	Cisco Nexus 9504 40-Gigabit fabric module	3 to 6 depending on line cards
N9K-C9504-FM-E	100-Gigabit -E fabric module (for the Cisco Nexus 9504 chassis) that supports the 100-Gigabit (-EX) line cards. When used, there must be 4 of these fabric modules installed in fabric slots 22, 23, 24, and 26.	4 5 when using the N9K-X9736C-FX line card.
N9K-C9504-FM-S	100-Gb -S fabric module (for the Cisco Nexus 9504 chassis) that supports the 100-Gigabit (-S) line cards. When used, there must be 4 of these fabric modules installed in fabric slots 22, 23, 24, and 26.	4
N9K-C9508-FM	Cisco Nexus 9508 Series 40-Gigabit fabric module	3-6 depending on the line cards
N9K-C9508-FM-E	100-Gigabit -E fabric module (for the Cisco Nexus 9508 chassis) that supports the 100-Gigabit (-EX) line cards. When used, there must be 4 of these fabric modules installed in fabric slots 22, 23, 24, and 26.	4 5 when using the N9K-X9736C-FX line card.
N9K-C9508-FM-S	100-Gigabit -S fabric module (for the Cisco Nexus 9508 chassis) that supports the 100-Gigabit (-S) line cards. When used, there must be 4 of these fabric modules installed in fabric slots 22, 23, 24, and 26.	4
N9K-C9508-FM-Z	Fabric blank with Fan Tray Power Connector module used in place of a fabric module that has been removed from fabric slots 22, 24, or 26 during lab verification test.	1
N9K-C9516-FM	Cisco Nexus 9500 Series 40-Gigabit fabric module	3-6 depending on the line cards
N9K-C9516-FM-E	100-Gb -E fabric module (for the Cisco Nexus 9516 chassis that supports the 100-Gb (-EX) line cards. When used, there must be four of these fabric modules installed in fabric slots 22, 23, 24, and 26.	4 5 when using the N9K-X9736C-FX line card.
N9K-C9516-FM-Z	Fabric blank with Fan Tray Power Connector module used in place of a fabric module that has been removed from fabric slots 22, 24, or 26 during lab verification test.	1

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Table 3 Cisco Nexus 9000 Series Fans and Fan Trays

Product ID	Description	Quantity	Cisco Nexus Switches
N9K-C9300-FAN1	Fan 1 module with port-side intake airflow (burgundy coloring)	3	9396PX (early versions)
N9K-C9300-FAN1-B	Fan 1 module with port-side exhaust airflow (blue coloring)	3	9396PX (early versions)
N9K-C9300-FAN2	Fan 2 module with port-side intake airflow (burgundy coloring)	3	93128TX 9396PX 9396TX
N9K-C9300-FAN2-B	Fan 2 module with port-side exhaust airflow (blue coloring)	3	93128TX 9396PX 9396TX
N9K-C9300-FAN3	Fan 3 module with port-side intake airflow (burgundy coloring)	3	92304QC 93120TX 9272Q ¹
N9K-C9300-FAN3-B	Fan 3 module with port-side exhaust airflow (blue coloring)	3	92304QC 93120TX 9272Q ¹
N9K-C9504-FAN	Fan tray for 4-slot modular chassis	3	9504
N9K-C9508-FAN	Fan tray for 8-slot modular chassis	3	9508
N9K-C9516-FAN	Fan tray for 16-slot modular chassis	3	9516
NXA-FAN-160CFM-PE	Fan module with port-side exhaust airflow (blue coloring)	3	9364C ¹
NXA-FAN-160CFM-PI	Fan module with port-side intake airflow (burgundy coloring)	3	9364C ¹
NXA-FAN-30CFM-B	Fan module with port-side intake airflow (burgundy coloring)	3	92160YC- 9332PQ X 9348GC- 9236C ¹ FXP 93108TC- 9372PX EX 9372PX-E 93108TC- 9372TX FX ¹ 9372TX-E 93180LC- EX ¹ 93180YC- EX 93180YC- FX ¹
NXA-FAN-30CFM-F	Fan module with port-side exhaust airflow (blue coloring)	3	92160YC- 9332PQ X 9348GC- 9236C ¹ FXP 93108TC- 9372PX EX 9372PX-E 93108TC- 9372TX FX ¹ 9372TX-E 93180LC- EX ¹ 93180YC- EX 93180YC- FX ¹
NXA-FAN-35CFM-PE	Fan module with port-side exhaust airflow (blue coloring)	4	92300YC ¹

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NXA-FAN-35CFM-PI	Fan module with port-side intake airflow (burgundy coloring)	4	92300YC ¹
NXA-FAN-65CFM-PE	Fan module with port-side exhaust airflow (blue coloring)	3	93240YC- 9336C- FX2 ¹ FX2 ¹
NXA-FAN-65CFM-PI	Fan module with port-side exhaust airflow (burgundy coloring)	3	93240YC- 9336C- FX2 ¹ FX2 ¹

¹ For specific fan speeds, see the Overview section of the Hardware Installation Guide.

Table 4 Cisco Nexus 9500 Series Line Cards

Product ID	Description	Maximum Quantity			Supporting Fabric Modules
		Cisco Nexus 9504	Cisco Nexus 9508	Cisco Nexus 9516	
N9K-X9408PC-CFP2	Line card with 8 100-Gigabit CFP2 ports	4	8	16	N9K-C9504-FM N9K-C9508-FM N9K-C9516-FM
N9K-X9432C-S	Line card with 32 100-Gigabit QSFP28 ports	4	8	16	N9K-C9504-FM-S N9K-C9508-FM-S --
N9K-X9432PQ	Line card with 32 40-Gigabit QSFP+ ports	4	8	16	N9K-C9504-FM N9K-C9508-FM N9K-C9516-FM
N9K-X9464PX	Line card with 48 1/10-Gigabit SFP+ ports and 4 40-Gigabit QSFP+ uplink ports	4	8	16	N9K-C9504-FM N9K-C9508-FM N9K-C9516-FM
N9K-X9464TX	Line card with 48 10GBASE-T (copper) ports and 4 40-Gigabit QSFP+ ports	4	8	16	N9K-C9504-FM N9K-C9508-FM N9K-C9516-FM
N9K-X9464TX2	Line card with 48 10GBASE-T (copper) ports and 4 40-Gigabit QSFP+ ports	4	8	16	N9K-C9504-FM N9K-C9508-FM N9K-C9516-FM
N9K-X9536PQ	Line card with 36 40-Gigabit ports	4	8	16	N9K-C9504-FM N9K-C9508-FM N9K-C9516-FM
N9K-X9564PX	Line card with 48 1-/10-Gigabit SFP+ ports and 4 40-Gigabit QSFP+ ports	4	8	16	N9K-C9504-FM N9K-C9508-FM N9K-C9516-FM
N9K-X9564TX	Line card with 48 1-/10GBASE-T (copper) ports and 4 40-Gigabit QSFP+ ports	4	8	16	N9K-C9504-FM N9K-C9508-FM N9K-C9516-FM
N9K-X9636PQ	Line card with 36 40-Gigabit QSFP+ ports	4	8	16	N9K-C9504-FM N9K-C9508-FM --
N9K-X9732C-EX	Line card with 32 40-/100-Gigabit QSFP28 ports	4	8	16	N9K-C9504-FM-E N9K-C9508-FM-E N9K-C9516-FM-E

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N9K-X9736C-EX	Line card with 36 40-/100-Gigabit QSFP28 ports	4	8	16	N9K-C9504-FM-E N9K-C9508-FM-E N9K-C9516-FM-E
N9K-X9736C-FX	Line card with 36 1-/10-/40-/50-/100-Gigabit QSFP28 ports	4	8	16	N9K-C9504-FM-E N9K-C9508-FM-E N9K-C9516-FM-E
N9K-X9788TC-FX	Line card with 48 1-/10-G BASE-T (copper) and 4 100-Gigabit QSFP28 ports	4	8	16	N9K-C9504-FM-E N9K-C9508-FM-E N9K-C9516-FM-E and -E2
N9K-X97160YC-EX	Line card with 48 10-/25-Gigabit SFP28 ports and 4 40-/100-Gigabit QSFP28 ports	4	8	16	N9K-C9504-FM-E N9K-C9508-FM-E N9K-C9516-FM-E

Table 5 Cisco Nexus 9000 Series Power Supplies

Product ID	Description	Quantity	Cisco Nexus Switches	
N9K-PAC-650W	650-W AC power supply with port-side intake (burgundy coloring)	2	9332PQ 9372PX 9372PX-E 9372TX	9372TX-E 9396PX 9396TX
N9K-PAC-650W-B	650-W AC power supply with port-side exhaust (blue coloring)	2	9332PQ 9372PX 9372PX-E 9372TX	9372TX-E 9396PX 9396TX
N9K-PAC-1200W	1200-W AC power supply with port-side intake airflow (burgundy coloring)	2	93120TX	
N9K-PAC-1200W-B	1200-W AC power supply with port-side exhaust airflow (blue coloring)	2	93120TX	
N9K-PAC-3000W-B	3000-W AC power supply	Up to 4 Up to 8 Up to 10	9504 9508 9516	
N9K-PDC-3000W-B	3000-W DC power supply	Up to 4 Up to 8 Up to 10	9504 9508 9516	
N9K-PUV-1200W	3000-W Universal AC/DC power supply with bidirectional airflow (white coloring)	2	92160YC-X 9236C 92300YC 92304QC 9272Q 93108TC-EX 93108TC-FX	93120TX 93128TX 93180LC-EX EX 93180YC-EX EX 93180YC-FX 9364C

