Cisco Nexus 9000 Series NX-OS Release Notes, Release 10.3(3)F

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Introduction

This document describes the features, issues, and exceptions of Cisco NX-OS Release 10.3(3)F software for use on Cisco Nexus 9000 Series switches.

The Cisco NX-OS Software Strategy and Lifecycle Guide provides details about the new Cisco NX-OS Software Release and Image-naming Convention.

Note: The documentation set for this product strives to use bias-free language. For the purposes of this documentation set, bias-free is defined as language that does not imply discrimination based on age, disability, gender, racial identity, ethnic identity, sexual orientation, socioeconomic status, and intersectionality. Exceptions may be present in the documentation due to language that is hardcoded in the user interfaces of the product software, language used based on RFP documentation, or language that is used by a referenced third-party product.

The following table lists the changes to this document:

Date	Description
April 25, 2024	Added CSCwh50989 to the Open Issues section.
November 14, 2023	Added CSCwf34104 to the Open Issues section.
July 27, 2023	Updated Table 1. Cisco Nexus 9400 Switches
May 8, 2023	Cisco NX-OS Release 10.3(3)F became available

New and Enhanced Software Features

New Features		
Product Impact	**Feature**	**Description**
Security	Port-security support with VXLAN EVPN (Single VTEP)	From Cisco NX-OS Release 10.3(3)F, the L2 port security feature is supported on VXLAN BGP EVPN (single VTEP). See Cisco Nexus 9000 Series NX-OS Security Configuration Guide, Release 10.3(x).
	Configure PKI Certification on CloudSec	You can now create a trust point CA using Public Key Infrastructure (PKI) for cloud security. See Cisco Nexus 9000 Series NX-OS VXLAN Configuration Guide, Release 10.3(x).
Ease of Use	MACsec Cipher key enforcement	The MACsec Cipher key enforcement feature provides you an option to configure the sequence for cipher suites from the most preferred to the least preferred. See Cisco Nexus 9000 Series NX-OS Security Configuration Guide, Release 10.3(x).
Diagnostics and Serviceability	sFlow Consistency Checker	From Cisco NX-OS Release 10.3(3)F, the sFlow Consistency Checker is supported on Cisco Nexus 9808 platform switches. See Cisco Nexus 9000 Series NX-OS Troubleshooting Guide, Release 10.3(x).
Licensing	Ability to select source interface for DNS	From Cisco NX-OS Release 10.3(3)F, you have an option to define a source interface through which the name server can be reached. See Cisco Nexus 9000 and 3000 Series NX-OS Smart Licensing Using Policy User Guide.
	Source interface support for smart transport and CSLU transport	From Cisco NX-OS Release 10.3(3)F, the source interface can be configured for Smart and CSLU modes of transport.

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New Features		
Product Impact	**Feature**	**Description**
		See Cisco Nexus 9000 and 3000 Series NX-OS Smart Licensing Using Policy User Guide.
Feature Set	Extended VRF-ID in NetFlow support on all Cisco Nexus 9000 switches	From Cisco NX-OS Release 10.3(3)F, INGRESS_VRF_ID (support template id 234) is supported on all Cisco Nexus 9000 switches. See Cisco Nexus 9000 Series NX-OS System Management Configuration Guide, Release 10.3(x).
	Multiple followers' support for G8275.2 in Unicast mode	From Cisco NX-OS Release 10.3(3)F, G.8275.2 Telecom profile is supported on Cisco Nexus 9300-FX3 platform switches. This feature provides the following capabilities: • ITU-T precision time protocol (PTP) profile for phase/time distribution with partial timing support from the network (unicast mode) • Support to configure PTP follower (role) on multiple unicast ports • Support for dynamic role with unicast ports See Cisco Nexus 9000 Series NX-OS System Management Configuration Guide, Release 10.3(x).
	VLAN Translation on non-VXLAN topology	Beginning with Cisco NX-OS Release 10.3(3)F, Port VLAN mapping is supported on non-VXLAN VLANs. See Cisco Nexus 9000 Series NX-OS Interfaces Configuration Guide, Release 10.3(x).

The enhanced features listed below are existing features introduced in earlier releases, but enhanced to support new platforms in Cisco NX-OS Release 10.3(3)F.

Enhanced Features		
Product Impact	**Feature**	**Description**
Ease of Setup/Deployment	Default Boot Mode change to LXC	From Cisco NX-OS Release 10.3(3)F, only the LXC mode is supported on Cisco Nexus 9300-FX3 and 9300-GX switches, which allows you to perform enhanced non-disruptive ISSU with minimal downtime. See Cisco Nexus 9000 Series NX-OS Software Upgrade and Downgrade Guide, Release 10.3(x).
Ease of Use	Autocomplete ACL name	You can now use the autocomplete feature to complete the ACL names on Cisco Nexus 9000 Series platform switches. See Cisco Nexus 9000 Series NX-OS Security Configuration Guide, Release 10.3(x).
Security	Expanded support for Type6 password encryption	Type-6 encryption uses stronger AES 128-bit encryption for storing passwords and is now supported for storing passwords for RPM keychain, SNMP, LDP, OSPF, MSDP, PIM, and BGP. See Cisco Nexus 9000 Series NX-OS System Management Configuration Guide, Cisco Nexus 9000 Series NX-OS VXLAN Configuration Guide, Cisco Nexus 9000 Series NX-OS Unicast Routing Configuration Guide, Cisco Nexus 9000 Series NX-OS Multicast Routing Configuration Guide, Cisco Nexus 9000 Series NX-OS Security Configuration Guide, and Cisco Nexus 3000 and 9000 Series NX-API REST SDK User Guide and API Reference for Release 10.3x, and Cisco Nexus 9000 Series NX-OS Verified Scalability Guide, Release 10.3(3)F.

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Enhanced Features		
Product Impact	**Feature**	**Description**
	Nested CA bundle with gNMI	From Cisco NX-OS Release 10.3(3)F, you can group multiple trustpoints under a specific CA bundle and import it. See Cisco Nexus 9000 Series NX-OS Security Configuration Guide, Release 10.3(x).
	NTP Security Enhancements - RFC 8573	In line with the RFC 8573 standards, NTP security is enhanced with the AES128CMAC authentication mechanism along with Type-6 encryption support for authentication keys. See Cisco Nexus 9000 Series NX-OS System Management Configuration Guide, Release 10.3(x).
Programmability	RFC 7589 NETCONF over TLS	You can now configure the NETCONF agent over Transport Layer Security (TLS) to provide secure transport of packets. See Cisco Nexus 9000 Series NX-OS Programmability Guide, Release 10.3(x).
	NGINX proxy for gRPC	From Cisco NX-OS Release 10.3(3)F, NGINX can act as a proxy for gRPC by receiving the gNMI and gNOI requests and passing them onto a gRPC agent. See Cisco Nexus 9000 Series NX-OS Programmability Guide, Release 10.3(x).
Feature Set	Micro-burst Enhancements	In earlier releases, micro-burst configuration was done only in units of bytes and the micro-burst records were exported to uburst bytes database using software telemetry. Beginning with Cisco NX-OS Release 10.3(3)F, along with the existing functionality, micro-burst configuration can also be done in units of percentage and the records are exported to Network Insights Resources (NIR). See Cisco Nexus 9000 Series NX-OS Quality of Service Configuration Guide, Release 10.3(x).
	Unidirectional Ethernet Support	From Cisco NX-OS Release 10.3.3(F), you can use the default Unidirectional Ethernet QoS template to block all the egress traffic on selected ethernet ports to avoid network outage. See Cisco Nexus 9000 Series NX-OS Quality of Service Configuration Guide, Release 10.3(x)
	Enhanced Support for Cisco Application Hosting Framework (CAF)	Cisco Application Hosting Framework (CAF) now supports Cisco Agents on Cisco Nexus 9504 and 9508 platform switches with -R and -R2 Line Cards, and N3K-C36180YC-R, N3K-C3636C-R, and N3K-C36480LD-R2 TORs, and Cisco Nexus 9808 and 9300-FX3 platform switches. See Cisco Nexus 9000 Series NX-OS Programmability Guide, Release 10.3(x).
	Variable mask load-balance config options	The load-balance configuration is enhanced with mask-position option, which allows the users to choose the bits used for load-balancing in user-defined ACL. See Cisco Nexus 9000 Series NX-OS ePBR Configuration Guide, Release 10.3(x).
	Q-in-VNI with Layer 2 Protocol Tunneling	From Cisco NX-OS Release 10.3(3)F, the Q-in-VNI with Layer 2 Protocol Tunneling feature supports EtherType translation. See Cisco Nexus 9000 Series NX-OS VXLAN Configuration Guide, Release 10.3(x).
	BGP Autonomous node IP assignment for container networking	The IPv6 Compute Node IP Auto-Configuration support is provided to assign and distribute the node IP addresses to multi-homed compute nodes and establish reachability to

