Cisco Nexus Dashboard Insights Release Notes, Release 6.3.1– for Cisco NDFC

Contents

Cisco Nexus Dashboard Insights (Nexus Dashboard Insights) service provides assurance, advisory, and troubleshooting capabilities to address the operational needs of networks in a data center.

This document describes the features, issues, and limitations for Nexus Dashboard Insights on Cisco Nexus Dashboard.

For more information, see the **Related Content** section.

Note: The user content describes features, issues, and limitations for the Nexus Dashboard Insights service using the Nexus Dashboard platform with the Nexus Dashboard Fabric Controller fabric. Nexus Dashboard Fabric Controller was formerly known as Data Center Network Manager.

Cisco Data Center Network Manager (DCNM) is renamed as Cisco Nexus Dashboard Fabric Controller (NDFC) starting with Release 12.0.1a.

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
January 19, 2024	Release 6.3.1.45 became available.
October 31, 2003	Release 6.3.1.40 became available.
September 13, 2023	Release 6.3.1.15 became available.

New Software Features

Release 6.3.1.45

Product Impact	Feature	Description
Base Functionality	Multiple sites association for Nexus Dashboard Insights Integrations	In this release, multiple Integrations per site are supported.

Note: Nexus Dashboard Insights release 6.3.1.45 is only supported on Nexus Dashboard release 3.0.(1i). It is not supported on Nexus Dashboard release 3.0.1(f).

Release 6.3.1.40

Product Impact	Feature	Description
Base Functionality	Support for N9K-C9808, N9K-C9804	This release includes the support for the following Cisco switches and line cards for software telemetry: • N9K-C9808 • N9K-C9804 • N9K-X9836DM-A

Product Impact	Feature	Description
		• N9K-X98900CD-A
	Support for 6 node virtual Nexus Dashboard and 9 node virtual Nexus Dashboard deployment	In this release, 6 node virtual Nexus Dashboard and 9 node virtual Nexus Dashboard deployment is supported.
	Upgrade support for 6 node virtual Nexus Dashboard and 9 node virtual Nexus Dashboard	In this release, 6 node virtual Nexus Dashboard and 9 node virtual Nexus Dashboard upgrade is supported.
Performance and Scalability	Increased scale for 3 node physical Nexus Dashboard	3 node physical Nexus Dashboard now supports 100 nodes and 10,000 flows

Note: Nexus Dashboard Insights release 6.3.1.40 is only supported on Nexus Dashboard release 3.0.(1i). It is not supported on Nexus Dashboard release 3.0.1(f).

Release 6.3.1.15

Product Impact	Feature	Description
Base Functionality	Sustainability	Sustainability report helps you monitor, predict, and improve your network's energy usage, its related carbon emissions, and its total energy cost.
	Scale Conformance	In the Conformance report, you can now view the scale conformance status for sites.
	Export Flow Records to Network Attached Storage	You can export flow records captured by Nexus Dashboard Insights on a remote Network Attached Storage (NAS) with NFS.
	Support for -GX2 platforms	Cisco Nexus 9300-GX2 platform switches support Software Telemetry.
	RoCEv2 Monitoring	This feature exposes the ECN and PFC counters to Nexus Dashboard Insights as a part of interface statistics in Inventory to identify network congestion.
	Multicast Traffic Monitoring	You can now view Multicast Route details for NDFC sites.
	Support for pure IPv6 and dual stack IPv4/IPv6 configurations	This release adds support for pure IPv6 or dual stack IPv4/IPv6 configurations for the cluster nodes and services.
	Connectivity Analysis	Using Connectivity Analysis, you can enable ELAM by selecting the Analyze Active Path check box to analyze an available active flow for additional connectivity information.
	ToR role	You can now onboard ToR in Nexus Dashboard Insights by creating an L3 interface (SVI) in ToR.
	Anomaly Search	You can perform a search for affected objects such as interface, VRF, EPG, BD and view the associated anomalies.
Ease of Use	UI look-and-feel improvements	This release adds product GUI improvements, including Journey Map, Global View, Analysis Hub and more.

