Reviewing System Status for Your Nexus Dashboard, Release 4.2.1

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New and changed information

The following table provides an overview of the significant changes up to this current release. The table does not provide an exhaustive list of all changes or of the new features up to this release.

Release Version	Feature	Description
Nexus Dashboard 4.2.1	Basic telemetry for Catalyst 9000 series devices	Beginning with Nexus Dashboard 4.2.1, basic telemetry data is now collected from Cisco Catalyst 9000 series devices. This data includes inventory, hardware statistics, essential-level anomalies including correlation, L3 neighbors, and traffic analytics compatibility mode. For more information, see Telemetry.

Overview

1. Navigate to **Overview** in **System Status**.

   Admin > System Status > Overview.

2. Review the information in **Overview**.

Field	Description
Anomaly level	Provides Nexus Dashboard-level anomaly information. Click the **Anomaly level** tile to navigate directly to the **Anomalies** tab in **System Status**. See Anomalies for more information.
Connectivity to Intersight	Provides the status for connectivity to Intersight. Click **Setup Intersight** to navigate to the **Intersight Device Connector** area. See Working With Intersight for more information.
Fabrics	Show this information: • The number of fabrics currently onboarded in your Nexus Dashboard • The connectivity status of those fabrics • The fabric types of all the fabrics in your Nexus Dashboard • The license tiers used by the fabrics in your Nexus Dashboard Click **View all** to navigate directly to **Manage > Fabrics**.
Cluster nodes	Provides information on the nodes that are currently part of the cluster and the health status for those nodes. Click **View all** to navigate directly to **Nodes** in **System Status**. See Nodes for more information.

Nodes

1. Navigate to **Nodes** in **System Status**.

   Admin > System Status > Nodes.

2. Review the information provided in **Nodes**.

Field	Description
Utilization	Provides utilization information for CPU, memory, and storage.
Nodes by status	Provides additional information on each node in the cluster. Click **Add node** to add a node to the cluster. See **Add nodes** for more information.

Add nodes

1. In **Nodes** in **System Status**, click **Actions > Add node**.

   The **Add node** page opens.

2. In the **Deployment details** area, provide the credentials information for the node, then click **Validate**.
   - For physical nodes, this is the IP address, username, and password of the server's CIMC. The CIMC will be used to configure the rest of the information on the node.
   - For virtual nodes, this is the IP address and rescue-user password you defined for the node when deploying it.
3. In the **General** area:
   a. Provide the name and serial number of the node.
   b. From the **Type** dropdown, choose **Secondary**.
4. In the **Management network** area, provide the management network information.
   - For physical nodes, you must provide the management network IP address, netmask, and gateway now.
   - For virtual nodes, the management network information will be pre-populated with the information pulled from the node based on the IP address and credentials you provided in the previous sub-step.
5. In the **Data network** area, provide the data network information.

   You must provide the data network IP address, netmask, and gateway. Optionally, you can also provide the VLAN ID for the network. For most deployments, you can leave the VLAN ID field blank.

6. (Optional) Provide IPv6 information for the management and data networks.
   - Nexus Dashboard supports dual stack IPv4/IPv6 for the management and data networks.
   - If you want to provide IPv6 information, you must do it when adding the node.
   - All nodes in the cluster must be configured with either only IPv4 or dual IPv4/IPv6 stack.

7. In the **Enable BGP** field, click the toggle to enable this feature, if necessary.
8. Click Save to add the node.

The configuration will be pushed to the node and the node will be added to the list in the GUI.

Managing secondary nodes

You can add a number of secondary nodes to an existing 3-node cluster for horizontal scaling to enable application co-hosting.

- Secondary nodes are not supported for cloud form factors of Nexus Dashboard clusters deployed in AWS or Azure.
- Secondary nodes are qualified for IPFM fabric types. For more information about IPFM fabrics, see Editing IP Fabric for Media (IPFM) Fabric Settings.

Add secondary nodes

This section describes how to add a secondary node to your cluster to enable horizontal scaling.

Before you begin

- Ensure that the existing primary nodes and the cluster are healthy.
- Prepare and deploy the new node.
- Ensure that the node you are adding is powered on.
- If you are adding a physical node, ensure that you have the new node's CIMC IP address and login information.

  You will need to use the CIMC information to add the new node using the Nexus Dashboard GUI.
- If you are adding a virtual node, ensure that you have the node's management IP address and login information.

To add a secondary node:

1. Navigate to **Nodes** in **System Status**.

   Admin > System Status > Nodes.
2. In the main pane, click **Actions > Add node**.

   The **Add Node** page opens.
3. In the **Add Node** screen, provide the node information.
   a. In the **Deployment details** area, provide the credentials information for the node, then click **Validate**.
      - For physical nodes, this is the IP address, username, and password of the server's CIMC. The CIMC will be used to configure the rest of the information on the node.
      - For virtual nodes, this is the IP address and rescue-user password you defined for the node when deploying it.

b. In the **General** area, provide the name and serial number of the node.

c. From the **Type** dropdown, choose Secondary.

d. Provide the **Management network** information.