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Enhanced Features		
Product Impact	**Feature**	**Description**
		Kubernetes (K8s) cluster using the assigned node IP. See Cisco Nexus 9000 Series NX-OS Unicast Routing Configuration Guide, Release 10.3(x).
	SGT forwarding support	Security Group Tags (SGT) forwarding is now supported on Cisco Nexus 9500 switches with N9K-X97160YC-EX Line Card. See Cisco Nexus 9000 Series NX-OS Security Configuration Guide, Release 10.3(x).
	Logging 2.0 Enhancements	From Cisco NX-OS Release 10.3(3)F, default bloggerd auto-collect is supported for, • adjmgr • cts • l2fm • vmtracker See Cisco Nexus 9000 Series NX-OS System Management Configuration Guide, Release 10.3(x).
	TCAM label allocation	The allocation of TCAM label is now supported on Cisco Nexus 9300-FX3 platform switches. See Cisco Nexus 9000 Series NX-OS Quality of Service Configuration Guide, Release 10.3(x).
	iCAM Support for NDFC/NDI	From Cisco NX-OS Release 10.3(3)F, iCAM is supported on Cisco Nexus 9808 platform switches. See Cisco Nexus 9000 Series NX-OS iCAM Configuration Guide, Release 10.3(x).
	ITD and ePBR with L3VNI interface	From Cisco NX-OS Release 10.3(3)F, the ITD and ePBR with L3VNI interface allow you to do the following: • Apply an ePBR Layer 3 policy on a new L3VNI interface. • Configure a new L3VNI interface type as an ingress interface for both IPv4 and IPv6 services. See Cisco Nexus 9000 Series NX-OS ePBR Configuration Guide and Cisco Nexus 9000 Series NX-OS Intelligent Traffic Director Configuration Guide, Release 10.3(x).
	Option to prioritize storm control policer over L3 control packet policers	The Cisco NX-OS Release 10.3(3)F introduces the **system storm-control priority-policy drop-l3** command to prioritize the storm-control policer over the CoPP policer for Layer 3 control frames. See Cisco Nexus 9000 Series NX-OS Security Configuration Guide, Release 10.3(x).
	ECMP Hash key not set for ECMP routes	From Cisco NX-OS Release 10.3(3)F, the **hardware** keyword is added to the **ip load-sharing address** command to enable underlay and overlay load balancing between two different ECMP VXLAN routes. See Cisco Nexus 9000 Series NX-OS Unicast Routing Configuration Guide, Release 10.3(x).
	IPV6 underlay - VXLAN Access features	From Cisco NX-OS Release 10.3(3)F, IPv6 underlay is supported for the following features: PVLAN, Dot1X, Port Security, Port VLAN, QinVNI, Selective QinVNI and QinQ-QinVNI, and Port VLAN Translation. See Cisco Nexus 9000 Series NX-OS VXLAN Configuration

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Enhanced Features		
Product Impact	**Feature**	**Description**
		Guide.
	Policy Based Routing: Next hop over tunnel	From Cisco NX-OS Release 10.3(3)F, the Policy Based Routing next-hop redirecting to a tunnel interface is supported. See Cisco Nexus 9000 Series NX-OS Unicast Routing Configuration Guide, Release 10.3(x).
	PBR for tunnel interface	From Cisco NX-OS Release 10.3(3)F, the Policy Based Routing policy on a tunnel interface is supported only for GRE or ipip mode. See Cisco Nexus 9000 Series NX-OS Interfaces Configuration Guide, Release 10.3(x).
	PBR Default NH -Sequential Preference	From Cisco NX-OS Release 10.3(3)F, you can redirect the default route match to next-hop on Cisco Nexus 9300-EX, 9300-FX, 9300-FX2, and 9300-GX platform switches. See Cisco Nexus 9000 Series NX-OS Unicast Routing Configuration Guide, Release 10.3(x).
Scalability	Scale Enhancements	For Cisco NX-OS Release 10.3(3)F Scale Enhancements, see Cisco Nexus 9000 Series NX-OS Verified Scalability Guide, Release 10.3(3)F.

Hardware Features

There are no new hardware features introduced in Cisco NX-OS Release 10.3(3)F.

For details about transceivers and cables that are supported on a switch, see the Transceiver Module (TMG) Compatibility Matrix.

Unsupported Features on N9K-C92348GC

Beginning with Cisco NX-OS Release 10.1(1), the following features are not supported on N9K-C92348GC:

- VXLAN
- SW/HW Telemetry
- NetFlow/Analytics
- iCAM
- PTP
- NX-SDK
- DME, Device YANG, OpenConfig YANG, gRPC, NETCONF, and RESTCONF

Note: NXAPI CLI and XML Agent (NETCONF over SSH) are supported on this platform.

Release Image

In Cisco NX-OS Release 10.3(3)F, the following two 64-bit images are supported:

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- The 64-bit Cisco NX-OS image filename with " nxos64-cs" as the prefix (for example, nxos64-cs.10.3.3.F.bin) is supported on all Cisco Nexus 9000 series switches except Cisco Nexus 9500 -R and -R2 switches and cards.
- The 64-bit Cisco NX-OS image filename with " nxos64-msll" as the prefix (for example, nxos64-msll.10.3.3.F.bin) is supported on Cisco Nexus 9000 -R and -R2 series modular switches.

The 32-bit image is no longer supported.

Open Issues

Bug ID	Description
CSCwf34104	Headline: SMU not installed after switch reload/panic/smu-install reload Symptoms: The symptoms are as follows: 1. Nexus 9000 Switch is running 10.3(3) and has any SMUs committed. Example: Swich_Name# show install committed Boot Image: NXOS Image: bootflash:///nxos64-cs.10.3.3.F.bin Committed Packages: nxos64-cs.CSCwf61602-1.0.0-10.3.3.lib32_64_n9000 committed 2. Committed SMUs may not be activated after reload due to power-cycle, software reload. Below command will show the SMU will be Inactive Committed (wrong signature) Switch_Name# show install patches Boot Image: NXOS Image: bootflash:///nxos64-cs.10.3.3.F.bin nxos64-cs.CSCwf61602-1.0.0-10.3.3.lib32_64_n9000 Inactive Committed (wrong signature) Workarounds: When Inactive Committed (wrong signature) is present, reload again to re-commit the SMU.
CSCvw16064	Headline: NX-OS to be conformed with RFC 5424 (NILVALUE for STRUCTURED-DATA and MSGID fields) Symptoms: In all Cisco NX-OS versions, the implementation of syslog does not follow RFC 5424 leading to following problems: • Adding NILVALUE for STRUCTURED-DATA field as we don't have structured data currently in syslog messages. RFC 5424:6.3. STRUCTURED-DATA In case of zero structured data elements, the STRUCTURED-DATA field MUST contain the NILVALUE. • Adding NILVALUE for MSGID in syslog header as this must be there if no data is available for MSGID. For the rest fields like APP-NAME, PROCID NILVALUE is not mandatory. Workarounds: None
CSCvz06811	Headline: Nexus Data Broker switch floods IGMPv3 membership queries out of all input ports. Symptoms: IGMP membership queries are flooded out of monitoring ports. IGMP storms (due to

