Cisco Nexus Data Broker, Release 3.7, Release Notes

This document describes the features, caveats, and limitations for the Cisco Nexus Data Broker (NDB) software, Release 3.7.

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
October 18, 2018	Created the release notes for the 3.7 release.
Feb 23, 2019	Updated support for in-line redirection for Nexus 3200 series switches.
June 7, 2019	Updated Feature Limitations section.
June 20, 2019	Added support for the following NX-OS versions: I7(6), 9.2(3), and I4(9).
Sep 19, 2019	Removed bug, CSCuy81389, from the list of Open Caveats.
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 3.7 release:

- Tool Port Grouping – Group more than one monitoring tools and use the group in the connection.
- Remote Monitoring Tool - ERSPAN source is configured and the filtered traffic is routed to remote monitoring tool.
- Edit support for span destination.
- Support for Dynamic EPG Members in the session.
- Dynamic EPG Members across multiple Leafs switches – In the Span session, the Dynamic EPG members can be added and the movement of VMs can be tracked across multiple leaf switches automatically.
- Last modified filed support for Filters, Ports, PortGroups, UDF.
- TACACS Health Check – While adding the TACACs server, reachability can be verified.
- Connection Lock – Users can lock their connection for changes from other users.
- NDB UI Session Timeout – NDB session timeout can be configured from UI.
- What's New Tip - Provide new salient features.
- Device details on device topology icon.
- Device details in the log during the download logs.

Feature Limitations

The following feature limitation apply for the Cisco Nexus Data Broker, Release 3.7:

- 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 NDB Release 3.7 Configuration Guide or Cisco NDB 3.7 Deployment Guide.

Usage Guidelines and Limitations

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.
- APIC versions supported are 1.1, 1.2, and 2.0 series.
- 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 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.
- 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
- 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 device rediscovery.
- When removing devices from the Cisco Nexus Data Broker, the device associated port definitions and connections should be removed first. Otherwise, the device might contain stale configurations created by the Cisco Nexus Data Broker.
- For secured communication between Nexus Data Broker and Device 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

- 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, 9236C Switch.
- For the NDB cluster deployment, the round trip delay across the various servers participating in the cluster should be less than 50 milliseconds. If the round trip delay is more, the NDB cluster behaves unexpectedly. The NDB server round trip delay should be less than 50 ms. If anything above that will have issue in NDB sync up with member servers.
- 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.

Compatibility Information

The Cisco Nexus Data Broker, Release 3.7 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	Cisco Nexus Data Broker 3.0 or later	Centralized and Embedded	Tap/SPAN aggregation and In-line redirection
Cisco Nexus 3100 platform	Cisco Nexus Data Broker 3.0 or later	Centralized and Embedded	Tap/SPAN aggregation and In-line redirection
Cisco Nexus 3164Q Switch	Cisco Nexus Data Broker 3.0 or later	Centralized and Embedded	Tap/SPAN aggregation only
Cisco Nexus 3200 switch	Cisco Nexus Data Broker 3.0 or later	Centralized and Embedded	Tap/SPAN aggregation only In-line redirection

Device Model	Cisco Nexus Data Broker Minimum version	Deployment Mode Supported	Supported Use Cases
Cisco Nexus 3500 Series	Cisco Nexus Data Broker 3.0 or later	Centralized and Embedded	Tap/SPAN aggregation only
Cisco Nexus 9200 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 platform	Cisco Nexus Data Broker 3.0 or later	Centralized and Embedded	Tap/SPAN aggregation and In-line redirection
Cisco Nexus 9300-EX switch	Cisco Nexus Data Broker 3.1 or later	Centralized and Embedded	Tap/SPAN aggregation only
Cisco Nexus 9300-FX switch	Cisco Nexus Data Broker 3.5 or later	Centralized and Embedded	Tap/SPAN aggregation only
Cisco Nexus 9500 platform	Cisco Nexus Data Broker 3.0 or later	Centralized and Embedded	Tap/SPAN aggregation only
Cisco Nexus 9500-EX switch	Cisco Nexus Data Broker 3.5 or later	Centralized only	Tap/SPAN aggregation only
Cisco Nexus 9500-FX switch	Cisco Nexus Data Broker 3.5 or later	Centralized only	Tap/SPAN aggregation only
Cisco Nexus 9500-FX switch	Cisco Nexus Data Broker 3.7 and later	Embedded	Tap/ SPAN aggregation only
Cisco Nexus 31100 Platfrom	Cisco Nexus Data Broker 3.7 or later	Centralized and Embedded	Tap/SPAN aggregation and In-line redirection

Device Model	Cisco Nexus Data Broker Minimum version	Deployment Mode Supported	Supported Use Cases
Cisco Nexus 9300-FX2 Platfrom	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 3.7.

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)	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), 9.2(1) to 9.2(3)	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), 9.2(1) to 9.2(3)	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), 9.2(1) to 9.2(3)	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), 9.2(1) to 9.2(3)	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), 9.2(1) to 9.2(3)	Not applicable
3548	OpenFlow	6.0(2)A6(x) and 6.0(2)A8(x). I7(5) and I7(5a), 7.0(3)I7(2) to 7.0(3)I7(7)	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), 9.2(1) to 9.2(3)	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), 9.2(1) to 9.2(3)	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), 9.2(1) to 9.2(3)	Not applicable
9364C/9332C	NX-API	9.2(3)	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), 9.2(1) to 9.2(3)	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(7) and 9.2(1) to 9.2(3)	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), 9.2(1) to 9.2(3)	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), 9.2(1) to 9.2(3)	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), 9.2(1) to 9.2(3)	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), 9.2(1) to 9.2(3)	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.

Open Caveats in the 3.7 Release

Bug ID	Description
CSCvm82102	Replacing a filter on a connection with its clone may generate incomplete ACL without the filter ACE.
CSCvm82223	Missing default deny ACL on some Ports when using multiple clients.

CSCvm65172	Direction change should be supported while editing span session.
CSCvk47961	Port configuration fails while importing the json file with unsupported characters in the description.
CSCvc41941	Node Id of the device group is not updated after upgrading from NDB release 3.X to 3.2 and above.
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.
CSCvh24146	Stale ACE entries are created on switch when TACACS+ server is unreachable.

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.

Resolved Caveats in the 3.7 Release

Bug ID	Description
CSCvk45723	Timestamp tag field needs to be enabled on NDB UI for 3548 device in AUX mode.
CSCvi02714	SPAN synchronization is dropping traffic to tool ports.
CSCvg17154	False flow inconsistencies are seen when switches are added in NXAPI mode.
CSCvg27252	Default-match-all filter supports additional ethertypes.
CSCvg28640	PTP and Timestamp configuration fails for ports that are in the port-channel.
CSCvh14853	Programmed ACLs should Include 'ndb' in the name.

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.

Known Caveats

Bug ID	Description
CSCve58719	Module Serial number instead of Switch serial number in OF statistics.
CSCvn52641	Disk space not reclaimed in switch I7.x versions while uninstalling Embedded NDB.
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.
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.
CSCvv22414	9508/9516-with 4k VLAN scale modules go to powered down state when upgrading to 9.3.3 and above.

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