



Cisco Network Insights for Resources Application for Cisco APIC Release Notes, Release 2.2.2

Cisco Network Insights for Resources (NIR) application consist of a monitoring utility that can be added to the Cisco Application Policy Infrastructure Controller (APIC).

This document describes the features, issues, and limitations for Cisco NIR on Cisco Application Services Engine with Cisco APIC.

For more information, see [Related Content](#).

Date	Description
March 10, 2022	Added Cisco Nexus -FX2 switch limitation.
Oct 8, 2020	Added Cisco Nexus 9300-EX platform switches VRF limitation.
Sep 4, 2020	Added CSCvv31188 and CSCvv33879 to resolved issues.
Sep 4, 2020	Release version 2.2.2.126 became available.
Aug 11, 2020	Usage Guidelines and Limitations.
July 27, 2020	Recommended scale for Cisco Application Services Engine.
July 26, 2020	Release 2.2.2 became available.

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New Software Features

Feature	Description
Cisco NIR App	Release version 2.2.2.126 became available.
Add Site	Add a site on Cisco Application Services Engine. Any apps installed on Cisco Application Services Engine can access the added sites.
Install Cisco Network Insights Resources Application on Cisco Application Services Engine	Install the Cisco NIR application on the Cisco Application Services Engine using the GUI.
Multiple Site support	The multiple site and flow configuration enables you to onboard the site from the list of available sites.
GUI enhancements	The GUI enhancements include improved dashboard design, custom dashboards with pinning, in-depth analysis of anomalies, site topology view, and bookmark support for detail view.
Anomaly Analytics enhancements	Analyze resource utilization and create custom comparison charts for statistical, environmental, flows, and resources. The graphical representation of anomalies and time zones on the Site Dashboard.
Topology Dashboard (Beta)	<p>The topology view represents the stitching between the nodes connected to the Cisco ACI site.</p> <p>The Early Access Mode in the Network Insights Setup page lets the user enable beta Network Insights features and enhancements. Once the beta features are enabled they cannot be disabled.</p>
Anomaly score and anomaly precedence	The Top Nodes by Anomalies page summarizes anomalies based on the anomaly score and severity of the anomaly.
Multicast protocols PIM, IGMP, and IGMP Snoop	Support for PIM, IGMP, and IGMP Snoop IPv4 multicast operational and statistical data in the Protocol Statistics tab.
Flow Analytics enhancements	Flow analytics records multiple entries for a flow that are captured at individual record times. A time series plot for flow analytics properties represents the node flows that are recorded in the entire site.
Endpoint Analytics	The Endpoint Analytics provides detailed analytics of endpoints learnt in the site. The anomalies detected as part of endpoint analytics include rapid endpoint moves across nodes, interface, and endpoint groups, and endpoints that do not get learnt back after a node reboot.

AppDynamics integration	AppDynamics provides the required metrics for monitoring, identifying, and analyzing the applications that are instrumented with AppDynamics agents. Cisco NIR provides flow analytics, statistics analytics, and topology view on these metrics to identify anomalies.
Dashboard Devices	The detailed view of the nodes with a graphical representation of top nodes and top resources.
Troubleshooting	Debugging commands for Cisco NIR on Cisco Application Services Engine.

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 NIR	Exists In ACI
CSCvu20531	NIR dashboard does not show information about remote leaf switches configured with routable mode.	2.2.2	NA
CSCvu07676	Interface observer statistics query fails to return data in Cisco Nexus 9300-FX2 platform switches and Cisco Nexus 9700-FX2 line cards.	NA	All releases of Cisco Nexus 9000 ACI-Mode Switches
CSCvu11543	NIR shows very high number of MAC Endpoints on nodes that are part of Endpoint move.	NA	Cisco Nexus 9000 ACI-Mode Switches Release 14.2(4o) and 15.0(1l)
CSCvu62256	Endpoint status is displayed as active after rebooting a leaf switch.	NA	Cisco APIC Release 5.0(1l), 5.0(2e)
CSCvu72947	Few PIM Doms multicast protocols are displayed as disabled in the NIR app while they are enabled.	NA	Cisco APIC Release 5.0(1l)
CSCvu10552	Endpoint rogue anomaly is raised for one instance while it is reoccurring every 30 minutes.	NA	Cisco APIC Release 5.0(1l)
CSCvu23105	Some endpoints may not be visible in Endpoint Analytics Dashboard in Cisco NIR after the policy upgrade of Cisco Application Services Engine nodes is completed.	NA	Cisco APIC Release 5.0(1l)
CSCvu56537	Precision Time Protocol (PTP) process crash anomaly is not displayed in NIR app.	NA	Cisco APIC Release 5.0(1l)
CSCvu60561	Few nodes in the fabric are not displayed on System Configuration Resource page.	NA	Cisco APIC Release 5.0(1l)