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Bug ID	Description
	queries) are forwarded from Nexus Data Broker Switch to production network. Workarounds: Filter the IGMP with an access list.
CSCwd86261	Headline: NFM crash causes the N9K-C9336C-FX2 to reboot unexpectedly. Symptoms: Unexpected reload of the switch without any special configurations or new exporters. Workarounds: None
CSCwd68210	Headline: After upgrading Cisco Nexus 9500, Cisco Nexus 9000, and Cisco Nexus 3000 Switch 100Gig Interface does not come up. Symptoms: Interface doesn't come up after upgrading Nexus 9500 from Cisco NX-OS Release 9.3(4) to 9.3(8). SFP used is the QSFP-100G-CWDM4-S Link between Nexus 9000: N9K-X9736C-FX and leaf: N3K-C36180YC-R. Workarounds: None
CSCwd75778	Headline: Unable to connect to gRPC port 50051 in non-default vrf. Symptoms: Unable to connect to gRPC port 50051 in non-default vrf with MPLS path. Telnet to port 50051 also fails. Workarounds: None
CSCwd85841	Headline: NX-OS SNMP does not respond to CISCO-ENTITY-FRU-CONTROL-MIB for N9K-C9508-FAN-PWR. Symptoms: No response to snmp OID 1.3.6.1.4.1.9.9.117.1.2.1.1.2 for 9K-C9508-FAN-PWR modules. Workarounds: None
CSCwd88006	Headline: Cisco Nexus 9500 switch sends the epld_upgrade snmp trap. Symptoms: Cisco Nexus 9500 switch sends the epld_upgrade snmp trap. Workarounds: None
CSCwd75851	Headline: /nxos/xlog is filled 100% with repeated copy run start and log files are not rolled over. Symptoms: When configuration changes are automated and multiple sessions try to save the configuration changes simultaneously and repeatedly, a syslog is seen. Workarounds: Avoid simultaneous configuration sessions and excessive/repeated config save operation.
CSCwd86342	Headline: SPAN traffic received from Cisco Nexus 9300 switch is dropped on Cisco Nexus 3548 switch. Symptoms: SPAN is configured on Cisco Nexus 9000 switch, and the SPAN destination interface is configured to Cisco Nexus 3548 switch. The Cisco Nexus 3548 switch receives and drops traffic. The drops are verified using the show hardware internal errors module 1 command. However, SPAN/ERSPAN traffic that the Cisco Nexus 3548 switch should have received is not seen. Workarounds: To resolve the issue, replace Cisco Nexus 9000 with Cisco Catalyst or add a Cisco Catalyst switch in between the Cisco Nexus 9000 and Cisco Nexus 3000 switches.
CSCwd41247	Headline: samcproxy is deadlocked with multiple Instances. Symptoms: Configuration or simple tasks such as turning on a locator LED do not complete. Multiple instances of samcproxy running are seen, and one is in a deadlocked state. There may also be other miscellaneous faults on the domain, due to samcproxy being in a bad state. Workarounds: Contact Cisco TAC for a workaround as this requires debug shell access.

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Bug ID	Description
CSCwd77505	Headline: MAC Address Not Learned on Peer 6332 FI. Symptoms: The host experiences a failover event or the VM is migrated to a different host, and the network connectivity to that VM is lost. Workarounds: Contact Cisco TAC for workarounds.
CSCwd90085	Headline: SNMPD Hap Reset causes unexpected outages. Symptoms: Fabric Interconnect goes down without warning and snmpd hap reset is present in the output of the show system reset-reason command. Workarounds: Fabric Interconnect often reboots after it goes down, bringing the paths back up after the reset is completed.
CSCwe20605	Headline: Encrypted tunnel (VXLAN Cloudsec) traffic is getting dropped on Cisco Nexus 9300-FX3 switch. Symptoms: After upgrading Cisco Nexus 9300-FX3 switch to Cisco NX-OS Release10.3(2)F image, few or all encrypted tunnel traffic is dropped. VXLAN Cloudsec or tunnel encryption statistics do not update. Workarounds: The workaround is as follows: 3. Remove tunnel-encryption from DCI uplinks. 4. Copy running-config startup-config. 5. Reload the switch. 6. Post reload, configure tunnel-encryption on DCI uplinks.
CSCwe43450	Headline: Unexpected Kernel panic post ISSU from Cisco NX-OS Release 9.3(6) to 9.3(9). Symptoms: After ND-ISSU from Cisco NX-OS Release 9.3(6) to 9.3(9), an unexpected reload due to kernel panic is noticed in POE devices. This symptom can be verified by running either the sh logging onboard internal reset-reason command or the sh system reset-reason command. The output shows Reset Requested due to Fatal Module Error. Workarounds: None
CSCwe70792	Headline: Device reboots with kernel panic error. Symptoms: Unexpected reboot. Logs show absence of cores or stack-traces. Workarounds: None
CSCwe72356	Headline: FEXes keep disconnecting from parent switch. Symptoms: N9K-C93180YC-FX running Cisco NX-OS Release 9.3(10) with four third-party FEXes keeps getting disconnected, and sysmgr core files are generated. Workarounds: None
CSCwe74799	Headline: Input errors generated when connecting to 1G Broadcom NIC. Symptoms: Input errors in the form of Runts and CRC are generated when the N9K-C93108TC-EX connects to 1G Broadcom NICs, specifically BCM5720 and BCM5719 Gigabit Ethernet NICs. Workarounds: None
CSCwe78470	Headline: The QSFP-DD-400G-AOC link randomly flap in steady state on Cisco Nexus 9300-GX and 9300-GX2B switches. Symptoms: Random link flaps (approximately once a month) take place in a steady state on Cisco Nexus 9300-GX2B-based device using QSFP-DD-400G-AOC cable. Port is configured as Layer 3. Workarounds: None

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Bug ID	Description
CSCwe81696	Headline: 100M links with the use of GLC-T/GLC-TE transceivers do not come up in Cisco NX-OS Release 10.2(4), 10.2(5), and 10.3(2). Symptoms: Links with 100M speed do not come up and remain in a Link not connected status. Workarounds: None
CSCwe81844	Headline: MACsec process is stuck. Symptoms: On Cisco NX-OS Release 10.2(4)M, at the first instance, MACsec works properly but after a switch reboot, the MACsec process gets stuck. Workarounds: Execute the macsec shutdown command and then the no macsec shutdown command on the switch that was rebooted.
CSCwe85882	Headline: The show run command output doesn't show diagnostic monitor interval module 27 test PrimaryBootROM after upgrade. Symptoms: After upgrading from Cisco NX-OS Release 7x to 9.3x, the show run command output doesn't show diagnostic monitor interval module 27 test PrimaryBootROM. Workarounds: Re-configure diagnostic monitor interval module 27 test PrimaryBootROM.
CSCwf12345	Headline: Seeing intermittent traffic drops during ND_ISSU for 4-5 seconds for FCoE hosts. Symptoms: During non-disruptive upgrade from Cisco NX-OS Release 10.3(1) or 10.3(2) to 10.3(3), intermittent traffic disruption is seen on FCoE hosts. Traffic switches over to available alternate path and then switches back. Workarounds: For upgrades from Cisco NX-OS Release 10.3(1) or 10.3(2) to 10.3(3), you can configure the holdtimer in LLDP to be of 255 (max value) using the following global command and then initiate upgrade: lldp holdtime 255.
CSCwf21754	Headline: After the reload ascii command, VRF ID always points to default when traffic flow is through the SVI interface. Symptoms: When the Cisco Nexus 9500 switch is reloaded with the reload ascii command, the netflow export sends ingressVRF-id as default VRF-id (1) Workarounds: Reload the switch.
CSCwf24420	Headline: Need to disable PIE feature and command from Cisco Nexus 9808 switches. Symptoms: PIE commands do not show right output for fan, power supply, and optics. Workarounds: None
CSCwh50989	Headline: Custom COPP causing transit traffic to be punted to the CPU on Nexus 9300-GX2 Symptoms: When custom-COPP policy contains ACL rules which match on Layer 4 destination or source port, transit traffic also hits the COPP and the packets are copied to CPU. This causes duplication of traffic as CPU also routes the copied packets to the destination. Workarounds: Custom COPP policy using src/dst match mitigates punt for transit traffic.

