



Cisco Nexus Dashboard Insights Inventory, Release 6.3.1 - For Cisco ACI

Table of Contents

New and Changed Information	2
Inventory	3
About Inventory	3
About Controllers	3
About Switches	9
Microbursts	18
Filtering Information	19
Copyright	21

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New and Changed Information

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

Table 1. New Features and Changed Behavior in the Cisco Nexus Dashboard Insights

Feature	Description	Release	Where Documented
Reorganized Content	Content within this document was originally provided in the Cisco Nexus Dashboard Insights User Guide. Starting with release 6.3.1, this content is now provided solely in this document and is no longer provided in the Cisco Nexus Dashboard Insights User Guide.	6.3.1	Entire document

This document is available from your Cisco Nexus Dashboard Insights GUI as well as online at www.cisco.com. For the latest version of this document, visit [Cisco Nexus Dashboard Insights Documentation](#).

Inventory

About Inventory

Inventory provides information on controllers and switches in Nexus Dashboard Insights.

Click **Operate** > **Inventory** to access Inventory.

At the top of Inventory, choose whether you want to view the inventory from **Online Sites** or **Snapshot Sites**.

Click **Controllers** to see high-level information on the controllers. Click **Switches** to see high-level information on the switches.



- Data for online sites will always be current, however data for snapshot sites may be old and not up to date.
- If a switch or hostname is modified, it takes around 2 hours for the updated switch or hostname to be reflect in Inventory.

About Controllers

Controllers provides the following high-level information on all of the controllers in Nexus Dashboard Insights.

Name	Anomaly Level	Advisory Level	Site	Type	Admin State	Operational Status	Software Version	Model
candid-scale2-ifc1	Major	Healthy	candid-scale2	Physical	OK	Active	5.2(7g)	APIC-SERVER-L3
candid-scale2-ifc2	Major	Healthy	candid-scale2	Physical	OK	Active	5.2(7g)	APIC-SERVER-L3
candid-scale2-ifc3	Major	Healthy	candid-scale2	Physical	OK	Active	5.2(7g)	APIC-SERVER-L3
tbMix121-apic1-sim0	Major	Healthy	telexia-cs2-a-0	Physical	Not Available	Active	6.0(51d)	APIC-SERVER-L3
tbMix121-apic1-sim0	Major	Healthy	telexia-cs2-a-1	Physical	Not Available	Active	6.0(51d)	APIC-SERVER-L3
tbMix121-apic1-sim0	Major	Healthy	telexia-cs2-a-2	Physical	Not Available	Active	6.0(51d)	APIC-SERVER-L3
tbMix121-apic1-sim0	Major	Healthy	telexia-cs2-a-3	Physical	Not Available	Active	6.0(51d)	APIC-SERVER-L3
tbMix121-apic1-sim0	Major	Healthy	telexia-cs2-a-4	Physical	Not Available	Active	6.0(51d)	APIC-SERVER-L3
candid7-apic1	Critical	Healthy	candid7	Physical	OK	Active	5.2(2d)	APIC-SERVER-L2
candid7-apic2	Critical	Healthy	candid7	Physical	OK	Active	5.2(2d)	APIC-SERVER-L2

Field	Description
Name	The name of each controller
Anomaly Level	The anomaly levels experienced by each controller

Field	Description
Advisory Level	The advisory levels experienced by each controller
Site	The site where each controller resides
Type	The type for each controller (physical or virtual)
Admin State	The administrative state for each controller to Nexus Dashboard Insights
Operational Status	The operational status for each controller to Nexus Dashboard Insights
Software Version	The version of the software on the controller
Model	The model type for each controller

The gear icon allows you to customize the table by hiding some of the columns. By default, all columns are visible. The ... can be used to **Launch APIC** directly from controllers. The table can also be filtered based on the columns available.



Launch APIC is only available for online sites.

Click on the site name to be redirected to all the site details. See [Sites](#) for more information. To get additional information on any single controller, click that controller under the **Name** column.

You'll see the following that will provide more information on that controller, with **Overview** shown first by default.