CSCvu76397	Protocol data mismatch between switch and NIR app.	NA	Cisco APIC Release 5.0(1I), 4.2(40), 5.0(2e)
CSCvr32097	LLDP transmit receive packets statistics graph displays the same values regardless of the selected time range.	2.2.2	NA
CSCvu56914	pimIfStats and igmpIfStats are not deleted after pimIf interfaces are deleted.	NA	Cisco APIC Release 5.0(1I), 4.2(40)
CSCvu83542	The operational status of a few interfaces is not reported correctly in NIR app Interface Browse page after upgrading Cisco APIC.	2.2.2	NA
CSCvu00248	Latency information is not displayed in the Flow Analytics Browse page.	NA	Cisco Nexus 9000 ACI-Mode Switches Release 14.2(4o)
CSCvu86618	LLDP neighbor information is not displayed in the Protocols Detail page.	NA	Cisco APIC Release 5.0(1I)
CSCvu43471	Shared services flow records are not exported in -FX, -FX2 -GX spine switches.	NA	All releases of Cisco Nexus 9000 ACI-Mode Switches
CSCvu98645	L3 endpoints are not visible in NIR app's Endpoint Analytics Browse page.	2.2.2	NA
CSCvu99008	L3 endpoints behind vPC port channel may be not visible in the Endpoint Analytics Browse page when the vPC port channel is down.	2.2.2	NA
CSCw09818	Cisco NIR software telemetry statistics are not populated in GUI when cisco APIC cluster time is off by hours.	2.2.2	NA

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 "Fixed In" column of the table specifies whether the issue was resolved in the base release or a patch release.

Bug ID	Description	Fixed In
CSCvs24988	Workloads affected due to interface errors or flaps are not reported.	2.2.2
CSCvu15488	Flow analytics does not work as expected after modifying a bridge domain or VRF instance for an EPG.	2.2.2
CSCvu15701	BGP, PIM, IGMP statistics are not shown in the Cisco NIR app when the Cisco APIC cluster time is different from the local time.	2.2.2
CSCvu18846	L3Out endpoint is not marked aged-out after L3Out ctx change.	2.2.2

CSCvu19812	EPG information is missing for L3Out IPv6 flow for -FX line card.	2.2.2
CSCvu23105	Endpoints are not reported after Cisco Application Services Engine upgrade.	2.2.2
CSCvu24493	Port Channel anomaly is missing after Cisco NIR app is disabled or enabled.	2.2.2
CSCvw31188	Unable to process Cisco ACI operational update during partition rebalance.	2.2.2
CSCvw33879	BGP adminSt and operSt are reported as none in Cisco NIR app for Cisco APIC 4.2(5k).	2.2.2

Hardware Requirements

This table describes the Cisco APIC LAN deployment requirements for Cisco NIR software telemetry. Cisco NIR installed in Cisco APIC cluster does not support flow telemetry.

Hardware	Cisco NIR installed in Cisco Application Services Engine cluster	Cisco NIR installed in Cisco APIC cluster
APIC-CLUSTER-M1	Yes	No
APIC-CLUSTER-M2	Yes	No
APIC-CLUSTER-M3	Yes	Yes (Maximum 30 ACI fabric nodes)
APIC-CLUSTER-L1	Yes	No
APIC-CLUSTER-L2	Yes	No
APIC-CLUSTER-L3	Yes	Yes (Maximum 30 ACI fabric nodes)

In the Lab environment you can install Cisco NIR app on APIC-CLUSTER-M1/M2 or APIC-CLUSTER-L1/L2. We do not recommend installing Cisco NIR app on APIC-CLUSTER-M1/M2 or APIC-CLUSTER-L1/L2 in the production environment.