   For virtual nodes, the management network information will be pre-populated with the information pulled from the node based on the IP address and credentials you provided in the previous sub-step.

   For physical nodes, you must provide the management network IP address, netmask, and gateway now.

e. Provide the **Data network** information.

   You must provide the data network IP address, netmask, and gateway. Optionally, you can also provide the VLAN ID for the network. For most deployments, you can leave the VLAN ID field blank.

f. (Optional) Provide IPv6 information for the management and data networks.

   Nexus Dashboard supports dual stack IPv4/IPv6 for the management and data networks.

   If you want to provide IPv6 information, you must do it when adding the node.

   All nodes in the cluster must be configured with either only IPv4 or dual IPv4/IPv6 stack.

g. In the **Enable BGP** field, click the toggle to enable this feature, if necessary.

4. Click **Save** to add the node.

   The configuration will be pushed to the node and the node will be added to the list in the GUI.

Delete a secondary node

Before deleting a secondary node:

- Ensure that the primary nodes and the cluster are healthy
- Check for any anomalies

See Overview for more information.

To delete an existing secondary node:

1. Navigate to **Nodes** in **System Status**.

   Admin > System Status > Nodes.

2. Select the checkbox next to the secondary node you want to delete.
3. From the **Actions** menu, choose **Delete** to delete the node.

Managing standby nodes

You can add up to two standby nodes, which you can use to quickly restore the cluster functionality in case one or more primary nodes fail by replacing the failed primary node with the standby node.

Standby nodes are similar to secondary nodes in deployment, initial configuration, and upgrades. However, unlike secondary nodes, the cluster will not use the standby nodes for any workloads.

Standby nodes are not supported for single-node clusters or clusters deployed in AWS or Azure.

The following two cases are supported:

- Single primary node failure

  You can use the UI to convert the standby node into a new primary node.

- Two primary nodes failure

  You will need to perform manual failover of one of the nodes to restore cluster functionality. Then fail over the second node using standard procedure.

Add standby nodes

This section describes how to add a standby node to your cluster for easy cluster recover in case of a primary node failure.

Before you begin

- Ensure that the existing primary nodes and the cluster are healthy.
- Prepare and deploy the new node.

  You can failover only between nodes of identical types (physical or virtual), so you must deploy the same type of node as the nodes in your cluster which you may need to replace. In case of virtual nodes deployed in VMware ESX, which have two node profiles (OVA-app and OVA-data), you can failover only between nodes of the same profile.

- Ensure that the node you are adding is powered on.
- If you are adding a physical node, ensure that you have the new node's CIMC IP address and login information.

  You will need to use the CIMC information to add the new node using the Nexus Dashboard GUI.

- If you are adding a virtual node, ensure that you have the node's management IP address and login information.

To add a standby node:

1. Navigate to **Nodes** in **System Status**.

   Admin > System Status > Nodes.

2. In the main pane, click **Actions > Add node**.

   The **Add Node** page opens.

3. In the **Add Node** screen, provide the node information.
   a. In the **Deployment details** area, provide the credentials information for the node, then click

Validate.

- For physical nodes, this is the IP address, username, and password of the server's CIMC. The CIMC will be used to configure the rest of the information on the node.
- For virtual nodes, this is the IP address and rescue-user password you defined for the node when deploying it.

b. In the **General** area, provide the name and serial number of the node.

c. From the **Type** dropdown, select Standby.

d. Provide the **Management network** information.

For virtual nodes, the management network information will be pre-populated with the information pulled from the node based on the IP address and credentials you provided in the previous sub-step.

For physical nodes, you must provide the management network IP address, netmask, and gateway now.

e. Provide the **Data network** information.

You must provide the data network IP address, netmask, and gateway. Optionally, you can also provide the VLAN ID for the network. For most deployments, you can leave the VLAN ID field blank.

f. (Optional) Provide IPv6 information for the management and data networks.

Nexus Dashboard supports dual stack IPv4/IPv6 for the management and data networks.

If you want to provide IPv6 information, you must do it when adding the node.

All nodes in the cluster must be configured with either only IPv4 or dual IPv4/IPv6 stack.

g. In the **Enable BGP** field, click the toggle to enable this feature, if necessary.

4. Click **Save** to add the node.

The configuration will be pushed to the node and the node will be added to the list in the GUI.

Replace single primary node with standby node

This section describes failover using a pre-configured standby node. If your cluster does not have a standby node, follow the steps described in one of the sections in Cisco Nexus Dashboard Troubleshooting instead.

Before you begin

- Ensure that at least 2 primary nodes are healthy.
- Ensure that you have at least one standby node available in the cluster.

  Setting up and configuring standby nodes is described in Adding Standby Nodes.