Resolved Issues

Bug ID	Description
CSCvq06451	Headline: Remove CLI to configure Fill Pattern as only IDLE is supported. Symptoms: The switchport fill-pattern is not a supported configuration on Cisco Nexus 9000 switches; only IDLE patterns are supported. Hence, the configuration CLI gets removed. Workarounds: None

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Bug ID	Description
CSCvj48376	Headline: STP does not converge with overlapping VLANs MST PVRST mode Symptoms: When Port VLAN mapping is configured for VXLAN VLANs, overlapping VLAN mappings cause the system to send BPDUs to the wrong VLAN. Workarounds: Although overlapping VLAN mapping is supported, do not implement Port VLAN mapping in this way for the affected NX-OS releases.
CSCvw60409	Headline: HSRP vmac is not cleared and remains as static entry after shutting down SVI. Symptoms: On a Cisco Nexus 9000 switch running HSRP, when SVI is shut down on the active HSRP switch, HSRP vmac does not get cleared and remains as a static entry. This can cause traffic disruption. Workarounds: Remove the HSRP configuration from SVI and then shut down SVI as follows: switch(config-if)# no hsrp 1 ipv4 switch(config-if)# no hsrp 1 ipv6
CSCvz67451	Headline: Bootflash lifetime usage threshold syslog has incorrect usage value in show command. Symptoms: The following syslog appears when the switch reaches a lifetime usage value of 95% on the bootflash. PLATFORM-2-BOOTFLASH_LIFETIME_MAJOR: Bootflash lifetime usage crossed 95%. Collect 'show hardware internal bootflash log' and consult with product support team. When the recommended command is checked, the output has inaccurate usage percentages, making it difficult to determine if the syslog is correct or the switch has an issue. Workarounds: None
CSCwc44309	Headline: Cisco Nexus 9300 single NAT without AU breaks passive data FTP session flow after a successful initial start. Symptoms: Passive FTP session data transfer does not complete. Workarounds: None
CSCwc98298	Headline: Cisco Nexus 9300 NAT does not translate tcp flow packets randomly. Symptoms: Packets of random tcp flow are sometimes sent untranslated in an in-out direction. Workarounds: None
CSCwd05450	Headline: PVLAN and port flap issue. Symptoms: The vPC member port on Secondary vPC peer gets flapped after associating, adding, or configuring a secondary PVLAN to the primary PVLAN when the vPC member port is configured as a promiscuous PVLAN port. Workarounds: None
CSCwd29257	Headline: IPv6 OSPF ECMP route does not show both routes as best. Symptoms: IPv6 OSPF ECMP route does not show both routes marked with asterisk (*) as best, only one route gets marked with the asterisk (as best). Thus, the route from one neighbor shows up with the asterisk and the route from the other neighbor does not. Workarounds: Clear the IPv6 route as follows: #clear ipv6 route 2001:fb1::/48
CSCwd41354	Headline: The grpcnxsdk work thread is not released properly. Symptoms: The observation is that there exists an ongoing gNMI 5-second sample subscription for System/ptp-items/ephoper-items/pastcorrections-items/PtpEphCorrection-list. When this path is queried, the path itself does not let the gNMI SET to take place. 1. The repetitive queries every 5 second of this path triggers a bug, which prevents the

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Bug ID	Description
	query itself from finishing. 2. Then the next gNMI SET is blocked due to this unfinished query. 3. The client script times out and sends more SET requests, which only pile up and use up the max limit of 16 sessions. Workarounds: Kill the grpcnxsdk process to recover automatically and make further queries.
CSCwd42595	Headline: Output of the show spanning-tree root command no longer shows " This bridge is root" for non-vPC VLANs. Symptoms: When upgrading to Cisco NX-OS Release 9.3(10), the output of the show spanning-tree root command does not indicate if the bridge is root for non-vPC VLANs. Additionally, on both vPC Peers, the Bridge ID can use the local system-mac in place of the vPC system-mac. Also, the output of show spanning-tree vlan command can show cost and port as 0. Workarounds: None
CSCwd53084	Headline: SNMP does not return any value. Symptoms: On Cisco NX-OS Release 9.3(5) and later, snmp get/walk to Cisco Nexus 9000 stops working and returning empty values or a message that the OID does not exist even if OID is present and populated on the system. Workarounds: Restart the SNMP process. If the issue repeats, restart again.
CSCwd81099	Headline: CLI CR fails with default radius server configuration. Symptoms: The symptoms are as follows: • CLI Config-Replace fails with the default radius server group • The default radius entry is shown in the running-config even after defaulting/removing its children configuration Workarounds: Use the non-default AAA group.
CSCwd81153	Headline: Cisco Nexus 9000 GX2 :: Core while configuring max Source interfaces in SPAN Symptoms: Adding sup-eth0 to monitor session source when there are already 31 physical source interfaces can lead to monitor session crash and reload of the box. Workarounds: Avoid configuring maximum sources or putting sup-eth0 in source list.
CSCwd83094	Headline: LACP rate configuration causes the config replace operation to fail. Symptoms: If the existing port is in a port-channel and admin up, and the desired configuration on the same port needs to change lacp rate, then this causes the config replace operation to fail and the following error is seen in the output of the show config-replace log exec command: 'interface Ethernet1/1' `lacp rate fast` ERROR: Command validation failed. Cannot set lacp rate. Port is not admin down in port-channel. Workarounds: Shut down the conflicting port before attempting config replace again.
CSCwd85017	Headline: Rx Pause enabled in the hardware even when flowcontrol is disabled in software causes pause frames to be honoured. Symptoms: The following symptoms are seen: • Rx Pause enabled in hardware even when flow-control is disabled in software causes pause frames to be honored. • As these pause frames are honored in the hardware, this can cause packet drops or performance issues for both Unicast and Multicast Traffic. Workarounds: None. BCM registers are enabled by default and with software help it is not

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Bug ID	Description
	possible to override it on the go.
CSCwd87170	Headline: snmpbulkget to ciscoEntityFRUControlMIB creates invalid unicode in show snmp internal event-his pktdump Symptoms: Unicode Symbols are seen in snmp packet buffer dump when executing FRUget snmpbulkget. Workarounds: Choose any one of the following workarounds: • Execute snmpbulkget with two instances rather than more than two instances. • Avoid using the show system internal snmp event-history pktdump command.
CSCwd92065	Headline: The start time and end time exported in NetFlow show incorrect values. Symptoms: Wrong timestamp is seen in the NetFlow exported data, where the time is ahead of the actual time or the system uptime. Workarounds: None
CSCwe05630	Headline: NXA-PAC-650W PSU is reported as shutdown but is still operational. Symptoms: Power supplies (including NXA-PAC-650W-PE/PI or NXA-PAC-500W-PE/PI) can be seen reported as shutdown while continuing to operate normally as per the output of the show environment power detail command. During the issue, the OK LED is seen to be either green or flashing green, and the Fault LED is seen to be off. Workarounds: Perform the following PSU OIR steps to clear the incorrect status: 1. Remove power cables from PSU2. 2. Wait for 2 minutes. 3. Remove PSU from chassis. 4. Wait for 2 minutes. 5. Insert PSU into chassis. 6. Wait for 2 minutes. 7. Connect power cables to PSU. The reason behind this long wait time is that the power supply capacitors hold enough power to keep registers in the same state.
CSCwe14182	Headline: ipfib crashes while using the show system internal forwarding table <> command. Symptoms: The show system internal forwarding table <> command triggers a crash of the ipfib process on a Cisco Nexus 9000 switch running Cisco NX-OS Release 9.3(10) or 10.2(4)M. Workarounds: Avoid using the show system internal forwarding table <> command.
CSCwe14849	Headline: Unexpected reload due to tahusd segmentation fault in Timer Code. Symptoms: A Cisco Nexus 9000 switch can reboot unexpectedly due to tahusd process crash, resulting from a segmentation fault, and a reset reason and error log are generated. Workarounds: None
CSCwe25343	Headline: Cisco Nexus 9000 VXLAN virtual peer-link tunnel recovery failure. Symptoms: After a specific failure of the virtual peer-link the tunnel used to traverse the CFS traffic can fail to recover after the virtual peer-link is brought back up. The virtual peer-link shows UP. However, VLANS forwarding over the peer-link does not take place and CFS traffic does not make it through the tunnel.

