



Cisco Nexus Data Broker Release Notes, Release 3.9.2

Introduction

Visibility into application traffic is important for infrastructure operations to maintain security and compliance, and to perform resource planning and troubleshooting. With the technological advances and growth in cloud-based applications, it has become imperative to gain increased visibility into the network traffic. Traditional approaches to gain visibility into network traffic are expensive and rigid, making it difficult for managers of large-scale deployments.

Cisco Nexus Data Broker with Cisco Nexus switches provides a software-defined, programmable solution to aggregate copies of network traffic using SPAN or network taps for monitoring and visibility. As opposed to traditional network taps and monitoring solutions, this packet-brokering approach offers a simple, scalable and cost-effective solution well-suited for customers who need to monitor higher-volume and business-critical traffic for efficient use of security, compliance, and application performance monitoring tools.

Cisco Nexus Data Broker (NDB) also provides a software-defined, programmable solution to perform inline inspection of the network traffic for monitoring and visibility purpose. Inline traffic inspection is performed on specific traffic by redirecting it through multiple security tools before it enters or exits a network.

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.

Date	Description
April 14, 2023	Updated the Interoperability Matrix table to indicate support for NX-OS releases, 10.3(1) and 10.2(4).
March 31, 2023	Updated the Interoperability Matrix table to indicate support for NX-OS release 9.3(10).
August 10, 2022	<ul style="list-style-type: none">Updated the Limitations and Guidelines section to indicate that Q-in-Q is not supported on Cisco Nexus 3548 switches.Updated the Interoperability Matrix table to indicate support for NX-OS release 10.2(3).
July 18, 2022	Updated the Interoperability Matrix table to indicate support for NX-OS release 9.3(9).
July 1, 2022	Updated the Interoperability Matrix table to indicate support of NX-OS releases, 9.3(5), 9.3(7a),9.3(8), for Cisco Nexus 3548 switch.
April 28, 2022	Release 3.9.2 became available.

New Software Features

The list of new features for Cisco Nexus Data Broker, Release 3.9.2 is [here](#).

Feature	Description
Setting the Memory Requirement	<p>By default, while deploying the Nexus Data Broker software, <i>medium</i> profile is assigned. You can change the profile, using the <code>./runxnc.sh -start -profile type</code> command.</p> <p>For more details, see the <i>Cisco Nexus Data Broker Deployment Guide, Release 3.9.2</i>.</p>
Uploading TLS Certificate(s) using the GUI	<p>You can enable TLS between an NDB device and NDB controller using the GUI. A new tab, TLS, has been introduced, which allows the user to upload and/or update the <code>tlsTrustStore</code> and <code>tlsKeyStore</code> files and the <code>keystore/truststore</code> passwords.</p> <p>For more details, see the <i>Cisco Nexus Data Broker Configuration Guide, Release 3.9.2</i>.</p>
Onboarding an NDB Device	<p>Enhanced GUI while adding a device. The Device Prerequisites option is enabled by default. See the <i>Viewing and Adding Devices</i> chapter in the <i>Cisco Nexus Data Broker Configuration Guide, Release 3.9.2</i>, for the detailed procedure.</p>
Fixing inconsistent ACL attachment(s) on port(s)	<p>Enhanced GUI to check and fix inconsistent ACL attachment(s) on the port(s) of an NDB device.</p> <p>For more details, see the <i>Cisco Nexus Data Broker Configuration Guide, Release 3.9.2</i>.</p>
GUI Enhancements while Installing and Upgrading the NDB software	<p>The NDB GUI is in a <i>ready-only</i> state while installing/ upgrading the NDB software. This is to facilitate smooth install and upgrade of the software as NDB is not stable while the upgrade is in progress. Relevant messages are displayed at the top of the NDB GUI screen to indicate the current background process. Wait for the <i>Ready</i> message to configure/ use the system.</p> <p>For more details, see the <i>Cisco Nexus Data Broker Deployment Guide, Release 3.9.2</i>.</p>
Support for Maintenance Mode	<p>You can move an NDB device to maintenance mode while performing device maintenance activities (such as NX-OS upgrade on NDB switches).</p> <p>For more details, see the <i>Cisco Nexus Data Broker Configuration Guide, Release 3.9.2</i>.</p>
Optimizing the TCP/IP Stack	<p>It is recommended to optimize the TCP/IP stack configuration in the cluster servers while configuring High Availability clusters. For the list of relevant commands, see the <i>Cisco Nexus Data Broker Configuration Guide, Release 3.9.2</i>.</p>

Issues

[Cisco Bug Search Help Tool](#) (BST) is a web-based tool that acts as a gateway to the Cisco bug tracking system that maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. BST provides you with detailed defect information about your products and software. Use the Bug Search Tool to search for a specific bug or to search for all bugs in a release.

