

# Campus A-03 Wired Lab Guide

## Day-2 Operations, Dashboards, and Events



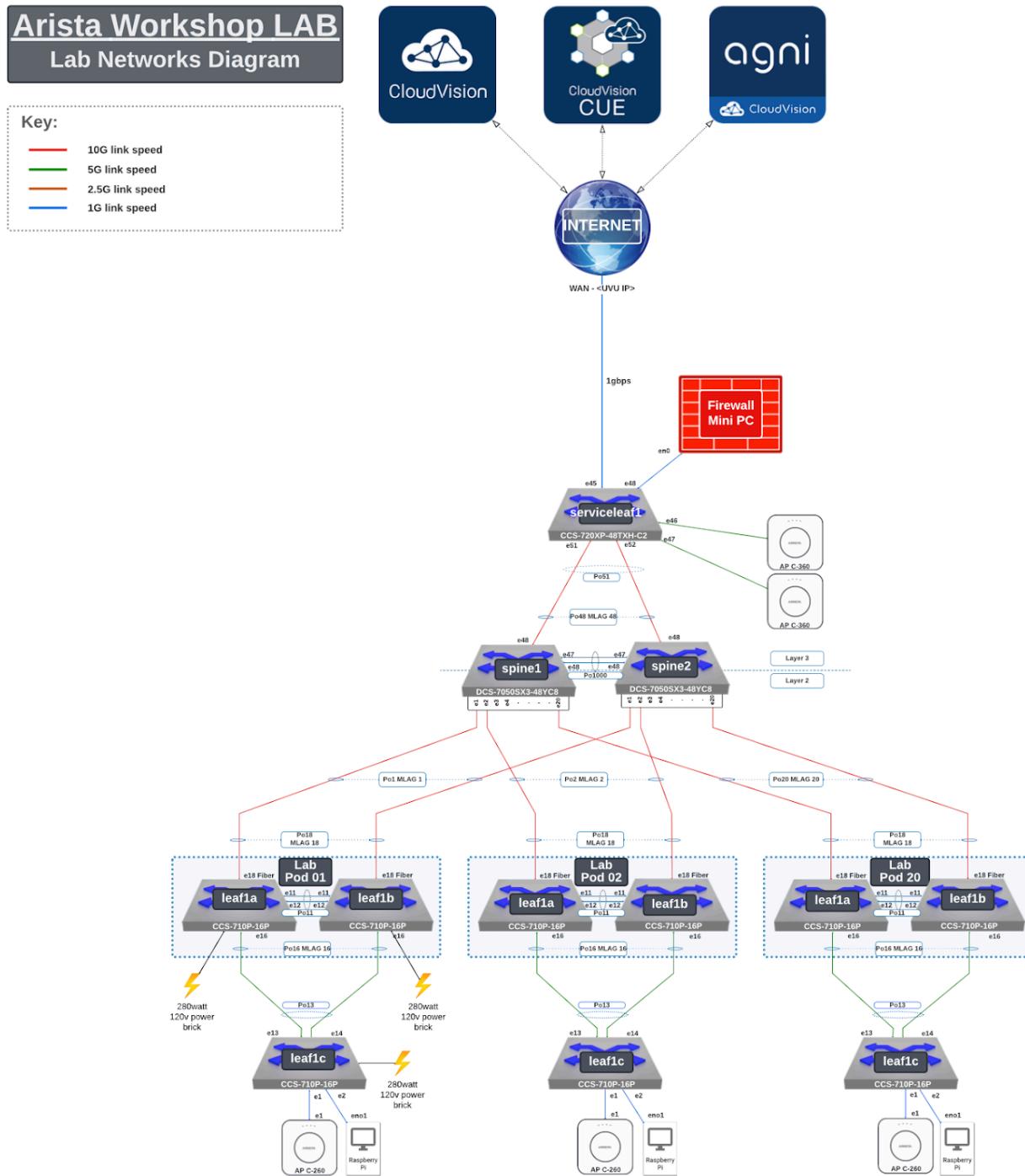
This Lab Guide:

<https://github.com/arista-rockies/Workshops/tree/main/Campus>

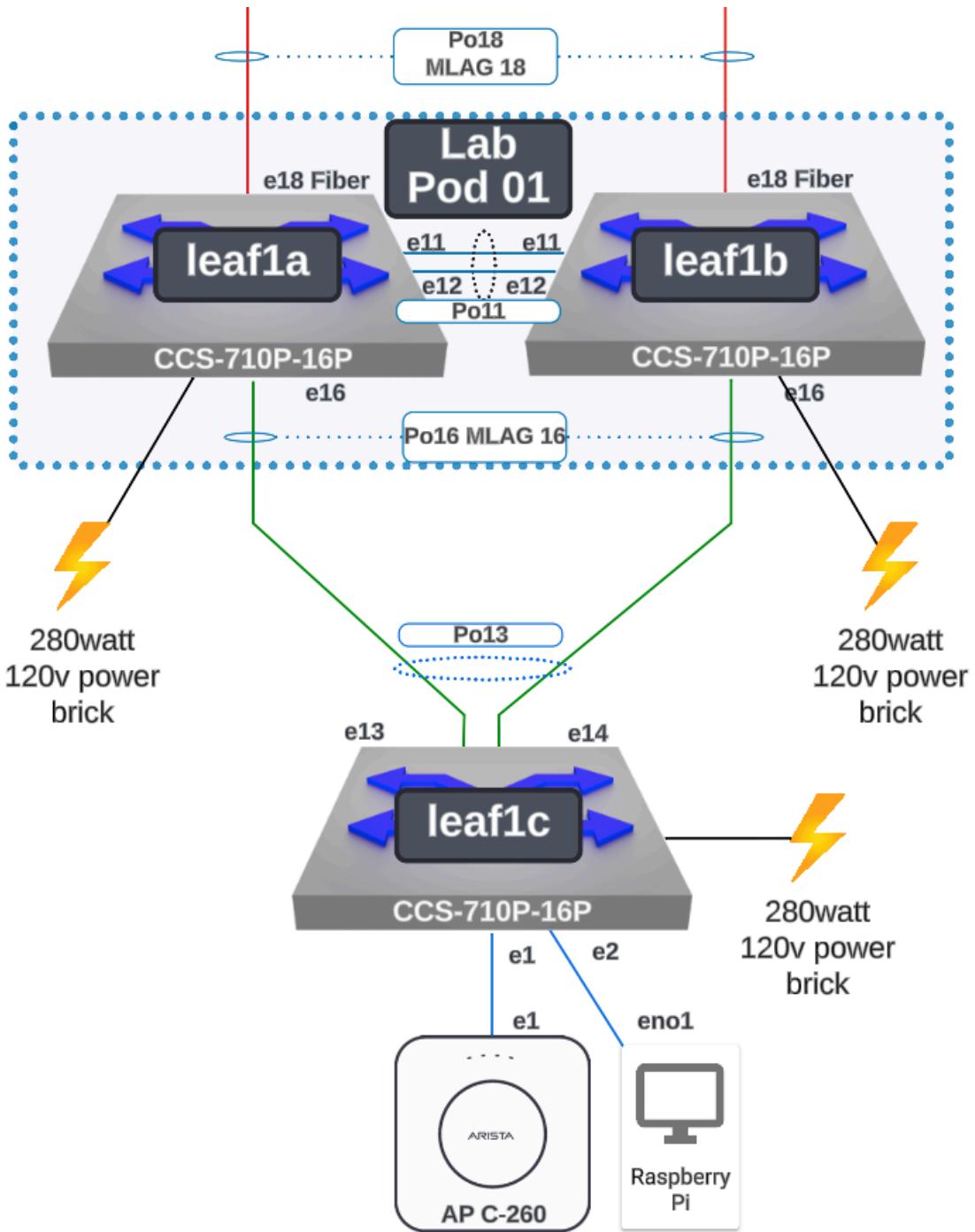
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# Full Lab Topology



