Cisco Nexus 9000 Series NX-OS Release Notes, Release 10.2(2)F

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Introduction

This document describes the features, issues, and exceptions of Cisco NX-OS Release 10.2(2)F software for use on Cisco Nexus 9000 Series switches.

The new Cisco NX-OS Software Release and Image-naming Convention information is available here — Cisco NX-OS Software Strategy and Lifecycle Guide.

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 and CSCwe53655 to Open Issues.
May 29, 2023	Added caveat CSCvy23869 to the Resolved Issues table.
May 05, 2023	Added PTP in Unsupported Features on N9K-C92348GC section.
April 09, 2023	Added caveat CSCwe67205 in Open Issues table.
February 3, 2023	Updated Table 11 with N9K-C9336C-FX2 and N9K-C9336C-FX2-E switches.
January 25, 2023	Updated the Unsupported Features on N9K-C92348GC section.
December 16, 2021	Cisco NX-OS Release 10.2(2)F became available.

New and Enhanced Software Features

New Features	
Feature	**Description**
Secure Erase	Beginning with Cisco NX-OS Release 10.2(2)F, the Secure Erase feature is introduced to remove all the identifiable customer information on Cisco NX-OS devices in conditions of product removal due to Return Merchandise Authorization (RMA), or upgrade or replacement, or system end-of-life. For more information, see Cisco Nexus 9000 Series NX-OS Security Configuration Guide, Release 10.2(x).

The enhanced features listed below are existing features introduced in earlier releases but enhanced to support new platforms in Cisco NX-OS Release 10.2(2)F.

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Enhanced Features	
Feature	**Description**
64-bit migration	Beginning with Cisco NX-OS Release 10.2(2)F, Cisco Nexus 9504 and 9508 platform switches, and Cisco Nexus 9508-R, R2, and RX line cards support Cisco NX-OS 64-bit images. This also means that Cisco NX-OS 32-bit image is not supported on these platform switches anymore. Disruptive upgrade from earlier releases to 10.2(2)F 64-bit NX-OS image is supported. For example, upgrade from Cisco NX-OS Release 10.2(1)F (32-bit) to Cisco NX-OS Release 10.2(2)F (which is 64-bit) is a disruptive upgrade. For more information, see Cisco Nexus 9000 Series NX-OS Software Upgrade and Downgrade Guide, Release 10.2(x).
PTP v1 and v2 co-existence	Beginning with Cisco NX-OS Release 10.2(2)F, added support for PTPv1 and v2 co-existence feature on Cisco Nexus 9300-GX, 9300-GX2, and 9300-FX3 platform switches. For more information, see Cisco Nexus 9000 Series NX-OS System Management Configuration Guide, Release 10.2(x).
Logging 2.0 enhancements	Enhanced log-format unification with ISO 8601 time format, and the same format is also used by ACI logs. Improved NX-OS Python Decoder with interactive decoding functionality that allows users to provide log file names and other options on an interactive basis. For more information, see Cisco Nexus 9000 Series NX-OS System Management Configuration Guide, Release 10.2(x).
PTP IPv6 UDP Unicast Transport	Beginning with Cisco NX-OS Release 10.2(2)F, the PTP IPv6 transport feature is supported on the Cisco Nexus 9300-FX, 9300-FX2, 9300-GX, and 9300-GX2 platform switches. Furthermore, the PTP unicast negotiation feature is supported on all the Cisco Nexus 9000 platform switches. For more information, see Cisco Nexus 9000 Series NX-OS System Management Configuration Guide, Release 10.2(x).
Underlay SM PIM Groups Increase	Beginning with Cisco NX-OS Release 10.2(2)F, the scale for BUM, TRM default-MDT, and TRM Data-MDT, and support 32K TRM route is increased from 128 Mcast groups to 512 Mcast groups. For more information, see Cisco Nexus 9000 Series NX-OS Verified Scalability Guide, Release 10.2(2)F.
SRTE Manual Preference Selection	Beginning with Cisco NX-OS Release 10.2(2)F, you can lockdown or shutdown an SR-TE policy or perform both; shutdown preference(s) of an SR-TE policy or an on-demand color template. Furthermore, you can force a specific preference to be active path option for SRTE policy and to force path re-optimization for all or a specific SRTE policy. For more information, see Cisco Nexus 9000 Series NX-OS Label Switching Configuration Guide, Release 10.2(x).
SRTE Usability Enhancements	Added new show commands for SR-TE policy and introduced autocomplete for a few existing SR-TE policy commands to improve usability. For more information, see Cisco Nexus 9000 Series NX-OS Label Switching Configuration Guide, Release 10.2(x).
NDB: Egress Filtering support	Added support to Egress PACL on egress router ACL on Cisco Nexus 9300-GX, N9K-C93108TC-FX3P, and N9K-C93180YC-FX3 platform switches.

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Enhanced Features	
Feature	**Description**
SNMP User Synchronization	Beginning with Cisco NX-OS Release 10.2(2)F, a new CLI is introduced to provide you an option to enable or disable the user synchronization between the SNMP and security components. For more information, see Cisco Nexus 9000 Series NX-OS System Management Configuration Guide, Release 10.2(x) and Cisco Nexus 9000 Series NX-OS Security Configuration Guide, Release 10.2(x).
FC/FCoE Switch Mode	Added support for FC/FCoE Switch Mode on Cisco N9K-C9336C-FX2-E platform switches. For more information, see Cisco Nexus 9000 Series NX-OS SAN Switching Configuration Guide, Release 10.2(x).
FC/FCoE NPV Mode	Added support for FC/FCoE NPV Mode on Cisco N9K-C9336C-FX2-E platform switches. For more information, see Cisco Nexus 9000 Series NX-OS SAN Switching Configuration Guide, Release 10.2(x).
SRTE flow-based traffic steering	Added support for SR-TE flow-based traffic steering on Cisco N9K-C9364D-GX2B platform switches. For more information, see Cisco Nexus 9000 Series NX-OS Label Switching Configuration Guide, Release 10.2(x).
SPAN-to-CPU with ACL filtering	Beginning with Cisco NX-OS Release 10.2(2)F, A SPAN-to-CPU feature introduced for troubleshooting packet flow through Cisco Nexus 9000 Series switches. A SPAN-to-CPU monitor session involves the definition of one or more source interfaces and traffic directions. For more information, see Cisco Nexus 9000 Series NX-OS System Management Configuration Guide, Release 10.2(x).
ESR PBR Enhancements	The following enhancements are introduced in Cisco NX-OS Release 10.2(2)F Release: • Default IPv4 and IPV6 Next Hop Verify Availability are supported for Policy Based Routing. • PBR allows multiple backup next-hops related to different VRFs to be configured for a route-map sequence. This allows EPBR to enable fail-action bypass from service pertaining to one VRF to another effectively. For more information on PBR, see Cisco Nexus 9000 Series NX-OS Unicast Configuration Guide, Release 10.2(x).
ePBR Enhancements	The following enhancements are introduced from Cisco NX-OS Release 10.2(2)F Release: • Enahnced PBR (ePBR) uses Q-in-Q to mark each flow to enforce service chaining. • CTP and link state probes are supported for L2 service only for ePBR. • When there is mac ACL traffic, load balancing is not supported. For more information on ePBR, see Cisco Nexus 9000 Series NX-OS ePBR Configuration Guide, Release 10.2(x).
Mutlicast NAT: Unicast to Multicast	Beginning with Cisco NX-OS Release 10.2(2)F, Unicast-to-Multicast NAT translation is supported. For more information, see Cisco Nexus 9000 Series NX-OS Multicast Routing Configuration Guide, Release 10.2(x).