This section includes the following topics:

- Open Issues
- Resolved Issues
- Known Issues

Open Issues

Open Issues for Cisco Nexus Data Broker.

Bug ID	Description	Exists In
CSCvs65911	Port Channel Configuration is not getting exported.	3.9.0 and above
CSCvt62492	Port-channel operations on ISL links results in failure of Link discovery.	3.9.0 and above
CSCvz21072	NDB throws NumberFormatException error with NX-OS 9.3(7a) devices.	3.9.2
CSCwa87997	Port status is not updated correctly in NDB UI and Flows are not pushed.	3.9.2

Resolved Issues

Resolved Issues for Cisco Nexus Data Broker.

Bug ID	Description	Resolved In
CSCvk39789	"Could not commit transaction" exception thrown at NDB.	3.9.2
CSCwv88307	NDB should not remove connected switches once controller moved to isolated state.	3.9.2
CSCwv38606	Connection moving to 'not installed' state if devices are not connected/reachable from NDB.	3.9.2
CSCwv43234	NDB is not adding IP ACL into ISL Port-channel after reload of switches.	3.9.2
CSCwv23569	Don't let the member start or become primary if primary is started with keys and certificates.	3.9.2
CSCwv19054	SPG modification, connections not loading, PD page not loading issues.	3.9.2
CSCwv77673	Modifying the Delivery port name with existing port name results NDB in abnormal state.	3.9.2
CSCwv92628	Pop-up warning message to user in NDB UI, while switch rediscover.	3.9.2
CSCvx08964	Tacacs authentication into the NDB server does not show actual remote address.	3.9.2
CSCvx11654	ISL Port-channels are attached with Global deny ACLs after sequence of upgrade to 3.10.0.	3.9.2
CSCwa47372	Vulnerability in Apache Log4j Library Affecting Cisco Products: December 2021.	3.9.2

Known Issues (NX-OS)

Bug ID	Description	Exists In
CSCvo85210	NDB Limitation: Can't match MAC address in IP packet, it will hit deny any any in IP ACLs.	9.2.1 and above

Bug ID	Description	Exists In
CSCvq61822	Need Error handling for feature SFLOW with ERSPAN destination since they are mutually exclusive.	9.2.1 and above
CSCvt15642	Can't match MAC address in IP packet, it will hit deny any any in IP ACLs.	9.2.1 and above
CSCvo21059	MPLS tapagg should allow deny ACE without redirection option.	9.2.2 and above
CSCvt15877	Not able to use ipv6 + vlan on the ISL link.	7.3.0 and above
CSCvs50998	IP ACL with UDF match removes internal VLAN tag in Cisco NX-OS Release 9.3(2). - Fixed in 9.3(3).	9.3.2
CSCvr01876	Re-direct STP, CDP packets similar to LLDP port for Openflow.	7.0.3 and above
CSCvt14639	Not able to convert Layer 2 ports to layer 3 in 9.3(3).	9.3.3
CSCvt03231	ACL with HTTP tcp-option-length redirect statement are not matching traffic correctly in 9.3(3).	9.3.3
CSCvt37799	ERSPAN Dest doesn't work when L2 port with mode tap-aggregation is converted to L3 port in 9.3(3).	9.3.4
CSCvx23944	Duplicate sequence number error in NXOS 9.3(6).	9.3.6
CSCvx32214	Dot1q-tunnel(QinQ) is not programmed correctly for port-channel members in NXOS 9.3(5).	9.3.5, 9.3.6
CSCvx45678	After device reload guestshell activation fails due to low memory on devices for NXOS 9.3(5) version.	9.3.5
CSCvx79293	Not seeing timestamptag on interface after configuring the cmds on C9504 platform in nxos 9.3.7.	9.3.7
CSCvy16218	Username is shown as 'guestshell' irrespective of user executes the guestshell.	9.3.7
CSCwa83634	udf6 option is missing in platform N9K-C9504 with NXOS version 10.2(x).	10.2.2
CSCwa89494	Not able to remove MPLS ACL using session manager way in NXOS 10.2.2 image.	10.2.2

Compatibility Matrix

The following table lists the compatibility information for Cisco Nexus Data Broker, Release 3.9.2.

