Cisco Nexus Data Broker, Release 3.8, Release Notes

This document describes the features, caveats, and limitations for the Cisco Nexus Data Broker (NDB) software, Release 3.8.

Additional product documentation is listed in the “Related Documentation” section.

Table 1 shows the online change history for this document.

Table 1 Online History Change

Date	Description
August 12, 2019	Created the release notes for the NDB 3.8 release.
September 19, 2019	Removed bug, CSCuy81389, from the list of Open Caveats.
December 12, 2019	Updated the deployment mode for Cisco Nexus 9200 Series switches.
January 11, 2020	Added CSCvs50998 to the list of known caveats.

Contents

This document includes the following sections:

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.

New and Changed Information

This section lists the new and changed features in Cisco NDB 3.8 release:

- Remote Source with ERSPAN Termination: Receive and terminate ERSPAN encapsulated traffic from a remote source (virtual TAP or ACI ERSPAN or any other ERSPAN source).
- NDB as Netflow Generator: Generate Netflow records at line rate for NDB ingress traffic.
- ACI/APIC Integration Enhancements: Multiple APICs (ACI fabrics), loose nodes support and ability to add AAEP members when creating SPAN Session.
- MPLS Label Filters: Create filters based on the MPLS Labels.
- Create Connection Page Improvement: Create or modify all the components required to create the connection from the Create Connection page.
- Automation of Device Pre-requisites: Complete automation of device pre-requisites for onboarding into NDB.
- Update Device Credentials in Bulk: Update device credentials (username and password) for multiple devices in NDB administration at a time by using device profiles.
- RMA from NDB UI: Easily replace existing NDB switches with new switches from the NDB UI.
- NDB Hitless Upgrade: Upgrade NDB controller software to newer versions without traffic impact (supported from NDB 3.6 onwards).
- Port-channel support: Create, modify, or delete port-channels from NDB UI.
- While in Use: Rename filters, connections, port groups while in use. Port VLAN can be changed while the port is in use by toggling OFF the connection.
- Session Page Improvements: The Span session and its related connection status can be tracked. Span session can be saved and toggled.
- Feature parity on Nexus 9500 Modular switches: Support for packet truncation, time stamping, and TTAG strip.

Feature Limitations

The following feature limitation apply for the Cisco Nexus Data Broker, Release 3.8:

- NDB Openflow embedded is not supported on Cisco Nexus 3000/9000 series switches running 7.0(3)I6.1 and 7.0(3)I7.1 NXOS image.
- Dry Run feature is disabled by default. To enable this feature, see Cisco NDB Configuration Guide.
- Default deny ACL on all ports and Default ISL deny ACL on ISL ports is enabled by default for Cisco NDB Release 3.6 and later releases. To disable this feature, please refer the Cisco Nexus Data Broker Configuration Guide, Release 3.8 or Cisco Nexus Data Broker Deployment Guide, Release 3.8.

Usage Guidelines

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

- By default, NDB cluster URL is https://<NDBIP>:8443.
- NDB supports Google Chrome version 45.x and later, FireFox version 45.x and later, and Internet Explorer version 11 and later.
- The switchport mode trunk and spanning-tree bpdufilter enable command should be enabled for all the inter-switch ports on all the 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 Nexus Data Broker and switch through HTTPS, start Nexus Data Broker in TLS mode for the first time only. Subsequent NDB restarts does not require TLS mode. For more details, refer to 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 {keystore_password} --truststore-password {truststore_password}.

  Here default URL to be - https://Nexus_Data_Broker_IP:8443

- For the NDB cluster deployment, the roundtrip delay between the cluster nodes should be less than 50 milliseconds. If the round trip delay is more, the NDB cluster behavior is unpredictable and inconsistent.
- Cisco Nexus 92XX devices does not support the QnQ, you cannot use this switch in the Multi switch environment.

Limitations

The following features will not be supported in embedded mode deployment of Cisco Nexus Data Broker:

- Adding another NDB device

  - Adding APIC for ACI SPAN session
  - Adding production device for the SPAN session
  - Configuring SPAN session
  - Configuring copy device
  - Configuring copy sessions
  - Scheduling Configuration Backup
  - NDB High availability is not supported
  - TLS communication between the NDB controller and the switches is not supported
  - Secured communication between the browser and NDB controller is not supported