- Ensure that the primary node you want to replace is powered off.

You cannot re-add the primary node you are replacing back to the cluster after

> the failover is complete. If the primary node you replace is still functional and you want to re-add it to the cluster after the failover, you must factory reset or re-image it as described in Cisco Nexus Dashboard Troubleshooting and add it as a standby or primary node only.

To failover a single primary node:

1. Navigate to **Nodes** in **System Status**.

   Admin > System Status > Nodes.

2. Click the **Actions** (**...**) menu next to the Inactive primary node that you want to replace.
3. Choose **Failover**.

   Note that you must have a standby node already configured and added or the **Failover** menu option will not be available.

4. In the **Fail Over** window that opens, select a standby node from the dropdown.
5. Click **Save** to complete the failover.

   The failed primary node will be removed from the list and replaced by the standby node you selected. The status will remain Inactive while the services are being restored to the new primary node.

   It can take up to 10 minutes for all services to be restored, at which point the new primary node's status will change to Active.

Replace two primary nodes with standby node

The option to replace two primary nodes with a standby node is not supported. Instead, if one cluster becomes unavailable, you will recover that cluster from a backup that is available on another cluster. See the section "Perform a dynamic recovery on a cluster" in Nexus Dashboard Troubleshooting for more information.

Delete standby nodes

Before deleting a standby node:

- Ensure that the primary nodes and the cluster are healthy
- Check for any anomalies

See Overview for more information.

To delete an existing standby node:

1. Navigate to **Nodes** in **System Status**.

   Admin > System Status > Nodes.

2. Select the checkbox next to the standby node you want to delete.
3. From the **Actions** menu, choose **Delete** to delete the node.

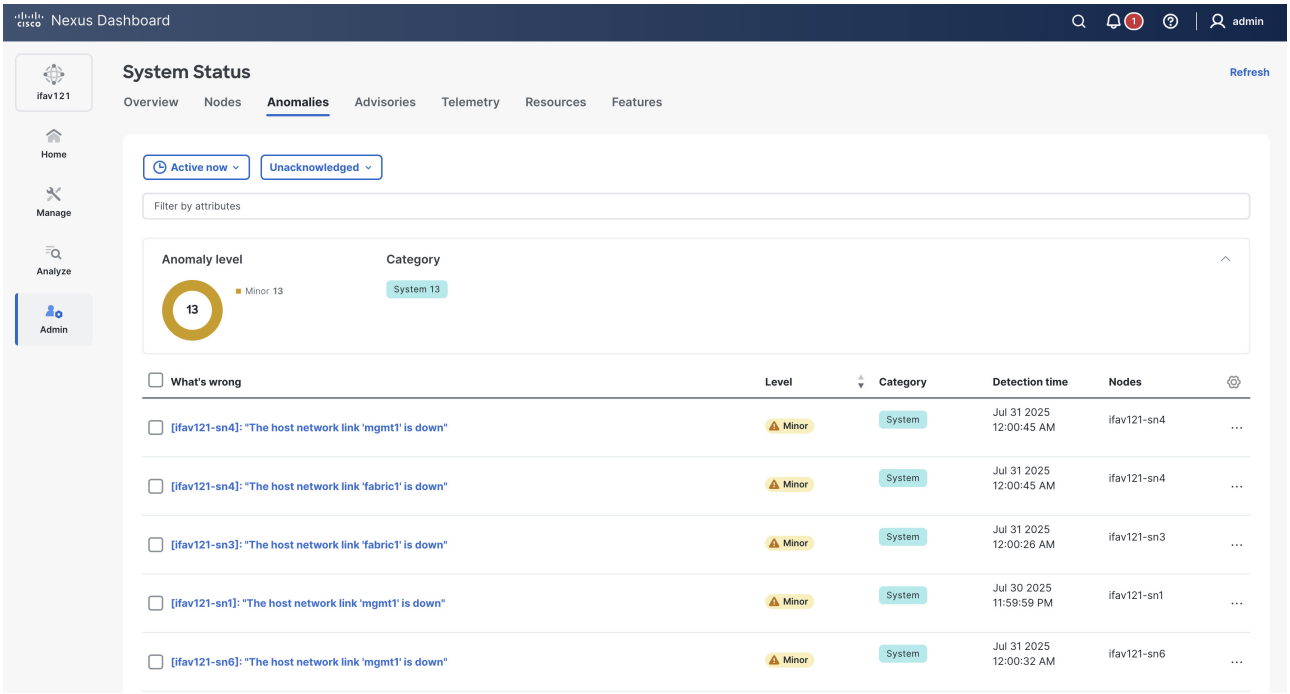
Anomalies

The **Anomalies** tab allows you to quickly monitor platform-level anomalies detected on Nexus Dashboard. It highlights critical, high-severity events that require your prompt attention and resolution to keep the system healthy and stable.