Device Model	Cisco Nexus Data Broker Minimum Version	Supported Deployment Mode	Supported Use Cases
Cisco Nexus 3000 Series Switch	Cisco Nexus Data Broker 3.0 or later	Centralized and Embedded	Tap/SPAN aggregation and In-line redirection
Cisco Nexus 3100 Series Switch	Cisco Nexus Data Broker 3.0 or later	Centralized and Embedded	Tap/SPAN aggregation and In-line redirection

Cisco Nexus 3164Q Series Switch	Cisco Nexus Data Broker 3.0 or later	Centralized and Embedded	Tap/SPAN aggregation only
Cisco Nexus 3200 Series Switch	Cisco Nexus Data Broker 3.0 or later	Centralized and Embedded	Tap/SPAN aggregation only In-line redirection
Cisco Nexus 3500 Series Switch	Cisco Nexus Data Broker 3.0 or later	Centralized and Embedded	Tap/SPAN aggregation only
Cisco Nexus 9200 Series Switch	Cisco Nexus Data Broker 3.1 or later	Centralized and Embedded Note: Cisco Nexus 9200 Series switches support only one switch deployment.	Tap/SPAN aggregation only
Cisco Nexus 9300 Series Switch	Cisco Nexus Data Broker 3.0 or later	Centralized and Embedded	Tap/SPAN aggregation and In-line redirection
Cisco Nexus 9300-EX Series Switch	Cisco Nexus Data Broker 3.1 or later	Centralized and Embedded	Tap/SPAN aggregation only
Cisco Nexus 9300-FX Series Switch	Cisco Nexus Data Broker 3.5 or later	Centralized and Embedded	Tap/SPAN aggregation only
Cisco Nexus 9332C Series Switch	Cisco Nexus Data Broker 3.8 or later	Centralized and Embedded	Tap/SPAN aggregation only
Cisco Nexus 9364C Series Switch	Cisco Nexus Data Broker 3.8 or later	Centralized and Embedded	Tap/SPAN aggregation only
Cisco Nexus 9500 Series Switch Supported Modules: <ul style="list-style-type: none">▪ N9K-X9464TX	Cisco Nexus Data Broker 3.0 or later	Centralized and Embedded	Tap/SPAN aggregation only
Cisco Nexus 9300-FX2 Series Switch	Cisco Nexus Data Broker 3.7 or later	Centralized and Embedded	Tap/SPAN aggregation only
Cisco Nexus 9300-GX Series Switch	Cisco Nexus Data Broker 3.9.2	Centralized and Embedded	Tap/SPAN aggregation only
Cisco Nexus 9500-EX Series Switch Supported Modules: <ul style="list-style-type: none">▪ N9K-X97160YC-EX▪ N9K-X9732C-EX	Cisco Nexus Data Broker 3.5 or later	Centralized and Embedded	Tap/SPAN aggregation only
Cisco Nexus 9500-FX Series Switch	Cisco Nexus Data Broker 3.5 or later	Centralized and Embedded	Tap/SPAN aggregation only

Cisco Nexus 31100 Series Switch	Cisco Nexus Data Broker 3.7 or later	Centralized and Embedded	Tap/SPAN aggregation and In-line redirection
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Interoperability Matrix

The following table lists the hardware and software interoperability matrix for Cisco Nexus Data Broker, Release 3.9.2.

Nexus Switch Model(s)	Implementation Type	Supported NX-OS Versions	OpenFlow Agent
3048/3064/3172	OpenFlow	6.0(2)U6(x), I2(x), and I3(x)	1.1.5
3048/3064/3172	OpenFlow	7.0(3)I4(1) to 7.0(3)I4(9), 7.0(3)I6(1), 7.0(3)I7(2) to 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(7a), 9.3(8) , 9.3(9).	2.14
3046/3064	NX-API	6.0(2)U6(x), 7.0(3)I4(1) to 7.0(3)I4(8b)	Not supported
3172	NX-API	7.0(3)I4(1) to 7.0(3)I4(9), 7.0(3)I6(1), 7.0(3)I7(2) to, 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(7a), 9.3(8) , 9.3(9).	Not applicable
3164	OpenFlow	Not supported	Not supported
3164	NX-API	7.0(3)I4(1) to 7.0(3)I4(9), 7.0(3)I6(1), 7.0(3)I7(2) to 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(7a), 9.3(8) , 9.3(9).	Not applicable
3232	OpenFlow	7.0(3)I4(1) to 7.0(3)I4(9), 7.0(3)I6(1), 7.0(3)I7(2) to 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(7a), 9.3(8) , 9.3(9).	2.14
3232	NX-API	7.0(3)I4(1) to 7.0(3)I4(9),	Not applicable