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N9K-PUV-3000W-B	3000-W Universal AC/DC power supply	Up to 4 Up to 8 Up to 10	9504 9508 9516
NXA-PAC-350W-PE	350-W AC power supply with port-side exhaust airflow (blue coloring)	2	9348GC-FXP
NXA-PAC-350W-PI	350-W AC power supply with port-side intake airflow (burgundy coloring)	2	9348GC-FXP
NXA-PAC-500W-PE	500-W AC power supply with port-side exhaust airflow (blue coloring)	2	93108TC-EX 93180YC-EX 93180LC-EX
NXA-PAC-500W-PI	500-W AC power supply with port-side intake airflow (burgundy coloring)	2	93108TC-EX 93180YC-EX 93180LC-EX
NXA-PAC-650W-PE	650-W power supply with port-side exhaust (blue coloring)	2	92160YC-X 92304QC 9236C 93108TC-EX 92300YC 93180YC-EX
NXA-PAC-650W-PI	650-W power supply with port-side intake (burgundy coloring)	2	92160YC-X 92304QC 9236C 93108TC-EX 92300YC 93180YC-EX
NXA-PAC-1100W-PE	1100-W AC power supply with port-side exhaust airflow (blue coloring)	2	9348GC-FXP
NXA-PAC-1100W-PI	1100-W AC power supply with port-side intake airflow (burgundy coloring)	2	9348GC-FXP
NXA-PAC-1100W-PE2	1100-W AC power supply with port-side exhaust airflow (blue coloring)	2	93240YC-FX2 9336C-FX2
NXA-PAC-1100W-PI2	1100-W AC power supply with port-side intake airflow (burgundy coloring)	2	93240YC-FX2 9336C-FX2
NXA-PHV-1100W-PE	1100-W AC power supply with port-side exhaust airflow (blue coloring)	2	93240YC-FX2 9336C-FX2
NXA-PHV-1100W-PI	1100-W AC power supply with port-side intake airflow (burgundy coloring)	2	93240YC-FX2 9336C-FX2
NXA-PAC-1200W-PE	1200-W AC power supply with port-side intake airflow (burgundy coloring)	2	9272Q 9364C
NXA-PAC-1200W-PI	1200-W AC power supply with port-side exhaust airflow (blue coloring)	2	9272Q 9364C
NXA-PDC-930W-PE	930-W DC power supply with port-side exhaust airflow (blue coloring)	2	93108TC-FX 93180YC-FX 93180LC-EX 9364C
NXA-PDC-930W-PI	930-W DC power supply with port-side intake airflow (burgundy coloring)	2	93108TC-FX 93180YC-FX 93180LC-EX 9364C
UCS-PSU-6332-DC	930-W DC power supply with port-side exhaust (gray coloring)	2	92160YC-X 9332PQ 9236C 9372PX 92304QC 9372PX-E 9272Q 9372TX 93108TC-EX 9372TX-E 93120TX 9396PX 93128TX 9396TX 93180YC-EX

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UCSC-PSU-930WDC	930-W DC power supply with port-side intake (green coloring)	2	92160YC-X 9236C 92304QC 9272Q 93108TC-EX 93120TX 93128TX 93180YC-EX	9332PQ 9372PX 9372PX-E 9372TX 9372TX-E 9396PX 9396TX
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Table 6 Cisco Nexus 9500 Series Supervisor Modules

Supervisor	Description	Quantity
N9K-SUP-A	1.8-GHz supervisor module with 4 cores, 4 threads, and 16 GB of memory	2
N9K-SUP-A+	1.8-GHz supervisor module with 4 cores, 8 threads, and 16 GB of memory	2
N9K-SUP-B	2.2-GHz supervisor module with 6 cores, 12 threads, and 24 GB of memory	2
N9K-SUP-B+	1.9-GHz supervisor module with 6 cores, 12 threads, and 32 GB of memory	2

Table 7 Cisco Nexus 9000 Series Switches

Cisco Nexus Switch	Description
92160YC-X (N9K-C92160YC-X)	1-RU Top-of-Rack switch with 48 10-/25-Gigabit SFP+ ports and 6 40-Gigabit QSFP+ ports (4 of these ports support 100-Gigabit QSFP28 optics).
92300YC (N9K-C92300YC)	1.5-RU Top-of-Rack switch with 48 10-/25-Gigabit SFP28 ports and 18 fixed 40-/100-Gigabit QSFP28 ports.
92304QC (N9K-C92304QC)	2-RU Top-of-Rack switch with 56 40-Gigabit Ethernet QSFP+ ports (16 of these ports support 4x10 breakout cables) and 8 100-Gigabit QSFP28 ports.
9236C (N9K-C9236C)	1-RU Top-of-Rack switch with 36 40-/100-Gigabit QSFP28 ports (144 10-/25-Gigabit ports when using breakout cables)
9272Q (N9K-C9272Q)	2-RU Top-of-Rack switch with 72 40-Gigabit Ethernet QSFP+ ports (35 of these ports also support 4x10 breakout cables for 140 10-Gigabit ports)
9336C-FX2 (N9K-C9336C-FX2)	1-RU switch with 36 40-/100-Gb Ethernet QSFP28 ports.
9364C (N9K-C9364C)	2-RU Top-of-Rack switch with 64 40-/100-Gigabit QSFP28 ports and 2 1-/10-Gigabit SFP+ ports.
93108TC-EX (N9K-C93108TC-EX)	1-RU Top-of-Rack switch with 48 10GBASE-T (copper) ports and 6 40-/100-Gigabit QSFP28 ports
93108TC-FX (N9K-C93108TC-FX)	1-RU Top-of-Rack switch with 48 100M/1/10GBASE-T (copper) ports and 6 40-/100-Gigabit QSFP28 ports
93120TX (N9K-C93120TX)	2-RU Top-of-Rack switch with 96 1/10GBASE-T (copper) ports and 6 40-Gigabit QSFP+ ports
93128TX (N9K-C93128TX)	3-RU Top-of-Rack switch with 96 1/10GBASE-T (copper) ports and an uplink module up to 8 40-Gigabit QSFP+ ports
93180LC-EX (N9K-C93180LC-EX)	1-RU Top-of-Rack switch with 24 40-/50-Gigabit QSFP+ downlink ports and 6 40/100-Gigabit uplink ports. You can configure 18 downlink ports as 100-Gigabit QSFP28 ports or as 10-Gigabit SFP+ ports (using breakout cables)
93180YC-EX (N9K-C93180YC-EX)	1-RU Top-of-Rack switch with 48 10-/25-Gigabit SFP28 fiber ports and 6 40-/100-Gigabit QSFP28 ports
93180YC-FX (N9K-C93180YC-FX)	1-RU Top-of-Rack switch with 10-/25-/32-Gigabit Ethernet/FC ports and 6 40-/100-Gigabit QSFP28 ports. You can configure the 48 ports as 1/10/25-Gigabit Ethernet ports or as FCoE ports or as 8-/16-/32-Gigabit Fibre Channel ports.
93240YC-FX2 (N9K-C93240YC-FX2)	1.2-RU Top-of-Rack switch with 48 10-/25-Gigabit SFP28 fiber ports and 12 40-/100-Gigabit Ethernet QSFP28 ports.

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9332PQ (N9K-C9332PQ)	1-RU switch with 32 40-Gigabit Ethernet QSFP+ ports (26 ports support 4x10 breakout cables and 6 ports support QSFP-to-SFP adapters)
9348GC-FXP (N9K-C9348GC-FXP)	Nexus 9300 with 48p 100M/1 G, 4p 10/25 G SFP+ and 2p 100 G QSFP
9372PX (N9K-C9372PX)	1-RU Top-of-Rack switch with 48 1-/10-Gigabit SFP+ ports and 6 40-Gigabit QSFP+ ports
9372PX-E (N9K-C9372PX-E)	An enhanced version of the Cisco Nexus 9372PX-E switch.
9372TX (N9K-C9372TX)	1-RU Top-of-Rack switch with 48 1-/10GBASE-T (copper) ports and 6 40-Gigabit QSFP+ ports
9372TX-E (N9K-C9372TX-E)	An enhanced version of the Cisco Nexus 9372TX-E switch.
9396PX (N9K-C9396PX)	2-RU Top-of-Rack switch with 48 1-/10-Gigabit Ethernet SFP+ ports and an uplink module with up to 12 40-Gigabit QSFP+ ports
9396TX (N9K-C9396TX)	2-RU Top-of-Rack switch with 48 1/10GBASE-T (copper) ports and an uplink module with up to 12 40-Gigabit QSFP+ ports
9504 (N9K-C9504)	7.1-RU modular switch with slots for up to 4 line cards in addition to two supervisors, 2 system controllers, 3 to 6 fabric modules, 3 fan trays, and up to 4 power supplies.
9508 (N9K-C9508)	13-RU modular switch with slots for up to 8 line cards in addition to two supervisors, 2 system controllers, 3 to 6 fabric modules, 3 fan trays, and up to 8 power supplies.
9516 (N9K-C9516)	21-RU modular switch with slots for up to 16 line cards in addition to two supervisors, 2 system controllers, 3 to 6 fabric modules, 3 fan trays, and up to 10 power supplies.

Table 8 Cisco Nexus 9000 Series Uplink Modules

Product ID	Hardware
N9K-M4PC-CFP2	Cisco Nexus 9300 uplink module with 4 100-Gigabit Ethernet CFP2 ports. For the Cisco Nexus 93128TX switch, only two of the ports are active. For the Cisco Nexus 9396PX and 9396TX switches, all four ports are active.
N9K-M6PQ	Cisco Nexus 9300 uplink module with 6 40-Gigabit Ethernet QSFP+ ports for the Cisco Nexus 9396PX, 9396TX, and 93128TX switches.
N9K-M6PQ-E	An enhanced version of the Cisco Nexus N9K-M6PQ uplink module.
N9K-M12PQ	Cisco Nexus 9300 uplink module with 12 40-Gigabit Ethernet QSPF+ ports.

Table 9 Cisco Nexus 9500 Series System Controller

Product ID	Hardware	Quantity
N9K-SC-A	Cisco Nexus 9500 Platform System Controller Module	2

Table 10 Cisco Nexus 3232C and 3264Q Switch Hardware

Product ID	Hardware	Quantity
N3K-C3232C	Cisco Nexus 3232C, 32 x 40-Gb/100-Gb 2 x 10-Gb SFP+, 1-RU switch	1
N3K-C3264Q	Cisco Nexus 3264Q, 64 x 40-Gb 2 x 10-Gb SFP+, 2-RU switch	1

New and Changed Information

Table 11 Cisco Nexus 3164Q Switch Hardware

Product ID	Hardware	Quantity
N3K-C3164Q-40GE	Cisco Nexus 3164Q, 64 x 40-Gb SFP+, 2-RU switch	1

Table 12 Cisco Nexus 31128PQ Switch Hardware

Product ID	Hardware	Quantity
N3K-C31128PQ-10GE	Nexus 31128PQ, 96 x 10 Gb-SFP+, 8 x 10-Gb QSFP+, 2-RU switch	1

Supported Optics

To determine which transceivers and cables are supported by this switch, see [Transceiver Module \(TMG\) Compatibility Matrix](#).