1. Navigate to **Anomalies** tab in the **System Status** page.

   Go to **Admin > System Status > Anomalies**.

2. Review the information provided in the **Anomalies** table.

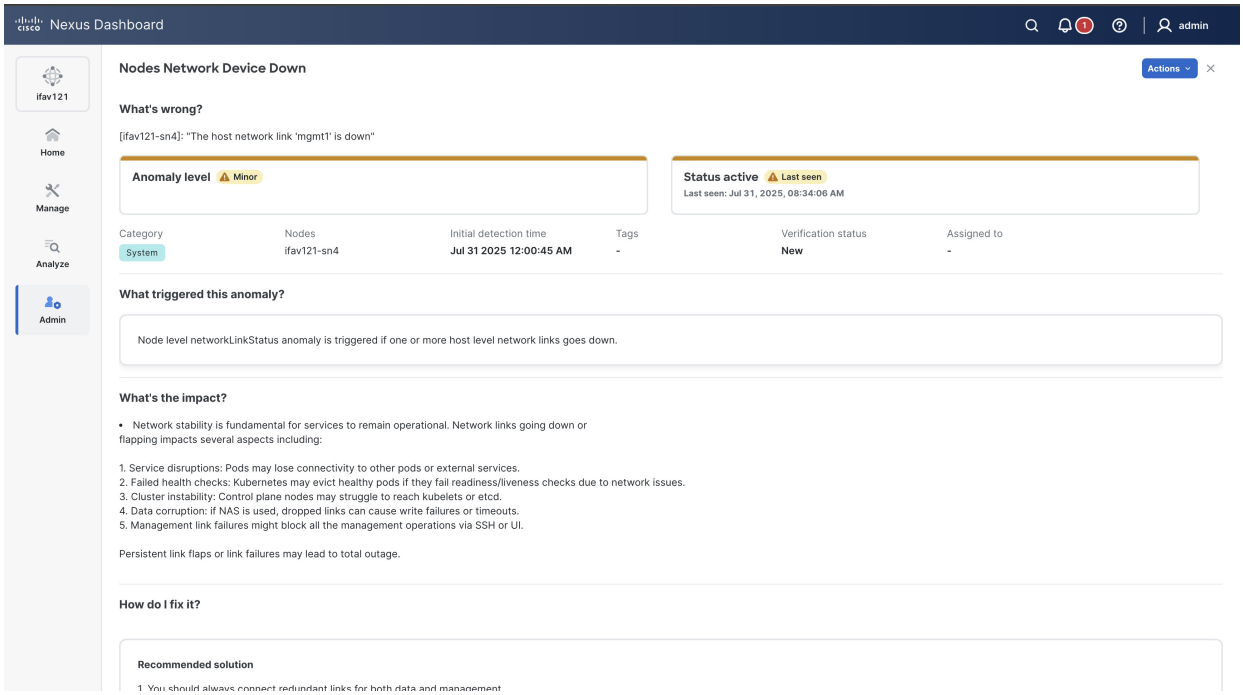


   The **Anomalies** table displays filtered anomalies. By default, the anomalies are sorted by level. Click the column heading to sort the anomalies in the table. To view cleared anomalies, apply a filter to list anomalies from the past 15 minutes (or a similar recent time frame), and configure the table to show the **Status** column, where the status is displayed as either **Active** or **Cleared**. An **Active** status means the anomaly is present in your network, while a **Cleared** status means the anomaly is no longer present.

3. Click an anomaly to view more information.

   The ***Anomaly name*** page displays these details.

   - **What's wrong?** – provides a problem description with the specific affected objects.
   - **What triggered this anomaly?** – provides the primary source of the anomaly.
   - **What's the impact?** – explains the potential impact if the problem is not fixed.
   - **How do I fix it?** – provides prescriptive recommendations.



For more information, see Detecting Anomalies and Identifying Advisories in your Nexus Dashboard.