- Overview
- Anomalies
- Advisories

update > inventory [L-controllers] > candid-scale2-rc1

candid-scale2-ifc1
candid-scale2

Refresh Actions Launch APIC

Overview Anomalies Advisories



Anomaly Level Major
5542 total major anomalies, out of which 0 occurred in the last week



No Advisories
No advisories found

General	Role
Site candid-scale2 (ACI)	Controller
Software Version 5.2(7p)	Last Software Update April 22, 2023
Uptime 122 Days Last reboot Apr 22, 2023 at 02:01:15 AM	Model APIC-SERVER-L3
Serial Number WMP270400YG	Out-of-Band IPv4 Address 10.193.8.111
Out-of-Band IPv6 Address fe80::ae2aa1ff:fe68:4c0a	In-Band IPv4 Address 10.193.13.130
In-Band IPv6 Address fc00::1	Type Physical
Created At Jul 26, 2023 at 11:01:16 AM	

Overview

Overview has the following additional information.

- Anomaly Level
- Advisory Level
- General

Anomaly level

Click the Anomaly Level to get more specific information on the anomalies present for this controller. A slide-in appears, showing all the anomalies that occurred for this controller.

See [Anomalies](#) to understand how to navigate across the anomalies.

Advisory Level

Hover over the Advisory Level to see what category the advisories belong to. Click the Advisory Level to get more specific information on the advisories present for this controller. A slide-in appears, showing all the advisories that occurred for this controller.

See [Advisories](#) to understand how to navigate across the advisories.

General

General displays the following information:

Field	Description
Site	The site where each controller resides
Role	The role defines what the device is
Software Version	The version of the software on the controller

Field	Description
Last Software Update	The date when the software was last updated on this controller.
Uptime	The amount of time that this controller has been up. You will also see when the controller was last rebooted.
Model	The model type for each controller
Serial Number	The serial number for this controller.
Out-of-Band IPv4 Address	The IP address for the out-of-band management of this controller.
Out-of-Band IPv6 Address	The IP address for the out-of-band management of this controller.
In-Band IPv4 Address	The IP address for the in-band management of this controller.
In-Band IPv6 Address	The IP address for the in-band management of this controller.
Type	The type for each controller (physical or virtual)
Created At	The date when the controller was created.

Anomalies

The Anomaly level shows the total number of anomalies that have occurred and the number of anomalies that have occurred in the last week.

Hover over the Anomaly Level to view the category of the anomalies occurred. Click the Anomaly Level to get specific information on the anomalies present for the specific controller or switch.

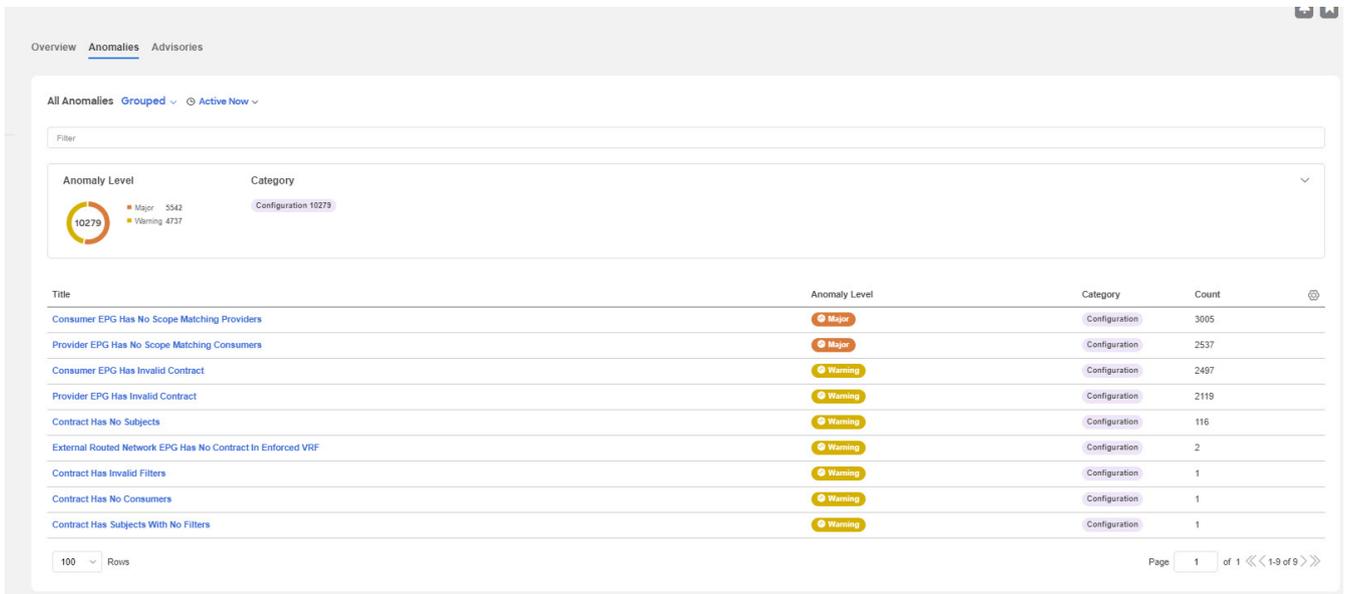
The **View all anomalies** takes you to the Anomalies tab.

