Cisco Nexus Data Broker Release Notes, Release 3.10

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 (NDB) 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 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
July 18, 2022	Updated the Interoperability Table to indicate support for NX-OS release, 9.3(9).
December 10, 2021	Updated the Interoperability Table to indicate NX-OS Release 10.1(2) is not supported on 93180LC-EX.
October 20, 2021	Added CSCvz99026 to the list of Open Caveats.
September 20, 2021	Updated the Interoperability Matrix table; indicated support for NX-OS Release 10.1(2).
September 7, 2021	Added CSCvz21072 to the list of Known Issues.
May 17, 2021	Updated Guidelines and Limitations section, indicating support only for Oracle Java.
May 14, 2021	Added CSCvy16218 to the list of Known Issues.
April 8, 2021	Added CSCvx79293 to the list of Known Issues.
April 1, 2021	Added CSCvx11654 to the list of Open Issues.
March 8, 2021	Added CSCvx45678, CSCvx32214, CSCvx23944 to the list of Known Issues.
January 20, 2021	Added CSCvx05890 to the list of Open Issues.
January 8, 2021	Release 3.10 became available.

New Software Features

A completely new GUI has been introduced in the Cisco Nexus Data Broker, Release 3.10. The GUI offers easy navigation and a better user experience.

The salient features of the Cisco NDB GUI, Release 3.10 are:

Feature	Description
Dashboard	The **Dashboard** tab provides information about the health and performance of the Cisco Nexus Data Broker. It includes the top connections, input ports, monitoring tools, filters and devices (based on TCAM utilization).
System Information	The **System Information** tab displays information about the NDB controller and the NDB controller host.
Audit Log	The **Audit Log** tab displays a record of actions performed by a user on the NDB controller.
Flow Management	The **Flow Management** tab enables you to view inconsistent connections and device flows and manage the inconsistent flows. You can view and download the details, which can be used for debugging.
Consolidated Input Ports	The **Input Ports** tab displays details of all the inputs ports of the devices of the NDB controller.
Monitor Sessions	The **Sessions** tab displays the sessions created for a remote monitoring tool with the connected inputs ports and local monitoring tools with packet truncation ports.
Port Instances for Devices	The **Devices** tab (detailed view) displays slot and instance details.
Reconnect Device	The **Reconnect Devices** action re-establishes a failed connection between a device and NDB controller.
On-demand trigger for attaching Global ACLs	The **Trigger Global ACLs** action identifies the non-configured interfaces of a device and attaches global ACLs to all these interfaces.
Support for Quick Create	The **Create** button in the header provides quick navigation to often-used configuration and administration procedures.
Improved Northbound APIs	The **System Tools** > **Northbound API** in the header provides you a better segregation of the NDB REST APIs.
About Nexus Data Broker	The **System Tools** > **About Nexus Data Broker** in the header displays details of the current NDB version.
Online Help	The **Help** button in the header displays online help content
XNC renamed to NDB	Installation folder name has been changed from **xnc** to **ndb**. When you extract the installer.zip folder for installing the NDB controller, the NDB software is installed in a folder named **ndb**.

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 (NDB)
- Resolved Issues (NDB)
- Known Issues (NX-OS)

Open Issues (NDB)

Bug ID	Description
CSCvk39789	"Could not commit transaction" exception thrown at NDB.
CSCvs65911	Port Channel Configuration is not getting exported.
CSCvt62492	Port-channel operations on ISL links results in failure of Link discovery.
CSCvw91742	Auto-priority connection with intersecting port range filters not working.
CSCvw20966	A NDB shouldn't use " session manager" way for MPLS ACLs configuration.
CSCvw82855	Port-channel is not getting recreated and reconfigured port hit upgrade.
CSCvm65172	Direction change should be supported while editing span session.
CSCvg10351	NDB Server backup entries are not shown in the UI after the upgrade.
CSCvx05890	Port configs cannot be removed when device is added with Hostname.
CSCvx11654	ISL Port-channels are attached with Global deny ACLs after sequence of upgrade to 3.10.0.
CSCvz99026	Not able to install connection with filter having IPv6/IPV4+VLAN in 10.1(2) NXOS.

Resolved Issues (NDB)

Click the bug ID to access the Bug Search tool and see additional information about the bug.

Bug ID	Description
CSCvu16131	N9K-C93180YC-FX can't connect to NDB after upgrade to 3.9.0.
CSCvo98675	Upgrade is not happening on doing any operations on second session.
CSCvt75433	Search by Description field in NDB Connections tab is not working.
CSCvu17887	Process Thread-15 takes 97% of CPU in NDB 3.9.0.
CSCvv94591	NDB - Filters page load time enhancement for high number of configured filters.
CSCvw03945	Filter page not loading, connection edit is slow with UDP 2048-65535 as SPORT and DPORT create.