To see the transceiver specifications and installation information, see <https://www.cisco.com/c/en/us/support/interfaces-modules/transceiver-modules/products-installation-guides-list.html>.

Supported FEX Modules

For more information, see the [Cisco Nexus 9000 Series Switch FEX Support](#) page.

Note the following:

- Cisco Nexus 9300 platform switches do not support FEXs on uplink modules (ALE).
- Beginning with Cisco NX-OS Release 7.0(3)I7(3), the Cisco Nexus N9K-C93180YC-FX supports N2K-C2232PP and N2K-C2248TP FEX models in NX-OS mode. In this mode, the N9K-C93180YC-FX supports straight-through FEX, but it does not support dual-homed FEX. Active-Active FEX and straight-through FEX are not supported on Cisco N9K-C9348GC-FXP, N9K-C93180TC-FX, N9K-C9336C-FX2, and N9K-C93240YC-FX2 switches in Cisco NX-OS Release 7.0(3)I7(3).
- For FEX HIF port channels, enable the STP port type edge using the spanning tree port type edge [trunk] command.
- The Cisco Nexus 2248PQ, 2348TQ, and 2348UPQ FEXs support connections to the Cisco Nexus 9300 or 9500 platform switches by using supported breakout cables to connect a QSFP+ uplink on the FEX and an SFP+ link on the parent switch (4x10 G links).

Note: For Cisco Nexus 9500 platform switches, 4x10-Gb breakout for FEX connectivity is not supported.

New and Changed Information

This section lists the following topics:

- New Hardware Features in Cisco NX-OS Release 7.0(3)I7(5)
- New Software Features in Cisco NX-OS Release 7.0(3)I7(5)

New Hardware Features in Cisco NX-OS Release 7.0(3)I7(5)

Cisco NX-OS Release 7.0(3)I7(5) supports the following new hardware:

- There is no new hardware in this release.

New Software Features in Cisco NX-OS Release 7.0(3)I7(5)

Cisco NX-OS Release 7.0(3)I7(5) supports the following new software features:

Interfaces Features

- Debounce Timer—Support added to configure debounce timer for the link-up events on Cisco Nexus 9336C-FX2 and 93240YC-FX2 switches.
- Link Aggregation Control Protocol (LACP)—Support added for vPC convergence on Cisco Nexus 9500 platform switches.
- QSFP-100G SRBD—Support added for Cisco Nexus 93180TC-FX and 93180YC-FX switches.

For more information, see the [Cisco Nexus 9000 Series NX-OS Interfaces Configuration Guide, Release 7.x](#).

Label Switching Features

- Egress-Stats for SR—Provides support for next-hop or egress adjacency stats in Cisco Nexus 9300-EX, 9300-FX, 9504-EX, 9504-FX, 9508-EX, and 9508-FX platform switches.
- EXP based marking in uniform mode—Provides the ability to mark the outer MPLS tunnel header instead of only copying the inner DSCP to the outer EXP value.
- MPLS Static—Provides Static MPLS support on the Cisco Nexus 9300-FX platform switches.
- MPLS Time-to-Live (TTL)—Support added using the Uniform mode. MPLS operates in default Uniform mode on Cisco Nexus X9700-FX line cards. Cisco Nexus X9700-EX line card operates in Pipe mode on the egress side.
- TCAM Capacity—Introduces the show hardware internal forwarding table utilization command to display information about the MAX and Used label entries.

For more information, see the [Cisco Nexus 9000 Series NX-OS Label Switching Configuration Guide, Release 7.x](#)

Programmability Features

- Counter type—Support added for the average depth per output queue.
- Streaming Statistics Export (SSX)—Support added for this feature.
- Universal Telemetry Receiver—Support added for this feature.

For more information, see the [Cisco Nexus 9000 Series NX-OS Programmability Guide, Release 7.x](#).

Unicast Routing Features

- BGP PIC edge— Introduced BGP prefix independent convergence (PIC) edge support for Cisco Nexus 9200, 9300-EX, 9300-FX, 9300-FX2, and 9300-FXP switches and Cisco Nexus 9500 switches with -EX and -FX line cards. This feature ensures fast convergence to a BGP backup path when an external (eBGP) edge link or an external neighbor node fails. BGP PIC edge supports only the IPv4 address family.

For more information, see the [Cisco Nexus 9000 Series NX-OS Unicast Routing Configuration Guide, Release 7.x](#).

VXLAN Features

Caveats

- Port VLAN Routing—Support added for the Cisco Nexus 9300-EX, 9300-FX, and 9300-FX2 switches.
- RP Everywhere—Ability added for the VXLAN fabric TRM border node overlay rendezvous point to communicate with a fabric's external rendezvous point.
- VXLAN Tunnel Egress QoS Policy—Added support for applying the QoS policy for VXLAN tunnel terminated packets on Cisco Nexus 9300-EX, 9300-FX, and 9300-FX2 switches.

For more information, see the [Cisco Nexus 9000 Series NX-OS VXLAN Configuration Guide, Release 7.x](#)

Caveats

This section includes the following topics:

- Resolved Caveats—Cisco NX-OS Release 7.0(3)I7(5)
- Open Caveats—Cisco NX-OS Release 7.0(3)I7(5)
- Known Behaviors—Cisco NX-OS Release 7.0(3)I7(5)

Resolved Caveats—Cisco NX-OS Release 7.0(3)I7(5)

The following table lists the Resolved Caveats in Cisco NX-OS Release 7.0(3)I7(5). Click the bug ID to access the Bug Search tool and see additional information about the bug.

Table 13 Resolved Caveats in Cisco NX-OS Release 7.0(3)I7(5)

Big ID	Description
CSCuu37721	VMtracker recognizes VM power on in 30 min after the event
CSCuw99630	Cisco NX-OS Authenticated SNMP Denial of Service Vulnerability
CSCvg18661	VXLAN F&L L3 ecnap for remote mac failed on Central GW(EOR) after remote VTEP reload
CSCvg84103	Need Syslog/Parser Warning Printed When NVE Source IP is Changed Without Shutting Down NVE
CSCvi05971	Configure BFD authentication between NS-OX and IOS-XE
CSCvi11173	PSU: Total Power Available for additional modules displays Negative value
CSCvi54421	Improve "lACP vpc-convergence" compatibility with 3rd party LACP Peer
CSCvi54531	Observed pixm_vl core after copy config from boot flash
CSCvi71602	Bgp neighbors are down when ecmp ipunnumbered uplink is configured
CSCvi87166	Nexus 3500 crashes with "spm hap reset" due to memory leak in libspm.so or only SPM process crashes.
CSCvj03194	Tunneling BFD packets on VXLAN is NOT working for T2 platforms
CSCvj06319	NVE has corrupt SDB BD info for some VNIs after ISSU I4.2 -> I4.6 -> I6.2 -> I7.3
CSCvj07743	Telnet stuck when Vlan SVI configured as nat inside and physical interface as nat outside
CSCvj09807	Nexus 93240 switch, 100gig link stays up when remote end in down state
CSCvj17717	MACSEC session stuck in Auth Pending (Interop)
CSCvj17763	Macsec Session should continue with current key if new mismatched key is added on peer (Interop)
CSCvj25432	Must-secure MACSEC traffic sent for a few seconds after peer configuration is removed
CSCvj25466	Nexus should-secure macsec port-channel traffic doesnt resume for session keys mismatch (interop)
CSCvj26076	Elaborate and comprehensive status for each key configured under a keychain (primary and fallback)

Caveats

Big ID	Description
CSCvj28815	n9k LDAP fails to associate correct role when using search-map userprofile attribute "memberOf"
CSCvj32068	Interface NVE config lost on Replace/Delete functions
CSCvj33668	lcnd_tah_inband_decap:3072:Recv invalid src_mod:0,pi:0,svp:0,vp_based_lkup:0 - kernel
CSCvj39292	orib process still exists after disable relevant feature
CSCvj44902	nginx_f process core using NXAPI to remove large EVPN configuration
CSCvj45450	After ISSU unable to communicate with single vlan
CSCvj54806	OBFL no partitions mounted on eMMC device
CSCvj61179	RACL CC doesn't catch label misprogramming on bdstatetable on Cisco ASIC based switches
CSCvj61790	MSDP CORE on N9k due to RPM
CSCvj61877	Reloading N9K EOR vpc peer caused packet loss from north to south
CSCvj62004	packets lost at the moment of fex online
CSCvj62385	"tahusd" process crash
CSCvj65705	Incorrect VLAN Tagging for IP-in-IP traffic through EOR new generation N9K with VXLAN enabled
CSCvj66408	SNMP trap not send on power supply failed/recovered on FEX
CSCvj69839	S>N PKT loss seen when vpc-less port is restored
CSCvj73621	Fosters: Tahusd crash when disabling autonegotiation on QSA port
CSCvj77420	Generate syslog for repeated 2B Parity Error in MMU table
CSCvj77770	VxLAN Pseudo BGW Configured for peer-type fabric-external Incorrectly Disables Split Horizon Check
CSCvj80495	SFP-H10GB-CU1M shows connected although device is not up on other end
CSCvj81380	N9K - EX all interface counters/snmp stop incrementing
CSCvj81868	N9K(Cisco ASIC) same_if_uc Drop for ERSPAN Pk When Egr-Intf Is L2 and Same As Original Packet Ingres
CSCvj84057	error msg: LOCAL7-3-SYSTEM_MSG: getsockname: Invalid argument (errno = 22) - dcos-xinetd[1057]
CSCvj85373	Uncorrectable fatal error in kernel may not be properly handled
CSCvj87211	N9K-C93108TC-FX: Link flap or down must occur only on eth1/54 using QSFP-100G-AOC1M
CSCvj89438	Packet drop issue after removing a L2VNI Gateway SVI on Nexus 9k
CSCvj91750	N9508: reload the module after repeated 2B Parity Error in MMU table
CSCvj94095	Nexus 9000 mgmt0 interface DHCP Release/Renew issue
CSCvj94247	Nexus 9K fatal module reload.
CSCvj94343	Not all ECMP paths are programmed in hardware
CSCvj94409	When POAP is done, Maintenance mode profile config lost if switch reload
CSCvj96082	Inconsist Higig interface number
CSCvj98984	Unable to make changes via config sync after upgrade
CSCvk03460	Address vulnerabilities in curl ver 7.40.0
CSCvk04349	After removing a L2VNI under int nve1 on anycast multisite BL, the mac-route is not deleted
CSCvk06881	interface stuck inactive after SFP plugge in
CSCvk11813	"ipfib" hap reset caused by kvfib consistency-checker
CSCvk13136	Egress port for ARP is not updated after re-enabling MAC Learning on non-EX Nexus 9000
CSCvk13186	N9K-C93180LC-EX:duplex shows full on a port with xcvrAbsen
CSCvk15207	rip flag with '-' can't remove redistribution form ospf
CSCvk18934	LACP PDU TX Delay when running show lacp internal info all with large number of port-channels
CSCvk24414	In PTP, the FollowUp packet is not sent from certain Master port

