Cisco Nexus Dashboard Insights Release Notes, Release 6.1.x – for Cisco DCNM

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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
December 02, 2024	Updated “Minimum Cisco NX-OS version required for Connectivity Analysis” to 9.3(7a).
July 13, 2022	Added CSCwc37170 to Open Issues.
June 7, 2022	Release 6.1.2 became available.
May 12, 2022	Added content to Changes in Behavior
May 9, 2022	Release 6.1.1 became available.

New Software Features

Feature	Description
Service deployment profile simplification	When you start the Nexus Dashboard Insights service, the deployment profile is now automatically selected based on the intent defined in the in the **Network Scale** area of Cluster Configuration in Nexus Dashboard.
New hardware support	Support for N9K-X9716D-GX is now available.
VMware vCenter integration	Add VMware vCenter integration to collect data and metrics of the virtual machines and hosts monitored by VMware vCenter.
Syslog support	We support the export of anomalies and advisories in syslog format.
Metadata update support for air-gap environment	With metadata support for air-gap environment, if Nexus Dashboard is not connected to Cisco secure cloud, you can upload the latest metadata to Nexus Dashboard Insights

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Feature	Description
	periodically in a secure and trusted way.
Software and Hardware conformance dashboard	In the Software and Hardware Conformance dashboard you can view the status of the overall software and hardware conformance inventory for a site.
L4-L7 traffic path visibility	You have expanded visibility in the Flow Path to L4-L7 external devices such as firewalls.
Check code for anomalies	You can filter anomalies by check code and the results are displayed in the anomalies table.
Column customizations	You can use the Customize Columns feature in tables to customize your table columns so that the settings persist during the login instance and subsequent logins.
Advisory metadata updates	Biweekly advisory metadata update is now available.
Event driven anomaly support	Event driven anomaly support for NDFC/NX-OS fabrics
Multi-Site traffic path	BETA FEATURE: You can stitch together flows from across two different sites in a Site Group into one single view.
SR-MPLS Flows	BETA FEATURE: SR-MPLS Flow analytics and Flow labels are now supported in NX-OS fabrics.

Note: Cisco Nexus Dashboard Insights Release 6.1.1 is only supported on Cisco Nexus Dashboard with Cisco NDFC release 12.0.2. Cisco Nexus Dashboard Insights Release 6.1.2 is only supported on Cisco Nexus Dashboard with Cisco NDFC release 12.1.1. Cisco Nexus Dashboard Insights Release 6.1.x is not supported on a DCNM compute cluster.

Changes in Behavior

Starting from Nexus Dashboard Insights release 6.1.1, new Anomalies of severity **Information** will not be displayed in the GUI. When you upgrade to Nexus Dashboard Insights release 6.1.1, Information Anomalies that was generated prior to upgrade will be displayed in the GUI.

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
CSCvy33992	Aborted DAGs does not indicate that there is partial data in Nexus Dashboard Insights GUI.	6.1.1 and 6.1.2
CSCvz07734	Duplicate endpoint Anomalies in Nexus Dashboard Insights.	6.1.1 and 6.1.2
CSCvz29928	Inconsistency in counts from aggregate view to primary affected objects view for anomalies.	6.1.1 and 6.1.2
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	6.1.1 and 6.1.2

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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	6.1.1 and 6.1.2
CSCwa13919	The anomaly record from the summary view may show the status of anomaly that is different than the one shown in analyze page or details view.	6.1.1 and 6.1.2
CSCwb43792	vCenter anomalies are not exported as part of email export, when basic or advanced option is selected.	6.1.1 and 6.1.2
CSCwb59867	Assurance anomalies are not exported as part of email export, when basic or advanced option is selected.	6.1.1 and 6.1.2
CSCwb61160	Certain devices would indicate a "Failed" bug scan status with a generic "Borg error".	6.1.1 and 6.1.2
CSCwb76417	Flow Rate Statistics feature under System Status Page can sometimes have empty Node Flow Rate tables.	6.1.1 and 6.1.2
CSCwc37170	Nexus Dashboard Insights service may have pods in undesired state and NDI UI will not open	6.1.2