		7.0(3)I6(1), 7.0(3)I7(2) to 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(7a), 9.3(8) , 9.3(9), 10.2(4), 10.3(1).	
3548 ¹	OpenFlow	6.0(2)A6(x) and 6.0(2)A8(x). I7(5) and I7(5a), and 9.3(1) to 9.3(5), 9.3(7a), 9.3(8) , 9.3(9), 10.2(3). (OF agent is not required) 7.0(3)I7(2) to 7.0(3)I7(9)	1.1.5
3548	NX-API	Not supported	Not supported
92160/92304	OpenFlow	Not supported	Not supported
92160/92304 ²	NX-API	7.0(3)I4(1) to 7.0(3)I4(9), 7.0(3)I6(1), 7.0(3)I7(2) to 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(7a), 9.3(8) , 9.3(9), 10.1(2).	Not applicable
93962 ² /93128 ²	OpenFlow	7.0(3)I4(1) to 7.0(3)I4(9), 7.0(3)I6(1), 7.0(3)I7(2) to 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(7a), 9.3(8) , 9.3(9), 10.1(2).	2.14
9372	OpenFlow	7.0(3)I4(1) to 7.0(3)I4(9), 7.0(3)I6(1), 7.0(3)I7(2) to 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(7a), 9.3(8) , 9.3(9), 9.3(10), 10.1(2).	2.14
9372/9396 ² /93128 ²	NX-API	7.0(3)I4(1) to 7.0(3)I4(9), 7.0(3)I6(1), 7.0(3)I7(2) to 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(7a), 9.3(8) , 9.3(9), 10.1(2).	Not applicable
9364C/9332C	NX-API	9.2(3) to 9.2(4) and 9.3(1) to 9.3(5), 9.3(7) , 9.3(7a), 9.3(8) , 9.3(9), 9.3(10),	NA

		10.1(2), 10.2(3), 10.2(4), 10.3(1).	
9364C/9332C	OpenFlow	Not supported	Not supported
93180LC-EX / 93108TC-EX / 93180YC-EX	OpenFlow	Not supported	Not supported
93180LC-EX ² / 93180YC-EX	NX-API	7.0(3)I4(1) to 7.0(3)I4(9), 7.0(3)I6(1), 7.0(3)I7(2) to 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(7a), 9.3(8) , 9.3(9), 10.1(2), 10.2(2), 10.2(3).	NA
93108TC-EX	NX-API	7.0(3)I4(1) to 7.0(3)I4(9), 7.0(3)I6(1), 7.0(3)I7(2) to 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(7a), 9.3(8) to 9.3(10), 10.1(2), 10.2(2), 10.2(3), 10.2(4), 10.3(1).	
93108TC-FX / 93180YC-FX	OpenFlow	Not supported	Not supported
93180YC-FX ³ / 93108TC-FX	NX-API	7.0(3)I7(1) to 7.0(3)I7(6), 7.0(3)I7(8), 7.0(3)I7(9), 9.2(1) to 9.2(4) , 9.3(1) to 9.3(5), 9.3(7) , 9.3(7a), 9.3(8) to 9.3(10), 10.1(2), 10.2(2), 10.2(3), 10.2(4), 10.3(1). Note: NX-OS releases, 10.2(4) and 10.3(1) are supported on 93108TC-FX.	Not applicable
93180YC-FX3		10.2(4), 10.3(1).	
9504/9508/9516	OpenFlow	Not supported	Not supported
9504	NX-API	7.0(3)I4(1) to 7.0(3)I4(9), 7.0(3)I6(1), 7.0(3)I7(2) to 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(2), 9.3.5, 9.3.7.a, 9.3(8) to 9.3(10), 10.1(2), 10.2(2), 10.2(3) 10.2(4), 10.3(1).	Not applicable
9508/9516	NX-API	7.0(3)I4(1) to 7.0(3)I4(9), 7.0(3)I6(1), 7.0(3)I7(2) to 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(2), 9.3.5, 9.3.7.a, 9.3.8, 9.3(9), 10.1(2), 10.2(2),	