Caveats

Big ID	Description
CSCvk24882	interface is working but display as down
CSCvk25947	N93240 console gets hung
CSCvk27060	DHCP Relayed DHCP OFF/ACK/NACK loop in EVPN
CSCvk30966	PSM4: Link wont come up after reload
CSCvk31468	show system internal ptp corrections missing every 100 correction
CSCvk31537	1G ports with Cisco SLIC adapter(QSFP to SFP): Link flaps seen and port fails to come up
CSCvk33268	cannot configure 'link transmit reset-skip' to the channel member port
CSCvk33978	show interface trunk vlan x causing the link go down
CSCvk43891	N9K drops vxlan encap traffic from software vteps when NVE/infra-vlan are configured
CSCvk44313	N9K iftmc crashed when tried to bring up gre tunnel
CSCvk44686	/nxos/dme_logs/vsh.log: Permission denied when SSH to device
CSCvk45374	N9K Kernel panic due to unable to handle kernel paging request, nvram block mismatch
CSCvk48208	unable to delete entry from an object-group whose name contains a dot
CSCvk50807	N9K-X9736C-EX/ internal higig link down event should generate fault interrupts
CSCvk53223	N9K crashed repeatedly due to "mfdm"
CSCvk53414	FEC config change not allowed with transceiver is not present
CSCvk65611	ethpm always crash due to config "lACP vpc-convergence" under port-channel
CSCvk69286	Inner TTL copied to GRE header on Fabric Module when tunnel outer_bd matches next hop BD
CSCvk69760	BFD session fails with SHA authentication between N9K and N7K/IOSXE
CSCvk71597	N3164 Fastboot behavior with ALL IPv6 BGP neighbors down
CSCvk73336	Shut down NVE on secondary VPC failed to move host mac from vpc to MCT
CSCvk73357	9300EX/FX suppress RARP with arp suppression
CSCvm03157	Upgrade to 7.0(3)I4(8a) does not work if FEX N2348TQ is connected
CSCvm07752	Host is unreachable post ISSU in a Vxlan fabric

Open Caveats—Cisco NX-OS Release 7.0(3)I7(5)

The following table lists the open caveats in the Cisco NX-OS Release 7.0(3)I7(5). Click the bug ID to access the Bug Search tool and see additional information about the bug.

Table 14 Open Caveats in Cisco NX-OS Release 7.0(3)I7(5)

Bug ID	Description
CSCuy08187	If EPLD is not latest, abort non-disruptive ISSU
CSCvb57299	Hardcoding the Cisco Nexus 9500 Series line card module speed to 100 causes the duplex full port to go down.
CSCvd06973	PVLAN: Secondary VLAN traffic will not hit ACL on primary VLAN's SVI.
CSCvf76134	Multicast-heavy:traffic for /64 IPv6 LPM do not work in N9300-EX post ISSU(7.0(3)I6(1)->7.0(3)I7(2))
CSCvg65669	After reload license is not checked out despite having "port-license acquire" cli under port.
CSCvh95282	Need to resolve of leak on trunk_member utilization/entries on Nexus 9000
CSCvi77567	Configuring "feature nv overlay" breaks sub-interface multicast forwarding across FM-E modules

Upgrade Instructions

CSCvj27056	ARP Frame May Be Sourced from BIA SVI MAC with Anycast GW configured
CSCvj52053	NGMVPN and MRIB entries not cleaned up if Data/IGMP Traffic stopped after triggers
CSCvj82718	N9K Tx continuous resets while receives RF
CSCvk16980	L3VNI in Del Pending state after Vlan -> L3VNI mapping change leading to traffic failure
CSCvm01300	SG not programming the OIF from IGMPv3 SSM group after clear ip mroute data-created
CSCvm05775	Nexus 9K does not send authorization request for roles
CSCvm06419	Clearing counters on N9k with fex is taking long time
CSCvm07589	Vxlan-QOS : 9300-EX TOR and 9700-EX LC platform: Bud node nve qos not working
CSCvm10650	N9236 // 7.0(3)I7(1)// VPC keep-alive link flaps after reload only with SLIC-adapters in use
CSCvm11061	TRM-Scale: After Stopping Traffic 2 S,G on BL is not getting deleted & readded
CSCvm14263	Stale adjacency IPv6 packet loss
CSCvm15216	N9K: Mpls L3EVPN :: BGP I2vpn evpn session between PE down after SSO
CSCvm15745	TRM L3:(*,G) entries dont age out on BL with External RP.
CSCvm20551	VxLAN PBR not working after upgrade
CSCvm96774	Link down/failure logged in syslog but interface is up from show port-channel on N92160

Known Behaviors—Cisco NX-OS Release 7.0(3)I7(5)

The following known behaviors are in this release.

- In the NX-API sandbox, whenever XML or JSON output is generated for the show run command or the show startup command, the output contains additional characters.

For example,

```
</nf:source>      <=====nf: is extra
```

```
<namespace> : extra characters are seen with XML and JSON from NX-API.
```

```
=====
```

Upgrade Instructions

To perform a software upgrade, follow the installation instructions in the [Cisco Nexus 9000 Series NX-OS Software Upgrade and Downgrade Guide, Release 7.x](#).

Note:

You can perform an In-Service Software Upgrade (ISSU) from the following release to Cisco NX-OS Release 7.0(3)I7(5):

Upgrade Instructions

- 7.0(3)I7(4)
 - 7.0(3)I7(3)
 - 7.0(3)I6(2)
 - 7.0(3)I6(1)
 - 7.0(3)I5(2)
 - 7.0(3)I5(1)
 - 7.0(3)I4(8)
 - 7.0(3)I4(7)
- Performing a non-disruptive upgrade from Cisco NX-OS Release 7.0(3)I7(1) to 7.0(3)I7(5) might un-configure the PBR policy. Possible workarounds are:
 - Disruptive upgrade
 - Remove all PBR policy configurations before a non-disruptive ISSU from Cisco NX-OS Release 7.0(3)I7(1) to 7.0(3)I7(5). Perform the ISSU and re-apply the PBR configurations.
 - Perform the ISSU from Cisco NX-OS Release 7.0(3)I7(1) to 7.0(3)I7(5) and reload the switch.
 - When upgrading from Cisco NX-OS Release 7.0(3)I6(1) or 7.0(3)I7(1) to Cisco NX-OS Release 7.0(3)I7(5), if the Cisco Nexus 9000 Series switches are running vPC and they are connected to an IOS-based switch via Layer 2 vPC, there is a likelihood that the Layer 2 port channel on the IOS side will become error disabled. The workaround is to disable the spanning-tree etherchannel guard misconfig command on the IOS switch before starting the upgrade process. Once both the Cisco Nexus 9000 Series switches are upgraded, you can re-enable the command. For more information, see defect [CSCvg05807](#).
 - If you are upgrading from Cisco NX-OS Release 7.0(3)I5(2) to Cisco NX-OS Release 7.0(3)I7(5) using the install all command, BIOS will not be upgraded due to CSCve24965. When the upgrade to Cisco NX-OS Release 7.0(3)I7(5) is complete, use the install all command again to complete the BIOS upgrade, if applicable.
 - An upgrade performed via the install all command for Cisco NX-OS Release 7.0(3)I2(2b) to Release 7.0(3)I7(5) might result in the VLANs being unable to be added to the existing FEX HIF trunk ports. To recover from this, the following steps should be performed after all FEXs have come online and the HIFs are operationally up:
 1. Enter the copy run bootflash:fex_config_restore.cfg command at the prompt.
 2. Enter the copy bootflash:fex_config_restore.cfg running-config echo-commands command at the prompt.
 - In Cisco NX-OS Release 7.0(3)I6(1) and earlier, performing an ASCII replay or running the copy file run command on a FEX HIF configuration requires manually reapplying the FEX configuration after the FEX comes back up.
 - When upgrading to Cisco NX-OS Release to 7.0(3)I7(5) from 7.0(3)I2(x) or before and running EVPN VXLAN configuration, an intermediate upgrade to 7.0(3)I4(x) or 7.0(3)I5(x) or 7.0(3)I6(x) is required. For further details, please refer to [CSCvh02777](#).
 - When upgrading to Cisco NX-OS Release 7.0(3)I7(5) running EVPN VXLAN and redistributing BGP EVPN into OSPF, match the route-type internal under the relevant route-map configured.
 - Before enabling the FHS on the interface, we recommend that you carve the ifacl TCAM region on Cisco Nexus 9300 and 9500 platform switches. If you carved the ifacl TCAM region in a previous release, you must reload the system

after upgrading to Cisco NX-OS Release 7.0(3)I7(5). Uploading the system will create the required match qualifiers for the FHS TCAM region, ifacl.