Advisories

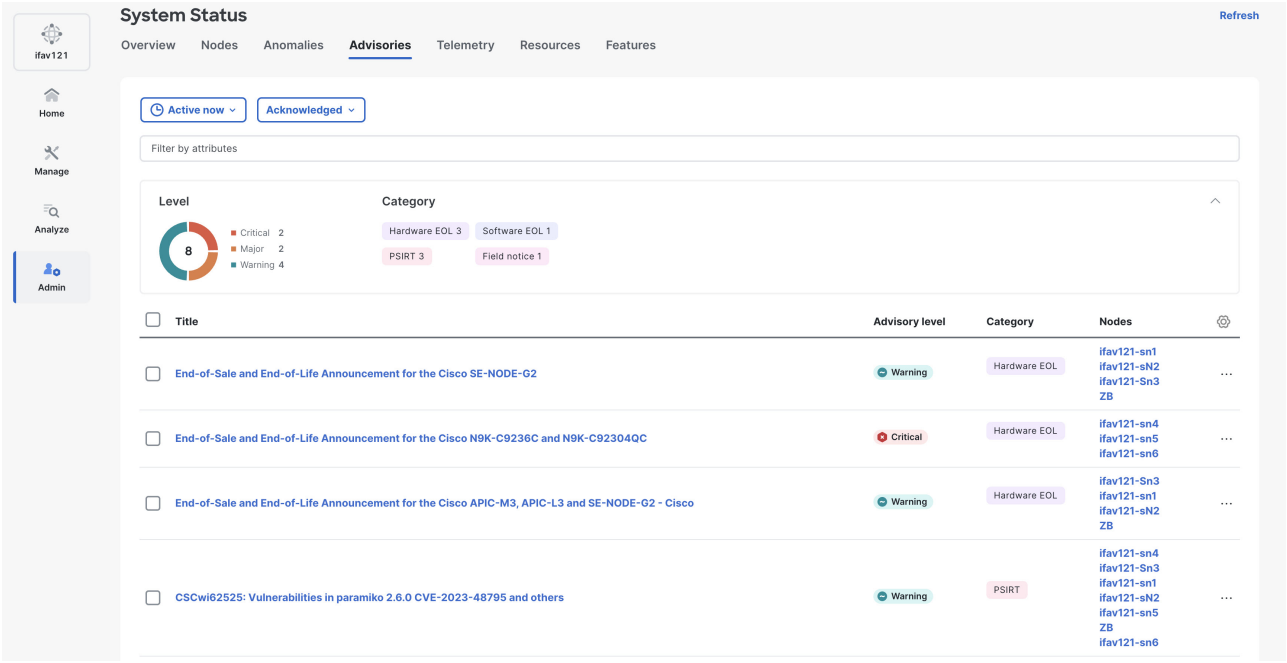
Nexus Dashboard uses metadata bundles to detect field notices, software and hardware end-of-life (EoL) and end-of-sale (EoS) announcements, as well as PSIRTs that affect the network cluster nodes, and it generates advisories. These advisories recommend actions to support your network for optimal performance. Previously, Nexus Dashboard limited advisories for fabric nodes. With this release, Nexus Dashboard includes advisories for cluster nodes. For more information, see Metadata support and Detecting Anomalies and Identifying Advisories in your Nexus Dashboard.

Follow these steps to view the cluster advisories.

1. Navigate to **Advisories** tab in the **System Status** page.

   Go to **Admin > System Status > Advisories**.

2. Review the information provided in the **Advisories** table.



Use the **Filter** drop-down list to choose the appropriate column name filter and display specific columns in the **Advisories** table.

The **Advisories** table displays the following information.

Field	Description
Title	Displays the name of the advisory as published by Cisco PSIRT or other sources.
Advisory level	Specifies if the custom dashboard is shared or private.
Category	Specifies the type of advisory, such as PSIRT, Field notice, Hardware, and Software EoL.
Nodes	Displays advisories for specific nodes.
What's wrong	Displays advisories of a specific affected object.

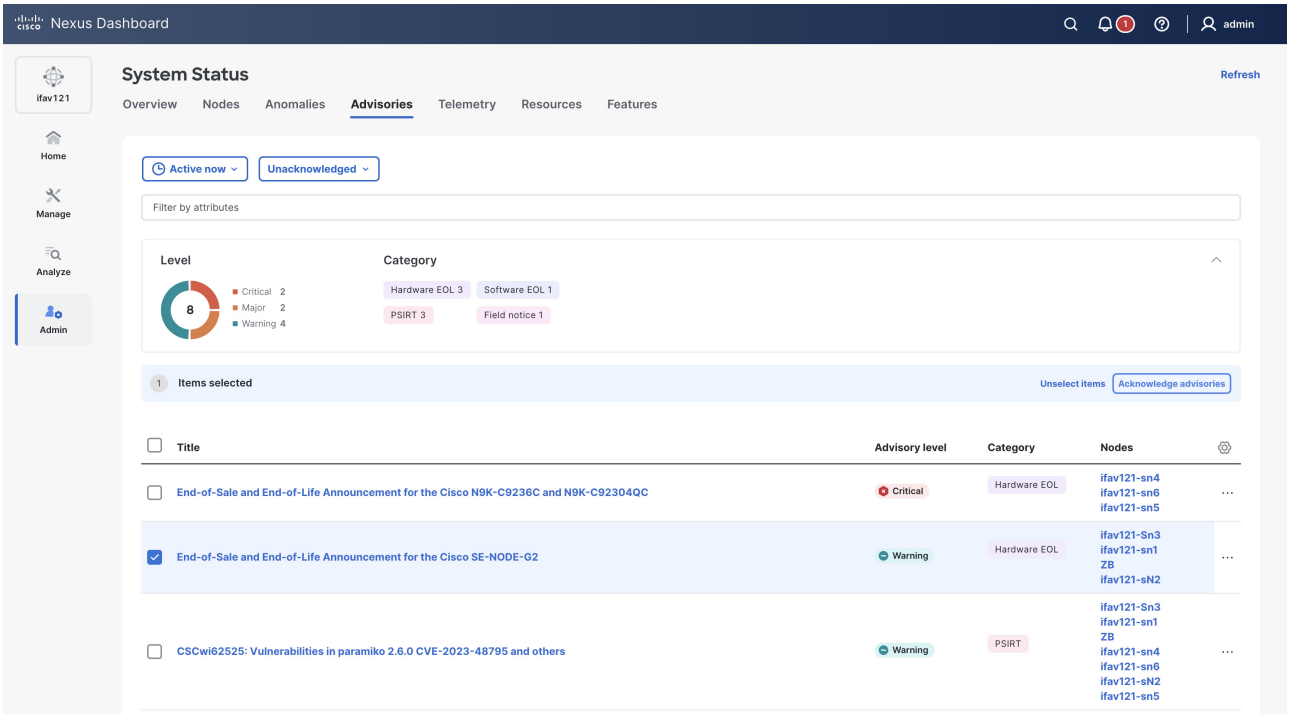
Field	Description
Detection time	Display advisories with a specific detection time.
Last seen time	Displays only advisories with a specific last seen time. The last seen time indicates when the advisory was updated while it was active. If the Nexus Dashboard does not clear the advisory status, it stays active.