Product Impact	Feature	Description
Performance and Scalability	Connectivity Analysis	Improved performance in Connectivity Analysis jobs.

Note: Nexus Dashboard Insights release 6.3.1.15 is only supported on Nexus Dashboard release 3.0.(1i). It is not supported on Nexus Dashboard release 3.0.1(f).

Changes in Behavior

Release 6.3.1.40

- In this release the following features are not available:
  - Time series selection for Interfaces, Endpoints, Multicast, and L3 neighbors.
  - A graphical view of top resources.
- After upgrading to this release, some anomaly rules may be updated or deleted. You can manually add these rules after the upgrade based on the new categories and severity.
- After upgrading to this release, Export Data configuration will contain newer anomaly and advisory categories replacing older ones.

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  - A graphical view of top resources.
- After upgrading to this release, some anomaly rules may be updated or deleted. You can manually add these rules after the upgrade based on the new categories and severity.
- After upgrading to this release, Export Data configuration will contain newer anomaly and advisory categories replacing older ones.
- Virtual Nexus Dashboard deployment for NDI release 6.3.1 requires a greenfield installation of Nexus Dashboard cluster. Upgrade of virtual Nexus Dashboard cluster to run NDI release 6.3.1 is not supported.
- Virtual Nexus Dashboard deployment for NDI release 6.3.1 now requires reduced resources of 3 virtual nodes instead of 6 virtual nodes with lower CPU, memory, and storage needs. See Nexus Dashboard Capacity Planning for detailed support information.
- This release supports a higher number of switches on 3 node and 6 node Nexus Dashboard clusters.
  - A 6 node Nexus Dashboard cluster with switch scale up to 500 switches for ACI and up to 350 for NDFC, supports 20,000 flows. For higher switch scale, 2,000 flows are supported.
  - Customers having 3-5 node Nexus Dashboard cluster with up to 100 switches for ACI and up to 100 switches for NDFC needing 10,000 flow support should not upgrade to NDI release 6.3.1.
  - See Nexus Dashboard Capacity Planning to verify the scale numbers.

Open Issues

This section lists the open issues in this release. Click the bug ID to access the Bug Search tool and see additional information about the caveat. The “Exists In” column of the table specifies the releases in which the issue exists.

Bug ID	Description	Exists In
CSCwh44274	BGP neighbors details page shows ASN number as zero.	6.3.1
CSCwh45345	Anomalies in workflow such as NDO assurance, Delta Analysis, and Compliance may not be present in the main anomalies table due to the total number of anomalies generated hitting the maximum threshold.	6.3.1
CSCwh35751	Newly discovered nodes are not visible in the Operate > Topology page.	6.3.1
CSCwh42672	Once the online site is onboarded to NDI, you cannot edit the username or password from the NDI UI.	6.3.1
CSCwh50022	Existing syslog export with SSL may be broken after Nexus Dashboard Insights (NDI) upgrade.	6.3.1
CSCwh44186	When you pause telemetry and then resume telemetry again, flow telemetry and microburst would still stay in DISABLED state. After this, if there is any change to microburst status, flow telemetry goes to disabled state.	6.3.1
CSCwh40103	The flow telemetry shows as disabled even though the View page shows as enabled.	6.3.1
CSCwh55844	Cohosting of NDI and NDO on 3-node physical Nexus Dashboard cluster is not supported.	6.3.1
CSCwh42737	The status of few devices are marked failure with reason as " ABORTED" . Of these failed devices, some of them could have failed due to Log collection failure and some of them could have succeeded.	6.3.1
CSCwh55396	Configuration import for DNS configuration with mappings file is stuck in initialize state.	6.3.1
CSCwh91968	In Delta Analysis Report, resource filters added to the Grouped view of the Anomalies Table do not get carried over to the pop-up drawer containing the individual anomaly details.	6.3.1
CSCwi01308	Journey Map displays blank slider after returning from Site Details.	6.3.1

Resolved Issues

This section lists the resolved issues in this release. Click the bug ID to access the Bug Search tool and see additional information about the caveat. The “Exists In” column of the table specifies the releases in which the issue exists.