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Bug ID	Description
	Workarounds: Flapping the uplinks that are used to build the virtual peer-link forces the virtual peer-link to re-initialize and recover from this state. If flapping the uplinks does not recover the peer-link, a reload is required.
CSCwe29679	Headline: Cisco N93108TC-FX3P triggers high clock offset spike during GM failover in PHY PTP mode. Symptoms: When switching over from Master or passive port to slave, high correction occurs for some time. Workarounds: None. However, the corrections settle down after some time (max 5 mins).
CSCwe31550	Headline: LPM entry gets stuck after multiple BGP withdraws. Symptoms: In an ECMP environment where the BGP prefixes have constant withdraws, it is possible for the single entries (no ECMP) to get stuck in the LPM table. Consequently, the ECMP entry ends up installed at the end and deferred, because the first or the older entry is honored. Workarounds: Choose any one of the following workarounds: • Clearing the route works as a temporary workaround, as this forces NX-OS to put the ECMP entry at the top. However, another withdraw can occur leading to the same condition. clear ip route x.x.x.x/x • Clearing the LPM entry works as a better workaround. However, if the constant withdraws continue the same condition can recur. Attach module 1 ; clear hardware internal tah l3 ipv4 tcam-bank z tcam-index y ldx | vrf | ip/len | mpath | nump | base/l2ptr |cc|sr|dr|td|dc|de|li|hr| ----------|---------|-------------------------------|-------|-------|------------|--|--|--|--|--|--|--|--| Z/Y | 1 | x.x.x.x/x | 1 | 2 | 0x---------- | | | | | | | |
CSCwe31997	Headline: Cisco Nexus C93360YC-FX2 FC interface randomly reset or error disabled by peer switch. Symptoms: FC link throughput is degraded, or the link is error disabled by the peer switch. This issue can be confirmed on the peer switch when it logs the E_LINK_RXBUF_NOT_AVAIL events for the affected FC interface. These events trigger the peer to send Link Reset to reset the credits on the interface. Workarounds: None
CSCwe33279	Headline: Archive configuration is missing after upgrade from Cisco NX-OS Release 9.3(10) to 10.2(4)M. Symptoms: After upgrading from Cisco NX-OS Release 9.3(10) to 10.2(4)M, the archive configuration is lost. • Archive • path bootflash:archive/xxxxxxx • time-period 10 • maximum 14 Workarounds: Migrate to Cisco NX-OS Release 10.2(5)M instead of 10.2(1)F, 10.2(2)F, 10.2(3)F, or 10.2(4)M.
CSCwe34915	Headline: Cisco Nexus 92348GC consumes -XF license instead of -GF license. Symptoms: Cisco Nexus 92348GC platform should consume GF licenses; instead, it is consuming XF licenses, when respective features are enabled. Workarounds: None
CSCwe35981	Headline: Unicast route create fails and Cisco Nexus 9000 tahusd crashes. Symptoms: Cisco Nexus 9000 switch running with LPM-heavy mode has Unicast route create

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Bug ID	Description
	failure resulting in failed logs. After a second, service tahusd also crashes. Workarounds: None
CSCwe38874	Headline: Certain interfaces show input/output rate as 0pps on Cisco Nexus 9300-GX platform switch. Symptoms: Certain interfaces show input/output rate as 0pps on Cisco Nexus 9300-GX platform switch without any operations. Workarounds: Perform the following workaround to clear the issue: 1. Flap one of the ports. 2. Reactivate the DMA state with internal commands. 3. Connect a new terminal to the port to which the DMA Group belongs to reactivate the DMA Group.
CSCwe41298	Headline: The xbar multicast show command causes 300 MB of memory to be allocated. Symptoms: Executing the show system internal xbar multicast_id all command, results in no output. However, 300 MB of memory is allocated to XBM_MEM_xbm_mcast_group_info_t. Workarounds: Clear the memory allocation by reloading the switch. Then avoid running the show system internal xbar multicast_id all command, and also commands such as show tech-support details.
CSCwe48938	Headline: The show spanning-tree internal info global command output is truncated at SWOVER Timeout. Symptoms: The show spanning-tree internal info global command does not show the full output. The output stops at the following line: SWOVER Timeout (sec). Once this issue comes up, the issue repeats. Workarounds: None
CSCwe52736	Headline: Cisco Nexus 9300 NBM-related syslog does not comply with standard NX-OS syslog format. Symptoms: NBM error messages get logged too frequently. Workarounds: None
CSCwe60434	Headline: Cisco Nexus 9000: urib core seen leaving only local routes on switch Symptoms: Cisco Nexus 9000 running the impacted code keeps running but leads to urib process crash. The switch remains up but as this process operated the Unicast RIB table, routing information is lost for a short moment. The tables are repopulated, and normal operation should resume. Workarounds: Restart the BGP process to get out of the problem state. Instead of using the non-cached ip route commands, use any one of the following commands (as applicable) through Netconf: • show ip route summary cached vrf all • show ipv6 route summary cached vrf all
CSCwe67953	Headline: Error or incorrect result when computing multiple file hashes simultaneously. Symptoms: The Cisco Nexus 9000 switch can throw an error when multiple file hashes are being computed at the same time by multiple SSH sessions: ck.out Empty / cksum or md5sum or sha256sum or sha512 calculation Error. Alternatively, the wrong hash can be reported for some of the computed files. Workarounds: Wait for File A to hash before starting the hash for File B.

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Bug ID	Description
CSCwe72406	Headline: Show commands collected through NX-API have missing character with 8k fastcgi buffers. Symptoms: Cisco Nexus 93240YC-FX2 running on Cisco NX-OS Release 10.2(2a) uses 8k fastgci buffers by default. When large outputs are requested from REST, errors are consistently seen where the 8076th character is missing. Workarounds: None
CSCwe72645	Headline: Cisco Nexus 9000 Switch reloads due to tahusd memory leak. Symptoms: Cisco Nexus 9000 switch reloads due to a memory leak in the tahusd process. Workarounds: No workaround to prevent the memory leak. However, reload the switch to clear the memory leak.
CSCwe79884	Headline: Stuck MDIO access with BV ports leads to missed HBs and USD kill. Symptoms: Tahusd process crashes resulting in box reload. Workarounds: None

Device Hardware

The following tables list the Cisco Nexus 9000 Series hardware that Cisco NX-OS Release 10.3(3)F supports. For additional information about the supported hardware, see the Hardware Installation Guide for your Cisco Nexus 9000 Series device.

Table 1. Cisco Nexus 9400 Switches

Product ID	Description
N9K-C9408	4-rack unit (RU) 8-slot LEM-based modular chassis switch, which is configurable with up to 128 200-Gigabit QSFP56 (256 100-Gigabit by breakout) ports or 64 400-Gigabit ports.
N9K-C9400-SUP-A	Cisco Nexus 9400 Supervisor Card
N9K-C9400-SW-GX2A	Cisco Nexus 9400 25.6Tbps Switch Card
N9K-X9400-8D	Cisco Nexus 9400 8p 400G QSFP-DD LEM
N9K-X9400-16W	Cisco Nexus 9400 16p 200G QSFP56 LEM

Note: N9K-C9400-SW-GX2A Sup card ports 2xSFP Eth10/1-2 are not supported in Cisco NX-OS Release 10.3(2)F and 10.3(3)F.