You can use the following filters to refine the displayed anomalies:

Field	Description
Anomaly Level	Filter anomalies using a specified level.
Category	Filter anomalies using a specified category.
Title	Filter anomalies using a specified title.

Anomalies are learned deviations from the last known "good" state of a controller and are displayed by type and severity.

To see an overall anomaly dashboard for this controller, click the **Anomalies** tab.



An anomalies dashboard appears for this controller. Determine if you want to see the anomalies grouped or ungrouped. Choose **Grouped** from the drop-down menu if you want to see the anomalies grouped. You can also select a specific time range to view the anomalies.

The level graph displays all the anomalies categorized by the severity level. The colors of the graph along with the key helps understand which severity level the anomalies belong to.

The Category defines the number of anomalies that belong to a specific category. Click the severity level to filter the results based on it. The gear icon is used to toggle fields in the table to filter the view.

Grouped anomalies are provided with the following information:

- Title
- Anomaly Level
- Category
- Count

Click any of the anomalies to view a list of all instances of the anomaly have occurred. The following fields are displayed for each instance:

- What's wrong
- Anomaly Level
- Site
- Detection time
- Status

... and **Actions** allows you to perform the following actions:

- Acknowledge Anomaly
- Verification Status
- Assigned To
- Comment
- Manage Tags

Click any instance of the anomaly to view a detailed report. The report lists the following:

- What's wrong? - provides problem description with the specific affected objects.
- What triggered this anomaly? - explains the reason behind the anomaly getting triggered.
- What's the impact? - explains what will happen if the problem is not fixed.
- How do I fix it? - provides prescriptive recommendations.

Choose **Ungrouped** from the drop-down menu if you want to see the anomalies ungrouped.

Ungrouped anomalies are provided with the following information:

- What's Wrong
- Anomaly Level
- Category
- Site
- Detection Time

In case of Ungrouped Anomalies, clicking on any anomaly brings up a slide in with the detailed report.

Advisories

The **Advisories** displays several levels of advisory severity for controller hardware and software in your network. To see an overall advisories dashboard for this controller, click **Advisories**. An advisories dashboard appears for this controller.

Advisories are shown with the following information:

- Title
- Level
- Category
- Site
- What's Impacted

- What's Wrong
- Status

The level graph displays all the advisories categorized by the severity level. The colors of the graph along with the key helps understand which severity level the advisories belong to.

The Category defines the number of advisories that belong to a specific category. Click the severity level to filter the results based on it.

The gear icon is used to toggle fields in the table to filter the view.

You can also filter the results by choosing between unacknowledged and acknowledged.

Click any of the advisories to view a slide in with a detailed report of the following:

- What's wrong? - provides problem description with the specific affected objects.
- What's the impact? - explains what will happen if the problem is not fixed.
- How do I fix it? - provides prescriptive recommendations.

You can use the following filters to refine the displayed advisories or anomalies:

Field	Description
Category	Filter using a specified category.
Detection Time	Filters based on the date and time that the advisory was detected.
Last Seen Time	Filter using last seen time.
Level	Filter using a specified level.
Title	Filter using a specified title.
Switch	Filter using a switch name.
What's Impacted	Filter based on what is impacted by the anomaly.
What's Wrong	Filter based on anomaly issue.
Check Code	Filter based on the check code assigned.