Known Issues (NX-OS)

Bug ID	Description
CSCvo85210	NDB Limitation: Can't match MAC address in IP packet, it will hit deny any any in IP ACLs.
CSCvq61822	Need Error handling for feature SFLOW with ERSPAN destination since they are mutually exclusive.
CSCvt15642	Can't match MAC address in IP packet, it will hit deny any any in IP ACLs.
CSCvo21059	MPLS tapagg should allow deny ACE without redirection option.
CSCvc87992	Connections are not matched with the VLAN ID of source ports on ISL links with an IPv6 filter.
CSCvt15877	Not able to use ipv6 + vlan on the ISL link.
CSCvs50998	IP ACL with UDF match removes internal VLAN tag in Cisco NX-OS Release 9.3(2). - Fixed in 9.3(3).
CSCvr01876	Re-direct STP, CDP packets similar to LLDP port for Openflow.
CSCvt14639	Not able to convert Layer 2 ports to layer 3 in 9.3(3).
CSCvt03231	ACL with HTTP tcp-option-length redirect statement are not matching traffic correctly in 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).
CSCvx23944	Duplicate sequence number error in NXOS 9.3(6).
CSCvx32214	Dot1q-tunnel(QinQ) is not programmed correctly for port-channel members in NXOS 9.3(5).
CSCvx45678	After device reload guestshell activation fails due to low memory on devices for NXOS 9.3(5) version.
CSCvx79293	Not seeing timestamptag on interface after configuring the cmds on C9504 platform in nxos 9.3.7.
CSCvy16218	Username is shown as 'guestshell' irrespective of user executes the guestshell.
CSCvz21072	NDB throws NumberFormatException error with NX-OS 9.3(7a) devices.

Compatibility Matrix

The following table lists the compatibility information for Cisco NDB, Release 3.10.

Deployment mode: Centralized

Device	Minimum Cisco NDB Version	Supported Use Case
Cisco Nexus 3000 Series Switch	Cisco NDB 3.0 or later	Tap/SPAN aggregation

Device	Minimum Cisco NDB Version	Supported Use Case
Cisco Nexus 3100 Series Switch Cisco Nexus 3200 Series Switch Cisco Nexus 3164Q Series Switch		
Cisco Nexus 31100 Series Switch	Cisco NDB 3.7 or later	Tap/SPAN aggregation
Cisco Nexus 9200 Series Switch	Cisco NDB 3.1 or later	Tap/SPAN aggregation
Cisco Nexus 9300 Series Switch	Cisco NDB 3.0 or later	Tap/SPAN aggregation
Cisco Nexus 9300-EX Series Switch	Cisco NDB 3.1 or later	Tap/SPAN aggregation
Cisco Nexus 9300-FX Series Switch	Cisco NDB 3.5 or later	Tap/SPAN aggregation
Cisco Nexus 9300-FX2 Series Switch	Cisco NDB 3.7 or later	Tap/SPAN aggregation
Cisco Nexus 9300-GX Series Switch	Cisco NDB 3.10 or later	Tap/SPAN aggregation
Cisco Nexus 9332C Switch Cisco Nexus 9364C Switch	Cisco NDB 3.8 or later	Tap/SPAN aggregation
Cisco Nexus 9500 Series Switch Supported Modules: ▪ N9K-X9464TX	Cisco NDB 3.0 or later	Tap/SPAN aggregation
Cisco Nexus 9500-EX Series Switch Supported Modules: ▪ N9K-X97160YC-EX ▪ N9K-X9732C-EX	Cisco NDB 3.5 or later	Tap/SPAN aggregation
Cisco Nexus 9500-FX Series Switch Supported Modules: ▪ N9K-X9732C-FX	Cisco NDB 3.5 or later	Tap/SPAN aggregation

Interoperability Matrix

The following table lists the hardware and software interoperability matrix for Cisco NDB, Release 3.10.