Table 2. Cisco Nexus 9800 Switches

Product ID	Description
N9K-C9808	16-RU modular switch with slots for up to 8 Line Cards in addition to two supervisors, 8 fabric modules, 4 fan trays, and 3 power trays.

Table 3. Cisco Nexus 9800 Series Line Cards

Product ID	Description
N9K-X9836DM-A	Cisco Nexus 9800 36-port 400G QSFP-DD Line Card with MACsec.

Table 4. Cisco Nexus 9800 Series Fabric Modules

Product ID	Description
N9K-C9808-FM-A	Cisco Nexus 9800 Fabric Module with for 8-slot Chassis

Table 5. Cisco Nexus 9800 Supervisor Module

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Product ID	Description	Quantity
N9K-C9800-SUP-A	Cisco Nexus 9800 Platform Supervisor Module	*

Table 6. Cisco Nexus 9800 Fans and Fan Trays

Product ID	Description	Quantity
N9K-C9808-FAN-A	Cisco Nexus 9800 8-slot chassis fan tray (1st Generation)	4

Table 7. Cisco Nexus 9800 Power Supplies

Product ID	Description	Quantity	Cisco Nexus Switches
NXK-HV6.3KW20A-A	Cisco Nexus 9800 6,300W 20A AC and HV Power Supply	9 (3 per tray)	Cisco Nexus 9808

Table 8. Cisco Nexus 9500 Switches

Product ID	Description
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.
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.
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 9. Cisco Nexus 9500 Cloud Scale Line Cards

Product ID	Description	Maximum Quantity		
		Cisco Nexus 9504	Cisco Nexus 9508	Cisco Nexus 9516
N9K-X9716D-GX	Cisco Nexus 9500 16-port 400G QSFP-DD Line Card	4	8	N/A
N9K-X9736C-FX	Cisco Nexus 9500 36-port 40/100 Gigabit Ethernet QSFP28 Line Card	4	8	16
N9K-X9788TC-FX	Cisco Nexus 9500 48-port 1/10-G BASE-T Ethernet and 4-port 40/100 Gigabit Ethernet QSFP28 Line Card	4	8	16
N9K-X97160YC-EX	Cisco Nexus 9500 48-port 10/25-Gigabit Ethernet SFP28 and 4-port 40/100 Gigabit Ethernet QSFP28 Line Card	4	8	16
N9K-X9732C-FX	Cisco Nexus 9500 32-port 40/100 Gigabit Ethernet QSFP28 Line Card	4	8	16
N9K-X9732C-EX	Cisco Nexus 9500 32-port 40/100 Gigabit Ethernet QSFP28 Line Card	4	8	16
N9K-X9736C-EX	Cisco Nexus 9500 36-port 40/100 Gigabit Ethernet QSFP28 Line Card	4	8	16

Table 10. Cisco Nexus 9500 R-Series Line Cards

Product ID	Description	Maximum Quantity	
		Cisco Nexus 9504	Cisco Nexus 9508
N9K-X9636C-R	Cisco Nexus 9500 36-port 40/100 Gigabit Ethernet QSFP28 Line Card	4	8
N9K-X9636C-RX	Cisco Nexus 9500 36-port 40/100 Gigabit Ethernet QSFP28 Line Card	4	8
N9K-X9636Q-R	Cisco Nexus 9500 36-port 40 Gigabit Ethernet QSFP Line Card	4	8
N9K-X96136YC-R	Cisco Nexus 9500 16-port 1/10 Gigabit, 32-port 10/25 Gigabit, and 4-port 40/100 Gigabit Ethernet	4	8

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Product ID	Description	Maximum Quantity	
		Cisco Nexus 9504	Cisco Nexus 9508
	Line Card		
N9K-X9624D-R2	Cisco Nexus 9500 24-port 400 Gigabit QDD Line Card	Not supported	8

Table 11. Cisco Nexus 9500 Cloud Scale Fabric Modules

Product ID	Description	Minimum	Maximum
N9K-C9504-FM-E	Cisco Nexus 9504 100-Gigabit cloud scale fabric module	4	5
N9K-C9504-FM-G	Cisco Nexus 9500 4-slot 1.6Tbps cloud scale fabric module	4	5
N9K-C9508-FM-E	Cisco Nexus 9508 100-Gigabit cloud scale fabric module	4	5
N9K-C9508-FM-E2	Cisco Nexus 9508 100-Gigabit cloud scale fabric module	4	5
N9K-C9508-FM-G	Cisco Nexus 9500 8-slot 1.6Tbps cloud-scale fabric module	4	5
N9K-C9516-FM-E2	Cisco Nexus 9516 100-Gigabit cloud scale fabric module	4	5

Table 12. Cisco Nexus 9500 R-Series Fabric Modules

Product ID	Description	Minimum	Maximum
N9K-C9504-FM-R	Cisco Nexus 9504 100-Gigabit R-Series fabric module	4	6
N9K-C9508-FM-R	Cisco Nexus 9508 100-Gigabit R-Series fabric module	4	6
N9K-C9508-FM-R2	Cisco Nexus 9508 400-Gigabit R-Series fabric module	4	6

Table 13. Cisco Nexus 9500 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

Note: N9K-SUP-A and N9K-SUP-A+ are not supported on Cisco Nexus 9504 and 9508 switches with -R Line Cards.

Table 14. Cisco Nexus 9500 System Controller

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

Table 15. Cisco Nexus 9500 Fans and Fan Trays

Product ID	Description	Quantity
N9K-C9504-FAN	Fan tray for 4-slot modular chassis	3
N9K-C9504-FAN2	Fan tray that supports the Cisco N9K-C9504-FM-G fabric module	3
N9K-C9508-FAN	Fan tray for 8-slot modular chassis	3
N9K-C9508-FAN2	Fan tray that supports the Cisco N9K-C9508-FM-G fabric module	3
N9K-C9516-FAN	Fan tray for 16-slot modular chassis	3

Table 16. Cisco Nexus 9500 Fabric Module Blanks with Power Connector

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Product ID	Description	Minimum	Maximum
N9K-C9504-FAN-PWR	Nexus 9500 4-slot chassis 400G cloud scale fan tray power connector	1	2
N9K-C9508-FAN-PWR	Nexus 9500 4-slot chassis 400G cloud scale fan tray power connector	1	2

Table 17. Cisco Nexus 9500 Power Supplies

Product ID	Description	Quantity	Cisco Nexus Switches
N9K-PAC-3000W-B	3 KW AC power supply	Up to 4 Up to 8 Up to 10	Cisco Nexus 9504 Cisco Nexus 9508 Cisco Nexus 9516
N9K-PDC-3000W-B	3 KW DC power supply	Up to 4 Up to 8 Up to 10	Cisco Nexus 9504 Cisco Nexus 9508 Cisco Nexus 9516
N9K-PUV-3000W-B	3 KW Universal AC/DC power supply	Up to 4 Up to 8 Up to 10	Cisco Nexus 9504 Cisco Nexus 9508 Cisco Nexus 9516
N9K-PUV2-3000W-B	3.15-KW Dual Input Universal AC/DC Power Supply	Up to 4 Up to 8 Up to 10	Cisco Nexus 9504 Cisco Nexus 9508 Cisco Nexus 9516

