Cisco Nexus Dashboard Insights Release Notes, Release 6.4.1– for Cisco NDFC or Standalone NX-OS

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
March 6, 2024, 2024	Release 6.4.1.45 became available.

New Software Features

Product Impact	Feature	Description
Base Functionality	Support for Standalone NX-OS sites	You can now onboard Standalone NX-OS sites to your Nexus Dashboard Cluster. NOTE: Onboarding standalone switches is supported only on 3-node physical clusters. Virtual Nexus Dashboard clusters, 1-node physical clusters, and 6-node clusters do not support this use case.
	Traffic Analytics	Traffic Analytics enables to monitor your network's latency, congestion, and drops. Traffic Analytics automatically discovers services running in your network by matching well-known Layer 4 ports to their corresponding service endpoint categories.
	Panduit integration	Panduit Power Distribution Unit (PDU) Integration in Nexus Dashboard Insights enables you to monitor energy usage and unlock sustainability insights for sites and individual devices connected to a Panduit PDU.
	Multi-cluster view	You can consolidate multiple Nexus Dashboard clusters into a single Global View.
	Time range selection	You can now select a time range in the Site View.

Product Impact	Feature	Description
	LACP/PIM/IGMP/IGMP-Snooping, protocol support	LACP, PIM, IGMP, and IGMP-Snooping protocols for switches are now supported.
	New Bug Scan in Analysis Hub	You can now view the active and susceptible bugs affecting your network after the Bug Scan is completed in Analysis Hub.
	Real-time telemetry (interfaces, hardware stats and more)	Real Time Visualization (RTEV) feature facilitates real-time event rendering within a user interface (UI) environment.
	PFC/ECN Congestion detection	The congestion statistics displays the ECN and PFC counters for the traffic received and transmitted.
	ToR role added for telemetry support	TOR role is available in Nexus Dashboard Insights for flow telemetry support.
Ease of Use	Health resource enhancements in Delta Analysis	Delta Analysis now performs an object delta rather than a count delta. So along with the count, you can now view how many anomalies were cleared, how many are unchanged and how many are new anomalies.
Performance and Scalability	Connectivity Analysis improved job times	The time taken by the connectivity analysis jobs in Nexus Dashboard Insights has been reduced.
	Large file support for Bug Scan	Support for large files for Bug Scan.
	Increased scalability for NDI co-hosted with NDFC in a 3 node pND cluster (250 switches)	NDI co-hosted with NDFC in a 3 node physical Nexus Dashboard cluster now supports 250 switches.

Changes in Behavior

- Beginning with Nexus Dashboard release 3.1(1), all services have been unified into a single deployment image. You no longer need to download, install, and enable each service individually. Instead, you can simply choose which services to enable during the Nexus Dashboard platform deployment process. As a result, we recommend deploying Nexus Dashboard release 3.1(1) with unified install for all new installations. Upgrading to this release will also automatically upgrade all services in your existing cluster. See Cisco Nexus Dashboard and Services Deployment and Upgrade Guide.

- The left navigation menu options **Operate** and **Configure** are now merged into **Manage** menu option.

- For Panduit PDU integration, you must configure a persistent IP address for PDU collector to stream telemetry information for one or multiple PDUs in your site in Nexus Dashboard.

  In Nexus Dashboard, navigate to **Admin** > System Settings > **General** > **External Service Pools** > **Add Data Service IP Address** to configure the persistent IP address.

  For more information on persistent IP address requirements see Cisco Nexus Dashboard and Services Deployment and Upgrade Guide.

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
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.	6.4.1
CSCwh50022	Existing syslog export with SSL may be broken after Nexus Dashboard Insights (NDI) upgrade.	6.4.1
CSCwi58908	System anomaly caused by fabric connectivity issue is not cleared after fabric connectivity issue is resolved.	6.4.1
CSCwi65827	Flow Rule fails when destination port filter is present	6.4.1
CSCwi96511	NDI shows zero latency for flows that are sent to egress leaf over vPC link.	6.4.1
CSCwi98040	Duplicate BGP Peer connection down anomaly is raised for same peer.	6.4.1
CSCwj01630	Super Spine is not counted under objects in Topology view.	6.4.1
CSCwj06046	Inconsistencies in the following two anomalies are observed when using NX-OS 10.2(3)F with NDFC. • L3 VNI Inconsistent Config L3 VNI Mismatch VLAN	6.4.1
CSCwj07014	When fabric contains EoR spine in flow troubleshoot, paths shown are not accurate.	6.4.1
CSCwj10388	Congestion score detail graphs and queue details on " Trends & Statistics" page are not evenly plotted if you stay on the page for some time.	6.4.1
CSCwi77034	When you enable flow telemetry, the status for the site will not be changed to " Enabling" immediately.	6.4.1

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
CSCwh44274	BGP neighbors details page shows ASN number as zero.	6.4.1
CSCwh35751	Newly discovered nodes are not visible in the Operate > Topology page.	6.4.1
CSCwh44186	When you pause telemetry and then resume telemetry again, flow telemetry and microburst would still stay in DISABLED state. After this, if	6.4.1

Bug ID	Description	Fixed In
	there is any change to microburst status, flow telemetry goes to disabled state.	
CSCwh40103	The flow telemetry shows as disabled even though the View page shows as enabled.	6.4.1
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.	6.4.1
CSCwi01308	Journey Map displays blank slider after returning from Site Details.	6.4.1
CSCwh55844	Cohosting of NDI and NDO on 3-node physical Nexus Dashboard cluster is not supported.	6.4.1
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.	6.4.1
CSCwh55396	Configuration import for DNS configuration with mappings file is stuck in initialize state.	6.4.1

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.	6.4.1
CSCvw00525	Fabrics with hardware flow telemetry in disabled failed state cannot be upgraded.	6.4.1
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.	6.4.1
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.	6.4.1
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.	6.4.1
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.	6.4.1
CSCvv89866	Endpoint data is displayed for unsupported devices.	6.4.1
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	6.4.1

Bug ID	Description	Exists In
	enable Flow Telemetry, the ACL configurations get corrupted.	
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.	6.4.1
CSCvt77736	When there is no data coming from switches, topNodes API returns all nodes into the list as healthy with endpoint count as 0.	6.4.1
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 will raise anomalies for all external routes missing in the leaf switch per VRF.	6.4.1
CSCwa42157	OVERLAPPING_EXT_INT_PREFIX - extended support in NX-OS assurance	6.4.1
CSCwb43792	vCenter anomalies are not exported as part of email export, when basic or advanced option is selected.	6.4.1
CSCwh37988	Bug Scan status will be shown as Failed with reason " CPU/Memory metrics not available for the device" .	6.4.1
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.	6.4.1
CSCwh42672	Once the online site is onboarded to NDI, you cannot edit the username or password from the NDI UI.	6.4.1

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	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), 10.4(2), 10.4(3), 10.4(4)
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)

Software/Hardware	Release
Minimum Intersight Device Connector version on Cisco Nexus Dashboard	1.0.9-828
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 • N9K-X9716D-GX line card • Cisco Nexus 9300-GX2 Platform Switches • Cisco Nexus 9408 switch **Note:** Cisco Nexus 9300-GX2 platform switches support Flow Telemetry for NX-OS release 10.4(2) and later.
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 • 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.

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:

- 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 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.

- 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 User Content for Cisco ACI	Describes the various Nexus Dashboard Insights features and use cases.

Documentation Feedback

To provide technical feedback on this document, or to report an error or omission, send your comments to ciscodcnapps-docfeedback@cisco.com.

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