Implementation Type: NX-API

Device	Supported NX-OS Versions
Cisco Nexus 3000 Series Switch[1] – 3048, 3064	9.3(1), 9.3(2),9.3(3),9.3(4),9.3(5),9.3(7), 9.3(7a), 9.3(8), 9.3(9).
Cisco Nexus 3100 Series Switch[1] – 3132C-Z, 3172, 3164, 3164Q	9.3(1), 9.3(2),9.3(3),9.3(4),9.3(5),9.3(7), 9.3(7a), 9.3(8) , 9.3(9).
Cisco Nexus 3200 Series Switch[1] – 3232	9.3(1), 9.3(2),9.3(3),9.3(4),9.3(5),9.3(7), 9.3(7a), 9.3(8) , 9.3(9).
Cisco Nexus 31100 Series Switch[1]	9.3(1), 9.3(2),9.3(3),9.3(4),9.3(5),9.3(7), 9.3(7a), 9.3(8) , 9.3(9).
Cisco Nexus 9200 Series Switch – C92304QC[1], C92160YC **Note**: Cisco Nexus 9200 Series switches support only one switch deployment.	9.3(1), 9.3(2),9.3(3),9.3(4),9.3(5), 9.3(7), 9.3(7a), 9.3(8), 9.3(9), 10.1(2).
Cisco Nexus 9300 Series Switch – C93128TX[1], C9396TX[1]	9.3(1), 9.3(2),9.3(3),9.3(4),9.3(5) ,9.3(7), 9.3(7a), 9.3(8) , 9.3(9),10.1(2).
Cisco Nexus 9300-EX Series Switch – C93180LC-EX[1], C93180YC-EX, C93108TC-EX	9.3(1), 9.3(2),9.3(3),9.3(4),9.3(5) ,9.3(7), 9.3(7a), 9.3(8) , 9.3(9), 10.1(2).
Cisco Nexus 9300-FX Series Switch – C93108TC-FX, C93180YC-FX	9.3(1), 9.3(2),9.3(3),9.3(4),9.3(5) 9.3(7), 9.3(7a), 9.3(8) , 9.3(9), 10.1(2).
Cisco Nexus 9300-FX2 Series Switch – N9K-9336C-FX2, 93240YC-FX2, C93360YC-FX2	9.3(1), 9.3(2),9.3(3),9.3(4),9.3(5) ,9.3(7), 9.3(7a), 9.3(8) , 9.3(9), 10.1(2)
Cisco Nexus 9300-GX Series Switch – 93600CD-GX, 9364C-GX,9316D-GX	9.3(5),9.3(7), 9.3(7a), 9.3(8) , 9.3(9), 10.1(2).
Cisco Nexus 9332C Switch	9.3(1), 9.3(2),9.3(3),9.3(4),9.3(5),9.3(7), 9.3(7a), 9.3(8) , 9.3(9), 10.1(2).
Cisco Nexus 9364C Switch	9.3(1), 9.3(2),9.3(3),9.3(4),9.3(5),9.3(7), 9.3(7a), 9.3(8) , 9.3(9), 10.1(2).
Cisco Nexus 9500 Series Switch Supported Modules: ・ N9K-X9464TX	9.3(1), 9.3(2), 9.3(7), 9.3(7a), 9.3(8) , 9.3(9), 10.1(2).
Cisco Nexus 9500-EX Series Switch Supported Modules: ・ N9K-X97160YC-EX ・ N9K-X9732C-EX	9.3(1), 9.3(2), 9.3(7), 9.3(7a), 9.3(8) , 9.3(9), 10.1(2).
Cisco Nexus 9500-FX Series Switch Supported Modules: ・ N9K-X9732C-FX	9.3(1), 9.3(2), 9.3(7), 9.3(7a), 9.3(8) , 9.3(9),10.1(2).

[1]- NX-OS Release 10.1(2) is not supported on these platforms.

Unsupported Features

Unsupported features for Cisco Nexus Data Broker, Release 3.10:

- Embedded mode (OVA) deployment in NX-OS version I(4) or lower is not supported.
- Communication between the NDB controller and devices using OpenFlow is not supported.
- Inline redirection of traffic is not supported.

Supported APIC Versions

The table displays the supported APIC versions.

APIC Version	Minimum Cisco NDB Version	Supported Deployment Mode
4.x	Cisco NDB 3.7 or later	Centralized only

Verified Scalability Limits

The table displays the supported verified scalability limits.

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

Guidelines and Limitations

This section lists the guidelines and limitations for Cisco NDB:

- A Cisco NDB instance can support only the NX-API configuration mode.
- By default, NDB cluster URL is https://<NDB_IP>:8443
- Java is not included with the Release 3.10 NDB software. Ensure to have the required Java packages downloaded to the Linux machine (for Centralized deployment) or NDB switch (for Embedded deployment), before installing Release 3.10 NDB software.

  Cisco NDB Release 3.10 supports Oracle Java only.

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

- The switchport mode trunk and spanning-tree bpdufilter enable command should be enabled for all switch ports on all Cisco NDB managed switches.
- Cisco Nexus switches managed by Cisco NDB 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 NDB and switch through HTTPS, start Cisco NXB in TLS mode for the first time only. Subsequent Cisco NDB 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

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

- Cisco Nexus 92xx devices do not support QnQ; you cannot use this switch in a multi-switch environment.

- Dry Run feature is disabled by default. To enable this feature, see Cisco NDB Configuration Guide.

- Do not configure TACACS on the Cisco NDB switches. You can configure it only for authentication and authorization. It is not to be used for accounting.

Related Content

Document	Description
Cisco Nexus Data Broker Release Notes	This document.
Cisco Nexus Data Broker Configuration Guide	Provides information on how to configure Cisco Nexus Data Broker.
Cisco Nexus Data Broker Deployment Guide	Provides information on how to deploy Cisco Nexus Data Broker.

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