Table 18. Cisco Nexus 9200 and 9300 Switches

Cisco Nexus Switch	Description
N9K-C9316D-GX	1-RU switch with 16x400/100/40-Gbps ports.
N9K-C9364C-GX	2-RU fixed-port switch with 64 100-Gigabit SFP28 ports.
N9K-C93600CD-GX	1-RU fixed-port switch with 28 10/40/100-Gigabit QSFP28 ports (ports 1-28), 8 10/40/100/400-Gigabit QSFP-DD ports (ports 29-36)
N9K-C9364C	2-RU Top-of-Rack switch with 64 40-/100-Gigabit QSFP28 ports and 2 1-/10-Gigabit SFP+ ports. - Ports 1 to 64 support 40/100-Gigabit speeds. - Ports 49 to 64 support MACsec encryption. Ports 65 and 66 support 1/10 Gigabit speeds.
N9K-C9332C	1-RU fixed switch with 32 40/100-Gigabit QSFP28 ports and 2 fixed 1/10-Gigabit SFP+ ports.
N9K-C9332D-GX2B	1-Rack-unit (1RU) spine switch with 32p 400/100-Gbps QSFP-DD ports and 2p 1/10 SFP+ ports.
N9K-C9348D-GX2A	48p 40/100/400-Gigabit QSFP-DD ports and 2p 1/10G/10G SFP+ ports
N9K-C9364D-GX2A	64p 400/100-Gigabit QSFP-DD ports and 2p 1/10 SFP+ ports
N9K-C93180YC-FX3	48 1/10/25 Gigabit Ethernet SFP28 ports (ports 1-48) 6 10/25/40/50/100-Gigabit QSFP28 ports (ports 49-54)
N9K-C93180YC-FX3S	48 1/10/25 Gigabit Ethernet SFP28 ports (ports 1-48) 6 10/25/40/50/100-Gigabit QSFP28 ports (ports 49-54)
N9K-C9336C-FX2-E	1- RU switch with 36 40-/100-Gb QSFP28 ports
N9K-C9336C-FX2	1-RU switch with 36 40-/100-Gb Ethernet QSFP28 ports
N9K-C93360YC-FX2	2-RU switch with 96 10-/25-Gigabit SFP28 ports and 12 40/100-Gigabit QSFP28 ports
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.
N9K-C93216TC-FX2	2-RU switch with 96 100M/1G/10G RJ45 ports, 12 40/100-Gigabit QSFP28 ports, 2 management ports (one RJ-45 and one SFP port), 1 console, port, and 1 USB port.
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.
N9K-C93180YC-FX-24	1-RU 24 1/10/25-Gigabit Ethernet SFP28 front panel ports and 6 fixed 40/100-Gigabit Ethernet QSFP28 spine-facing ports. The SFP28 ports support 1-, 10-, and 25-Gigabit Ethernet connections and 8-, 16-, and 32-Gigabit Fibre Channel connections.
N9K-C93108TC-FX	1-RU Top-of-Rack switch with 48 100M/1/10GBASE-T (copper) ports and 6 40-/100-Gigabit QSFP28 ports
N9K-C93108TC-FX-24	1-RU 24 1/10GBASE-T (copper) front panel ports and 6 fixed 40/100-Gigabit Ethernet QSFP28 spine-facing ports.
N9K-C93108TC-FX3P	1-RU fixed-port switch with 48 100M/1/2.5/5/10GBASE-T ports and 6 40-/100-Gigabit QSFP28 ports

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Cisco Nexus Switch	Description
N9K-C9348GC-FXP [1]	Nexus 9300 with 48p 100M/1 G, 4p 10/25 G SFP+ and 2p 100 G QSFP
N9K-C92348GC-X	The Cisco Nexus 92348GC-X switch (N9K-C92348GC-X) is a 1RU switch that supports 696 Gbps of bandwidth and over 250 mpps. The 1GBASE-T downlink ports on the 92348GC-X can be configured to work as 100-Mbps, 1-Gbps ports. The 4 ports of SFP28 can be configured as 1/10/25-Gbps and the 2 ports of QSFP28 can be configured as 40- and 100-Gbps ports. The Cisco Nexus 92348GC-X is ideal for big data customers that require a Gigabit Ethernet ToR switch with local switching.
N9K-C93180YC-EX	1-RU Top-of-Rack switch with 48 10-/25-Gigabit SFP28 fiber ports and 6 40-/100-Gigabit QSFP28 ports
N9K-C93180YC-EX-24	1-RU 24 1/10/25-Gigabit front panel ports and 6-port 40/100 Gigabit QSFP28 spine-facing ports
N9K-C93108TC-EX	1-RU Top-of-Rack switch with 48 10GBASE-T (copper) ports and 6 40-/100-Gigabit QSFP28 ports
N9K-C93108TC-EX-24	1-RU 24 1/10GBASE-T (copper) front panel ports and 6 40/100-Gigabit QSFP28 spine facing ports.

***Note**:

Table 19. Cisco Nexus 9200 and 9300 Fans and Fan Trays

Product ID	Description	Quantity	Cisco Nexus Switches
NXA-FAN-160CFM-PE	Fan module with port-side exhaust airflow (blue coloring)	3	9364C [2] 93360YC-FX2
NXA-FAN-160CFM-PI	Fan module with port-side intake airflow (burgundy coloring)	3	9364C [1] 93360YC-FX2
NXA-FAN-160CFM2-PE	Fan module with port-side exhaust airflow (blue coloring)	4	9364C-GX
NXA-FAN-160CFM2-PI	Fan module with port-side intake airflow (burgundy coloring)	4	9364C-GX
NXA-FAN-30CFM-B	Fan module with port-side intake airflow (burgundy coloring)	3	93108TC-EX 93108TC-FX [1] 93180YC-EX 93180YC-FX [1] 9348GC-FXP [1]
NXA-FAN-30CFM-F	Fan module with port-side exhaust airflow (blue coloring)	3	93108TC-EX 93108TC-FX [1] 93180YC-EX 93180YC-FX [1] 9348GC-FXP
NXA-FAN-35CFM-PE	Fan module with port-side exhaust airflow (blue coloring)	4 6	92300YC [1] 9332C [1] 93180YC-FX3S [3] 93180YC-FX3 93108TC-FX3P 9336C-FX2-E 9316D-GX 93600CD-GX
NXA-FAN-35CFM-PI	Fan module with port-side intake airflow (burgundy coloring)	4	92300YC [1] 9332C [1] 93180YC-FX3S [2] 93180YC-FX3

[1] For N9K-C9348GC-FXP the PSU SPROM is not readable when the PSU is not connected. The model displays as " UNKNOWN" and status of the module displays as " shutdown."

[2] For specific fan speeds see the Overview Section of the Hardware Installation Guide.

[3] This switch runs with +1 redundancy mode so that if one fan fails, the switch can sustain operation. But if a second fan fails, this switch is not designed to sustain operation. Hence before waiting for the major threshold temperature to be hit, the switch will power down due to entering the fan policy trigger command.

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Product ID	Description	Quantity	Cisco Nexus Switches
		6	93108TC-FX3P 9316D-GX 93600CD-GX
	Fan module with port-side exhaust airflow (blue coloring)	6	9336C-FX2-E
NXA-FAN-65CFM-PE	Fan module with port-side exhaust airflow (blue coloring)	3	93240YC-FX2 [1] 9336C-FX2 [1]
NXA-FAN-65CFM-PI	Fan module with port-side exhaust airflow (burgundy coloring)	3	93240YC-FX2 9336C-FX2 [1]