Nexus Dashboard lists nodes on the **Advisories** page for 30 minutes after removing them from the cluster. This intentional delay ensures proper handling of any ongoing processes or alerts related to the nodes before removing them from the **Advisories** table. Hence, the main **Advisories** page displays the nodes that are already removed from the cluster but are still within the 30-minute grace period. However, when you click on a specific advisory to view detailed information, Nexus Dashboard displays a more accurate list of nodes, excluding those that have been removed.

3. Navigate to **Active now > Time Selection**, to choose the date and time range.

   By default, **Active now** is chosen. You can customize the date and time range to determine the advisories data displayed in the **Advisories** table.

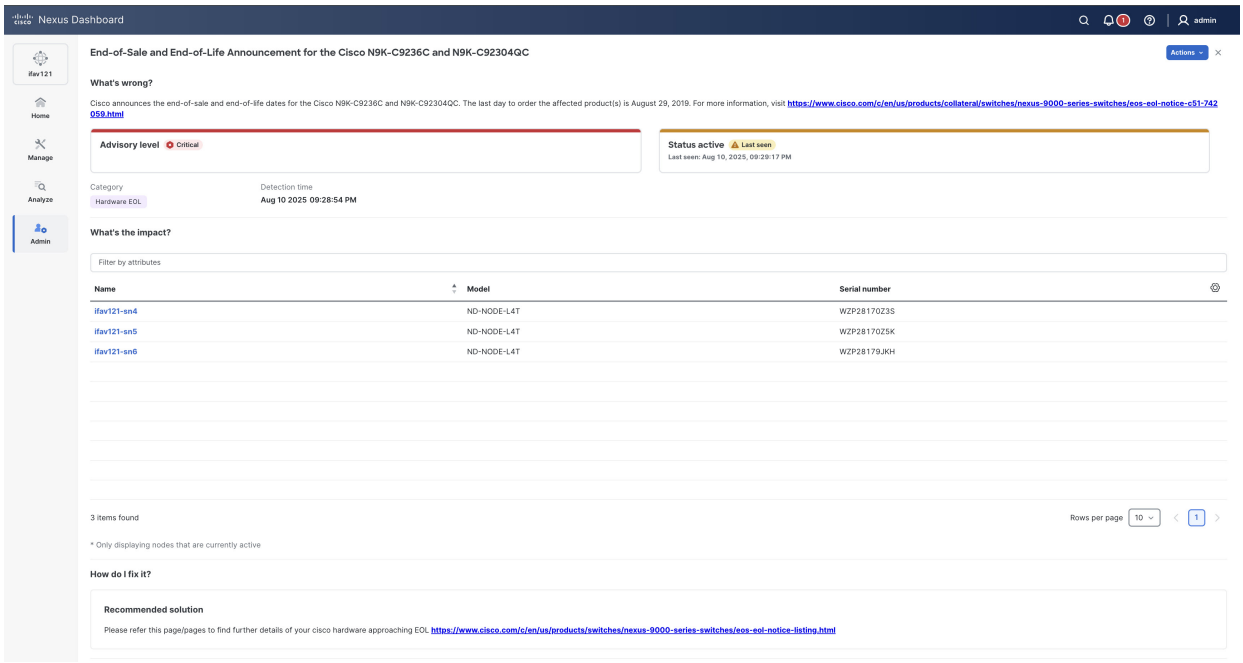
4. Choose the advisories from the **Advisories** table and click **Acknowledge advisories** to acknowledge advisories.