Bug ID	Description	Fixed In
CSCwe46046	Scheduled jobs are queuing up in the Configure Site Group > Assurance Analysis page.	6.3.1.15

Bug ID	Description	Fixed In
CSCwe81243	vPC down anomaly takes longer than 20 minutes to clear.	6.3.1.15
CSCwe87280	Anomalies not shown in Primary Affected Object view if the assurance job is not run in the last 2 hours.	6.3.1.15
CSCwc52996	Online analysis exits with error code 1.	6.3.1.15
CSCwh55554	The anomaly details are not seen after clicking on a Flow Record Anomalies table anomaly link.	6.3.1.40

Known Issues

This section lists the known issues in this release. Click the bug ID to access the Bug Search tool and see additional information about the caveat. The " Exists" column of the table specifies whether the issue was resolved in the base release or a patch release.

Bug ID	Description	Exists In
CSCvv58470	Advisories are displayed for devices removed from the Site or Fabric.	6.3.1
CSCvw00525	Fabrics with hardware flow telemetry in disabled failed state cannot be upgraded.	6.3.1
CSCvw05118	After downgrading the switch to 7.0(3)I7(8) version from 9.3.5 or above, telemetry is only partially configured on the switch.	6.3.1
CSCvx69082	Flow Telemetry configuration is not removed from FX3S switch if the switch was running NX-OS release 9.3.7 with Flow Telemetry enabled and then upgraded or downgraded to NX-OS release 10.1.	6.3.1
CSCvu74237	Under scale condition, when some of the flow records are either dropped in the switch or dropped in processing, partial paths will be displayed.	6.3.1
CSCvw31279	VRF that is associated with the NSX-V flow may not be the correct VRF the NSX-V flow is taking in the fabric.	6.3.1
CSCvv89866	Endpoint data is displayed for unsupported devices.	6.3.1
CSCvz07750	When Flow Telemetry is disabled while one of the switches is unreachable, the site goes into *Disable Failed* state. This is expected behavior. Following this condition, when the switch becomes available, if you enable Flow Telemetry, the ACL configurations get corrupted.	6.3.1
CSCvz23063	For NX-OS version 9.3(7a), Nexus Dashboard Insights is supported on DCNM release 11.5(3) and later. For DCNM release 11.5(2) release, Nexus Dashboard Insights excludes those switches from analysis resulting in partial assurance analysis for the fabric.	6.3.1
CSCvt77736	When there is no data coming from switches, topNodes API returns all nodes into the list as healthy with endpoint count as 0.	6.3.1
CSCwa19211	If external routes in the border leaf switch are filtered and only default route is advertised to other leaf switch via BGP EVPN VXLAN, assurance	6.3.1

Bug ID	Description	Exists In
	will raise anomalies for all external routes missing in the leaf switch per VRF.	
CSCwa42157	OVERLAPPING_EXT_INT_PREFIX - extended support in NX-OS assurance	6.3.1
CSCwb43792	vCenter anomalies are not exported as part of email export, when basic or advanced option is selected.	6.3.1
CSCwh37988	Bug Scan status will be shown as Failed with reason " CPU/Memory metrics not available for the device" .	6.3.1
CSCwh29141	There will be an error thrown by config service if the exporters are created if the POST API is called using deprecated categories as input.	6.3.1

Compatibility Information

For Nexus Dashboard Insights compatibility information see the Services Compatibility Matrix.