Table 20. Cisco Nexus 9200 and 9300 Power Supplies

Product ID	Description	Quantity	Cisco Nexus Switches
NXA-PAC-500W-PE	500-W AC power supply with port-side exhaust airflow (blue coloring)	2	93108TC-EX 93180YC-EX 93180YC-FX
NXA-PAC-500W-PI	500-W AC power supply with port-side intake airflow (burgundy coloring)	2	93108TC-EX 93180YC-EX 93180YC-FX
NXA-PAC-650W-PE	650-W power supply with port-side exhaust (blue coloring)	2	92300YC 93180YC-FX3S 93108TC-EX 93180YC-EX 93180YC-FX3
NXA-PAC-650W-PI	650-W power supply with port-side intake (burgundy coloring)	2	92300YC 93180YC-FX3S 93108TC-EX 93180YC-EX 93180YC-FX3
NXA-PAC-750W-PE	750-W AC power supply with port-side exhaust airflow (blue coloring) 1	2	9336C-FX2 9336C-FX2-E 9332C 93240YC-FX2
NXA-PAC-750W-PI	750-W AC power supply with port-side intake airflow (burgundy coloring) 1	2	9336C-FX2 9336C-FX2-E 9332C 93240YC-FX2
NXA-PAC-1100W-PE2	1100-W AC power supply with port-side exhaust airflow (blue coloring)	2	93240YC-FX2 9332C 9316D-GX 9336C-FX2 9336C-FX2-E 93600CD-GX
NXA-PAC-1100W-PI2	1100-W AC power supply with port-side intake airflow (burgundy coloring)	2	93240YC-FX2 9332C 9316D-GX 9336C-FX2 9336C-FX2-E 93600CD-GX
NXA-PAC-1100W-PI	Cisco Nexus 9000 PoE 1100W AC PS, port-side intake	2	93108TC-FX3P
NXA-PAC-1100W-PE	Cisco Nexus 9000 PoE 1100W AC PS, port-side exhaust	2	93108TC-FX3P
NXA-PAC-1900W-PI	Cisco Nexus 9000 PoE 1900W AC PS, port-side intake	2	93108TC-FX3P
NXA-PAC-1200W-PE	1200-W AC power supply with port-side exhaust airflow (blue coloring)	2	93360YC-FX2 9364C
NXA-PAC-1200W-PI	1200-W AC power supply with port-side intake airflow (burgundy coloring)	2	93360YC-FX2 9364C
N9K-PUV-1200W	1200-W Universal AC/DC power supply with bidirectional airflow (white coloring)	2	92300YC 93108TC-EX 93108TC-FX 93360YC-FX2

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Product ID	Description	Quantity	Cisco Nexus Switches
			93180YC-FX3S 93180YC-EX 93180YC-FX 9364C
NXA-PDC-930W-PE	930-W DC power supply with port-side exhaust airflow (blue coloring)	2	93108TC-EX 93180YC-EX 93360YC-FX2 93180YC-FX3S 93180YC-FX 9364C
NXA-PDC-930W-PI	930-W DC power supply with port-side intake airflow (burgundy coloring)	2	93108TC-EX 93180YC-EX 93360YC-FX2 93180YC-FX3S 93180YC-FX 9364C
NXA-PDC-1100W-PE	1100-W DC power supply with port-side exhaust airflow (blue coloring)	2	93240YC-FX2 93600CD-GX 9316D-GX 9332C 9336C-FX2 9336C-FX2-E
NXA-PDC-1100W-PI	1100-W DC power supply with port-side intake airflow (burgundy coloring)	2	93240YC-FX2 93600CD-GX 9316D-GX 9332C 9336C-FX2 9336C-FX2-E
UCSC-PSU-930WDC	930-W DC power supply with port-side intake (green coloring)	2	93108TC-EX 93180YC-EX
UCS-PSU-6332-DC	930-W DC power supply with port-side exhaust (gray coloring)	2	93108TC-EX 93180YC-EX
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-2KW-PE	2000-W AC power supply with port-side exhaust airflow (blue coloring)	2	9364C-GX
NXA-PAC-2KW-PI	2000-W AC power supply with port-side intake airflow (burgundy coloring)	2	9364C-GX
NXA-PDC-2KW-PE	2000-W DC power supply with port-side exhaust airflow (blue coloring	2	9364C-GX
NXA-PDC-2KW-PI	2000-W DC power supply with port-side intake airflow (burgundy coloring)	2	9364C-GX
N2200-PAC-400W	400-W AC power supply with port-side exhaust airflow (blue coloring)	2	92348GC-X
N2200-PAC-400W-B	400-W AC power supply with port-side intake airflow (burgundy coloring)	2	92348GC-X
N2200-PDC-350W-B	350-W DC power supply with port-side intake airflow	2	92348GC-X
N2200-PDC-400W	400-W DC power supply with port-side exhaust airflow (blue coloring)	2	92348GC-X

Compatibility Information

Fabric Module and Line Card compatibility details are listed below:

Table 21. Cisco Nexus 9500 Cloud Scale Line Cards

Product ID	N9K-C9504-FM-G	N9K-C9508-FM-G	N9K-C9504-FM-E	N9K-C9508-FM-E	N9K-C9508-FM-E2	N9K-C9516-FM-E2
N9K-X9716D-GX	4	4	No	No	No	No

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Product ID	N9K-C9504-FM-G	N9K-C9508-FM-G	N9K-C9504-FM-E	N9K-C9508-FM-E	N9K-C9508-FM-E2	N9K-C9516-FM-E2
N9K-X9736C-FX	5	5	5	5	5	5
N9K-X97160YC-EX	4	4	4	4	4	4
N9K-X9788TC-FX	4	4	4	4	4	4
N9K-X9732C-EX	4	4	4	4	4	4
N9K-X9736C-EX	4	4	4	4	4	4
N9K-X9732C-FX	4 5 (n+1 redundancy)	4 5 (n+1 redundancy)	4 5 (n+1 redundancy)	4 5 (n+1 redundancy)	4 5 (n+1 redundancy)	4 5 (n+1 redundancy)

Table 22. Cisco Nexus 9500 R-Series Line Cards

Product ID	N9K-C9504-FM-R	N9K-C9508-FM-R
N9K-X9636C-RX	6	6
N9K-X9636Q-R	4 6 (n+2 redundancy)	4 6 (n+2 redundancy)
N9K-X9636C-R	5 6 (n+1 redundancy)	5 6 (n+1 redundancy)
N9K-X96136YC-R	6	6

Table 23. Cisco Nexus 9500 R2-Series Line Cards

Product ID	N9K-C9508-FM-R2
N9K-X9624D-R2	6

Optics

For information about transceivers and cables supported on a switch, see the Transceiver Module (TMG) Compatibility Matrix. For the transceiver specifications and installation information, see the Install and Upgrade Guides.

Cisco Nexus Dashboard Insights for Data Center

Cisco NX-OS Release 10.3(3)F supports the Nexus Dashboard Insights on Cisco Nexus 9200, 9300-EX, 9300-FX, 9300-FX2, 9300-FX3, 9400, and 9800 platform switches and 9500 platform switches with -EX/FX/GX Line Cards. See the Cisco Nexus Insights documentation.

Upgrade and Downgrade

To perform a software upgrade or downgrade, follow the instructions in the Cisco Nexus 9000 Series NX-OS Software Upgrade and Downgrade Guide, Release 10.3(x). For information about an In Service Software Upgrade (ISSU), see the Cisco NX-OS ISSU Support Matrix.

Related Content

Cisco Nexus 9000 Series documentation: Cisco Nexus 9000 Series Switches

Cisco NX-OS Software Release and Image-naming Convention: Cisco NX-OS Software Strategy and Lifecycle Guide

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Cisco Nexus 9000 and 3000 Series NX-OS Switch License Navigator: Cisco Nexus 9000 and 3000 Series NX-OS Switch License Navigator

Cisco Nexus 9000 Series Software Upgrade and Downgrade Guide: Cisco Nexus 9000 Series NX-OS Software Upgrade and Downgrade Guide, Release 10.3(x).

Cisco Nexus 9000 Series FPGA/EPLD Upgrade Release Notes: Cisco Nexus 9000 Series FPGA/EPLD Upgrade Release Notes, Release 10.3(3).

Cisco Nexus 3000 and 9000 Series NX-API REST SDK User Guide and API Reference: Cisco Nexus NX-API Reference

Cisco NX-OS Supported MIBs:
ftp://ftp.cisco.com/pub/mibs/supportlists/nexus9000/Nexus9000MIBSupportList.html

Supported FEX modules: Cisco Nexus 9000 Series Switch FEX Support Matrix

Licensing Information: Cisco NX-OS Licensing Guide and Cisco Nexus Smart Licensing Using Policy User Guide

When you downgrade from Cisco NX-OS Release 10.3(3)F to an earlier release, the features that use the ACI+NX-OS Essentials, Advantage, and add-on licenses or the Hardware Streaming Telemetry license continue to work in honor mode in the downgraded version. In addition, the output of the show license usage command continues to include entries for these unsupported licenses.

See the Cisco NX-OS Licensing Guide.

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