- Before enabling the FHS, we recommend that you carve the ing-redirect TCAM region on Cisco Nexus 9200 and 9300-EX platform switches. If you carved the ing-redirect TCAM region in a previous release, you must reload the system after upgrading to Cisco NX-OS Release 7.0(3)I7(5). Uploading the system will create the required match qualifiers for the FHS TCAM region, ing-redirect.
- An error occurs when you try to perform an ISSU if you changed the reserved VLAN without entering the copy running-config save-config and reload commands.
- On enhanced ISSUs from Cisco NX-OS Release 7.0(3)I5(1) or 7.0(3)I5(2) to Cisco NX-OS Release 7.0(3)I7(5), ISSU completes, but you must reload the switch for tunnel enhancements to work. ToR ISSU does not require a reload.
- During an ISSU, there is a drop for all traffic to and from 100 Mb ports 65-66 on the Cisco Nexus 92304QC switch.
- The install all command is the recommended method for software upgrades and downgrades because it performs configuration compatibility checks and BIOS upgrades automatically. In contrast, changing the boot variables and reloading the device bypasses these checks and the BIOS upgrade and therefore it is not recommended.
- An enhanced ISSU can be performed only from a Cisco NX-OS Release 7.0(3)I5(1) to a later image.
- Upgrading from Cisco NX-OS Release 7.0(3)I1(2), Release 7.0(3)I1(3), or Release 7.0(3)I1(3a) requires installing a patch for Cisco Nexus 9500 platform switches only. For more information on the upgrade patch, see *Patch Upgrade Instructions*.
- When upgrading to Cisco NX-OS Release 7.0(3)I7(5), Guest Shell automatically upgrades from 1.0 to 2.0. In the process, the contents of the guest shell 1.0 root filesystem are lost. To keep from losing important content, copy any needed files to /bootflash or an off-box location before upgrading to Cisco NX-OS Release 7.0(3)I7(5).
- An ISSU can be performed only from a Cisco NX-OS Release 7.0(3)I4(1) to a later image.
- While performing an ISSU, VRRP and VRRPv3 displays the following messages:
 - If VRRPv3 is enabled:


```
2015 Dec 29 20:41:44 MDP-N9K-6 %$ VDC-1 %$ %USER-0-SYSTEM_MSG: ISSU ERROR: Service "vrrpv3" has sent the following message: Feature vrrpv3 is configured. User can change vrrpv3 timers to 120 seconds or fine tune these timers based on upgrade time on all Vrrp Peers to avoid Vrrp State transitions. - sysmgr
```
 - If VRRP is enabled:


```
2015 Dec 29 20:45:10 MDP-N9K-6 %$ VDC-1 %$ %USER-0-SYSTEM_MSG: ISSU ERROR: Service "vrrp-eng" has sent the following message: Feature vrrp is configured. User can change vrrp timers to 120 seconds or fine tune these timers based on upgrade time on all Vrrp Peers to avoid Vrrp State transitions. - sysmgr
```
- Guest Shell is disabled during an ISSU and reactivated after the upgrade. Any application running in the Guest Shell will be affected.
- If you have ITD probes configured, you need to disable the ITD service (using the shutdown command) before upgrading to Cisco NX-OS Release 7.0(3)I7(5). After the upgrade, enter the feature sla sender command to enable IP SLA for ITD probes and then the no shutdown command to re-enable the ITD service. (If you upgrade without shutting down the service, you can enter the feature sla sender command after the upgrade.)

For additional information, see the [Cisco NX-OS ISSU Support](#) application.

Patch Upgrade Instructions

- Upgrading from Cisco NX-OS Release 7.0(3)I1(2), 7.0(3)I1(3), or 7.0(3)I1(3a) requires installing a patch and then upgrading using the install all command. Failing to follow this requirement requires console access to recover.
- Upgrading from Cisco NX-OS Release 7.0(3)I1(2), 7.0(3)I1(3), or 7.0(3)I1(3a) to 7.0(3)I7(5) requires a patch for modular switches. A patch is available for each respective release. Please see the respective links below.
- When upgrading from Cisco NX-OS Release 7.0(3)I1(1) or earlier, including all variants of 6.1(2) based releases, a patch is not required. You can upgrade directly using the install all command.

Note: The patch is only for upgrading. After the upgrade, the patch is automatically removed. If you decide not to upgrade after installing the patch, do not deactivate it. Deactivating the patch may cause a bios_daemon crash.

Cisco NX-OS Release 7.0(3)I1(2) Upgrade Patch

<https://software.cisco.com/download/special/release.html?config=ea82d4567eeb829ad4f32ae29c627cfc>

Cisco NX-OS Release 7.0(3)I1(3) Upgrade Patch

<https://software.cisco.com/download/special/release.html?config=e3e68dd1e8db9633978e080b9b715df8>

Cisco NX-OS Release 7.0(3)I1(3a) Upgrade Patch

<https://software.cisco.com/download/special/release.html?config=0f2015eebc7ea0d606441171b4a3baf2>

To upgrade with the patch:

1. Add the patch.
2. Install the patch.
3. Commit the patch.
4. Upgrade using the install all command.

The following table is an example of a patch upgrade:

```
switch(config)# install add bootflash:n9000-dk9.7.0.3.I1.2.CSCuy16604.bin
Install operation 16 completed successfully at Thu Mar  3 04:24:13 2016
switch(config)# install add bootflash:n9000-dk9.7.0.3.I1.2.CSCuy16606.bin
Install operation 17 completed successfully at Thu Mar  3 04:24:43 2016

switch(config)# install activate n9000-dk9.7.0.3.I1.2.CSCuy16604.bin
Install operation 18 completed successfully at Thu Mar  3 04:28:38 2016
switch (config)# install activate n9000-dk9.7.0.3.I1.2.CSCuy16606.bin
Install operation 19 completed successfully at Thu Mar  3 04:29:08 2016

switch(config)# install commit n9000-dk9.7.0.3.I1.2.CSCuy16604.bin
Install operation 20 completed successfully at Thu Mar  3 04:30:38 2016
switch (config)# install commit n9000-dk9.7.0.3.I1.2.CSCuy16606.bin
Install operation 21 completed successfully at Thu Mar  3 04:31:16 2016
```

Upgrade Instructions

```
switch (config)# install all nxos bootflash:Nxos.7.0.3.I7.5.bin
Installer will perform compatibility check first. Please wait.
uri is: /Nxos.7.0.3.I7.5.bin
Installer is forced disruptive

Verifying image bootflash:/Nxos.7.0.3.I7.5.bin for boot variable "nxos" .
[#####] 100% -- SUCCESS

Verifying image type.
[#####] 100% -- SUCCESS

Preparing "nxos" version info using image bootflash:/Nxos.7.0.3.I7.5.bin.
[#####] 100% -- SUCCESS

Performing module support checks.
[#####] 100% -- SUCCESS

Notifying services about system upgrade.
[#####] 100% -- SUCCESS
```

Compatibility check is done:

Module	bootable	Impact	Install-type	Reason
1	yes	disruptive	reset	Incompatible image
6	yes	disruptive	reset	Incompatible image
8	yes	disruptive	reset	Incompatible image
9	yes	disruptive	reset	Incompatible image
10	yes	disruptive	reset	Incompatible image
11	yes	disruptive	reset	Incompatible image
14	yes	disruptive	reset	Incompatible image
15	yes	disruptive	reset	Incompatible image
16	yes	disruptive	reset	Incompatible image
21	yes	disruptive	reset	Incompatible image
22	yes	disruptive	reset	Incompatible image
23	yes	disruptive	reset	Incompatible image
24	yes	disruptive	reset	Incompatible image
25	yes	disruptive	reset	Incompatible image
26	yes	disruptive	reset	Incompatible image
27	yes	disruptive	reset	Incompatible image
28	yes	disruptive	reset	Incompatible image
29	yes	disruptive	reset	Incompatible image
30	yes	disruptive	reset	Incompatible image

Images will be upgraded according to following table:

Module	Image	Running-Version(pri:alt)	New-Version	Upg-Required
1	lcn9k	7.0(3)I1(2)	7.0(3)I7(5)	yes
1	bios	v01.42(00):v01.42(00)	v01.48(00)	yes
6	lcn9k	7.0(3)I1(2)	7.0(3)I7(5)	yes
6	bios	v01.48(00):v01.48(00)	v01.48(00)	no

Upgrade Instructions

8	lcn9k	7.0(3)I1(2)	7.0(3)I7(5)	yes	
8	bios	v01.48(00:v01.29(00	v01.48(00	no	
9	lcn9k	7.0(3)I1(2)	7.0(3)I7(5)	yes	
9	bios	v01.48(00:v01.35(00	v01.48(00	no	
10	lcn9k	7.0(3)I1(2)	7.0(3)I7(5)	yes	
10	bios	v01.48(00:v01.42(00	v01.48(00	no	
11	lcn9k	7.0(3)I1(2)	7.0(3)I7(5)	yes	
11	bios	v01.48(00:v01.52(00	v01.48(00	no	
14	lcn9k	7.0(3)I1(2)	7.0(3)I7(5)	yes	
14	bios	v01.48(00:v01.48(00	v01.48(00	no	
15	lcn9k	7.0(3)I1(2)	7.0(3)I7(5)	yes	
15	bios	v01.48(00:v01.40(00	v01.48(00	no	
16	lcn9k	7.0(3)I1(2)	7.0(3)I7(5)	yes	
16	bios	v01.48(00:v01.42(00	v01.48(00	no	
21	lcn9k	7.0(3)I1(2)	7.0(3)I7(5)	yes	
21	bios	v01.48(00:v01.42(00	v01.48(00	no	
22	lcn9k	7.0(3)I1(2)	7.0(3)I7(5)	yes	
22	bios	v01.48(00:v01.40(00	v01.48(00	no	
23	lcn9k	7.0(3)I1(2)	7.0(3)I7(5)	yes	
23	bios	v01.48(00:v01.40(00	v01.48(00	no	
24	lcn9k	7.0(3)I1(2)	7.0(3)I7(5)	yes	
24	bios	v01.48(00:v01.40(00	v01.48(00	no	
25	lcn9k	7.0(3)I1(2)	7.0(3)I7(5)	yes	
25	bios	v01.48(00:v01.40(00	v01.48(00	no	
26	lcn9k	7.0(3)I1(2)	7.0(3)I7(5)	yes	
26	bios	v01.48(00:v01.40(00	v01.48(00	no	
27	nxos	7.0(3)I1(2)	7.0(3)I7(5)	yes	
27	bios	v08.06(09/10/2014):v08.18(08/11/2015)	v08.26(01/12/2016)	yes	
28	nxos	7.0(3)I1(2)	7.0(3)I7(5)	yes	
28	bios	v08.06(09/10/2014):v08.26(01/12/2016)	v08.26(01/12/2016)	yes	
29	lcn9k	7.0(3)I1(2)	7.0(3)I7(5)	yes	
29	bios	v01.48(00:v01.35(00	v01.48(00	no	
30	lcn9k	7.0(3)I1(2)	7.0(3)I7(5)	yes	
30	bios	v01.48(00:v01.35(00	v01.48(00	no	

Switch will be reloaded for disruptive upgrade.

Do you want to continue with the installation (y/n)? [n] y

Install is in progress, please wait.

Performing runtime checks.

[#####] 100% -- SUCCESS

Syncing image bootflash:/Nxos.7.0.3.I7.5.bin to standby.

[#####] 100% -- SUCCESS

Setting boot variables.

[#####] 100% -- SUCCESS

Performing configuration copy.