- A Cisco Nexus Data Broker instance can support either the OpenFlow or NX-API configuration mode, it does not support both configuration modes in the same NDB instance.
- VLAN based IP filtering is not supported for Nexus Series switch with NxOS version 7.0(3)I6.1. Hence, the filtering fails when you filter the traffic for the following series of switches: 92160YC-X Switch,92300YC Swicth, 9272Q switch, 92304Q Switch, and 9236C Switch.
- Do not configure TACACS on the NDB switches. You can configure it only for authentication and authorization. Not to be used for accounting.
- For Cisco NDB Release 3.7, Cisco NX-OS Release versions 7.0(3)I5(1), 7.0(3)I5(2), and 7.0(3)I7(2) are not recommended for NXAPI deployment and Cisco NX-OS Release versions 7.0(3)I5(1) and 7.0(3)I5(2) are not recommended OpenFlow deployments.
- Cisco Nexus Data Broker Embedded will be supported on NxOS 7.0(I4).1 onwards, and 7.0(3)I6.1 onwards. For more information, see the *Nexus Data Broker Hardware and Software Interoperability Matrix* section.

Compatibility Information

The Cisco Nexus Data Broker, Release 3.8 supports the following operating systems for the full visibility software sensors:

Table 2 Cisco NDB Compatibility Information

Device Model	Cisco Nexus Data Broker Minimum version	Deployment Mode Supported	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	Cisco Nexus Data Broker	Centralized and Embedded	Tap/SPAN aggregation

Device Model	Cisco Nexus Data Broker Minimum version	Deployment Mode Supported	Supported Use Cases
Switch	3.0 or later		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: ▪ N9K-X9464TX	Cisco Nexus Data Broker 3.0 or later	Centralized and Embedded	Tap/SPAN aggregation only

Device Model	Cisco Nexus Data Broker Minimum version	Deployment Mode Supported	Supported Use Cases
▪ N9K-X9464TX			
Cisco Nexus 9500-EX Series Switch Supported Modules: ▪ N9K-X97160YC-EX ▪ N9K-X97160YC-EX ▪ N9K-X9732C-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
Cisco Nexus 9300-FX2 Series Switch	Cisco Nexus Data Broker 3.7 or later	Centralized and Embedded	Tap/SPAN aggregation only

Nexus Data Broker Hardware and Software Interoperability Matrix

The following table lists the hardware and software ineteroperability matrix for NDB Release 3.8.

Table 3 Nexus Data Broker Hardware and Software Interoperability Matrix

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(7), 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7), 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(7), 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7), 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(7), 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 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(7), 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(9).	2.14
3232	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(7), 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(9).	Not applicable
3548	OpenFlow	6.0(2)A6(x) and 6.0(2)A8(x). I7(5) and I7(5a), and 9.3(1) (OF agent is not required) 7.0(3)I7(2) to 7.0(3)I7(7), 7.0(3)I7(9)	1.1.5
3548	NX-API	Not supported	Not supported
92160/92304	OpenFlow	Not supported	Not supported
92160/92304	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(7), 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(9).	Not applicable

9372/9396/93128	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(7), 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(9).	2.14
9372/9396/93128	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(7), 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(9).	Not applicable
9364C/9332C	NX-API	9.2(3) to 9.2(4) and 9.3(1) to 9.3(5), 9.3(7)	NA
9364C/9332C	OpenFlow	Not supported	Not supported
93180LC-EX / 93108TC-EX / 93180YC-EX	OpenFlow	Not supported	Not supported
93180LC-EX / 93108TC-EX / 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(7), 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(9).	NA
93108TC-FX / 93180YC-FX	OpenFlow	Not supported	Not supported
93108TC-FX / 93180YC-FX	NX-API	7.0(3)I7(1) to 7.0(3)I7(6), 7.0(3)I7(9) and 9.2(1) to 9.2(4) , 9.3(1) to 9.3(5), 9.3(7) , 9.3(9).	Not applicable
9504/9508/9516	OpenFlow	Not supported	Not supported
9504/9508/9516	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(7), 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(9).	Not applicable
31108TC-V / 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(7), 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(9).	Not applicable

31108TC-V / 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(7), 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(9).	Not applicable
9336C-FX2 / 93240YC-FX2	NX-API	7.0(3)I7(5), 7.0(3)I7(5a), 7.0(3)I7(6), 7.0(3)I7(7), 7.0(3)I7(9), 9.2(1) to 9.2(4), 9.3(1) to 9.3(5), 9.3(7) , 9.3(9).	Not applicable
N9K-C93360YC-FX2	NX-API	9.3(1) to 9.3(5), 9.3(7) , 9.3(9).	Not applicable

APIC versions supported on NDB

The following tables provide the APIC versions supported on NDB.

Table 4 APIC versions supported on NDB

APIC Version	Cisco Nexus Data Broker Minimum version	Deployment Mode Supported
1.1, 1.2 and 2.0	NDB 3.0	Centralized only
2.X	NDB 3.1 and above	Centralized only
4.X	NDB 3.7 and above	Centralized only

Verified Scalability Limits

The following tables provide the scalability limits for Cisco Nexus Data Broker for Centralized Deployment

Table 5 Scalability Limits for Cisco Nexus Data Broker

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

Caveats

This section contains lists of open and resolved caveats and known behaviors.