		10.2(3).	
31108TC-V ³ / 31108PC-V	NX-API	7.0(3)I4(1) to 7.0(3)I4(9), 7.0(3)I6(1), 7.0(3)I7(2) to 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(7a), 9.3(8) , 9.3(9), 9.3(10), 10.1(2) , 10.2(4), 10.3(1). Note: NX-OS release 10.2(4), 10.3(1) is supported on 31108PC-V.	Not applicable
31108TC-V ³ / 31108PC-V	OpenFlow	7.0(3)I4(1) to 7.0(3)I4(9), 7.0(3)I6(1), 7.0(3)I7(2) to 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(7a), 9.3(8) , 9.3(9), 9.3(10), 10.1(2).	Not applicable
9336C-FX2	NX-API	7.0(3)I7(5), 7.0(3)I7(5a), 7.0(3)I7(6) to 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(7a), 9.3(8) , 9.3(9),10.1(2), 10.2(3).	Not applicable
93240YC-FX2 ³ / C93360YC-FX2	NX-API	7.0(3)I7(5), 7.0(3)I7(5a), 7.0(3)I7(6) to 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(7a), 9.3(8) to 9.3(10), 10.1(2), 10.2(2), 10.2(3), 10.2(4), 10.3(1). Note: NX-OS 10.2(4) and 10.3(1) is supported on C93360YC-FX2.	Not applicable
93600CD-GX	NX-API	9.3(5), 9.3(7), 9.3.8, 9.3.7(a) , 9.3(9), 9.3(10), 10.1(2), 10.2(2), 10.2(3), 10.2(4) 10.3(1).	Not applicable

¹- NX-OS release 10.x is not supported on these platforms.

²- C3548P-XL has been qualified for NX-OS release 10.2(3), 10.2(4), 10.3(1).

³- 31108TCV, 93240YC, 93180YC-FX do not support NX-OS release 9.3(10).

Supported APIC Versions

The table displays the supported APIC versions.

APIC Version	Minimum Cisco Nexus Data Broker Version	Supported Deployment Mode
1.1, 1.2, 2.0	3.0	Centralized
2.x (2.1 and later)	3.1 and above	Centralized
4.x	3.7 or later	Centralized

Verified Scalability Limits

The table displays the supported verified scalability limits.

Description	Small	Medium	Large
Number of switches used for TAP and SPAN aggregation	25	50	75

Guidelines and Limitations

This section lists the guidelines and limitations for Cisco Nexus Data Broker:

Specific for Release 3.9.2:

- 3-node HA cluster is highly recommended.
Devices are not disconnected when a node is isolated from the cluster. Isolated node(s) are updated with the latest data when they connect back to the cluster.

General:

- A Cisco Nexus Data Broker instance can support only the NX-API configuration mode.
- By default, the Nexus Data Broker cluster URL is https://<IP_address>:8443
- The **switchport mode trunk** and **spanning-tree bpdudfilter enable** commands are used by the NDB controller to enable all switch ports on the Cisco NDB-managed switches.
- Cisco Nexus switches managed by Cisco Nexus Data Broker in NX-API mode must have LLDP feature enabled. Disabling LLDP may cause inconsistencies and require switch rediscovery for NX-API switches.
- For secured communication between Cisco Nexus Data Broker and switch through HTTPS, start the Cisco Nexus Data Broker in TLS mode for the first time only. Subsequent restarts does not require TLS mode.

For more details, see Cisco Nexus Data Broker Configuration Guide.

- The TLS KeyStore and TrustStore passwords are sent to the Cisco Nexus Data Broker so it can read the password-protected TLS KeyStore and TrustStore files only through HTTPS

```
./xnc config-keystore-passwords [--user {user} --password {password} --url {url} -verbose --prompt --keystore-password {key-store_password} --truststore-password {truststore_password}]
```

- Cisco Nexus 92xx series switches and Cisco Nexus 3548 switches do not support Q-in-Q; you cannot use this switch in a multi-switch environment.
- Dry Run feature is disabled by default. To enable this feature, see the *Cisco NDB Configuration Guide*.
- TACACS can be configured on Cisco NDB devices for authentication , authorization and accounting. Accounting can be enabled only for configuration commands, not for show commands.

Related Content

Document	Description
<i>Cisco Nexus Data Broker Release Notes, Release 3.9.2</i>	This document.
Cisco Nexus Data Broker Configuration Guide, Release 3.9.2	Provides information on how to configure Cisco Nexus Data Broker.
Cisco Nexus Data Broker Deployment Guide, Release 3.9.2	Provides information on how to deploy Cisco Nexus Data Broker.

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