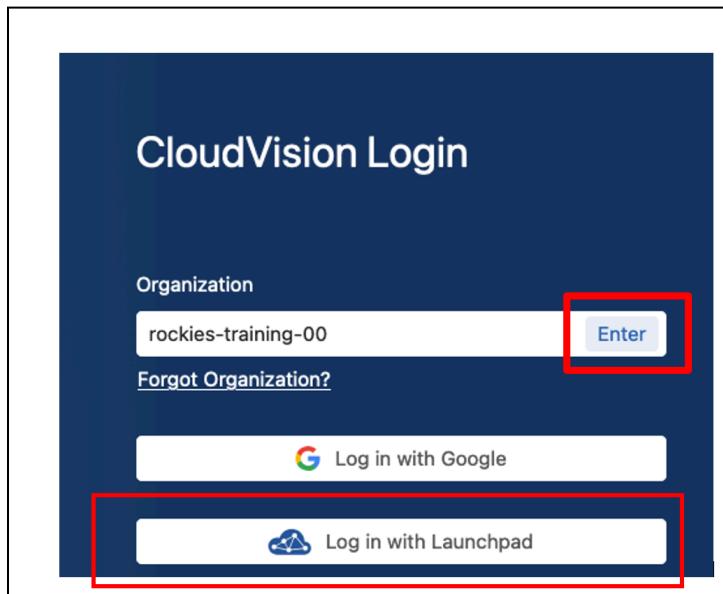
# POD Topology



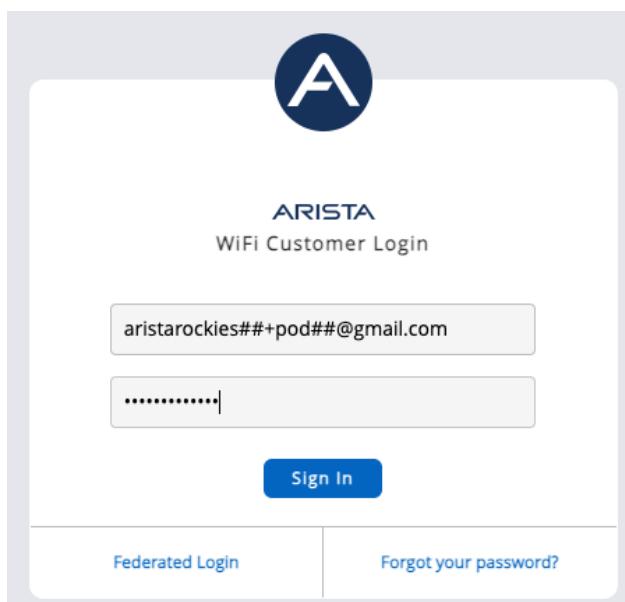
# 1. Accessing CloudVision as a Service

In your Google Chrome browser, enter the following URL: <https://www.arista.io/> to access CloudVision as a Service (CVaaS).

1. in the “Organization” box enter the Organization name “**rockies-training-##**” where **##** is a 2 digit character between 01-20 that was assigned to your lab/Pod, then click “Enter”.



2. Click the Log in with Launchpad button and provide your assigned lab/Pod email address and password:



### 3. You will now be logged into CloudVision

**Campus Health Overview**

Aug 9, 2024 10:32:28 (1 hour) | [?](#) aristaro...s1+pod13 rockies...ining-13

[View in Network Inventory](#) No data to display [View in Endpoint Overview](#) No data to display

**Connectivity Monitor Anomalies**

No Monitoring Set Up [Connectivity Monitor Studio >](#)

**Network Topology**

**Events**

0 Up 0 Down 3 Disconnected

- CVE Threat Exposure 2d ago (campus-pod13-leaf1c)
- CVE Threat Exposure 1w ago (campus-pod13-leaf1a)
- CVE Threat Exposure 1w ago (campus-pod13-leaf1b)