See [Filtering Information](#) for filter refinement using certain operators.

About Switches

Switches provides the following high-level information on the switches.

Operate > Inventory

Inventory Refresh

Online Sites ▾

Controllers **Switches**

Switches

Filter by attributes

Name	Anomaly Level	Advisory Level	Site	Model	Role	Serial Number	Software Version	Type	⚙️
candid-scale2-leaf01	Warning	Healthy	candid-scale2	NSK-C93240YC-FX2	leaf	FDO2315167 M	15.2(Tg)	ACI	
candid-scale2-leaf02	Warning	Healthy	candid-scale2	NSK-C93240YC-FX2	leaf	FDO231515VZ	15.2(Tg)	ACI	
candid-scale2-leaf03	Warning	Healthy	candid-scale2	NSK-C93240YC-FX2	leaf	FDO23151659	15.2(Tg)	ACI	
candid-scale2-leaf04	Warning	Healthy	candid-scale2	NSK-C93240YC-FX2	leaf	FDO2315166F	15.2(Tg)	ACI	
candid-scale2-leaf05	Warning	Healthy	candid-scale2	NSK-C93240YC-FX2	leaf	FDO231516QJ	15.2(Tg)	ACI	
candid-scale2-leaf06	Major	Healthy	candid-scale2	NSK-C93240YC-FX2	leaf	FDO2315162Y	15.2(Tg)	ACI	
candid-scale2-leaf07	Warning	Healthy	candid-scale2	NSK-C93240YC-FX2	leaf	FDO2315167C	15.2(Tg)	ACI	
candid-scale2-leaf08	Warning	Healthy	candid-scale2	NSK-C93240YC-FX2	leaf	FDO2315165C	15.2(Tg)	ACI	
candid-scale2-leaf09	Warning	Healthy	candid-scale2	NSK-C93240YC-FX2	leaf	FDO2315165H	15.2(Tg)	ACI	
candid-scale2-leaf10	Warning	Healthy	candid-scale2	NSK-C93240YC-FX2	leaf	FDO2315165D	15.2(Tg)	ACI	
candid-scale2-leaf100	Warning	Healthy	candid-scale2	NSK-C93240YC-FX2	leaf	FDO231515TT	15.2(Tg)	ACI	
candid-scale2-leaf11	Warning	Healthy	candid-scale2	NSK-C93240YC-FX2	leaf	FDO2315161F	15.2(Tg)	ACI	

Field	Description
Name	The name of each switch
Anomaly Level	The anomaly levels experienced by each switch
Advisory Level	The advisory levels experienced by each switch
Site	The site where each switch resides
Model	The model type for each switch
Role	Displays what type of switch this is: <ul style="list-style-type: none"> 1. Leaf 2. Spine
Serial Number	The serial number for the specific switch
Software Version	The software version in which the switch is available
Type	Displays the type of switch: <ul style="list-style-type: none"> 1. ACI 2. NDFC

The gear icon allows you to customize the table by hiding some of the columns. By default, all columns are visible. The table can also be filtered based on the columns available.

Click on the site name to be redirected to all the site details. See [Sites](#) for more information. To get additional information on any single switch, click that switch under the **Name** column.

You'll see the following that will provide more information on that switch, with the **Overview** tab shown first by default.

- Overview
- Connectivity
- Anomalies
- Advisories

Overview

- Anomaly Level
- Advisory Level
- Interfaces
- Switch View
- General
- Connectivity

Anomaly level

Click the Anomaly Level to get more specific information on the anomalies present for this controller. A slide-in appears, showing all the anomalies that occurred for this controller.

See [Anomalies](#) to understand how to navigate across the anomalies.

Advisory level

Hover over the Advisory Level to see what category the advisories belong to. Click the Advisory Level to get more specific information on the advisories present for this switch. A slide-in appears, showing all the advisories that occurred for this switch.