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Enhanced Features	
Feature	**Description**
SSM translation for IGMPv3	Beginning with Cisco NX-OS Release 10.2(2)F, IGMPv3 feature is supported for SSM. For more information, see Cisco Nexus 9000 Series NX-OS Multicast Routing Configuration Guide, Release 10.2(x).
CLI knob to exclude metadata in DHCP option 82	From Cisco NX-OS Release 10.2(2)F, Option 82 information for DHCP packets without Circuit ID type and length of the circuit ID suboption type is added. For more information, see Cisco Nexus 9000 Series NX-OS Security Configuration Guide, Release 10.2(x).
MACsec	Added support for N9K-X9736C-FX and N9K-X9736Q-FX with 10G QSA links. For more information, see Cisco Nexus 9000 Series NX-OS Security Configuration Guide, Release 10.2(x).
ESR: ITD Enhancements	The following enhancements are introduced from Cisco NX-OS Release 10.2(2)F Release: • You can use ITD NAT with Fail-Action bucket distribute for vPC nodes. This fail-action option allows bucket distribute predefined bucket to node mapping. • You can configure node level Standby IP under node IP address as part of ITD device-group. You can configure standby IP with Failaction Bucket Distribute. For more information on ITD, see Cisco Nexus 9000 Series NX-OS Intelligent Traffic Director Configuration Guide, Release 10.2(x).
IGMP Proxy with NBM	Beginning with NX-OS Release 10.2(2)F, IGMP SG Proxy feature is introduced for media fabrics. Media fabric uses a passive mode where the controller programs the routes in the fabric. For more information, see Cisco Nexus 9000 Series NX-OS Multicast Routing Configuration Guide, Release 10.2(x).
PIM Allow RP	Beginning with NX-OS Release 10.2(2)F, Protocol Independent Multicast (PIM) and PIM6 features are supported on Cisco NX-OS devices in the IPv4 and IPv6 networks. For more information, see Cisco Nexus 9000 Series NX-OS Multicast Routing Configuration Guide, Release 10.2(x).
Proactive Consistency Checker	Enables to pro-actively detect any inconsistency in the consistency checker. You can enable or disable the pro-active consistency checker and configure the frequency with which it should run in the background. For more information, see Cisco Nexus 9000 Series NX-OS Troubleshooting Guide, Release 10.2(x).
SPAN Consistency Checker	Performs a check on the program and consistency configurations for Supervisor, Line cards, and Hardware tables. For more information, see Cisco Nexus 9000 Series NX-OS Troubleshooting Guide, Release 10.2(x).
Multicast NAT Consistency Checker	Added support for Cisco Nexus 9300-EX,FX,FX2,FX3, GX, and 9300C platform switches. For more information, see Cisco Nexus 9000 Series NX-OS Troubleshooting Guide, Release 10.2(x).
Platform Insights Engine Enhancements	Added support for Nexus 9000 Series TOR switches and Cisco Nexus 9500 family switches.

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Enhanced Features	
Feature	**Description**
	For more information, see Cisco Nexus 9000 Series NX-OS Platform Insights Engine Guide, Release 10.2(x).
Timestamp for Individual Interface Counters	Introduced " grpc gnmi subscription query-condition keep-data-timestamp" command that enables sample/once/poll subscriptions to get timestamp from database when the data was last updated. For more information, see Cisco Nexus 9000 Series NX-OS Programmability Guide, Release 10.2(x).
BGP Route Map Deletion	Adds a mechanism to block the deletion of entire route-map that is associated with the BGP. With the route-map deletion blocked, the modifications to the route-map statement are still allowed. For more information, see Cisco Nexus 9000 Series NX-OS Unicast Configuration Guide, Release 10.2(x).
BGP Global RID	Beginning with NX-OS Release 10.2(2)F, a third source for obtaining router-id, in case the first two sources are unavailable, is introduced. For more information, see Cisco Nexus 9000 Series NX-OS Programmability Guide, Release 10.2(x).
NDB: GRE Header stripping	Allows you to strip the GRE header from packets that come in with a GRE encapsulation. For more information, see Cisco Nexus 9000 Series NX-OS System Management Configuration Guide, Release 10.2(x).
DME Configuration for EIGRP	Combines the benefits of distance vector protocols with the features of link-state protocols and sends out periodic Hello messages for neighbor discovery. For more information, see Cisco Nexus 3000 and 9000 Series NX-API REST SDK User Guide and API Reference, Release 10.2(x).
Terminal-lock for VSH sessions	Introduced a new CLI " terminal lock mdp" that locks the Model Driven Programmability interfaces and supports DME lock sessions. For more information, see Cisco Nexus 9000 Series NX-OS System Management Configuration Guide, Release 10.2(x).
OC RPM	Allows you to enable or disable OpenConfig support on the programmability agents (NETCONF, RESTCONF and gRPC). For more information, see Cisco Nexus 9000 Series NX-OS Programmability Guide, Release 10.2(x).
gNMI Enhancements	Added support for wild card options in paths for gNMI. For more information, see Cisco Nexus 9000 Series NX-OS Programmability Guide, Release 10.2(x).
SSX counters export via DME	Allows telemetry to send trimmed data that contains only the PFC information. For more information, see Cisco Nexus 9000 Series NX-OS Programmability Guide, Release 10.2(x).
PMN Unicast to Multicast NAT	Unicast to Multicast NAT works in ingress translation mode. The multicast translated packet can be egress translated back to multicast. The destination address of the

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Enhanced Features	
Feature	**Description**
	unicast packet should match the NAT service reflection interface. For more information, see Cisco Nexus 9000 Series NX-OS IP Fabric for Media Solution Guide, Release 10.2(x), and Cisco Nexus 3000 and 9000 Series NX-API REST SDK User Guide and API Reference, Release 10.2(x).
VXLAN Scale Enhancements	Enhanced the scale limits for Layer 2 VNIs, Extended Layer 2 VNIs, Layer 3 VNIs, SVI with Distributed Anycast Gateway. For more information, see Cisco Nexus 9000 Series NX-OS Verified Scalability Guide, Release 10.2(2)F.
MLAG BGW support for Cloudsec	Enhanced multihoming on Cloudsec BGWs for vPC support. For more information, see Cisco Nexus 9000 Series NX-OS VXLAN Configuration Guide, Release 10.2(x).
Firewall Clustering with VXLAN EVPN	Configures a firewall cluster that spans across multiple sites running a VXLAN fabric with a BGP EVPN control plane. For more information, see Cisco Nexus 9000 Series NX-OS VXLAN Configuration Guide, Release 10.2(x).
Internet Peering Route Scale for CDN network	Enhanced the scale limits for IPv4 and IPv6 host routes in internet-peering mode and the ECMP paths. For more information, see Cisco Nexus 9000 Series NX-OS Verified Scalability Guide, Release 10.2(2)F.
EVPN multi-homing inter-op	Enhanced the support for vPC-based multihoming, where a pair of switches act as a single device for redundancy and both switches function in an active mode. For more information, see Cisco Nexus 9000 Series NX-OS VXLAN Configuration Guide, Release 10.2(x).
EIGRP Scale Enhancement	Enhanced scale limits for EIGRP routes and neighbors for multi-VRF scenarios. For more information, see Cisco Nexus 9000 Series NX-OS Verified Scalability Guide, Release 10.2(2)F.
EoMPLS Stripping	Added support for EoMPLS only on Cisco Nexus 9300-EX family switches. For more information, see Cisco Nexus 9000 Series NX-OS System Management Configuration Guide, Release 10.2(2)F.

New Hardware Features

There are no new hardware features introduced in Cisco NX-OS Release 10.2(2)F.

For details on transceivers and cables that are supported by 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

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

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

Release Image

In Cisco NX-OS Release 10.2(2)F, the following two 64-bit images are supported:

- The 64-bit Cisco NX-OS image filename that begins with " nxos64-cs" (for example, nxos64-cs.10.2.2.F.bin). This image is supported on Cisco Nexus 9000 -EX,-FX,-GX series modular switches and Cisco Nexus 9000 series fixed switches.
- The 64-bit Cisco NX-OS image filename that begins with " nxos64-msll" (for example, nxos64-msll.10.2.2.F.bin). This image is supported on Cisco Nexus 9000 -R and -R2 series modular switches, Cisco Nexus 3600 series fixed switches and Cisco Nexus 3500-XL switches.

The 32-bit image is no longer supported.