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
CSCvz45292	Flow Telemetry status shows Disabled even after enabling it in Flow settings page.	6.1.1
CSCvz64136	Selecting a time range of Last Week on the Interfaces Dashboard causes the browser to show a blank screen.	6.1.1
CSCvt66683	When a switch is removed from a fabric, flows records originating from that switch is displayed in Nexus Insights unless analytics feature configurations are removed.	6.1.1
CSCvz46540	A duplicate or redundant switch entry may be seen on the Nodes page after the upgrade of a switch whose hostname contains a period (.) in it (eg. switch1.abc).	6.1.1
CSCvz15603	Site becomes "Disabled" or "Add_Fail" and policies will not be pushed to the fabric when Nexus Dashboard Insights gets disabled and re-enabled or upgraded if the site goes down.	6.1.1
CSCwa42622	Flow statistics summary data is cleaned up after Nexus Dashboard Insights upgrade.	6.1.1
CSCwa38385	A system anomaly "Failed to process advisories for all devices on offline site" is raised when an offline tar file is uploaded from Cisco DCNM.	6.1.1

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Bug ID	Description	Fixed In
CSCwa40593	When a NDFC site is onboarded to Nexus Dashboard using remote authenticated users, and when Nexus Dashboard Insights is enabled on this fabric, the Nexus Dashboard Insights enable will fail. Nexus Dashboard Insights site configuration does not have the option to take in the login domain which is required for remote authenticated users.	6.1.1
CSCvz22022	Assurance job is aborted if there is not enough CPU and memory resources available and if there are multiple jobs running at the same time.	6.1.1
CSCwa48425	In the Protocols Details page, port-channel listed for LLDP protocol.	6.1.1
CSCwa70097	Export Import feature does not show the Kafka configuration settings.	6.1.2
CSCwa48905	Image management functionality for Connectivity Analysis may fail.	6.1.2
CSCwb43232	If Nexus Dashboard Insights and Nexus Dashboard Fabric Discovery are collocated on the same Nexus Dashboard, and if username and password is not specified, you will not be able to start Assurance Analysis for a site group and/or failed assurance analysis runs.	6.1.2

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.	6.1.1 and 6.1.2
CSCvw00525	Fabrics with hardware flow telemetry in disabled failed state cannot be upgraded.	6.1.1 and 6.1.2
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.	6.1.1 and 6.1.2
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.	6.1.1 and 6.1.2
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.	6.1.1 and 6.1.2
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.	6.1.1 and 6.1.2
CSCvv89866	Endpoint data is displayed for unsupported devices.	6.1.1 and 6.1.2
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	6.1.1 and 6.1.2

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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.	6.1.1 and 6.1.2
CSCvt77736	When there is no data coming from switches, topNodes API returns all nodes into the list as healthy with endpoint count as 0.	6.1.1 and 6.1.2

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), 10.1(1), 10.2(1), 10.2(2),10.2(3)
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(7a)
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 • 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-

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Software/Hardware	Release
	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 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.
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

Software/Hardware	Scale Limits
Number of DCNM sites	8 for physical Nexus Dashboard 4 for virtual Nexus Dashboard
Maximum number of nodes supported in a site in managed mode	150
Maximum number of nodes supported across all sites	350* * For total number of nodes greater than 150 across all sites, we recommend upgrading to Nexus Dashboard Insights release 6.2.1

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Software/Hardware	Scale Limits
Maximum support for a 3-node Cisco Nexus Dashboard cluster	Site with 50 nodes, 60000 Endpoints per Site Group, and 10000 Flows
Maximum support for a 6-node Cisco Nexus Dashboard cluster	Site with 350 nodes, 60000 Endpoints per Site Group, 20000 Flows, and 300000 logical rules
Maximum support for a 6-node Cisco Virtual Nexus Dashboard (vND) cluster	Site with 50 nodes, 5000 Endpoints per Site Group, 2500 Flows, and 100000 logical rules
Maximum support for a 9-node Cisco Virtual Nexus Dashboard (vND) cluster (3 data nodes and 6 app nodes)	Site with 200 nodes, 5000 Endpoints per Site Group and 20000 per cluster, 5000 Flows, and 100000 logical rules

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 6.0.1.

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.

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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.

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- 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 6.1.1 on Cisco Nexus Dashboard with NDFC 12.0.(2).
  - 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 12.0(2), you must export Site Group configuration from Nexus Dashboard Insights to have the accurate NDFC 12.0(2) 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.

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- 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.

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 Guide	Describes how to install and upgrade Nexus Dashboard Insights.
Cisco Nexus Dashboard Insights User Guide for Cisco DCNM	Describes how to use Nexus Dashboard Insights.

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