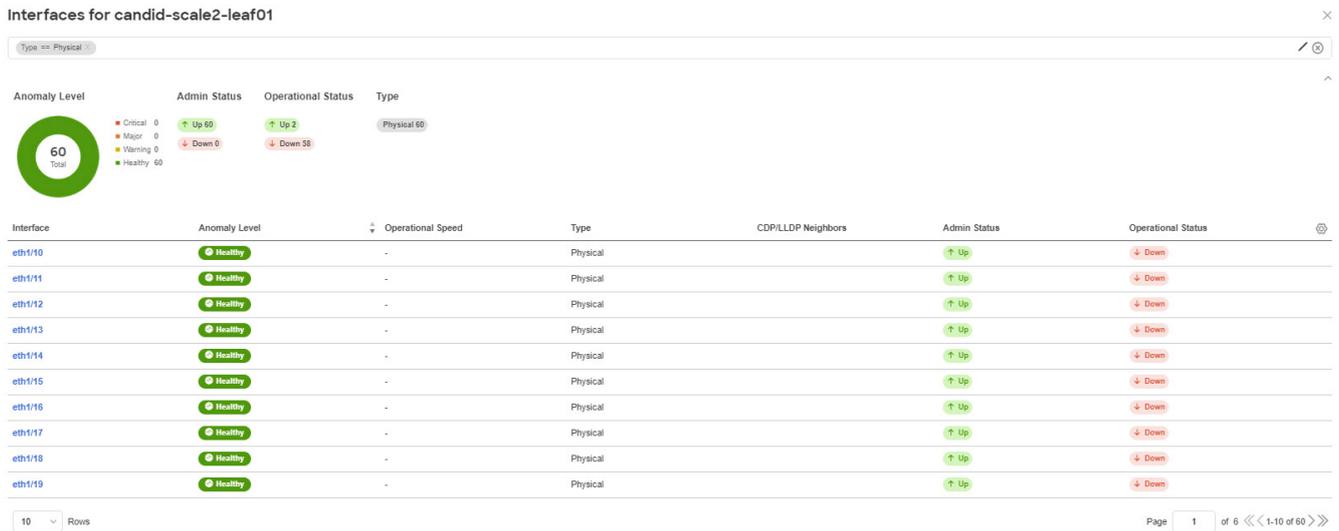
See [Advisories](#) to understand how to navigate across the advisories tab.

Interfaces

Interfaces provides the following information:

- The total number of interfaces in this switch
- The number of physical interfaces
- The overall status of the interfaces in the switch (the number of interfaces that are up, down, or not connected).

Click on the number above the **Total** text to get additional information on the interfaces in this switch.



Click on a specific interface listed under the Interface column to get additional information on that particular interface. See **Interface Details** for more information.