Open Issues

Bug ID	Description
CSCwa29179	Headline: VXLAN blackholing after ND-ISSU Symptoms: After a nondisruptive ISSU of a VXLAN VTEP, there is an extremely small chance that the VTEP will be blackholing transit VXLAN traffic due to absent vlanxlatetable entries in hardware. To confirm that the problem has been encountered, run " show system internal orib clients". The " nve" client would be missing in that case. Workarounds: Reload the switch.
CSCvz44412	Headline: Nexus 9000 and Nexus 3000 Switch 100 Gig Interface does not come up after interface Flap Symptoms: • Interface does not come up after the shut/unshut on the Nexus 9500 with N9K-X9736C-FX • SFP used is the QSFP 40/100G-SRBD - link between the Nexus 9500 and Nexus 3408 Workarounds: • Apply speed to 100 Gig and disable auto negotiation. • Shutdown the interfaces on both the sides, unshut the interface on Nexus 9000 first and later on Nexus 3000.
CSCvx86007	Headline: Intermittent Link Flaps observed with QSFP-100G-PSM4 Symptoms: Repeating flaps are seen on the links between Jericho linecard and Tahoe linecard, using CISCO-LUXTERA QSFP-100G-PSM4 rev B or C. The links recovers from the flap shortly and is stable for some time afterwards. Workarounds: NA

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Bug ID	Description
CSCvz06811	Headline: Nexus Data Broker switch floods IGMPv3 membership queries out of all input ports Symptoms: IGMPv3 membership queries are flooded out of input ports Workarounds: None
CSCwa14123	Headline: N9K-C9348D-GX2A: CRC on peer side on 4x10g copper link while running reload script. Symptoms: While running reload script at N9K-C9348D-GX2A with 100 iteration, peer side N9K-C9336C-FX2 detects FCS/RCV on 4x10g copper link and error increased slowly. Workarounds: Performing interface shut/no shut recovers the problem.
CSCwa09877	Headline: DME time out error upon netconf post Symptoms: Netconf POST errors out with the below error when HSRP and VRRPv3 are scaled together. protocol operation-failed error DME request timed out Commit Failed Workarounds: Post the configuration using Netconf in parts i.e. HSRP config at first followed by VRRPv3 i.e. in different payloads separately. Pushing them in the same post or payload requires more time to configure and netconf times out as seen in the error message.
CSCwa15216	Headline: MLAG long convergence after vPC BGW MCT up Symptoms: Traffic from hosts connected to cloudsec-enabled vPC BGW destined towards the DCI side takes long time to converage for triggers like vPC box reload, MCT flap, NVE flap. Traffic loss will be equal to the difference of vPC delay-restore and NVE source-interface holddown timer in worst case scenario. Workarounds: Configuring NVE source-interface holddown timer equal to the vPC delay-restore timer value will ensure that the convergence of the effected traffic will be of the order of seconds.
CSCwa23797	Headline: VXLAN encapsulated DHCP/ICMP packets classified incorrect in CoPP Symptoms: VXLAN encapsulated DHCP/ICMP packets are not classified correctly in CoPP. This results in these packets being matched to the CoPP default class-map. Workarounds: None
CSCwa31915	Headline: The gNMI onchange notifications not received for management interface in the openconfig-interfaces model. Symptoms: The on-change notifications are not received when user subscribes to the following openconfig-interfaces model path through gNMI, to receive on-change notifications for management interface description - /interfaces/interface[name=mgmt0]/state/description Workarounds: The same information can be obtained by subscribed to the corresponding device yang path System/mgmt-items/MgmtIf-list\[id=mgmt0\]/descry.

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Bug ID	Description
CSCwa37709	Headline: FEX ND ISSU from Cisco NX-OS Release 10.2(1)F to higher NXOS versions cause output variations Symptoms: Non disruptive CS FEX [FX3 as FEX) ISSU from Cisco NX-OS Release 10.2(1)F to higher NX OS versions cause output variations in que command " show queing interface" . Traffic is not impacted as Harware programming remains intact. Workarounds: Under ‘system qos policy’ remove and reapply the qos input classification policy.
CSCwa42634	Headline: BFD configuration MOs disappear for L3 sub-interfaces under vrf Symptoms: If there are no BFD configuration on sub-interfaces that are part of non-default VRF, there will be no BFD interface MO with default values on these sub-interfaces. But when you do netconf get-config and then send same payload for edit-config replace operation, BFD interface MOs get created with default values on these sub-interfaces. These MOs will be showing up as differences when comparing the get-config payload obtained before replace and the get-config payload obtained after replace operation. Workarounds: To create BFD interface MOs with default values on these sub-interfaces, add some interface level BFD configurations and remove them back.
CSCwa46170	Headline: Mcast traffic drop after nve process restart on BGW Symptoms: The TRM Multicast source is from Site 1 and Receivers are on Site2. Trigger: On an Nexus 9000 leaf in Site 1, perform an NVE process restart by killing the process from bash. Multicast traffic originating from Site 1 to Site 2 and Site 3 start dropping 100% indefinitely. Workarounds: If the multisite IR configuration under the VNIs is applied after the bringup of the NVE interface and the VNIs is completed, the discrepancy between the runtime state of NVE and the running-config won't arise.
CSCwa49147	Headline: Nexus 9000 active sup reports factory-reset timeout for standby sup Symptoms: The 'factory-reset' of a Nexus 9000 standby supervisor module results in the following warning message. " WARNING - Factory reset operations were unable to complete on module <#> in the allocated time!" Workarounds: Utilize console cables to observe both the active and standby supervisor console output during 'factory-reset' operations. Upon the completion of all 'factory-reset' procedures, the standby will drop back to the loader> prompt, which signifies that procedures are complete. The subsequent warning message on the active supervisor can be ignored.
CSCwe67205	Headline: Credit Loss Recovery is not triggered for FC interface with no transmit credits. Symptom: A Fibre Channel interface that stays at 0 transmit credits is not recovered by the Credit Loss Recovery agent. Workaround: If the interface has **switchport ignore bit-errors** configured, then remove it with the **no switchport ignore bit-errors** interface configuration command.
CSCwe53655	Headline: Revert reserved MAC blocking behavior for VRRP macs on SVIs Symptoms: User is not able to configure VRRP VMAC on SVI interfaces. Workarounds: None.

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Bug ID	Description
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
CSCvx33096	Headline: Remove MAC address age column enhancement request Symptoms: The Nexus command, show mac address-table, has an age column that is defined as seconds since last seen. In previous versions of NX-OS, that is, 6.0(2)U6(10), the age column reported the age of each MAC since it was last seen. On newer Nexus platforms, the ASICs no longer keep track of MAC last seen timestamps. In the newer NX-OS, that is, 7.0(3)I7 and 9.3x, the MACs are reported with age of 0. Workarounds: None.
CSCvy23869	Headline: Syslog - System non-volatile storage usage is full at 100% on Cisco Nexus 9000 switches; check /mnt/pstore. Symptoms: The syslog reports an error stating that /mnt/pstore is full on Cisco Nexus Switches running 10.1(x) 64-bit images. Workarounds: Log in as a Network Admin user and use the following method to clear out the file: C9316D-GX-01# conf t C9316D-GX-01(config)# feature bash-shell C9316D-GX-01(config)# end C9316D-GX-01# run bash bash-4.4$ cd /mnt/pstore/stats_ssd bash-4.4$ ls -ll total 1756 -rw-rw-rw- 1 root root 1545310 Mar 4 13:23 ssd_stats_log.txt -rw-rw-rw- 1 root root 236869 Nov 3 00:00 ssd_stats_log.txt.initial.gz bash-4.4$ echo " " > ssd_stats_log.txt bash-4.4$ ls -ll total 235 -rw-rw-rw- 1 root root 1 Mar 4 13:44 ssd_stats_log.txt -rw-rw-rw- 1 root root 236869 Nov 3 00:00 ssd_stats_log.txt.initial.gz Upgrade to fixed code, or the file will fill up again after some time.