[View cluster in Topology](#) [View in Events](#)

**Quick Actions**

[Access Interface Configuration](#) Access Interface Configuration  
[Interface Diagnostics](#) Run Interface Diagnostics

**Top Flows by Source**

Source IP	Flow Volume
uslax1-vip-bx-004.a.applimg.com	2G
10.0.113.42	0
lax31s16-in-f1.1e100.net	0

**Top Flows by Destination**

Destination IP	Flow Volume
10.0.113.42	2G
lax17s55-in-f10.1e100.net	0
lax31s16-in-f14.1e100.net	0

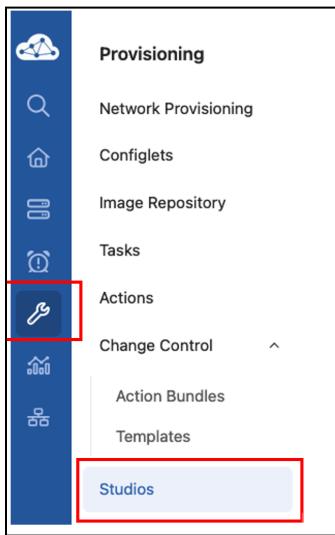
**Compliance Issues**

Category	Count
Bug Exposure	3
CVE Threats	3
Configuration	0
Image	0
End of life: Software	0
End of life: Hardware	0

## 2. Operations: Add a VLAN

Adding a VLAN is a common provisioning task. Let's use the existing Campus Fabric Studio to add an incremental configuration (add a VLAN). This VLAN will be specific to your pod and not routable outside.

1. Select **Provisioning**, then **Studios**



2. Create a new Workspace and name it similar to “<add-vlan2##>” where ## is your pod number. Examples:

Pod 1 = VLAN 201

Pod 2 = VLAN 202

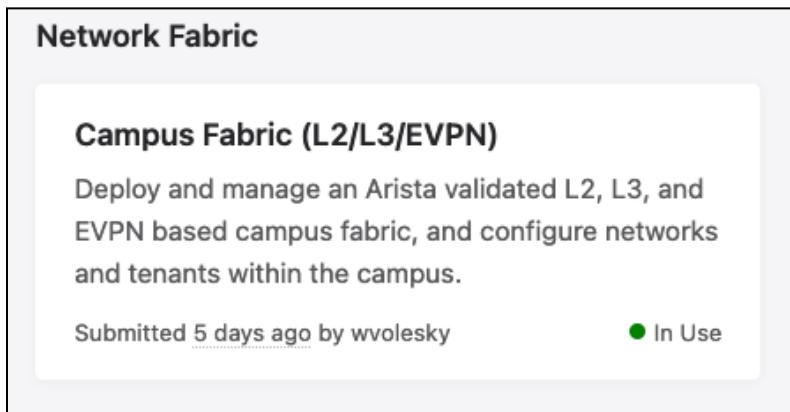
...

Pod 13 = VLAN 213

etc.

A screenshot of the 'Create Workspace' dialog box. It shows a 'Create Workspace' button (highlighted with a red box) and a descriptive text: 'A workspace is used to make changes to your network by configuring studio inputs and assigning tagged devices.' Below this are fields for 'Name' (containing 'add-vlan213', highlighted with a red box) and 'Description'. At the bottom are 'Cancel' and 'Create' buttons, with the 'Create' button highlighted with a red box.

3. Once the workspace is created, open the existing **Campus Fabric (L2/L3/EVPN)** studio:



- a. Within the Campus Fabric studio, validate that the Device Selection still applies to **All Devices**

The screenshot shows the "Campus Fabric (L2/L3/EVPN)" studio interface. At the top, there is a search bar with "add-vlan213" and a creation timestamp "Created by aristarockies1+pod13". A red box highlights the "Device Selection" section, which contains the text "This studio is assigned to:" and a button "All Devices".