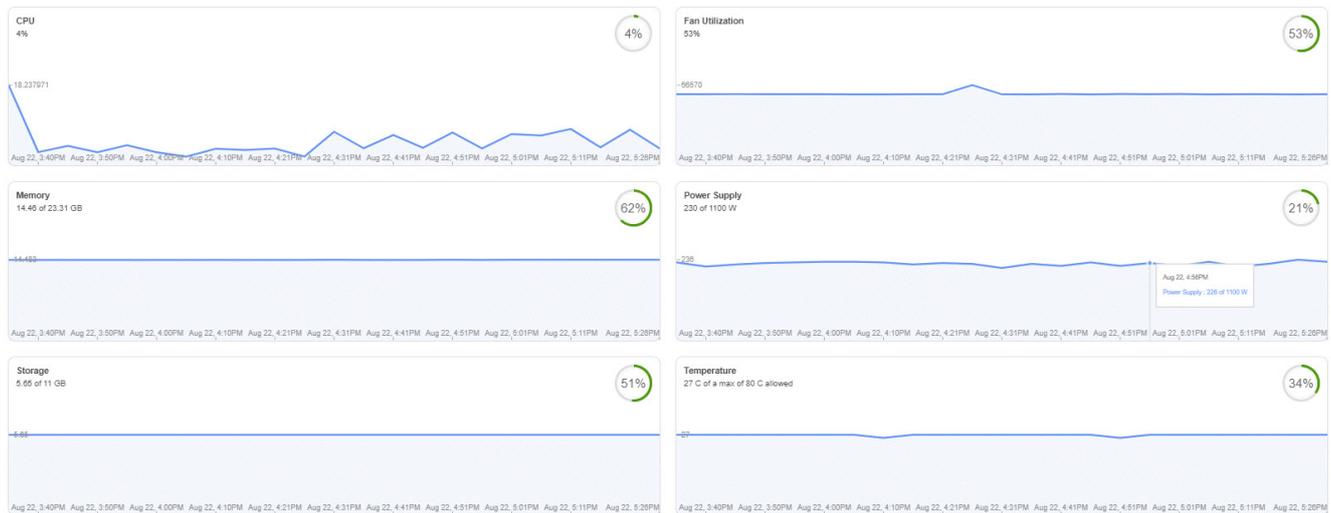
Switch View

Within the **Switch View**, you can see the status of the interfaces, where the state could be one of these values:

- Up (green)
- Down (red)
- Not in Use (gray)

If the switch has multiple modules installed, you can switch the views between the different modules. Click these links in the Switch View to get additional information:

- **View Hardware Resources** - Click **View Hardware Resources** to view a slide-in which appears with information on the hardware resources for this switch. Hardware resources shows the variations in the hardware resources over the time range selected. The following hardware resources are displayed with the percentage utilized per component:
 - CPU
 - Fan Utilization
 - Memory
 - Power Supply
 - Storage
 - Temperature



Click any resource to view further details about it.

- **View Capacity** - Click **View Capacity** to view a slide-in appears with capacity information for the switch. Capacity details shows the variations in operational, configuration and interface resources over the time range selected.

Operational Resources

- IPV4 (learned)
- IPV4 Host Routes
- IPV6 (learned)
- IPV6 Host Routes
- MAC (learned)
- Multicast Routes
- Policy TCAM

Configuration Resources

- BD
- EPG
- VLAN
- VRF

Interface Resources

- Egress Port Bandwidth
- Ingress Port Bandwidth
- Port Usage

The port diagram key helps understand the switch view. Click any interface in the switch view to

get more details about the interface. See **Interface Details** for more information.

General

General provides the following information :

Field	Description
Site	The site where each switch resides.
Role	The role defines what the device is.
Software Version	The version of the software on the switch.
Last Software Update	The date when the software was last updated on this switch.
Uptime	The amount of time that this switch has been up. You will also see when the switch was last rebooted.
Model	The model type for each switch.
Serial Number	The serial number for this switch.
Out-of-Band IPv4 Address	The IP address for the out-of-band management of this switch.
Out-of-Band IPv6 Address	The IP address for the out-of-band management of this switch.
In-Band IPv4 Address	The IP address for the in-band management of this switch.
In-Band IPv6 Address	The IP address for the in-band management of this switch.
Switch ID	The ID of the switch
Created At	The date of when the switch was created.

Connectivity

Connectivity provides the following information:

Field	Description
Endpoints	The number of endpoints associated with this switch
L3 Neighbors	The number of Layer 3 neighbors associated with this switch

Click on the number shown in either of these areas to get additional information on the endpoints or the Layer 3 neighbors.

Connectivity

Click **Connectivity** to bring up connectivity information for this switch. The following appear below **Connectivity**, with **Interfaces** shown first by default.

Click any of these to bring up additional connectivity information for this switch:

- Interfaces
- L3 Neighbors
- Endpoints
- VPC Domains

Interfaces

Click Interfaces to bring up the Interfaces for this switch. The following information is available in Interfaces:

- Anomaly level
- Admin Status
- Operational status
- Type

The Interfaces are listed in a tabular form. Click on an interface to get the following additional information on that interface.

Interface Details

Overview

You see general information about your interface.

- General
 - Interface
 - Type
 - Operational Speed
 - Ip Address
 - Admin State
 - Operational Status
 - CDP neighbors
 - LLDP neighbors
 - Total Endpoints
 - SFP Diagnostics
- EPGs with Active Endpoints

- Tenant name
- Endpoints in EPG
- EPG Name
- Mapped Domains
- VLAN
- L3 Neighbors

In this area, details are displayed such as Peer IP, Operational State, Protocol Name, VRF Name, Neighbors Type.



An interface must be active for you to be able to view the neighbor details.