5. By default, all the unacknowledged advisories are displayed in the **Advisories** table. Once you acknowledge an advisory, choose **Acknowledged** from the drop-down list to view all the acknowledged advisories.
6. The **Advisories** page displays the total number of advisories by severity such as **Critical**, **Major**, and **Warning** in the donut chart under **Level**. You can view the type of advisory, such as PSIRT, field notices, hardware, and software EoL under **Category**.
7. Click an advisory to view more information.

The ***Advisory name*** page displays these details.

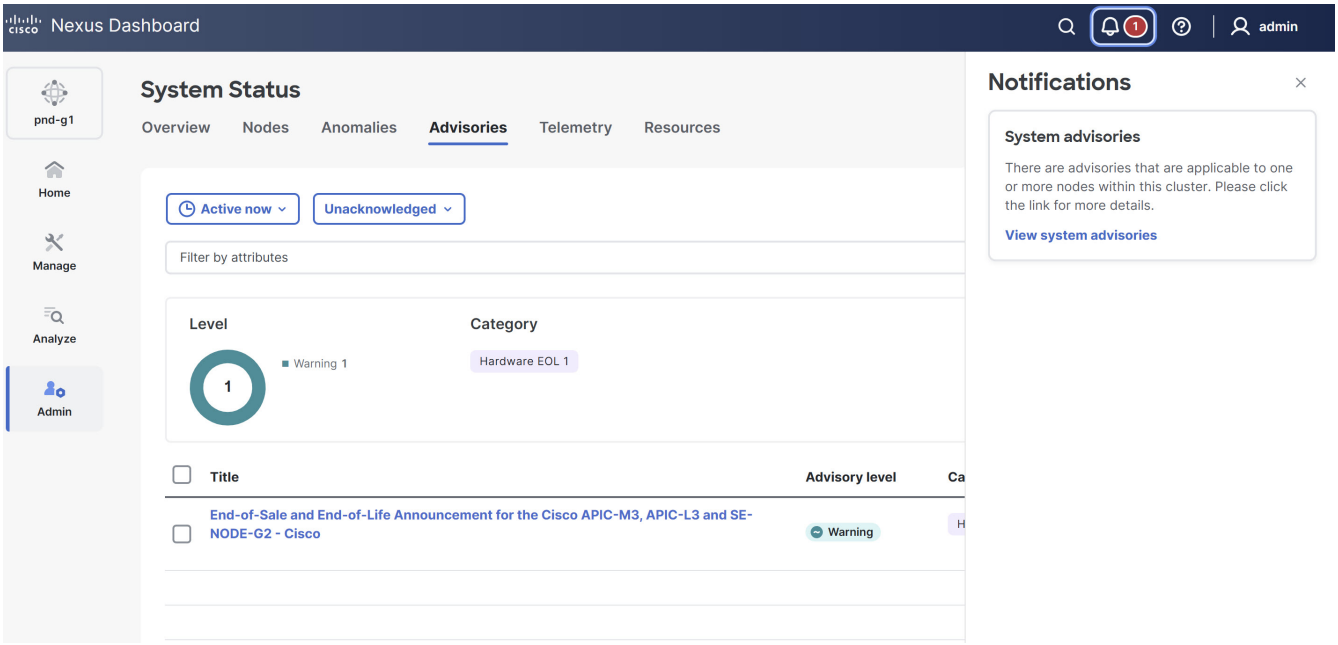
- **What's wrong?** – provides a problem description with the specific affected objects.
- **How do I fix it?** – provides prescriptive recommendations.



You can also view the cluster advisories by navigating to **Analyze > Advisories**. Click the **Include system advisories** toggle button to include system advisories. For more information, see Detecting Anomalies and Identifying Advisories in your Nexus Dashboard.

System advisory notification

When there is an active system advisory, a notification alert appears on the **Notifications** bell icon located in the common navigation bar at the top of the page. Click the notification bell icon to open the **Notifications** pane. In the **Notifications** pane, click **View system advisories**. Nexus Dashboard redirects you to the **System Status** page, where you can review the full list of current and past system advisories in the **Advisories** table.



Metadata support

Nexus Dashboard uses metadata bundles to detect latest bug signatures, PSIRTs, field notices, and end-of-life notices. Cisco Intersight Cloud regularly updates, validates, and makes metadata packages available. Nexus Dashboard connects to the Cisco Intersight Cloud via an embedded device connector, which periodically retrieves the updated metadata packages. For air-gapped environments, where the Nexus Dashboard is not connected to the Cisco Intersight Cloud, you can securely and manually upload the latest metadata. You can download the bundle updates from Cisco Intersight.

Follow these steps to check the metadata version.

1. Navigate to **Admin > System Settings**.
2. In the **General** tab, under **Metadata** you can view the metadata version.
3. Click **Edit** to update the metadata version.

   The **Metadata** page appears. In the **Update metadata version** area, you can manually upload the latest metadata files.