The main area is divided into sections:

- Campus Fabrics**: Create or select a campus to configure. Each campus is an individual network. It shows a table with one entry: "Campus: Workshop".
- Advanced Fabric Settings**: Modify advanced settings across all campus fabrics. You must configure inband ZTP settings for campus devices that are managed inband.
- Fabric Allocations**: Inband ZTP. Includes links to "Fabric Allocations" and "Inband ZTP".
- Campus Services (Non-VXLAN)**: Select a Campus to create VLANs and VRFs for. These services should be configured instead of Tenant Services. It shows a table with one entry: "Campus: Workshop".

- b. Within the **Campus Services (Non-VXLAN)** select the **Campus-Pod:Workshop** expand arrow button on the right

Studios

## Campus Fabric (L2/L3/EVPN)

Deploy and manage an Arista validated L2, L3, and EVPN based campus fabric, and configure networks and tenants within the campus.

add-vlan213 Created by aristarockies1+pod13

Device Selection

This studio is assigned to:

All Devices [Edit](#)

**Campus Fabrics**

Create or select a campus to configure. Each campus is an individual network.

Campus:	Workshop
---------	----------

[+ Add Campus Fabric](#)

**Advanced Fabric Settings**

Modify advanced settings across all campus fabrics. You must configure inband ZTP settings for campus devices that are managed inband.

[Fabric Allocations >](#) [Inband ZTP >](#)

**Campus Services (Non-VXLAN)**

Select a Campus to create VLANs and VRFs for. These services should be configured instead of Tenant Services.

Campus:	Workshop
---------	----------

4. Add new VLAN and add to the “IT-Bldg” Campus POD.

- a. Within the **Campus: Workshop** section, click the **Campus-Pod: IT-Bldg** name or the right arrow **Expand** button

**Campus Services (Non-VXLAN)**

Select a Campus to create VLANs and VRFs for. These services should be configured instead of Tenant Services when there is no VXLAN overlay.

add-vlan213      Created by aristarockies1+pod13

Campus Fabric (L2/L3/EVPN) / Campus:Workshop

Configuration associated with Assigned Devices

Campus: Workshop    campus-pod13-leaf1a × campus-pod13-leaf1b × campus-pod13-leaf1c ×

**Campus Pods**

Select a Campus Pod to create VLANs for.

Campus-Pod: **IT-Bldg**      OR      >

**VRFs**

Define L3 network services organized by VRF.

+ Add VRF

- b. click the **Add VLAN** button

Campus Fabric (L2/L3/EVPN) / Campus:Workshop / Campus-Pod:IT-Bldg

Configuration associated with Assigned Devices

Campus-Pod: **IT-Bldg**    campus-pod13-leaf1a × campus-pod13-leaf1b × campus-pod13-leaf1c ×

**Campus Type**

Select the Campus Pod's network architecture to display the appropriate input fields. The type must match the selected type in Campus Fabric.

**L2**

**VLANs**

Configure and assign VLANs for devices in this campus pod. This will generate the appropriate L2 VLAN configuration on all L2 devices and also add the SVI configuration to all L2/L3 devices where the VLAN is assigned.

110      >      + Add VLAN

- c. Once an entry is added for VLAN <2##>, click the right arrow **Expand** button

The screenshot shows a list of VLANs with their IDs (113 and 213) and a blue 'Add VLAN' button. To the right of the list is a toolbar with icons for up, down, search, and delete, with the right arrow 'Expand' icon highlighted by a red box.

VLAN ID
113
213

[+ Add VLAN](#)

- d. Customize the new VLAN by giving it a name

Campus Fabric (L2/L3/EVPN) / Campus:Workshop / Campus-Pod:IT-Bldg / 213

Configuration for  
213

The screenshot shows the configuration details for VLAN 213. It includes fields for VRF selection (Select), Enabled status (Enabled), Name (213), and Pod selection (Pods). The 'Name' field is highlighted with a red box.

value is selected, the VLAN will be a member of the default VRF.