Trends and Statistics -

Click Trends and Statistics to bring up trends and statistics information on this specific interface in this switch. You see information about the traffic that is flowing over the interface, the usage and various statistics for Microbursts and errors.

- Traffic (by bytes or by packets)
- Usage
- [Microbursts](#)
- Errors

Qos

Overview Trends and Statistics [QoS](#) Anomalies

QoS Queues

Level	Packets Transmitted		Packets Received	
	Admitted	Dropped	Admitted	Dropped
control-plane	0	0	0	0
level1	0	0	0	0
level2	0	0	0	0
level3	0	0	0	0
level4	0	0	0	0
level5	0	0	0	0
level6	0	0	0	0
policy-plane	0	0	0	0
span	0	0	0	0

10 Rows

Page 1 of 1 << 1-9 of 9 >>

Anomalies - Click to bring up anomaly information on this specific interface in this switch. See [Anomalies](#) to understand how to navigate across the anomalies.

Supported Interface Types

- **Physical Interface:** To view the interface details of the node such as, node name, physical interface name, operational status, and admin state. The page also displays protocols, QoS, and DOM properties of the physical interface.
- **Port Channel Interface:** The port channel is an aggregate of physical interfaces and they can be statistically channeled or can be dynamic using LACP protocols. The statistical data that collects the counters for packets, bytes and various errors are similar to that of physical interface. The

150 *sourcename* differentiates the physical interface from port-channel (aggregated interfaces). The operational data is obtained by looking at an additional set of objects that gives the admin-status, oper-status and list of member interfaces for both PC and vPC.

- **vPC Interface:** The vPC is a logical interface that spans across two physical switches for fault tolerance. For a vPC interface type, the Logical Neighbors information is also displayed. The categories that are supported are L3Out, IPN, ISN, L4-L7.
- **SVI Interface:** An SVI is a virtual routed interface that connects a VLAN on the device to the Layer 3 router engine on the same device. Specific information such as Member Interfaces over which the SVI is deployed, VLAN ID, VLAN Type, Encap VLAN are displayed for the SVI interface.

L3 Neighbors

Click L3 Neighbors to bring up L3 Neighbors for this switch. You can filter the results based on Neighbor, Local Switch, VRF and Operational Status.

The screenshot shows the 'L3 Neighbors' tab for the switch 'candid-scale2-leaf01'. It features a filter bar and a table with columns: Neighbor, Local Switch, Routing Protocol, VRF, and Operational Status. Two rows are visible, both with 'Established' status. A pagination control shows 'Page 1 of 1'.

Click the IP address in the Neighbor column to bring up details on this neighbor.

Neighbor Details for 10.0.64.68 on candid-scale2-leaf01

Local Switch Details

Name	Local IP	ASN	Interface	Router ID	Port	VRF
candid-scale2-leaf01	10.0.64.68	100	unspecified	0.0.0.0	57099	overlay-1

Neighbor Details

Neighbor IP	ASN	Router ID	Port	Neighbor Status	Uptime
10.0.64.64	100	172.16.1.4	179	Established	17 weeks, 3 days, 13 hours, 32 minutes

BGP Address Families

Type	Converged	Prefixes Sent	Prefixes Saved	Prefixes Flushed	Accepted Paths
vpnv6-ucast	Yes	0	0	0	0
vpn4-ucast	Yes	0	0	0	3
rtfilter-ucast	Yes	121	0	0	1

Neighbor Capabilities

Capability	Advertised	Received
as4	Yes	Yes
cap	No	Yes
dynamic	Yes	Yes
dynamic-gr	Yes	Yes
dynamic-mp	Yes	Yes
dynamic-old	Yes	Yes
dynamic-refresh	Yes	Yes
gr-helper	Yes	Yes
refresh	Yes	Yes

Click the switch name to bring up the corresponding switch details for the selected neighbor.

Endpoints

Click Endpoints to bring up the Endpoints for this switch. You can filter the results based on Anomaly Level, MAC Address, IP Addresses, Hostnames, Connected To, Interface, Time, Status, Tenant, VRF, BD, EPG/I3out, Search Deleted IPs, VM Name, Hypervisor.