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Bug ID	Description
CSCwa25377	Headline: aclqos: error! malloc for km_p failed Symptoms: The memory allocation is failing for aclqos time to time when trying to do some configuration changes. Workarounds: 1. Free up the memory using the command sequence provided, or Get access to bash shell Go to folder proc/sys/vm Monitor memory available from cache Change value with " echo 3 > drop_caches" Monitor memory again with command cat/proc/meminfo |egrep -I -e " MemFree|MemAvail" Example: bash-4.3# cd /proc/sys/vm bash-4.3# cat /proc/meminfo | egrep -i -e 'memfree|memavail' MemFree: 16154452 kB MemAvailable: 17060220 kB bash-4.3# echo 3 > drop_caches bash-4.3# cat /proc/meminfo | egrep -i -e 'memfree|memavail MemFree: 16640264 kB MemAvailable: 17063700 kB 2. Reload the switch. switch# reload This command will reboot the system. (y/n)? [n] y
CSCwa30060	Headline: Process swtele is not running after initial bootup (no crash file generated). Symptoms: Switch boots up. When you configure Cloud Scale Telemetry feature you find that swtele feature is not running. Workarounds: Reload the switch. Process starts up normally next time.
CSCwa35108	Headline: Stale nexthop entry stuck in route table if VRF leaking. Symptoms: Some OSPF routes are advertised in the BGP which are leaked to different VRF. Once the OSPF routes reconverge in the sourcing VRF, those route will stuck in destination VRF and mark as (stale). Workarounds: Clear the route in the routing table.

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Bug ID	Description
CSCvz80126	Headline: Interfaces in warp SPAN destination group do not go down when link fails. Symptoms: A physical interface associated with a warp SPAN destination group on a Cisco Nexus 3548 switch may not transition into a down/down state when the link connected to the physical interface fails down. Workarounds: Administratively flapping the affected physical interface with the " shutdown" and " no shutdown" interface configuration commands may resolve this issue. An example of this is shown here. switch# configure terminal switch(config)# interface Ethernet1/1 switch(config-if)# shutdown switch(config-if)# no shutdown switch(config-if)# end switch# Alternatively, bringing the failed link back up by re-inserting the cable or transceiver may work around this issue. This issue only happens when 2 or more WARP interfaces are brought down one by one with very short time gap in between so another workaround is to bring links down with 2-3 second time gap in between.
CSCwa18642	Headline: Unable to make configuration changes -Failed to send SUA command request. Symptoms: Cannott make configuration changes. Output from the command " show system internal mts buffers summary" show the process " PPM, SAP 489" stuck in the queue. Workarounds: Reload the device.
CSCwa21227	Headline: Nexus generating general IGMP leave when flapping STP Edge VPC member port. Symptoms: When vPC operating as STP Edge port is being flapped, it is observed that the TCN trigger in the IGMP events are resulting in temporary multicast drop. Workarounds: None.
CSCwa31486	Headline: N9300 BFD session over SVI/L2 sends packets out on incorrect L2 port. Symptoms: BFD session on SVI/L2 does not come up. Workarounds: N/A
CSCvz39258	Headline: Incorrect error message while appling IPv6 RA Guard Policy Symptoms: While configuring IPV4 RA Guard Policy, if TCAM is not carved for IPV4 PACL [ifacl] region, general error message printed " Could not attach policy:" instead of more specific error message " Could not attach policy: IFACL TCAM not available,configure before enabling feature" Workarounds: Verify if TCAM memory for ifacl region is carved. If not then carve TCAM for this region using this guide to carve TCAM. https://www.cisco.com/c/en/us/support/docs/switches/nexus-9000-series-switches/119032-nexus9k-tcam-00.html

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Bug ID	Description
CSCvy62175	Headline: 100Gig link not coming up due to FEC Symptoms: An operational 100Gig link on the switch goes down without any trigger after a flap and doesn't come up. The link could be using AOC cable or SR4 Optics. Replacing the Optics or cable doesn't help.When FEC is disabled on both ends using " no fec off" , the link comes up. Workarounds: Multiple workarounds:- Move to connection to an unused port on the switch- Disable FEC on both ends if acceptable- A reload of the switch can resolve the issue.
CSCvz35213	Headline: BFD per-link causes flaps with multiple discriminators Symptoms: BFD per-link may be unstable when one of the port-channel members is stuck in " XCVR not inserted" . Workarounds: Attempt to bring the stuck interface up.
CSCvz38543	Headline: N9k Type-7 to Type-5 LSA translation is not happening when Link-ID is in host IP range Symptoms: Issue is seen when type 7 LSA will be received with Link ID as host IP range. Workarounds: None
CSCvz38944	Headline: N9k DHCPv6 Relay breaks after IPv6 snooping is removed Symptoms: Original Symptom from DHCPv6 Client perspective would be not receiving an IPv6 Address from the DHCPv6 server. CPU will only show the DHCPv6 solicit/Re-bind packets; Relay-FWD would NOT be originated by the n9k Workarounds: Reload fixes the issue(shut/no-shut of the SVIs Dont seem to fix the problem)
CSCvx88496	Headline: Telemetry source-interface unable to use dual stack Symptoms: When the source-interface is configured with ipv4 and ipv6 addresses at the same time?Only the newly configured address takes effect. When the device restart, the first address will take effect.When the source-interface is not configured, both ipv4 and ipv6 can take effect. Workarounds: do not configure source-interface under telemetry profile
CSCvz46137	Headline: BGP flaps upon IP address change Symptoms: BFD flaps are observed.Non-existent sessions are observed in the command " show bfd neighbors" output. Workarounds: delete the interface vlan and create it again
CSCvz57896	Headline: VXLAN L3 traffic drop after changing replication method Symptoms: In VXLAN environment after changing replication from PIM to IR L3 traffic drops for particular L3VNIARP entry exists but MAC is absent. Workarounds: Clear ip arp manually or wait re-ARP probe
CSCvz60769	Headline: NX-OS too strict in validation of IPv6 NA sourced off-subnet address Symptoms: Device sources IPv6 NA from off-subnet address Workarounds: None

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Bug ID	Description
CSCvz71312	Headline: MH BFD fails after VRF deletion and creation Symptoms: When a VRF is first configured with MH EBGP and BFD, the BFD session comes up, shows BGP as client, but BGP considers the session invalid and doesn't bring down the adjacency when BFD fails. Workarounds: System reload only solves this issue
CSCvz05986	Headline: Nexus 9000 - OSPF does not report syslog like EIGRP/BGP for Deadtimer Expired condition Symptoms: Neighbor Went down due to dead-timer expired (Note: interface didn't bounce)%OSPF-5-ADJCHANGE: ospf-1 [26244] Nbr X.X.X.X on Ethernet1/54 went DOWNAbove syslog does not reflect dead-timer expired like EIGRP/BGP. For Examplebgp- [26235] (test) neighbor x.x.x.x Down - sent: holdtimer expired error%EIGRP-5-NBRCHANGE_DUAL: eigrp-1 [26245] (test-base) IP-EIGRP(0) 1: Neighbor x.x.x.x (Ethernet1/54) is down: holding time expired Workarounds: N/A
CSCvy68871	Headline: SVI counters not incrementing Symptoms: SVI counters were working earlier but suddenly stopped working Workarounds: None
CSCvz11857	Headline: VNI Scale: Maximum number of VNIs exceeded warning message Symptoms: VNI Scale: Maximum number of VNIs exceeded warning message Workarounds: None
CSCvz22694	Headline: Type 2 l2vpn evpn routes are not advertised to Multisite Peer under certain conditions Symptoms: Two symptoms will be seen;1) Type 2 Routes that are supposed to be blocked by a route-map will be incorrectly advertised to BGW Peer2) Type 2 Routes that are supposed to be advertised by a route-map permit statement, will NOT be advertised to multisite peer(incorrect behavior) Workarounds: NoneClearing/restarting BGP might NOT fix the problemReload also will NOT fix this problemIf feasible, removing route-map applied on the BGP peer will fix this issue.
CSCvz32196	Headline: Nexus 9000: SNMPv3 syncd from tacacs+ becomes incorrect after SNMP crash Symptoms: After the SNMP crashes, the local SNMPv3 user created via tacacs+ will no longer be available. The DCNM will reports " Unknown user or password" for this switch. Workarounds: Set the aaa-user chache-timeout to 10, and DO NOT use sync the password with " sync-snmp-password " , the snmp aaa-user will be clear due to cache-timeout.# snmp-server aaa-user cache-timeout 10You can use the command " show snmp user" to ensure that the aaa-user has been deleted. And then, use " sync-snmp-password <password> <username> <ipaddress>" to sycn the password again.