**Enabled**  
Enable/Disable the SVI. If no value is entered, the SVI will be enabled.

**Name**  
Enter a one-word name for the VLAN.  
213

**Pods**  
Select the Access Pods this VLAN to be configured on

- e. Add the VLAN to the Access-Pod by clicking **Add Pod** and selecting **IDF1**

Campus Fabric (L2/L3/EVPN) / Campus:Workshop ▾ / Campus-Pod:IT-Bldg ▾ / 213 ▾

Configuration for

213 ⚡

value is selected, the VLAN will be a member of the default VRF.

**Enabled**

- Enabled ⓘ

Enable/Disable the SVI. If no value is entered, the SVI will be enabled.

**Name**

Enter a one-word name for the VLAN.

**Pods**

Select the Access Pods this VLAN to be configured on

Access-Pod: Select

+ Add Pod

Values Under: Campus-Pod:IT-Bldg

IDF1

You can skip entries for all of the remaining section.

#### 4. Review and Submit Workspace

- a. Click “**Review Workspace**” to submit the staged changes.

### VLANs

Configure and assign VLANs for devices in this campus pod. This will generate the appropriate L2 VLAN configuration on all L2 devices and also add the SVI configuration to all L2/L3 devices where the VLAN is assigned.

add-vlan213

Created by aristarockies1+pod13

Build Succeeded

Saved 39 minutes ago

**Review Workspace**

- b. Notice that the Studio is adding the VLAN to all three devices within the Pod.

Proposed Configuration Changes		
<input type="text"/> Search devices <span style="float: right;">Advanced Reconcile</span>		
<b>Update Config - common changes on 2 devices</b> <span style="float: right; color: green;">+2 ~2 -0</span>		
<b>campus-pod13-leaf1a campus-pod13-leaf1b</b>		
<b>Proposed Configuration</b>		<b>Running Configuration</b>
<pre>     &gt; Expand 170 lines 171  vlan 213 172    name vlan213     &gt; Expand 18 lines 191  interface Port-Channel16 192    description CAMPUS-POD13-LEAF1C_Po13 193    switchport trunk allowed vlan 113,<b>213</b>     &gt; Expand 5 lines 199  interface Port-Channel18 200    description SPINE1_Po17 201    switchport trunk allowed vlan 113,<b>213</b>     &gt; Expand 80 lines </pre>	<span style="float: right;"> <input type="text"/> </span>	
<b>Update Config - campus-pod13-leaf1c</b> <span style="float: right; color: green;">+2 ~1 -0</span>		
<b>Proposed Configuration</b>		<b>Running Configuration</b>
<pre>     &gt; Expand 169 lines 170  vlan 213 171    name vlan213     &gt; Expand 9 lines 181  interface Port-Channel13 182    description CAMPUS-POD13-LEAF1A_Po16 183    switchport trunk allowed vlan 113,<b>213</b>     &gt; Expand 73 lines </pre>	<span style="float: right;"> <input type="text"/> </span>	

c. Once you review the changes, click **Submit Workspace**

The screenshot shows the 'Workspaces' page with a workspace named 'add-vlan213'. The 'Build Status' section is highlighted with a red box. It shows a green checkmark icon indicating success for three stages: 'Input Validation', 'Configlet Compilation', and 'Config Validation'. The status message says 'Last built 49 seconds ago'.

d. Click **View Change Control**

A modal dialog box is displayed, confirming the workspace submission. It contains the message 'Workspace Submitted' and 'Change Control has been created'. A red box highlights the 'View Change Control' button at the bottom right of the dialog.

e. Review the Change Control and select “Review and Approve”

Change Control

add-vlan213 (created by workspace)

Name: add-vlan213 (created by workspace) Description: Changes from workspace "add-vlan213" Schedule Start: Select date Recent Activity

Review and Approve

aristaro...s1+pod13 rockies...ining-13

Change Control Stages (3 actions)