[#####] 100% -- SUCCESS

Upgrade Instructions

Module 1: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#####] 100% -- SUCCESS

Module 6: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#####] 100% -- SUCCESS

Module 8: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#####] 100% -- SUCCESS

Module 9: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#####] 100% -- SUCCESS

Module 10: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#####] 100% -- SUCCESS

Module 11: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#####] 100% -- SUCCESS

Module 14: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#####] 100% -- SUCCESS

Module 15: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#####] 100% -- SUCCESS

Module 16: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#####] 100% -- SUCCESS

Module 21: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#####] 100% -- SUCCESS

Module 22: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#####] 100% -- SUCCESS

Module 23: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#####] 100% -- SUCCESS

Module 24: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#####] 100% -- SUCCESS

Upgrade Instructions

Module 25: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#####] 100% -- SUCCESS

Module 26: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#####] 100% -- SUCCESS

Module 27: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#####] 100% -- SUCCESS

Module 28: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#####] 100% -- SUCCESS

Module 29: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#####] 100% -- SUCCESS

Module 30: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#####] 100% -- SUCCESS

Finishing the upgrade, switch will reboot in 10 seconds.
switch(config)#
User Access Verification
switch login: [2644.917727] [1456980048] writing reset reason 88,

CISCO SWITCH Ver 8.26

CISCO SWITCH Ver 8.26
Memory Size (Bytes): 0x0000000080000000 + 0x0000000380000000
Relocated to memory
Time: 6/3/2016 4:41:8
Detected CISCO IOFPGA
Booting from Primary Bios
Code Signing Results: 0x0
Using Upgrade FPGA
FPGA Revision : 0x27
FPGA ID : 0x1168153
FPGA Date : 0x20160111
Reset Cause Register: 0x22
Boot Ctrl Register : 0x60ff
EventLog Register1 : 0x2000000
EventLog Register2 : 0xfbe77fff
Version 2.16.1240. Copyright (C) 2013 American Megatrends, Inc.
Board type 1
IOFPGA @ 0xe8000000
SLOT_ID @ 0x1b
Standalone chassis

Upgrade Instructions

```
check_bootmode: grub: Continue grub
Trying to read config file /boot/grub/menu.lst.local from (hd0,4)
Filesystem type is ext2fs, partition type 0x83

Booting bootflash:/Nxos.7.0.3.I7.5.bin ...
Booting bootflash:/Nxos.7.0.3.I7.5.bin
Trying diskboot
Filesystem type is ext2fs, partition type 0x83
IOFGPA ID: 1168153
Image valid

Image Signature verification was Successful.

Boot Time: 3/3/2016 4:41:44
INIT: version 2.88 booting
Unsquashing rootfs ...

Loading IGB driver ...
Installing SSE module ... done
Creating the sse device node ... done
Loading I2C driver ...
Installing CTRL driver for card_type 3 ...
CTRL driver for card_index 21000 ...
old data: 4000004 new data: 1
Not Micron SSD...

Checking all filesystems.....
Installing default sprom values ...
done.Configuring network ...
Installing LC netdev ...
Installing psdev ...
Installing veobc ...
Installing OBFL driver ...
mounting plog for N9k!
tune2fs 1.42.1 (17-Feb-2012)
Setting reserved blocks percentage to 0% (0 blocks)
Starting portmap daemon...
creating NFS state directory: done
starting 8 nfsd kernel threads: done
starting mountd: done
starting statd: done
Saving image for img-sync ...
Loading system software
Installing local RPMS
Patch Repository Setup completed successfully
dealing with default shell..
file /proc/cmdline found, look for shell
unset shelltype, nothing to do..
user add file found..edit it
Uncompressing system image: Thu Jun 3 04:42:11 UTC 2016
```



```

blogger: nothing to do.

..done Thu Mar 3 04:42:11 UTC 2016
Creating /dev/mcelog
Starting mcelog daemon
Overwriting dme stub lib
Replaced dme stub lib
INIT: Entering runlevel: 3
Running S93thirdparty-script...

2016 Mar 3 04:42:37 switch%$ VDC-1 %$ %USER-2-SYSTEM_MSG: <<%USBHSD-2-MOUNT>> logflash: online -
usbhsd
2016 Mar 3 04:42:37 switch%$ VDC-1 %$ Mar 3 04:42:37 %KERN-2-SYSTEM_MSG: [ 12.509615] hwport mode=6 -
kernel
2016 Mar 3 04:42:40 switch%$ VDC-1 %$ %VMAN-2-INSTALL_STATE: Installing virtual service 'guestshell+'
2016 Mar 3 04:42:40 switch%$ VDC-1 %$ %DAEMON-2-SYSTEM_MSG: <<%ASCII-CFG-2-CONF_CONTROL>>
Binary restore - ascii-cfg[13904]
2016 Mar 3 04:42:40 switch%$ VDC-1 %$ %DAEMON-2-SYSTEM_MSG: <<%ASCII-CFG-2-CONF_CONTROL>>
Restore DME database - ascii-cfg[13904]
2016 Mar 3 04:42:42 switch%$ VDC-1 %$ netstack: Registration with cli server complete
2016 Mar 3 04:43:00 switch%$ VDC-1 %$ %USER-2-SYSTEM_MSG: ssnmgr_app_init called on ssnmgr up - aclmgr
2016 Mar 3 04:43:09 switch%$ VDC-1 %$ %USER-0-SYSTEM_MSG: end of default policer - copp
2016 Mar 3 04:43:10 switch%$ VDC-1 %$ %VMAN-2-INSTALL_STATE: Install success virtual service 'guestshell+';
Activating
2016 Mar 3 04:43:10 switch%$ VDC-1 %$ %VMAN-2-ACTIVATION_STATE: Activating virtual service 'guestshell+'
2016 Mar 3 04:43:13 switch%$ VDC-1 %$ %CARDCLIENT-2-FPGA_BOOT_PRIMARY: IOFPGA booted from Primary
2016 Mar 3 04:43:18 switch%$ VDC-1 %$ %USER-2-SYSTEM_MSG: IPv6 Netlink thread init successful - icmpv6
2016 Mar 3 04:43:19 switch%$ VDC-1 %$ %VDC_MGR-2-VDC_ONLINE: vdc 1 has come online

User Access Verification
switchlogin: 2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PRESENT: Detected the presence of
Module 1
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PRESENT: Detected the presence of Module 6
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PRESENT: Detected the presence of Module 8
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PRESENT: Detected the presence of Module 9
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PRESENT: Detected the presence of Module 10
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PRESENT: Detected the presence of Module 11
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PRESENT: Detected the presence of Module 14
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PRESENT: Detected the presence of Module 15
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PRESENT: Detected the presence of Module 16
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PRESENT: Detected the presence of Module 21
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PRESENT: Detected the presence of Module 22
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PRESENT: Detected the presence of Module 23
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PRESENT: Detected the presence of Module 24
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PRESENT: Detected the presence of Module 25
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PRESENT: Detected the presence of Module 26
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PRESENT: Detected the presence of Module 28
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PRESENT: Detected the presence of Module 29
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PRESENT: Detected the presence of Module 30
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-PS_OK: Power supply 1 ok (Serial number DTM173903QQ)
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-PS_FANOK: Fan in Power supply 1 ok