Telemetry

Beginning with Nexus Dashboard 4.2.1, Nexus Dashboard now collects basic telemetry data from Cisco Catalyst 9000 (CAT9K) devices running IOS-XE 17.15. Data collected from legacy protocols such as SNMP, Syslog, Netflow, and sflow provide basic telemetry and analytics information to represent device health and monitoring.

1. Navigate to **Telemetry** in **System Status**.

   Admin > System Status > Telemetry.

   - Click the **Fabrics** tab to view telemetry status information for the fabrics in your Nexus Dashboard.
   - Click the **Switches** tab to view telemetry status information for the fabrics in your Nexus Dashboard.

   After upgrading to Nexus Dashboard 4.1.1, if any fabric shows a **Telemetry** configuration status as **Pending updates**, all other configurations or runtime states (at both fabric and switch level) should be ignored until a redeploy is triggered.

Understanding system status

Nexus Dashboard processes your fabric's telemetry through different jobs, services and tasks that reflect what you see on screen. The statuses are summarized at the fabric level. Following is a brief description for each of them:

- **Assurance**: Indicates the status of the last assurance collection job. Hovering over this field will detail when assurance was last run, and whether it was a scheduled or on-demand task.
- **Capacity**: Ensures all validated switch capacity limitations are in conformance. It is expected for controllers to report No Data as this is not applicable to these devices.
- **Hardware resources**: Monitors the health of all switch HW resources including CPU, memory, fans, power supplies, storage and environmental levels are healthy.
- **Statistics**: Indicates the status of the collection of switch and interface level metrics. This collection is refreshed every 5 minutes.
- **Endpoints**: Displays the collection status of a switches Endpoint records. Hovering over this field will display the last update timestamp. Endpoint collection is not applicable to controllers or spines switches that have no endpoints connected.
- **Bug scan**: Provides the status of the previous bug scan analysis. Hovering over this field will provide the timestamp of the last run attempt.
- **Best practices**: Displays the status of the last best practices scan. Hovering over this field will provide the timestamp of the last run attempt.
- **Telemetry collection status**: This is available only at telemetry status in **Fabric Overview** (**Manage > Fabrics > FabricXYZ**). This is dynamically updated and represents the data streaming status.
- **Telemetry configuration status**: Indicates that basic telemetry has been enabled on devices in the fabric. Status are:

- **OK**: All switches have been successfully configured for telemetry streaming.
- **Not OK**: Telemetry configuration for all switches in the fabric has failed or pending change control change.
- **Partial OK**: Some switches have been successfully configured for telemetry streaming, some failed.
- **In progress**: Telemetry configuration attempting to change state (Telemetry Pause/Resume, Pending change control).
- **Pending updates**: Indicates new telemetry configurations are available, can be availed with 'redeploy' action.
- **Out of sync** :Indicates a restore operation is in-progress, should be completed with 'reconfigure' action.

- **Software telemetry status**: Displays the software telemetry status for each switch. The value for this property will show Enabled, Disabled or a Pending state (if Change Control is enabled).
- **Flow collection**: Indicates flow collection configuration status.

Configuring telemetry on Cisco Catalyst devices

Follow these steps to configure telemetry on Cisco Catalyst 9000 devices running IOS-XE 17.15:

1. Configure Telemetry Receiver on CAT9K

   CAT9K-1#show telemetry receiver name nexusdb

2. Configure Telemetry Subscription

   Based on the filter specified, required data is collected. Subscriptions can be created for MOs such as endpoint, MAC, ARP, and interface.

   CAT9K-1# show telemetry ietf subscription 303 detail

3. Configure UTR-PL for telemetry processing

   This enables telemetry data to be received and parsed before being forwarded to downstream services for processing.

Telemetry feature support matrix

Category	Features
Inventory	Switches, controllers, interfaces, and endpoints with historical data
Hardware resources	CPU, memory, power, temperature, and interfaces with historical information
Topology	Fabric-level with switch, interface, and inventory view for endpoint visibility

Category	Features
Traffic analytics	Fabrics can be either in TA full or TA compatible mode. Mixed mode is not supported where some switches within the fabric are either in TA full and TA compatible mode. NOTE: For TA compatibility mode, navigate to **Manage > Fabric**, select the fabric and click **Actions > Edit fabric settings**. Go to the **Telemetry** tab, select **Traffic analystics compatibility mode** and click **Save**.

Resources

Resources provides real-time information about the resource utilization of your Nexus Dashboard cluster.

1. Navigate to **Resources** in **System Status**.

   Admin > System Status > Resources.

In Nexus Dashboard 4.2.1, the digital news feed button is removed from the **Admin > System Status > Resources** page.

Features

Features provides information on the features that are enabled in your Nexus Dashboard and the health status for those features.

1. Navigate to **Features** in **System Status**.

   Admin > System Status > Features.

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