Software/Hardware	Release
Minimum Cisco NX-OS version required for Software Telemetry	7.0(3)I7(6), 8.4(2)
Minimum Cisco NX-OS version required for Software and Hardware Telemetry	7.0(3)I7(9), 7.0(3)I7(10), 9.3(2), 9.3(3), 9.3(4), 9.3(5), 9.3(6), 9.3(7), 9.3(8), 9.3(9), 9.3(10), 9.3(11), 9.3(12), 10.1(1), 10.2(1), 10.2(2), 10.2(3), 10.2(4), 10.2(5), 10.2(6), 10.3(1), 10.3(2), 10.3(3), 10.3(4), 10.4(1)
Minimum Cisco NX-OS version required for Host Flow Overlay	9.3(4), 10.2(1)
Minimum Cisco NX-OS version required for Micro-Burst, Endpoint Analytics, and Multicast Protocols	9.3(4)
Minimum Cisco NX-OS version required for Modular Hardware Telemetry	9.3(4)
Minimum Cisco NX-OS version required for Connectivity Analysis	9.3(3)
Minimum Cisco NX-OS version required for Flow Telemetry Event (FTE)	9.3(5)
Minimum Intersight Device Connector version on Cisco Nexus Dashboard	1.0.9-828
Cisco Device supported for Host Flow Overlay	Cisco Nexus 9000 -FX, -FX2, -FX3, and -GX platform switches
Cisco Devices supported for Flow Telemetry Events	Cisco Nexus 9000 -FX, -FX2, -FX3, and -GX platform switches and 9700 -FX line cards
Cisco Device supported for Flow Telemetry	• Cisco Nexus 9000 -FX3, Cisco Nexus 9300-EX, -FX, -FX2, -FX3, and -GX platform switches and 9500-EX and FX

Software/Hardware	Release
	• N9K-X9716D-GX line card
Cisco Device supported for Software Telemetry	• Cisco Cloud Scale ASIC devices • Cisco Nexus 7000 series switches: N77-C7710 or N77XX, N7K-C7009, N7K-C7010 or 70XX • Cisco Nexus 3000 series switches: Nexus 3100-XL series, Nexus 3100-V series, Nexus 3200 series, Nexus 3400 series, Nexus 3500-XL series • Cisco Nexus 9504 and 9508 with -R and -RX lines cards: N9K-X96136YC-R, N9K-C9508-FM-R, N9K-C9504-FM-R, N9K-X9636C-R, N9K-X9636C-RX • Cisco Nexus 3600 platform switches: N3K-C3636C-R, N3K-C36480LD-R2, N3K-C36180YC-R • Cisco Nexus 9000 -FX3, Cisco Nexus 9300-GX, 9300-FX3 and platform switches • N9K-X9716D-GX line card • Cisco Nexus 9300-GX2 platform switches • Cisco Nexus 9408 switch • Starting from Cisco NX-OS release 10.4(1), N9K-C9332D-H2R is supported. • Cisco Nexus 9808 and Cisco Nexus 9804 switches • Cisco Nexus 9800 Line Cards: N9K-X9836DM-A, N9K-X98900CD-A
Cisco Device not supported for Software Telemetry	• Cisco N3K-C3408-S, N3K-C3432D-S, N3K-C34200YC-SM, N3K-34180YC, and N3K-3464C switches • Cisco N3K-C3464C, N3K-C34180YC, N3K-C3408S, N3K-C34200YC-SM, N3K-C3432D-I
Micro-Burst support	See Supported Platforms for details.

Software/Hardware	Release
Arista EOS	4.21
Arista Device Supported	Arista 7050SX and 7280SR platform switches

Note: Flow Telemetry data will consume 6MB for 10K IPv4 flows per node. Flow Telemetry data will consume 12MB for 10K IPv6 flows per node.

Verified Scalability Limits

For Nexus Dashboard Insights verified scalability limits see Nexus Dashboard Capacity Planning.