```

```
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-PS_OK: Power supply 2 ok (Serial number DTM174000SB)
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-PS_FANOK: Fan in Power supply 2 ok
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-PS_OK: Power supply 3 ok (Serial number DTM174000RR)
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-PS_FANOK: Fan in Power supply 3 ok
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-PS_OK: Power supply 4 ok (Serial number DTM173903SH)
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-PS_FANOK: Fan in Power supply 4 ok
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-PS_OK: Power supply 5 ok (Serial number DTM173903SR)
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-PS_FANOK: Fan in Power supply 5 ok
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-FANMOD_FAN_OK: Fan module 1 (Fan1(sys_fan1) fan) ok
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-FANMOD_FAN_OK: Fan module 2 (Fan2(sys_fan2) fan) ok
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-FANMOD_FAN_OK: Fan module 3 (Fan3(sys_fan3) fan) ok
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_DETECT: Module 30 detected (Serial number
SAL1803KQ78) Module-Type System Controller Model N9K-SC-A
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PWRUP: Module 30 powered up (Serial number
SAL1803KQ78)
2016 Mar 3 04:43:52 switch%$ VDC-1 %$ %PLATFORM-2-MOD_DETECT: Module 28 detected (Serial number
:unavailable) Module-Type Supervisor Module Model :unavailable
2016 Mar 3 04:43:58 switch%$ VDC-1 %$ %PLATFORM-2-MOD_DETECT: Module 29 detected (Serial number
SAL1803KQAS) Module-Type System Controller Model N9K-SC-A
2016 Mar 3 04:43:58 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PWRUP: Module 29 powered up (Serial number
SAL1803KQAS)
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MOD_DETECT: Module 21 detected (Serial number
SAL1813NZMB) Module-Type Fabric Module Model N9K-C9516-FM
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MOD_DETECT: Module 22 detected (Serial number
SAL1811NE36) Module-Type Fabric Module Model N9K-C9516-FM
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PWRUP: Module 21 powered up (Serial number
SAL1813NZMB)
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PWRUP: Module 22 powered up (Serial number
SAL1811NE36)
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MOD_DETECT: Module 23 detected (Serial number
SAL1813P9VN) Module-Type Fabric Module Model N9K-C9516-FM
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PWRUP: Module 23 powered up (Serial number
SAL1813P9VN)
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MOD_DETECT: Module 24 detected (Serial number
SAL1811NE3U) Module-Type Fabric Module Model N9K-C9516-FM
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PWRUP: Module 24 powered up (Serial number
SAL1811NE3U)
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MOD_DETECT: Module 25 detected (Serial number
SAL1813NZNB) Module-Type Fabric Module Model N9K-C9516-FM
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PWRUP: Module 25 powered up (Serial number
SAL1813NZNB)
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MOD_DETECT: Module 26 detected (Serial number
SAL1811NE46) Module-Type Fabric Module Model N9K-C9516-FM
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PWRUP: Module 26 powered up (Serial number
SAL1811NE46)
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MODULE_EJECTOR_POLICY_ENABLED: All Ejectors closed
for module 1. Ejector based shutdown enabled
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MOD_DETECT: Module 1 detected (Serial number
SAL1817REUZ) Module-Type 32p 40G Ethernet Module Model N9K-X9432PQ
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PWRUP: Module 1 powered up (Serial number
SAL1817REUZ)
```

```
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MODULE_EJECTOR_POLICY_ENABLED: All Ejectors closed
for module 9. Ejector based shutdown enabled
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MOD_DETECT: Module 9 detected (Serial number
SAL1746G7Y3) Module-Type 48x1/10G-T 4x40G Ethernet Module Model N9K-X9564TX
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PWRUP: Module 9 powered up (Serial number
SAL1746G7Y3)
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MODULE_EJECTOR_POLICY_ENABLED: All Ejectors closed
for module 10. Ejector based shutdown enabled
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MOD_DETECT: Module 10 detected (Serial number
SAL1817REVT) Module-Type 32p 40G Ethernet Module Model N9K-X9432PQ
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PWRUP: Module 10 powered up (Serial number
SAL1817REVT)
2016 Mar 3 04:44:01 switch%$ VDC-1 %$ %PLATFORM-2-MODULE_EJECTOR_POLICY_ENABLED: All Ejectors closed
for module 11. Ejector based shutdown enabled
2016 Mar 3 04:44:02 switch%$ VDC-1 %$ %PLATFORM-2-MOD_DETECT: Module 11 detected (Serial number
SAL1820SKZ1) Module-Type 36p 40G Ethernet Module Model N9K-X9536PQ
2016 Mar 3 04:44:02 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PWRUP: Module 11 powered up (Serial number
SAL1820SKZ1)
2016 Mar 3 04:44:02 switch%$ VDC-1 %$ %PLATFORM-2-MODULE_EJECTOR_POLICY_ENABLED: All Ejectors closed
for module 15. Ejector based shutdown enabled
2016 Mar 3 04:44:02 switch%$ VDC-1 %$ %PLATFORM-2-MOD_DETECT: Module 15 detected (Serial number
SAL1812NTFC) Module-Type 36p 40G Ethernet Module Model N9K-X9536PQ
2016 Mar 3 04:44:02 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PWRUP: Module 15 powered up (Serial number
SAL1812NTFC)
2016 Mar 3 04:44:02 switch%$ VDC-1 %$ %PLATFORM-2-MODULE_EJECTOR_POLICY_ENABLED: All Ejectors closed
for module 16. Ejector based shutdown enabled
2016 Mar 3 04:44:02 switch%$ VDC-1 %$ %PLATFORM-2-MOD_DETECT: Module 16 detected (Serial number
SAL1816QGWW) Module-Type 48x1/10G SFP+ 4x40G Ethernet Module Model N9K-X9464PX
2016 Mar 3 04:44:02 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PWRUP: Module 16 powered up (Serial number
SAL1816QGWW)
2016 Mar 3 04:44:08 switch%$ VDC-1 %$ %PLATFORM-2-MODULE_EJECTOR_POLICY_ENABLED: All Ejectors closed
for module 14. Ejector based shutdown enabled
2016 Mar 3 04:44:08 switch%$ VDC-1 %$ %PLATFORM-2-MOD_DETECT: Module 14 detected (Serial number
SAL1910AP3B) Module-Type 8p 100G Ethernet Module Model N9K-X9408PC-CFP2
2016 Mar 3 04:44:08 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PWRUP: Module 14 powered up (Serial number
SAL1910AP3B)
2016 Mar 3 04:44:09 switch%$ VDC-1 %$ %PLATFORM-2-MODULE_EJECTOR_POLICY_ENABLED: All Ejectors closed
for module 6. Ejector based shutdown enabled
2016 Mar 3 04:44:09 switch%$ VDC-1 %$ %PLATFORM-2-MOD_DETECT: Module 6 detected (Serial number
SAL1910AP4E) Module-Type 8p 100G Ethernet Module Model N9K-X9408PC-CFP2
2016 Mar 3 04:44:09 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PWRUP: Module 6 powered up (Serial number
SAL1910AP4E)
2016 Mar 3 04:44:10 switch%$ VDC-1 %$ %PLATFORM-2-MODULE_EJECTOR_POLICY_ENABLED: All Ejectors closed
for module 8. Ejector based shutdown enabled
2016 Mar 3 04:44:10 switch%$ VDC-1 %$ %PLATFORM-2-MOD_DETECT: Module 8 detected (Serial number
SAL1746G7Y8) Module-Type 48x1/10G-T 4x40G Ethernet Module Model N9K-X9564TX
2016 Mar 3 04:44:10 switch%$ VDC-1 %$ %PLATFORM-2-MOD_PWRUP: Module 8 powered up (Serial number
SAL1746G7Y8)
2016 Mar 3 04:44:56 switch%$ VDC-1 %$ %USBHSD-STANDBY-2-MOUNT: logflash: online
2016 Mar 3 04:47:31 switch%$ VDC-1 %$ %ASCII-CFG-2-CONF_CONTROL: System ready
2016 Mar 3 04:47:51 switch%$ VDC-1 %$ %VMAN-2-ACTIVATION_STATE: Successfully activated virtual service
'guestshell+'
```

```
2016 Mar  3 04:47:51 switch%$ VDC-1 %$ %VMAN-2-GUESTSHELL_ENABLED: The guest shell has been enabled. The
command 'guestshell' may be used to access it, 'guestshell destroy' to remove it.
```

User Access Verification

```
switch# show version
```

Cisco Nexus Operating System (NX-OS) Software

TAC support: <http://www.cisco.com/tac>

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Software

BIOS: version 08.26

NXOS: version 7.0(3)I7(5)

BIOS compile time: 06/12/2016

NXOS image file is: bootflash:///Nxos.7.0.3.I7.5.bin

NXOS compile time: 2/8/2016 20:00:00 [02/09/2016 05:18:17]

Hardware

cisco Nexus9000 C9516 (16 Slot) Chassis (" Supervisor Module")

Intel(R) Xeon(R) CPU E5-2403 0 @ 1.80GHz with 16401664 kB of memory.

Processor Board ID SAL1745FTPW

Device name: switch

bootflash: 20971520 kB

Kernel uptime is 0 day(s), 0 hour(s), 8 minute(s), 13 second(s)

Last reset at 235176 usecs after Thu Mar 3 04:40:48 2016

Reason: Reset due to upgrade

System version: 7.0(3)I1(2)

Service:

plugin

Core Plugin, Ethernet Plugin

```
Active Package(s):  
switch#
```

Downgrade Instructions

The only supported method of downgrading a Cisco Nexus 9000 Series switch is to utilize the install all command. Changing the boot variables, saving the configuration, and reloading the switch is not a supported method to downgrade the switch.

Disable the Guest Shell if you need to downgrade from Cisco NX-OS Release 7.0(3)I7(5) to an earlier release.

- ISSU (non-disruptive) downgrade is not supported.
 - Downgrading with PVLANS (Private VLANs) configured is only supported with Cisco NX-OS 6.1(2)I3(4x) releases.
 - For a boot-variable change and reload to Cisco NX-OS Release 7.0(3)I1(1x), the PVLAN process is not brought up, and the PVLAN ports are kept down. For a boot-variable change to the Cisco NX-OS Release 6.1(2)I3(3) and earlier, an ASCII replay will be tried, but feature PVLANS and other PVLAN configurations will fail.

Software Maintenance Upgrades

For information about software maintenance upgrades, see the “Performing Software Maintenance Upgrades” section in the [Cisco Nexus 9000 Series NX-OS System Management Configuration Guide](#).

Note: If you perform a software maintenance upgrade (SMU) and later upgrade your device to a new Cisco NX-OS software release, the new image will overwrite both the previous Cisco NX-OS release and the SMU package file.

If you are going to apply the patch for the issue described in [CSCvh04723](#), you must make sure that the ACL is deleted before applying the patch. Otherwise, the issue will be seen again. This issue applies only to the ACL which has the redirect keyword in it.

Limitations

This section lists limitations related to Cisco NX-OS Release 7.0(3)I7(5).

- Due to the design of airflow, back-to-front fans requires fan speed to be run at full speed all the time. You might also see fan speeds increase from 40% to 70% post-upgrade. This applies to the following PIDs: N9K-C9272Q, N9K-C9236C, N9K-C93180YC-FX, N9K-C93180TC-FX, N9K-C9364C, N3K-C36180YC-R, N9K-C9336C-FX2, N9K-C9332C. This change is made as of cisco NX-OS Release 7.0(3)I7(3). If your PID is not listed, please contact Cisco TAC for additional verification.
- The following features are not supported on the Cisco Nexus 9364C switch.
 - 100 G port cannot support breakout (HW limitation)
 - FEX
 - Tetratation (HW limitation)

Limitations

- If the speed group is configured, the default interface command displays the following error:

```
Error: default interface is not supported as speed-group is configured
```
- Line rate cannot be sustained across all 36 ports on the 9736C-EX line card.
- Ingress DROP_ACL_DROP is seen with Cisco Nexus 9272Q, 9236C, and 92160YC-X switches on an ASIC during congestion. However, these drops do not impact the performance of the switch.
- Resilient hashing (port-channel load-balancing resiliency) and VXLAN configurations are not compatible with VTEPs using ALE uplink ports. Please note that resilient hashing is disabled by default.
- hardware profile front portmode command is not supported on the Cisco Nexus 9000 Series switches.
- PortLoopback and BootupPortLoopback tests are not supported.
- FEXs configured with 100/full-duplex speed, without explicitly configuring the neighboring device with 100/full-duplex speed, **will not pass data packet traffic properly. This occurs with or without the link appearing to be “up.”**
 - no speed-Auto negotiates and advertises all speeds (only full duplex).
 - speed 100-Does not auto negotiate; pause cannot be advertised. The peer must be set to not auto negotiate (only 100 Mbps full duplex is supported).
 - speed 1000-Auto negotiates and advertises pause (advertises only for 1000 Mbps full duplex).
- The following switches support QSFP+ with the QSFP to SFP/SFP+ adapter (40 Gb to 10 Gb):
 - N9K-C93120TX
 - N9K-C93128TX
 - N9K-C9332PQ
 - N9K-C9372PX
 - N9K-C9372PX-E
 - N9K-C9372TX
 - N9K-C9396PX
 - N9K-C93108TC-EX
 - N9K-C93180YC-EX
 - N9K-C93180YC-FX

Note: The Cisco Nexus 9300 platforms support for the QSFP+ breakout has the following limitations:

- Only 10 Gb can be supported using the QSFP-to-SFP Adapter on 40-Gb uplink ports on Cisco Nexus 9300 platform switches in NX-OS.
- 1 Gb with QSFP-to-SFP Adapter is not supported.
- For the Cisco Nexus 9332PQ switch, all ports except 13-14 and 27-32 can support breakout.