Compatibility Information

For Cisco NIR on Cisco APIC and Cisco NIR on Cisco Application Services Engine compatibility with Day-2 Operations apps, see the [Cisco Day-2 Operations Apps Support Matrix](#).

Software	PID or Release
Cisco Device supported for Software Telemetry	Cisco Nexus 9000 Series switches
Cisco Application Services Engine cluster	SE-CL-L3
Cisco Device supported for Flow Telemetry	Cisco Nexus 9300-EX, -FX, -FX2, -GX, and 9500 platform switches with EX, FX line cards
AppDynamics APM	4.5

Recommended Scale for Cisco NIR Installed on Cisco Application Services Engine

Software/Hardware	Number
Number of ACI fabrics	8
Number of ACI nodes (includes ACI switches and APIC)	500
Number of flows supported in Flow Analytics	20000
Maximum support for a 3-node Cisco Application Services Engine cluster	Fabric with 100 nodes, 60000 Endpoints, and 10000 Flows
Maximum support for a 6-node Cisco Application Services Engine cluster	Fabric with 500 nodes, 60000 Endpoints, and 20000 Flows

Usage Guidelines and Limitations

This section lists the usage guidelines and limitations for Cisco NIR:

- Cisco NIR 2.2.2 App supports Cisco ACI 3-Tier architecture for Software Telemetry.
- A Cisco APIC cluster must have a minimum of 3 APICs. Cisco NIR is not supported on single APIC.
- Upgrade from Cisco NIR 2.0.x to Cisco NIR 2.2.2 App is not supported for Cisco NIR installed on Cisco APIC.
- Upgrade from Cisco NIR 2.2.1 to Cisco NIR 2.2.2 App is not supported for Cisco NIR installed on Cisco Application Services Engine.
- Upgrade from Cisco NIR 2.2.1 to Cisco NIR 2.2.2 App is supported for Cisco NIR installed on Cisco APIC.
- Cisco NIR app downgrade is not supported.
- You have to configure telemetry in the Cisco NIR app to configure for fabric node control.
- Cisco NIR 2.2.2 installed on Cisco Application Services Engine can be launched only on Cisco Application Services Engine. All Cisco NIR app lifecycle operations such as install, enable, launch, and upgrade are available from the Cisco Application Services Engine GUI. You cannot cross launch the Cisco NIR app from Cisco APIC.
- When you upgrade fabric policy or upgrade nodes, if there is a connectivity loss between the fabric and the Cisco Application Services Engine cluster, the Cisco NIR app may raise incorrect missing endpoint anomaly.
- After Cisco Application Services Engine reboot, it is recommended to wait until the following are complete for the Cisco Application Services Engine to restore functionality:
 - The acidiag health state displays healthy.
 - The Cisco Application Services Engine cluster displays green.
- Interface and Port Channel down anomaly will not be raised when oper-state is down, before Cisco NIR app installation. Anomaly is captured only when the oper-state is up or down, after Cisco NIR app is installed.

- After modifying a bridge domain or VRF instance for an EPG, the flows show errors and flow analytics does not work as expected.
- For unknown IP address, the traffic from spine nodes will be dropped and flow records are not generated in Flow Telemetry.
- Connectivity from Cisco NIR to AppDynamics controller using proxy is not supported.
- Cisco Nexus 9300-EX platform switches do not support VRF based filtering. They support only bridge domain or subnet filtering of flow telemetry rules. Cisco NIR app gets the flows from the subnet if the subnet is across multiple VRFs.
- If Fast Link Failover is enabled, -FX2 switches will not report the egress interface information for fabric interfaces facing the spines switches.

Related Content

The Cisco NIR documentation can be accessed from the following website:

<https://www.cisco.com/c/en/us/support/data-center-analytics/network-insights-resources/model.html>

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

Document	Description
Cisco Network Insights for Resources Application for the Cisco APIC Release Notes	This document.
Cisco Network Insights for Resources Application for the Cisco APIC User Guide	Describes how to download, install, and set up Cisco NIR in Cisco APIC.

Documentation Feedback

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

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