Rollup and Retention Numbers for Nexus Dashboard Insights Telemetry

Nexus Dashboard Insights implements a multi-level roll-up strategy for the telemetry streamed that enables better management of the data. The following table provides information about roll-up and retention policy in Nexus Dashboard Insights release 6.3.1.

Statistics Name	Granularity (Time difference between sample points)	Retention proposed for Nexus Dashboard Insights
Interfaces and Protocols Statistics and Error Counters	1 minute	3 days
	5 minutes	7 days
	3 hours	30 days
Resources and Environmental Statistics	5 minutes	7 days
	3 hours	30 days
Integrations Statistics (AppDynamics)	5 minutes	7 days
	3 hours	30 days
Anomalies and Advisories	On-event*	30 days
Microburst	On-event*	7 days
Endpoints History**	On-event*	7 days
Events	On-event*	15 days
Flows and Flow Telemetry Events	-	7 days
Delta Analysis	-	30 days

*On-event: The data is sent from the switch or stored in the database only if the state of the object has changed.

** Endpoint History tracks the moves and modifications of an endpoint for last 7 days.

Usage Guidelines and Limitations

This section lists the usage guidelines and limitations for Cisco Nexus Dashboard Insights:

- Telemetry for hardware TCAM utilization, such as forwarding TCAM and ACL TCAM are not supported on Cisco Nexus C9504, C9508, and C9516 platform switches.
- Software Telemetry should be enabled before enabling Hardware Telemetry.
- Nexus Dashboard Insights checks for metadata update every hour. However, there may not be an update every time.
- After metadata update you need to run manual bug scan to reflect PSIRTs.
- The Hardware Resources tab in System Resource Utilization Dashboard is not supported for Cisco Nexus 7000 series switches. The hardware resources do not have a direct mapping to the objects that show in Nexus Dashboard Insights. The command that shows hardware details does not provide the percentage of entries used and the maximum number of entries allocated for a particular feature. Nexus Dashboard Insights does not raise the anomalies and details page for any resource in Hardware Resources tab for Cisco Nexus 7000 series switches.
- The features supported on Cisco Nexus 7000 series switches includes Environmental, Statistics, and Resources.
- The features not supported on Cisco Nexus 7000 series switches includes Endpoint Analytics, Multicast, Microburst, CDP statistics protocol, and hardware resource statistics such as COPP, HRT, LPM, QoS, and ACL.
- The features supported on Cisco Nexus 3000 series switches includes Environmental, Statistics, and Resources.
- The features not supported on Cisco Nexus 3000 series includes Endpoint Analytics, Multicast, and Microburst.
- The IGMP and IGMP Snoop multicast statistics protocols are supported only on Cisco Nexus 9000 series switches.
- The IGMP and IGMP Snoop multicast statistics protocols are not supported for the following:
    - Cisco Nexus 3000 and 7000 series switches.
    - Cisco N9K-X9636C-R, N9K-X9636Q-R, N9K-X96136YC-R, and N3K-C3636C-R line cards.
- Nexus Dashboard Insights does not support BGP PrefixSaved statistics on the following:
    - Cisco Nexus 3000, 7000, and 9000 platform switches.
    - Cisco N9K-X96136YC-R, N9K-X9636C-R, N9K-X9636Q-R, and N3K-C3636C-R line cards.
- After enabling Nexus Dashboard Insights on a fabric and adding a group of switches together to the fabric, DCNM/ NDFC sends notification for the newly added switches. When Nexus Dashboard Insights tries to program the newly added switches, DCNM can be potentially finishing the switch discovery for these switches. In this case, the Nexus Dashboard Insights operation fails on the switches. The failed operations should be retried with retry facility in Nexus Dashboard Insights.
- For virtual Nexus Dashboard (vND), you must provision the underlying HOST with Distributed Virtual Switch and not with a Standard Virtual Switch.