Guidelines and Limitations for Fabric Extenders

- All ports in the QSFP-to-SFP Adapter speed group must operate at the same speed (see the configuration guide).

-
- The following switches support the breakout cable (40 Gb ports to 4x10-Gb ports):

- N9K-C9332PQ
- N9K-X9436PQ
- N9K-X9536PQ
- N9K-C93180LC-EX—last four ports are breakout capable (10x4, 24x4, 50x2)
- N9K-C93180YC-EX
- N9K-C93108TC-EX
- N9K-X9732C-EX line card
- N9K-X9732C-FX line card
- N9K-X97160YC-EX

- Limitations for ALE (Application Link Engine) uplink ports are listed at the following URL:

https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus9000/sw/ale_ports/b_Limitations_for_ALE_Uplink_Ports_on_Cisco_Nexus_9000_Series_Switches.html

Guidelines and Limitations for Fabric Extenders

This section lists configuration guidelines and limitations for the Cisco Nexus 2000 Series Fabric Extenders:

- Post-routed flood is not supported.
- The configuration is purged when:
 - Straight-through FEXs are converted to dual-homed
 - Dual-homed FEXs are converted to Straight-through.
- Conversion from dual-homed FEX to straight-through or straight-through to dual-homed FEX requires a reload of the parent switch.

There are two cases for dual-home to straight-through conversion:

- While the FEX is online: the FEX goes down as a dual-homed FEX on conversion and comes back up as a straight-through FEX. The configuration is purged on bringup.
- While the FEX is offline: the FEX goes down as a dual-homed FEX, then the no vpc id command is entered on the fabric port channel. No configuration purge takes place. In this scenario, default the configuration on FEX interfaces while toggling the mode from active-active to straight-through.

For more information, see the [Cisco Nexus 2000 Series NX-OS Fabric Extender Configuration Guide for Cisco Nexus 9000 Series Switches, Release 7.x](#).

Unsupported Features

Notes regarding unsupported features:

- [Cisco Nexus 3232C and 3264Q Switches](#)
- [Cisco Nexus 9200, 9300-EX, and 9300-FX Platform Switches](#)
- [Cisco Nexus 9408 Line Card and 9300 Series Switches](#)
- [Cisco Nexus 9732C-EX Line Card](#)
- [FEX](#)
- [Other Unsupported Features](#)

Cisco Nexus 3232C and 3264Q Switches

The following features are not supported for the Cisco Nexus 3232C and 3264Q switches:

- 3264Q and 3232C platforms do not support the PXE boot of the NX-OS image from the loader.
- Automatic negotiation support for 25-Gb and 50-Gb ports on the Cisco Nexus 3232C switch
- Cisco Nexus 2000 Series Fabric Extenders (FEX)
- Cisco NX-OS to ACI conversion (The Cisco Nexus 3232C and 3264Q switches operate only in Cisco NX-OS mode.)
- DCBXP
- Designated router delay
- DHCP subnet broadcast is not supported
- Due to a Poodle vulnerability, SSLv3 is no longer supported
- FCoE NPV
- Intelligent Traffic Director (ITD)
- Enhanced ISSU. NOTE: Check the appropriate guide to determine which platforms support Enhanced ISSU.
- MLD
- NetFlow
- PIM6
- Policy-based routing (PBR)
- Port loopback tests
- Resilient hashing
- SPAN on CPU as destination

Unsupported Features

- Virtual port channel (vPC) peering between Cisco Nexus 3232C or 3264Q switches and Cisco Nexus 9300 platform switches or between Cisco Nexus 3232C or 3264Q switches and Cisco Nexus 3100 Series switches
- VXLAN IGMP snooping

Cisco Nexus 9200, 9300-EX, and 9300-FX Platform Switches

The following features are not supported for the Cisco Nexus 9200 platform switches and the Cisco Nexus 93108TC-EX and 93180YC-EX switches:

- 64-bit ALPM routing mode
- Cisco Nexus 9272PQ and Cisco Nexus 92160YC platforms do not support the PXE boot of the NXOS image from the loader.
- ACL filters to span subinterface traffic on the parent interface
- Egress port ACLs
- Egress QoS policer is supported on the Cisco Nexus 9300-EX and 9300-FX platform switches. It is not supported on the Cisco Nexus 9200 platform switch. The only policer action supported is drop. Remark action is not supported on egress policer.
- FEX (supported for Cisco Nexus 9300-EX platform switches but not for Cisco Nexus 9200 platform switches.)
- GRE v4 payload over v6 tunnels
- IP length-based matches
- IP-in-IP on Cisco Nexus 92160 switch
- ISSU enhanced is not supported on the Cisco Nexus 9300-FX platform switch.
- Layer 2 Q-in-Q is supported only on Cisco Nexus 9300-EX platform switches (93108TC-EX and 93180YC-EX) and Cisco Nexus 9500 platform switches with the X9732C-EX line card.
- MTU (Multi Transmission Unit) checks for packets received with an MPLS header
- NetFlow is not supported on Cisco Nexus 9200 platform switches. It is supported on Cisco Nexus 9300-EX and 9300-FX platform switches.
- Packet-based statistics for traffic storm control (only byte-based statistics are supported)
- PVLANS (supported on Cisco Nexus 9300 and 9300-EX platform switches but not on Cisco Nexus 9200 platform switches)
- Q-in-VNI is not supported on Cisco Nexus 9200 platform switches. Beginning with Cisco NX-OS Release 7.0(3)I5(1), Q-in-VNI is supported on Cisco Nexus 9300-EX platform switches.
- Q-in-Q for VXLAN is not supported on Cisco Nexus 9200 and 9300-EX platform switches
- Q-in-VNI is not supported on Cisco Nexus 9200 platform switches (supported on Cisco Nexus 9300-EX platform switches)
- Resilient hashing for ECMP on the Cisco Nexus 9200 platform switches.
- Resilient hashing for port-channel

Unsupported Features

- Rx SPAN for multicast if the SPAN source and destination are on the same slice and no forwarding interface is on the slice
- SVI uplinks with Q-in-VNI are not supported with Cisco Nexus 9300-EX platform switches
- Traffic storm control for copy-to-CPU packets
- Traffic storm control with unknown multicast traffic
- Tx SPAN for multicast, unknown multicast, and broadcast traffic
- VACL redirects for TAP aggregation

Cisco Nexus 9500 Platform N9K-X9408PC-CFP2 Line Card and 9300 Platform Switches

The following features are not supported for the Cisco Nexus 9500 platform N9K-X9408PC-CFP2 line card and Cisco Nexus 9300 platform switches with generic expansion modules (N9K-M4PC-CFP2):

- 802.3x
- Breakout ports
- FEX (this applies to the N9K-X9408PC-CFP2 and -EX switches, not all Cisco Nexus 9300 platform switches)
- MCT (Multichassis EtherChannel Trunk)
- NetFlow
- Only support 40G flows
- Port-channel (No LACP)
- PFC/LLFC
- PTP (Precision Time Protocol)
- PVLAN (supported on Cisco Nexus 9300 platform switches)
- Shaping support on 100g port is limited
- SPAN destination/ERSPAN destination IP
- Storm Control
- vPC
- VXLAN access port.

N9K-X9732C-EX Line Card

The following features are not supported for Cisco Nexus 9508 switches with an N9K-X9732C-EX line card:

- FEX
- IPv6 support for policy-based routing

Related Documentation

- LPM dual-host mode
- SPAN port-channel destinations

FEX

- Cisco Nexus 9300 platform switches do not support FEX on uplink modules (ALE).
- FEX is supported only on the Cisco Nexus 9332PQ, 9372PX, 9372PX-E, 9396PX, 93180YC-EX, and 9500 platform switches (FEX is not supported on the N9K-X9732C-EX line card, and Cisco Nexus 9200 platforms).
- FEX vPC is not supported between any model of FEX and the Cisco Nexus 9500 platform switches as the parent switches.
- IPSPG (IP Source Guard) is not supported on FEX ports.
- VTEP connected to FEX host interface ports is not supported.
- FEX Layer 3 is not supported on the Cisco Nexus 2348TQ-E fabric.

Other Unsupported Features

The following lists other features not supported in the current release:

- IPSPG is not supported on the following:
 - The last six 40-Gb physical ports on the Cisco Nexus 9372PX, 9372TX, and 9332PQ switches
 - All 40G physical ports on the Cisco Nexus 9396PX, 9396TX, and 93128TX switches

Related Documentation

The entire Cisco Nexus 9000 Series NX-OS documentation set is available at the following URL:

<https://www.cisco.com/c/en/us/support/switches/nexus-9000-series-switches/tsd-products-support-series-home.html>

The Cisco Nexus 3164Q Switch - Read Me First is available at the following URL:

https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus3164/sw/6x/readme/b_Cisco_Nexus_3164Q_Switch_Read_Me_First.html

The Cisco Nexus 31128PQ Switch - Read Me First is available at the following URL:

https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus31128/sw/readme/b_Cisco_Nexus_31128PQ_Switch_Read_Me_First.html

The Cisco Nexus 3232C/3264Q Switch - Read Me First is available at the following URL:

https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus3232and3264/sw/7x/readme/b_Cisco_Nexus_3232C_and_3264Q_Switch_Read_Me_First.html

The Cisco Nexus 3000 and 9000 Series NX-API REST SDK User Guide and API Reference is available at the following URL:

Obtaining Documentation and Submitting a Service Request

<https://developer.cisco.com/site/nx-os/docs/n3k-n9k-api-ref/>

The Cisco NX-OS Supported MIBs URL:

<ftp://ftp.cisco.com/pub/mibs/supportlists/nexus9000/Nexus9000MIBSupportList.html>

The *Cisco Nexus 9000 Series FPGA/EPLD Upgrade Release Notes, Release 7.0(3)I7(3)* is available at the following URL:

https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus9000/sw/7-x/epld_rn/guide/nxos_n9K_epldRN_703i73.html

NOTE: This version applies to Release 7.0(3)I7(5).

New Documentation

The *Cisco Nexus 9000 Series NX-OS Verified Scalability Guide, Release 7.0(3)I7(5)* is available at the following URL:

https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus9000/sw/7-x/scalability/guide_703I75/b_Cisco_Nexus_9000_Series_NX-OS_Verified_Scalability_Guide_703I75.html

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

Open a service request online at:

<https://tools.cisco.com/ServiceRequestTool/create/launch.do>

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This product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (<http://www.openssl.org/>). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

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