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Bug ID	Description
CSCvz35985	Headline: FEX fabric interfaces down with FEX-fabric sfp invalid status after switch is reloaded Symptoms: When a first-generation Nexus 9000 series switch has " no service unsupported-transceiver" configured alongside FEXs, FEX fabric interfaces will enter a " FEX-fabric sfp invalid" status after the switch is reloaded. Workarounds: To proactively prevent this issue from happening, ensure that " service unsupported-transceiver" is configured instead of " no service unsupported-transceiver". Note that " service unsupported-transceiver" is default configuration on Nexus 9000 series switches.
CSCvz38303	Headline: ACEs that use addrgroup get replaced by any in startup-configs Symptoms: >> ACE is getting changed in startup config once we delete the ACL from running config, Startup config is getting changed without saving the running config.>> Due to this Ansible is catching the difference with Startup and Running config which in return creates some connectivity issue in customer environment. Workarounds: Perform copy run start, immediately after deleting the ACE / ACL. Reload without saving the configuration.
CSCvz40264	Headline: Add 'show hardware internal tah mac-credit-info' to show tech Symptoms: Enhancement request to add " show hardware internal tah mac-credit-info" to relevant component show tech. This CLI will show instantaneous usage of MAC credits (relevant when troubleshooting potential buffer lockups/wedges/etc). Workarounds: N/A
CSCvz40618	Headline: local-as configured on BGP neighbor switches to template local-as after reload Symptoms: When the local-as is configured in a template inherited by the neighbor as well as configured in the neighbor, the local-as configured in the neighbor is used: router bgp 65000 address-family ipv4 unicast template peer test_template local-as 45000 no-prepend replace-as remove-private-as all address-family ipv4 unicast neighbor 1.1.1.2 inherit peer test_template remote-as 65001 local-as 65002 no-prepend replace-as no remove-private-as all address-family ipv4 unicastswitch# show ip bgp neighbors 1.1.1.2BGP neighbor is 1.1.1.2, remote AS 65001, local AS 65002, ebgp link, Peer index 3However, when the switch is reloaded, the local-as in the template is used but no change was made to the config:switch# show ip bgp neighbors 1.1.1.2BGP neighbor is 1.1.1.2, remote AS 65001, local AS 45000, ebgp link, Peer index 3 Workarounds: Remove and re-configure the local-as in the neighbor. switch(config-router)# neighbor 1.1.1.2 switch(config-router-neighbor)# default local-as 65002 switch(config-router-neighbor)# local-as 65002 no-prepend replace-as

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Bug ID	Description
CSCvz41769	Headline: N9K Interface Microflaps May Cause All Control & Data-Plane Traffic to Fail Symptoms: A Nexus 9000 Series Switch with Cloud-Scale ASIC architecture (-EX, -FX, -FX2, -GX, etc) may experience a condition where interface microflaps lead to the switch being unable to pass any traffic from either the control-plane or the data-plane. In this condition, buffer exhaustion syslogs may or may not be seen. All control plane protocols will fail, and multiple interfaces may slowly increment output discards, even with little to no egress traffic shown for the interface's egress rate." Microflaps" are link failures which occur and recover within the configured Link Debounce time (100ms by default). There are no syslog indications of a port experiencing microflaps, nor are microflaps often a cause for concern if they never lead to true link failure. Workarounds: Reload if condition is detected early enough, flapping the port experiencing the microflaps may recover the switch- If upgrading is not feasible, " link debounce time 0" can temporarily prevent a microflapping port from triggering the condition. This will disable the link debounce timer, and force a full reinitialization of the link in the event any loss of signal is detected. For a microflapping port, this may lead to rapid link failures, though the overall integrity of the switch will be maintained.
CSCvz42021	Headline: port-channel interface deletion through netconf running datastore causes switch stuck for ~5min Symptoms: After a port-channel is deleted through Netconf edit-config request, device is stuck for ~5min Workarounds: Send the Netconf request through candidate datastore. This candidate netconf request works successfully without any issues
CSCvz45148	Headline: N9k - Generate syslog message for BootupPortLoopback diagnostic failure Symptoms: There is no syslog message generated for BootupPortLoopback diag failure. The " show module" output reports BootupPortLoopback failed diagnostics. Workarounds: Verify the diagnostics status using " show module x" and " show diagnostic result module x" command outputs.The ports reporting diag failure may not function as expected.If the diagnostic is failed, open a TAC case to replace the module through RMA.
CSCvz45991	Headline: N9K-FX3 AOC port bringup delay Symptoms: Delay observed with port bringup on N9K -FX3 switches running AOC DAC transceivers - within a minute on shut / no shut, up to tens of minutes upon reload. Workarounds: None
CSCvz49248	Headline: Cabling removal may lead to 30s port bring down delay(traffic blackhole) - LACP Hot-Standby scenario Symptoms: When trying to remove cabling from both Active and Hot-Standby port at same time there is possibility that Active will not go down immediately but with 30 seconds delay. Workarounds: None
CSCvz53721	Headline: VxLAN BGP EVPN - incorrect processing of RD vs origin_id on receiving side. Symptoms: Reflected BGP L2VPN EVPN prefixes are incorrectly processed causing RD and origin_id mismatch.Senders sends out BGP update containing multiple RD under one origin_id.This cause BGP best path algorithm results to choose wrong or suboptimal path due to router-id preference. Workarounds: None

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Bug ID	Description
CSCvz55570	Headline: Nexus 9000 is not sending authorization request Symptoms: Nexus 9348 is being administered with ISE device administration feature which uses TACACS+. When going through the aaa flow, authentication and accounting queries are sent back to ISE. But authorization request are never sent by the NXFrom ISE perspective, we always hit the correct policy. But authorization request never reaches ISE.In lab testing, we can see that this is not reproduceable Workarounds: Configure Inband interface as global TACACS interface.
CSCvz58366	Headline: aq_error.log & aq_errors.log can fill up tmp directory Symptoms: tmp directory can get full due to aq_error,log files Nexus show system internal flash/bin/df: write error: No space left on deviceFilesystem 1K-blocks Used Available Use% Mounted onnone 614400 614400 0 100% /var/volatile/tmpbash-4.3$ cd /var/volatile/tmpbash-4.3$ ls -ltotal 614064-rw-rw-rw- 1 root root 577957888 Aug 25 06:50 aq_error.log-rw-rw-rw- 1 root root 50393088 Aug 25 06:50 aq_errors.log Workarounds: Clear out the files from bash conf t ; feature bash ; run bashcd /var/volatile/tmpecho > /var/volatile/tmp/aq_error.logecho > /var/volatile/tmp/aq_errors.log
CSCvz59001	Headline: Enh:Syslog needed for " ip igmp join-group" Symptoms: Loss of data plane traffic and OIL in hardware on n9K platforms Workarounds: Use " ip igmp static-oif" instead
CSCvz59009	Headline: N9K - BGP next-hop filtering affect FIB table for Static route Symptoms: On Nexus 9000 series switches after static route have the next-hop denied under BGP next-hop filtering, the static route have a valid next-hop in RIB but not valid in FIB.As a side effect, a BGP neighbor learns via this static route, is not established, because route to NH considered as unreachable in kstack. As BGP use kstack, BGP can not use this NH for establish TCP session to peer. Workarounds: Remove and add again the static route or use pinned static route
CSCvz60482	Headline: NBM Static mroutes missing after reload Symptoms: On an NBM switch with light configuration and a small amount of transceivers, if the " system ready" message is generated before a minute passes since MRIB process initialization, NBM static routes installed by DCNM might not appear in " show ip mroute" . Workarounds: None
CSCvz62790	Headline: N9K: Feature Inconsistency in DME DB DN sys/fm after Upgrade Symptoms: After an upgrade from 9.3(5) to a later release, a feature will be listed as enabled in the startup and running configurations of the switch. However, when trying to enter the configuration or access a configuration-mode in relation to this feature, the switch returns an error stating the feature is not enabled. For example, " feature interface-vlan" is enabled in the startup & running configs along with one or more VLAN SVI interfaces are created; but the user is unable to enter the interface config-mode on the VLAN SVI interface. Workarounds: Execute " reload ascii" to rebuild the DME database.