- In Multi-cluster setup, remote cluster system anomalies are not displayed in the local cluster. You must log in to the remote cluster to view the system anomalies.
- Flow telemetry is supported in -FX3 platform switches for the following NX-OS versions:
  - 9.3(7) and later
  - 10.1(2) and later
  - Flow telemetry is not supported in -FX3 platform switches for NX-OS version 10.1(1).
- N9K-X9716D-GX line card is only supported for NX-OS versions 10.2(3) and later.
- N9K-X9716D-GX line card is only supported only for NDFC or NX-OS deployments.
- The following behaviors are observed for Nexus Dashboard Insights release 6.2.1 on Cisco Nexus Dashboard with NDFC 12.x.
  - Timeout is observed during import of large number of VRFs or networks into Nexus Dashboard Orchestrator template.
  - If there is an inactive switch in the fabric, there is a delay in deploying configuration on the switch.
  - In large setups, in managed mode, configuration deployment from the Nexus Dashboard Insights service could take an hour or more to finish.
- If you have Nexus Dashboard Insights installed in your cluster, you must disable it before migrating from DCNM to NDFC. You can re-enable Nexus Dashboard Insights service after the migration is completed successfully. Perform the steps in the following order:
  - Disable Nexus Dashboard Insights.
  - Upgrade Nexus Dashboard to the latest version.
  - Enable Nexus Dashboard Insights after the upgrade is completed successfully.
  - Upgrade Nexus Dashboard Insights to the latest version.
  - Disable Nexus Dashboard Insights.
  - Perform a Backup/Restore of fabrics from DCNM 11.5.x to NDFC 12.x.
  - Re-provision sites on Nexus Dashboard. (If the site name is different from the fabric name, you must remove the sites from Nexus Dashboard and add them back.)
  - Enable Nexus Dashboard Insights.
  - Remove sites from Nexus Dashboard Insights and add them back with the new NDFC IP address and credentials.
  - Delete the previous Site Group and create new Site Group with same name and add the corresponding fabric to the Site Group.
- After migrating from DCNM 11.5(3) to NDFC 12.x, you must export Site Group configuration from Nexus Dashboard Insights to have the accurate NDFC 12.x IP address and credentials during import anytime later.
- If a bug pertaining to a switch is resolved in a Software Maintenance upgrade (SMU) package, in Nexus Dashboard Insights the bug will be displayed as PSIRTs in the Advisories page.

- When you run Connectivity Analysis on a site type NDFC monitored mode, in the Nodes page, the status is displayed as **Not Installed** and you will not be able to upgrade the node.
- Nexus Dashboard Insights data network should be reachable to switch data and management network.
- For the L4-L7 traffic path visibility feature, Cisco NDFC release 12.0.x does not support IPv6 and one-arm firewall configurations. In a one-arm firewall configuration, a firewall interface is used, and all traffic comes into and out from the same interface. Starting from Cisco NDFC release 12.1.1, IPv6 and one-arm firewall configuration is supported.
- After you upgrade from NDI 6.1.3 to NDI 6.2.1, Log Collector, Bug Scan, and Best Practices jobs completed before upgrade will not display per device level details. To view the latest results, you must rerun the jobs after the upgrade.
- You must select fabric mode (Managed or Monitored) when adding a NDFC site to Nexus Dashboard Insights. This mode should be consistent with the fabric's mode configured in NDFC.

Related Content

The Cisco Nexus Dashboard Insights documentation can be accessed from the following website:

https://www.cisco.com/c/en/us/support/data-center-analytics/nexus-insights/series.html

The documentation includes installation, upgrade, configuration, programming, and troubleshooting guides, technical references, and release notes, as well as other documentation.

Document	Description
Cisco Nexus Dashboard Insights Release Notes for Cisco DCNM	This document.
Cisco Nexus Dashboard Insights Deployment	Describes how to install and upgrade Nexus Dashboard Insights.
Cisco Nexus Dashboard Insights User Content for Cisco NDFC	Describes the various Nexus Dashboard Insights features and use cases.

Documentation Feedback

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