- Open Caveats
- Resolved Caveats
- Known Caveats

Open Caveats

This section lists the open caveats. Click the bug ID to access the Bug Search tool and see additional information about the bug.

Bug ID	Description
CSCvm65172	Direction change should be supported while editing span session.
CSCvi33830	Unable to configure ports/connections after creating slice user.
CSCvk47961	Port configuration fails while importing the json file with unsupported characters in the description.
CSCvg26989	Export operation does not retrieve Node specific configuration.
CSCvg29188	Limitations in uploading a configuration that has redirections (bi-directional).
CSCvg10351	NDB Server backup entries are not shown in the UI after the upgrade.
CSCvk39789	“Could not commit transaction” exception thrown at NDB.

Resolved Caveats

This section lists the resolved caveats. Click the bug ID to access the Bug Search tool and see additional information about the bug.

Bug ID	Description
CSCvg59808	NDB3.4: Link color not showing correctly in topology for Port-channel after shut/no shut.
CSCvg67732	NDB3.4: white space is not allowing while entering description in Description Field in ConnectionTab.
CSCvj19486	GUI authentication may fail if AAA passes unknown value in cisco-av-pair attribute.
CSCvo58108	NDB: Switch discovery failure while upgrading/downgrading from 9.2.2 to 9.2.3.

NX-OS Known Caveats

This section lists the known caveats from the previous releases. Click the bug ID to access the Bug Search tool and see additional information about the bug.

Bug ID	Description
CSCvo85210	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.
CSCvo21594	TapAgg: MPLS traffic with TTL=0 gets flooded without MPLS label being stripped off.
CSCvo21059	MPLS tapagg should allow deny ace without redirection option.
CSCve58719	Module Serial number instead of Switch serial number in OF statistics.
CSCve57428	Unable to attach VLAN access list entry to the interface in NXOS Release 7.0(3)I6.1.
CSCve44700	Flows are not installing in switch with simple IPv6 match criteria.
CSCvd89813	NXAPI w/TACACS authentication failing.
CSCvd87975	Reconnecting the switch with NXOS I5.2 from NDB periodically.
CSCve60078	Device in NDB becomes suddenly disconnected - nginx_f crash.
CSCvd15455	Openflow - Portchannel links are not seen on NDB, Release 2.1.
CSCvc87992	Connections are not matched with the VLAN ID of source ports on ISL links with an IPv6 filter.
CSCvh22148	IPv6 traffic is not hitting appropriate ACL deny entries that are configured with UDF.
CSCvg96645	Redirect interface is missing from ACL after an upgrade operation.
CSCvn52641	Disk space not reclaimed in switch I7.x versions while uninstalling Embedded NDB.
CSCvh04723	Unable to remove MAC ACE using sequence number in Cisco NXOS I7(2) release.
CSCvs50998	IP ACL with UDF match removes internal VLAN tag in Cisco NX-OS Release 9.3(2).
CSCvr01876	Re-direct STP, CDP packets similar to LLDP port for Openflow.
CSCvs59353	After device reload guestshell activation fails due to low memory on devices for NXOS 9.x.x version.
CSCvt92735	After reloading switch N9372PX-118 in GS it takes more time to send interface details to NDB server.

CSCvx45678	After device reload guestshell activation fails due to low memory on devices for NXOS 9.3(5) version.
CSCvx32214	Dot1q-tunnel(QinQ) is not programmed correctly for port-channel members in NXOS 9.3(5).
CSCvv22414	9508/9516-with 4k VLAN scale modules go to powered down state when upgrading to 9.3.3 and above.
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.

Related Documentation

The Cisco Nexus Data Broker documentation can be accessed from the following websites:

Nexus Data Broker Datasheet http://www.cisco.com/c/en/us/products/collateral/cloud-systems-management/nexus-data-broker/data_sheet_c78-729452.html

General Documentation: http://www.cisco.com/c/en/us/support/cloud-systems-management/nexus-data-broker/tsd-products-support-series-home.html

The documentation includes installation information and release notes.

Document	Description
Cisco Nexus Data Broker Embedded Deployment Guide	Describes the deployment Nexus Data Broker on NxOS devices either as a separate NDB virtual service or as a application along with GuestShell+ virtual service
Cisco Nexus Data Broker Centralized Deployment Guide	Describes the deployment of Nexus Data Broker in a Linux VM that be used to manage multiple NxOS device for SPAN configuration