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Bug ID	Description
CSCvz65502	Headline: SERVICE_CRASHED: Service " vdc_mgr" hasn't caught signal 11 Symptoms: FPN-N9232-L3-HL# 2021 Sep 9 14:54:21.425 FPN-N9232-L3-HL %ASCII-CFG-6-INFORMATION: Reading ACFG Runtime information (message repeated 2 times)2021 Sep 9 14:54:32.078 FPN-N9232-L3-HL %ASCII-CFG-6-INFORMATION: Reading ACFG Runtime information (message repeated 1 time)2021 Sep 9 14:54:32.078 FPN-N9232-L3-HL %LIBIFMGR-5-ALL_COUNTERS_CLEARED: All interface counters cleared by user2021 Sep 9 14:54:33.618 FPN-N9232-L3-HL %SYSLOG-1-SYSTEM_MSG: Logging logfile (messages) cleared by user2021 Sep 9 14:54:43.734 FPN-N9232-L3-HL vshd: Failed to open PSS; default ULIB configuration will be used. URL: nonvolatile:/var/sysmgr/startup-cfg/bin/ulib_cfg_start_pss2021 Sep 9 14:54:47.607 FPN-N9232-L3-HL %SYSMGR-2-SERVICE_CRASHED: Service " vdc_mgr" (PID 19154) hasn't caught signal 11 (core will be saved).2021 Sep 9 14:54:48.018 FPN-N9232-L3-HL %VDC_MGR-5-VDC_HOSTNAME_CHANGE: vdc 1 hostname changed to FPN-N9232-L3-HL 2021 Sep 9 14:54:48.187 FPN-N9232-L3-HL %SYSMGR-2-LAST_CORE_BASIC_TRACE: : PID 16856 with message vdc_mgr(non-sysmgr) crashed, core will be saved . 2021 Sep 9 14:54:48.254 FPN-N9232-L3-HL %SYSMGR-2-SERVICE_CRASHED: Service " vdc_mgr" (PID 16856) hasn't caught signal 11 (no core).2021 Sep 9 14:54:48.616 FPN-N9232-L3-HL %VDC_MGR-5-VDC_HOSTNAME_CHANGE: vdc 1 hostname changed to FPN-N9232-L3-HL 2021 Sep 9 14:54:48.812 FPN-N9232-L3-HL %SYSMGR-2-SERVICE_CRASHED: Service " vdc_mgr" (PID 16913) hasn't caught signal 11 (core will be saved).2021 Sep 9 14:54:49.188 FPN-N9232-L3-HL %VDC_MGR-5-VDC_HOSTNAME_CHANGE: vdc 1 hostname changed to FPN-N9232-L3-HL Workarounds: None
CSCvz67182	Headline: n9k/xconnect: Xconnect traffic loss in Multicast underlay due to dot1q tag miss over MCT Symptoms: Packet drop or duplicated traffic for VXLAN/xconnect traffic when traffic is passing over VPC PeerLink during failover scenario when all uplink are down Workarounds: Use different vlan ID for backup underlay routing
CSCvz68036	Headline: N9K: NXAPI " Server is busy. Request rejected" reply to some requests Symptoms: N9K replies to some NXAPI requests with:`show nxapi-server logs`<SNIP>2021 August 30 10:09:32.550 ngx_http_ins_api_post_body_handler:713 pid:19078 Sending response now {" ins_api" :{" type" :" cli_show" ," version" :" 1.0" ," sid" :" eoc" ," outputs" :{" output" :{" clierror" :" " ," input" :" show hostname" ," msg" :" Server is busy. Request rejected" ," code" :" 500" }}}} Workarounds: Define the user-account which the NDB controller uses in the local database on the switch:conf tusername xxx

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Bug ID	Description
CSCvz74057	Headline: When downgrading N9K with duplex configuration, config compatibility check fails Symptoms: When downgrading N9K from 9.3(7) to 7.0(3)I7(7), when duplex configuration is explicit (eg " duplex full"), the configuration compatibility check will fail. Once issue is triggered, workaround is required to move past this issue and complete the downgrade.Images will be upgraded according to following table: Module Image Running-Version(pri:alt) New-Version Upg-Required------ ---------- -- -------------------- ------------ 1 nxos 9.3(7) 7.0(3)I7(7) yes 1 bios v07.68(05/18/2020):v07.66(06/11/2019) v07.66(06/11/2019) no---------- Running-config contains configuration that is incompatible with the new image (strict incompatibility). Please run 'show incompatibility-all nxos <image>' command to find out which feature needs to be disabled.DC1-ToR04# show incompatibility-all nxos bootflash:nxos.7.0.3.I7.7.binChecking incompatible configuration(s) for vdc 'DC1-ToR04':----------The following configurations on active are incompatible with the system image 1) Service : ethpm , Capability : CAP_FEATURE_DUPLEX_HALF_FULLDescription : Duplex configuration is presentCapability requirement : STRICTEnable/Disable command : Please remove duplex configuration from interface using " no duplex" Checking dynamic incompatibilities:----------No incompatible configurations Workarounds: -Set the speed on the port to 10M. After that, do a ?no duplex? on the port. Then, continue with the downgrade.-If the original config is saved anywhere, do: -copy bootflash:<saved_cfg_filename> startup-config -reload ascii
CSCvz75496	Headline: Profile apply failures should list the commands led to manual conflicts Symptoms: Nexus 9k fails to apply the profile; Accounting log prints below messageDC1-BGW2# sh account log | in i apply.profileThu Sep 23 14:35:10 2021:type=update:id=172.18.121.76@pts/7:user=admin:cmd=configure terminal ; apply profile bokf (FAILURE) Workarounds: Currently the only workaround is to scan through the configurations, freeform and understand if there are any configurations that conflict with the profile and remove those.
CSCvz75541	Headline: Port bringup issue on FX3 FEX-mode Symptoms: When FX3 is used in FEX-mode, ports dont come up.Issue doesn't affect FX3 in TOR mode. Workarounds: NA
CSCvz75734	Headline: N9K EVPN route installs incorrect/random next-hop. Symptoms: evpn route imported into vrf with bogus next-hop on a VTEP causing traffic to black-hole. Workarounds: delete " soft-reconfiguration inbound" CLI from template
CSCvz86703	Headline: nxos 9.3(8) ip radius-source interface not working Symptoms: mab/dot1x will failed due to ip-source interface not crafting the correct source address Workarounds: None
CSCvz88291	Headline: IPv6 LLA BGP control packets matching Default CoPP class on N34XX-S based platforms Symptoms: Add support for IPv6 link local BGP peering. Workarounds: None

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Bug ID	Description
CSCvz89455	Headline: Bluewood-QSA: Seeing delayed linkup on QSA links on Bluewood & Bluewood40 LC Symptoms: Some QSA links are exhibiting delayed linkup. Time is more than 1 hour. This is seen on both regular & BV ports. Workarounds: None
CSCvz89560	Headline: netconf returns 'port already in a port-channel' error when phys interface goes first thru dme Symptoms: When a netconf edit-config request to add a member to the port-channel is sent, it returns an error - " ERROR: : port already in a port-channel, no config allowed" Workarounds: In the netconf edit-config payload, adding mtu property to the member interface is the workaround for this issue.'mtu' value of member interface should match with the 'mtu' value of port-channel interface.
CSCvz90725	Headline: Kernel panic and reload with igb Link down errors Symptoms: 2021 Sep 8 15:42:15 EVGR-D-93180-2 %KERN-3-SYSTEM_MSG: [3.372488] may be MMC, Skipping mtd registration on this card - kernel2021 Sep 8 15:42:15 EVGR-D-93180-2 %KERN-2-SYSTEM_MSG: [14.157919] cctrl_tor3_plat_io_isr Failed to handle the interrupt 7 - kernel2021 Sep 8 15:42:15 EVGR-D-93180-2 %KERN-2-SYSTEM_MSG: [14.344814] cctrl_tor3_plat_io_isr Failed to handle the interrupt 7 - kernel----- reset reason for module 1 (from Supervisor in slot 1) ---At 403954 usecs after Wed Sep 8 14:20:54 2021 Reason: Kernel Panic Service: Version: 10.1(1) Workarounds: None
CSCvz90749	Headline: IPv6 LLA BGP control packets matching Default CoPP class on GX/GX2 based platforms Symptoms: IPv6 link local BGP classification on CoPP missing on GX/GX2 PIDs.LLA IPv6 addressing is defined as an address within prefix FE80::/10. Support for this on CloudScale requires the TCAM carving to be increased for the Ingress SUP region from 512 to 768 in order to provide more space for CoPP to add this match under the critical class.However, even after the increase in TCAM is performed on the Ingress SUP, IPv6 LLA BGP packets remain classified under the default class. This can lead to drops and corresponding TCP retransmission (latency) in deployments. Workarounds: There is no workaround for this.
CSCvz91416	Headline: n9k:CTS tagged packets are dropped in Non-default VRF with Subinterface Symptoms: OSPF route also not update Workarounds: USE default vrf
CSCvz93029	Headline: Fabricpath packets don't match the ACL of ethertype 0x8903 Symptoms: Fabricpath packets match the ACL with any any instead of 0x8903 ether type Workarounds: N/A
CSCvz93365	Headline: 'show ip prefix-list test X.X.X.X/X first-match' doesn't match correctly. Symptoms: Certain prefix routes will not match the prefix-list as expected:switch# show ip prefix-list test x.0.0.0/24 first-match seq 5 permit x.0.0.0/16 eq 24 switch# show ip prefix-list test x.0.0.0/24 first-match seq 5 permit x.0.0.0/16 eq 24 switch# show ip prefix-list test x.0.1.x/24 first-match switch# show ip prefix-list test x.0.1.x/25 first-match switch# Workarounds: None