The screenshot shows the Cisco DNA Center interface for the switch 'candid-scale2-leaf06'. The 'Endpoints' tab is selected, displaying a summary of 1 healthy endpoint. Below the summary is a table with the following data:

MAC	IP Addresses	Hostnames	Anomaly Level	Connected To	Interface	Status	Tenant	VRF
00:13:5F:20:B7:40	22.151.2.1	22.151.2.1.com	Healthy	candid-scale2-leaf06	eth1/6	Active	mgmt	inb

Click a MAC address in the **MAC** column to get the following additional information on that endpoint:

1. Overview
2. Endpoint history - Determine how you want to show endpoint history. You can show the endpoint history for the last day, last week, or last month.
3. Anomalies

VPC Domains

Click **vPC Domains** to bring up the vPC Domain for this switch. You can filter the results based on Domain ID.

Click a domain in the **Domain ID** column to bring up vPC domain details on that domain. Click an interface in the Interface column to bring up additional information on that interface.

Anomalies

See [Anomalies](#) to understand how to navigate across the anomalies.

Advisories

See [Advisories](#) to understand how to navigate across the anomalies.

Microbursts

A burst of traffic impacts the output buffer of a physical interface port given the channel is already subscribed with line-rate flows. These bursts are often hard to detect with just given queuing parameters, such as buffer cells used and buffer cells unused as there is a high variance of usage of

these buffers.

The Cisco Nexus 9000 series switches provide a capability of detecting this by issuing an interrupt that is triggered when a queue occupancy rises above x bytes and falls below y bytes. This x & y bytes are configurable per queue per interface. You can configure up to 8 output queues per physical interface port.

When the UTR software collector receives a GRPC telemetry stream for the path show queuing burst-detect detail, according to the parser for the encoding path, data is formatted, and it's written to the telemetry output topic of Kafka.

You can view the microbursts details such as Queue, Start Time, Number of Bursts, Max Duration, Avg. Duration, Max Peak, and Avg Peak in the Microbursts section. A chart view and a tabular view is available.

Microburst Anomaly

Anomalies are raised in Nexus Dashboard Insights based on the number of microbursts at the interface level. Microburst anomaly jobs run every 5 minutes in a container environment, which checks for microburst records in microburst database. If the number of microbursts per interface is greater than microburst count threshold at any given point of time, then a minor anomaly is raised per interface in a node. At that point any anomaly record is written to Elasticsearch.

Nexus Dashboard Insights raises these anomalies:

1. The flows that are displayed in the summary table are gathered from Flow Telemetry data for a corresponding egress interface. Nexus Dashboard Insights matches the egress interface and egress queue to gather the corresponding microburst.
2. Based on the percentage of threshold, microburst is either low, high, or medium. The percentage of threshold is inverse to sensitivity. When the number of microbursts are greater than 100 on a particular interface, an anomaly is raised.
3. If flow telemetry is enabled and microburst is also enabled, then Nexus Dashboard Insights displays the estimated impact of flows for a particular microburst anomaly.
4. If the flow telemetry is disabled and microburst anomaly is enabled, then Nexus Dashboard Insights displays no Estimated Impact for that anomaly.
5. Flows that are contributing or impacted by microburst.

Filtering Information

In some cases, you might be able to filter results to find information more easily.

For example, you might have a situation where there a large number of endpoints under a single leaf switch, but you are only interested in endpoints that have a certain VLAN value.

You could filter the information to show only those specific endpoints in this situation.

Use the following operators for the filter refinement:

Operator	Description
==	With the initial filter type, this operator, and a subsequent value, returns an exact match.
!=	With the initial filter type, this operator, and a subsequent value, returns all that do not have the same value.
contains	With the initial filter type, this operator, and a subsequent value, returns all that contain the value.
!contains	With the initial filter type, this operator, and a subsequent value, returns all that do not contain the value.
<	With the initial filter type, this operator, and a subsequent value, returns a match less than the value.
< =	With the initial filter type, this operator, and a subsequent value, returns a match less than or equal to the value.
>	With the initial filter type, this operator, and a subsequent value, returns a match greater than the value.
> =	With the initial filter type, this operator, and a subsequent value, returns a match greater than or equal to the value.

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