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Bug ID	Description
CSCvz93622	Headline: Layer 3 VNI SVI is down indicating "VLAN/BD is down" after upgrade. Symptoms: After disruptive upgrade from nxos 9.3(5) to nxos 9.3(8) the layer 3 vni svi on border gateway may stay down indicating "VLAN/BD is down" leading to connectivity issues. Workarounds: Shut/No-shut the L3 VNID SVINote that a reload might not fix it as next reload might also result in L3VNID SVI to remain in down/down
CSCvz95129	Headline: Scrimshaw: Link does not come on BV port connected to Server Symptoms: 40G AOC link not coming up when connected to ESXi server. Workarounds: Move connection to non BV port. Use port 1 to 48 on N9K-C9364C or port 7 to 32 on N9K-C9336C-FX2
CSCvz97453	Headline: Maintanence Mode fail causing SDB init failures Symptoms: L3VNI SVI will not come up after upgrade from 9.3.5 to 9.3.8 Workarounds: Shut/no-shut of the L3VNI SVI
CSCvz98466	Headline: Nexus 9000: CC syslog is not generated after test cc execution but after show cc execution Symptoms: Consistency Checker syslog is generated after execution of show command instead of getting generated after execution of test command. Workarounds: The show cc output and syslog are related to previous execution of test cc command. If CC failed in the past, running show cc command multiple times will generate previous cc failure and not most current state of CC.Always run the cc using test command and then verify show cc output.
CSCvz98995	Headline: Nexus 9000/msite - DF bit not correctly programmed on DCI interafces Symptoms: In multisite with split horizon enabled "split-horizon per-site" there can be observed BUM (broadcast/multicast) packet drop after one of Anycast BGW is put in maintenance mode. When issue is present ELTM do not have configured DF bit for any VLAN. Workarounds: To prevent issue to happen Disable "split horizon" feature or reload device without maintenance mode.To recover from issue flap NVE interface on remaining ABGW (devices that are not in maintenance mode)
CSCvz99747	Headline: VLAN id configured, unable to generate auto RD error when applying VNI config. Symptoms: The following error is seen but the configuration is applied anyways: switch(config)# apply profile testMessage reported by command :: rd autoNo VLAN id configured, unable to generate auto RD Workarounds: None. The error can be ignored because it doesn't affect the switch operation.
CSCwa00358	Headline: Change syslog severity of TAHUSD_L2_LEARN_DISABLE_MTM_FLOW_CTRL Symptoms: TAHUSD_L2_LEARN_DISABLE_MTM_FLOW_CTRL has syslog severity Informational, thus log not seen in syslog when flow control condition is hit. Workarounds: None.

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Bug ID	Description
CSCwa00657	Headline: N9k Multisite BGW drops traffic after reload Symptoms: Nexus 9500 Multisite BGW could be seen dropping traffic towards remote VXLAN BGWs after reload Workarounds: Bouncing the DCI links recovers forwarding of traffic towards remote VXLAN BGWs until the next reload
CSCwa02953	Headline: snmpd core when certain sha and priv patterns used for snmp-server cli Symptoms: A core is generated and switch will reload after configuring snmp-server given specific inputs for sha and priv. Workarounds: Avoid entering values for sha and priv using localized2key that are inconsistent with what is provided for the user in the running-config.
CSCwa04023	Headline: Nexus // IPv4 /32 host route not in target VRF with route leaking Symptoms: Transit traffic between hosts in 2 different vrf is punted to CPU instead of getting hardware switched. BGP is used to leak routes between these VRFs and a third VRF.Receive a /32 am host route in the source VRF. Workarounds: Statically assigning the ARP entry in the source VRF.
CSCwa07236	Headline: Nexus 9000 VXLAN Encapsulation uses Incorrect Outer Destination IP Symptoms: VXLAN Encapsulated Packets are sent with Wrong Outer Destination IP address. URIB says the route is learnt from VTEP X, but Packets are encapsulated with outer DIP of VTEP Y. Workarounds: None.
CSCwa14052	Headline: tahusd high cpu due to interrupts Symptoms: TAHUSD is seen operating consistently at 10-14% when checking 'show processes cpu sort' Workarounds: The only way to clear condition on system is reload of unit
CSCwa15369	Headline: Nexus 9000 Ipv6 recursive lookups fail when the last hop is ipv4 Symptoms: The ipv6 packet must be processed in software to hit this issue. For example, pinging an ipv6 address to or from the switch and the ipv6 address has multiple recursive lookups in which the last hop is an ipv4 address. The last hop would be an ipv4 address if the ipv6 packet is encap in an ipv4 packet. Workarounds: None
CSCwa16832	Headline: No radius pacets after an OIR or switchover event on the active sup - N9K EOR Symptoms: Radius authentication failure and the following logs are displayed: MTR-2A-32-Core1# sh logg log | last 102021 Nov 8 16:25:41.268 MTR-2A-32-Core1 %RADIUS-3-RADIUS_ERROR_MESSAGE: Failed looking up IP address for RADIUS server 10.197.241.1922021 Nov 8 16:25:41.268 MTR-2A-32-Core1 %RADIUS-3-RADIUS_ERROR_MESSAGE: All RADIUS servers failed to respond after retries.2021 Nov 8 16:25:42.465 MTR-2A-32-Core1 %RADIUS-3-RADIUS_ERROR_MESSAGE: Failed looking up IP address for RADIUS server 10.197.241.192Ethanalyzer does not display the RADIUS PAP REQ packets and the next-hop will not see anything coming in Workarounds: None

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Bug ID	Description
CSCwa17807	Headline: VXLAN: MAC address not correctly learned after REMOTE -> LOCAL mac move Symptoms: MAC address are not correctly updated after large (more than 500 MAC addresses) are moved from remote VTEP to local VTEP. After the move MAC address table still point to remote VTEP and is not updated until GARP/ARP is received from host or ARP timeout Workarounds: Ensure host will send GARP/ARP after the move or downgrade to 9.3(7a)
CSCwa23504	Headline: infra-vlans config is inconsistent Symptoms: There is no ability to remove vlan from infra-vlans list in running-config even if the below command is successful. Wed Nov 10 10:08:50 2021:type=update:id=<IP_ADDR>@pts/14:user=admin:cmd=configure terminal ; no system nve infra-vlans 756 (SUCCESS)+ VLAN still present in running-config:#show run | sec " system nve infra-vlans" system nve infra-vlans 64,66,600,616,620,625,629-630,638,640,643,647-648,650,654,656,658,661-662,665-666,668,670,675-676,681,683,691-692,694,696,698,703,712,717,721,724,744,747,750,755-756,761,764,766,771,775,796,798,800,809-810,812,817,830,839,844,847,852,862,868,891-892,906,910,918,920,939,942,953,960,962,968,973-974,978,980,983,989,998+ At same time this vlan is not seen as infra-vlan in DME config:switch#show system internal dme running-config all | inc '" id" : " 756" ' next 8 prev 4<empty output>+ No ability to add the same vlan back to the list:Wed Nov 10 19:00:32 2021:type=update:id=<IP_ADDR>@pts/14:user=admin:cmd=configure terminal ; system nve infra-vlans 756 (FAILURE)+ Consistency-checker 'show consistency-checker dme running-config` looks to be not detecting this problem and not throwing any related inconsistencies Workarounds: None
CSCwa24516	Headline: ELTM process crashes while handling an MTS messages. Symptoms: A Nexus 9000 switch running NX-OS 9.2(x) or 9.3(x) may experience a HAP reset due to a segfault (signal 11) crash in the ELTM process when it is handling an MTS (Messaging and Transaction System) message. This is due to the fact that software level memory corruption has occurred. The actual feature that generated the MTS event that ELTM is handing can be random, as the corruption was caused by something prior. Workarounds: None.
CSCwa27101	Headline: MAC address was learnt from a STP(rstp) blocked port Symptoms: MAC address was learnt from a STP(rstp) blocked port. Workarounds: unknown
CSCwa29328	Headline: dfe-tuning-delay 1500 can not be configured Symptoms: dfe-tuning-delay 1500 cannot be configured on port-channel interface even after deleting the configuration about port-channel. And after deleting the configuration about port-channel, dfe-tuning-delay 1500 can only be configured after configured [dfe-tuning-delay 1000]. Workarounds: N/A
CSCwa32356	Headline: SNMPd crash Symptoms: In rare circumstances, an SNMPd process crash can happen, causing the whole switch to reload. The crash has been confirmed to be caused by memory corruption, with unknown circumstances. NXOS versions in " known fixed releases" contain a fix that prevents this corruption from causing issues. Workarounds: None.

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Bug ID	Description
CSCwa34101	Headline: ttag-strip failed in hardware programming after shut/no shut port-channel member Symptoms: Ttag-strip functionality is broken on port-channel member port. Workarounds: Issue shut & no shut on port-channel itself.
CSCvx31824	Headline: some ports get err-disabled after switch boot up Symptoms: After switch boot up, you may see some ports stuck in initializing status and get err-disabled finally. Reason is sequence timeout.%ETHPORT-5-IF_DOWN_ERROR_DISABLED: Interface Ethernet1/4 is down (Error disabled. Reason:sequence timeout)And there wiil be a " ipqosmgr" crash finally.>%SYSMGR-2-SERVICE_CRASHED: Service " ipqosmgr" (PID 28294) hasn't caught signal 6 (core will be saved) Workarounds: shut/not shut the port
CSCvz14369	Headline: EEM script with Cron timer configuration randomly stop working Symptoms: EEM script with CRON timer configured randomly stop working Workarounds: N/A
CSCwa14118	Headline: EoR Chassis missing kernel traces during watchdog timeout Symptoms: Corner scenarios of hardware failure/watchdog timeout can cause missing stack traces. Workarounds: None
CSCvz80795	Headline: CTS tagged packets are dropped upon receiving from Nexus 7000 device Symptoms: SGT Tagged packets received from Nexus 7000 gets dropped by Nexus 9000 Workarounds: None
CSCwb02697	Headline: Pre Translated MMNAT/MUNAT Flows CC failing with LXC-MODE Symptoms: CC Failure when box is in LXC-Mode boot mode for Pre Translated MMNAT/MUNAT Flows Workarounds: When the box is in Non-LXC mode, CC works fine.

General/Known Issues

Bug ID	Description
CSCwa27800	init-system fails following secure-erase and lxc mode showing module 0 in warning.
CSCvz98412	DOM data is not populated for Breakout Interfaces in DME
CSCwa11889	DME time out error upon netconf post due to scale config
CSCwa34469	Transient ipv6 traffic loss when FM comes online after reloading
CSCwa36602	Transient traffic loss observed after deleting and restoring port-channel Vlans using rollback
CSCvw44166	QP MACSEC: Conf offset update causing traffic loss

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Bug ID	Description
CSCwa36037	For Cisco Nexus 9300-GX platform switches, post VXLAN strip, L2 header addresses are re-written as follows: Source MAC as VDC MAC address and Destination MAC as 000000abcdef.
CSCwi99525	On Cisco Nexus N2K-C2348TQ HIFs fail to utilize redundant Port-Channel links, to NIF, during link failover events.

Device Hardware

The following tables list the Cisco Nexus 9000 Series hardware that Cisco NX-OS Release 10.2(2)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 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 2. 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 400-Gigabit Ethernet QSFP 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

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Table 3. 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 line card	4	8
N9K-X9624D-R2	Cisco Nexus 9500 24-port 400 Gigabit QDD line card	Not supported	8

Table 4. 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 5. 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 6. Cisco Nexus 9500 Supervisor Modules

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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 7. Cisco Nexus 9500 System Controller

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

Table 8. 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 9. Cisco Nexus 9500 Fabric Module Blanks with Power Connector

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 10. 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	Cisco Nexus 9504 Cisco Nexus 9508

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Product ID	Description	Quantity	Cisco Nexus Switches
		Up to 10	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 11. 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-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

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Cisco Nexus Switch	Description
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
N9K-C9348GC-FXP*	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:** 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."

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Table 12. 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 [1] 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 [2] 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 6	92300YC [1] 9332C [1] 93180YC-FX3S [2] 93180YC-FX3 93108TC-FX3P 9316D-GX 93600CD-GX 9336C-FX2-E

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

[2] 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
	Fan module with port-side exhaust airflow (blue coloring)	6	
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 13. 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

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Product ID	Description	Quantity	Cisco Nexus Switches
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 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

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Product ID	Description	Quantity	Cisco Nexus Switches
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 14. 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
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 15. Cisco Nexus 9500 R-Series Line Cards

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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 16. Cisco Nexus 9500 R2-Series Line Cards

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

Optics

To determine which transceivers and cables are supported by a switch, see the Transceiver Module (TMG) Compatibility Matrix. To see the transceiver specifications and installation information, see the Install and Upgrade Guides.

Cisco Nexus Dashboard Insights

Cisco NX-OS Release 10.2(2)F supports the Nexus Dashboard Insights on Cisco Nexus 9200, 9300-EX, 9300-FX, 9300-FX2, and 9300-FX3 platform switches and 9500 platform switches with -EX/FX/GX line cards. For more information, 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 10.2(x). For information about an In Service Software Upgrade (ISSU), see the Cisco NX-OS ISSU Support Matrix.

Related Content

This document describes and provides links to the user documentation available for Cisco Nexus 9000. To find a document online, use one of the links in this section.

Document	Description
Cisco Nexus 9000 Series Switches	Cisco Nexus 9000 Series documentation
Cisco NX-OS Software Strategy and Lifecycle Guide	Cisco NX-OS Software Release and Image-naming Convention

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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 NX-OS Software Upgrade and Downgrade Guide, Release 10.2(x)	Cisco Nexus 9000 Series Software Upgrade and Downgrade Guide
Cisco Nexus 9000 Series FPGA/EPLD Upgrade Release Notes, Release 10.2(2)	Cisco Nexus 9000 Series FPGA/EPLD Upgrade Release Notes
Cisco Nexus NX-API Reference	Cisco Nexus 3000 and 9000 Series NX-API REST SDK User Guide and API Reference
ftp://ftp.cisco.com/pub/mibs/supportlists/nexus9000/Nexus9000MIBSupportList.html	Cisco NX-OS Supported MIBs
Cisco Nexus 9000 Series Switch FEX Support Matrix	Supported FEX modules
Cisco NX-OS Licensing Guide and Cisco Nexus Smart Licensing Using Policy User Guide	Licensing Information

When you downgrade from Cisco NX-OS Release 10.2(2)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.

For more information, see the Cisco NX-OS Licensing Guide.

Documentation Feedback

To provide technical feedback on this document, or to report an error or omission, please send your comments to nexus9k-docfeedback@cisco.com. We appreciate your feedback.

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