- campus-pod13-leaf1a (WTW2323... (1 action))
  - campus-pod13-leaf1a
    - Set Config to Designed Config at Aug 9, 2024 07:46:36
- campus-pod13-leaf1b (WTW2323... (1 action))
  - campus-pod13-leaf1b
    - Set Config to Designed Config at Aug 9, 2024 07:46:36
- campus-pod13-leaf1c (WTW2323... (1 action))
  - campus-pod13-leaf1c
    - Set Config to Designed Config at Aug 9, 2024 07:46:36

Change Control Summary

Root Execute: Parallel

Last Edit Approval In Progress Completed

Action Summary: 3 Config

Device Status (3): campus-pod13-leaf1a, campus-pod13-leaf1b, campus-pod13-leaf1c (All Active)

Configuration Changes (3): campus-pod13-leaf1a, campus-pod13-leaf1b, campus-pod13-leaf1c (All Active)

- f. Toggle the **Execute Immediately** button and select **Approve and Execute**

**Review Change - add-vlan213 (created by workspace)**

**Update Config - common changes on 2 devices**      +2 ~2 -0

**campus-pod13-leaf1a**    **campus-pod13-leaf1b**

**Designed Configuration**      **Running Configuration**

> Expand 170 lines	
171    vlan 213	
172    name vlan213	
> Expand 18 lines	
191    interface Port-Channel16	188    interface Port-Channel16
192    description CAMPUS-POD13-LEAF1C_Po13	189    description CAMPUS-POD13-LEAF1C_Po13
193    switchport trunk allowed vlan 113,213	190    switchport trunk allowed vlan 113
> Expand 5 lines	
199    interface Port-Channel18	196    interface Port-Channel18
200    description SPINE1_Po17	197    description SPINE1_Po17
201    switchport trunk allowed vlan 113,213	198    switchport trunk allowed vlan 113
> Expand 80 lines	

**Update Config - campus-pod13-leaf1c**      +2 ~1 -0

**Designed Configuration**      **Running Configuration**

> Expand 169 lines	
170    vlan 213	
171    name vlan213	
> Expand 9 lines	

Notes: Enter approval note

Execute immediately       Cancel      **Approve and Execute**

5. Verify the VLAN has been added to the device configuration by using the **Devices Comparison** function.

- a. Click **Devices** then **Comparison** menu, and select a **Time Comparison**

**Devices**

- Inventory
- Device Registration
- Compliance Overview
- Endpoint Overview
- Connectivity Monitor
- Traffic Flows
- Endpoint Search
- Comparison**

**Comparison**

Compare configuration and routing tables

**Time Comparison**

Compare the state of a single device at two chosen times

**Device Comparison**

Compare the state of two devices at two chosen times

Compare

- b. Select **Time Comparison** and under **Select device...** choose a device from the list, such as **leaf1c**

**Time Comparison**  
Compare the state of a single device at two chosen times

**Device Comparison**  
Compare the state of two devices at two chosen times

Select device... ▾

campus-pod02-leaf1a

Quick links: 30 mi campus-pod02-leaf1b

campus-pod02-leaf1c

- c. Select a time period, for example **30 minutes ago** and click the **Compare** button

**Time Comparison**  
Compare the state of a single device at two chosen times

**Device Comparison**  
Compare the state of two devices at two chosen times

campus-pod02-leaf1c ▾

Compare Jul 30, 2024 20:40:31 against Current Time

Quick links: 30 minutes ago | 1 hour ago | 2 hours ago | 12 hours ago | 1 day ago

Compare

d. The first screen presented shows the overview is unchanged:

The screenshot shows a comparison interface for the device 'campus-pod02-leaf1c'. The left sidebar lists various table types: Overview, Configuration, Snapshots, ARP Table, NDP Table, MAC Address Table, VXLAN Table, IPv4 Routing Table, IPv6 Routing Table, IPv4 Multicast Table, and IGMP Table. The main area displays a table comparing metrics between two time points. The columns are 'Metric' (common), 'campus-pod02-leaf1c at Jul 30, 2024 20:40:31', and 'campus-pod02-leaf1c at Current Time'. The table includes rows for BGP Configured, Software Version, MLAG Status, MAC Addresses Learned, IPv4 Attached Routes, IPv4 Learned Routes, IPv6 Attached Routes, and IPv6 Learned Routes. At the bottom right, it says 'Showing 8 of 8 rows'.

e. Select the Configuration section

The screenshot shows the same comparison interface, but the 'Configuration' tab in the sidebar is highlighted with a red box. The main area displays a detailed configuration comparison between 'campus-pod02-leaf1c at Jul 30, 2024 20:40:31' and 'campus-pod02-leaf1c at Current Time'. It shows the 'Running Config' for both time points. A specific line of configuration is highlighted with a red box: 'vlan 202 name vlan202'. This line was added to the 'Running Config' at line 78, as indicated by the line numbers on the right.

**\*Note:** Notice that the configuration has been updated. Feel free to explore other comparisons by feature. Since this VLAN was localized only, no new IP routes or MAC addresses should be learned.

Lab section completed! In the next lab section you will see how to roll back a previous change control

### 3. Rollback a Change Control

A common operational task is to roll back a specific configuration and restore back to previous state. You may need to do this for all devices affected by a change, or only a subset of devices under troubleshooting.

CloudVision change controls allow this flexibility for granular change management per device and fleet-wide

1. Let's roll back the change control we used to add a VLAN via Studios.
  - a. First go to **Provisioning** then **Change Control** menu. Select the change control corresponding to your VLAN addition

The screenshot shows the CloudVision interface. On the left, there is a vertical sidebar with icons for Provisioning, Network Provisioning, Configlets, Image Repository, Tasks, Actions, Change Control, and Action Bundles. The 'Actions' icon is highlighted with a red box. The 'Change Control' item is also highlighted with a red box. The main panel is titled 'Change Control' and contains a search bar, a date range from 2024-07-23 to 2024-07-30, and a list of change controls. One change control, 'add-vlan202 (created by workspace)', is selected and highlighted with a red box. Below it, there are statistics: 3 files, 3 devices, and the target location 'campus-pod02-leaf1a, campus'.

- b. Click the **Rollback** button

This screenshot shows the details of the selected change control, 'add-vlan202'. At the bottom right of the screen, the 'Rollback' button is highlighted with a red box.

- c. In the next screen, select the top list check mark to **select all the devices** and click **Create Rollback Change Control**

**Rollback "add-vlan202 (created by workspace)"**

Only completed image upgrade, config update tasks, and sync actions can be rolled back. Incomplete tasks have been returned to the pool.

**Tasks**

Task ID ↓	Type	Status	Device	Executed
Filter	Filter	Filter	Filter	Filter

No data to display

**Sync Actions**

<input checked="" type="checkbox"/> Name ↑	Status	Device	Executed
Filter	Filter	Filter	Filter
<input checked="" type="checkbox"/> Set Config	Completed	campus-pod02-leaf1a	14 minutes ago
<input checked="" type="checkbox"/> Set Config	Completed	campus-pod02-leaf1b	14 minutes ago
<input checked="" type="checkbox"/> Set Config	Completed	campus-pod02-leaf1c	14 minutes ago

Export to CSV Showing 3 of 3 rows

Cancel **Create Rollback Change Control**

- d. Verify the **Configuration Changes** section by clicking “**View Diff**” Once you have reviewed the change, click the **Review and Approve** button

**Change Control**

**Rollback "add-vlan202 (created by workspace)"**

**Review and Approve** **aristar...es2+pod2 Z\_ROCKIES-ATD-02**

Name: Rollback "add-vlan202 (created by workspace)" Description: Schedule Start: Select date Recent Activity

**Change Control Stages (3 actions)**

- Sync campus-pod02-leaf1a (1 action)
  - campus-pod02-leaf1a
    - Set Config to Running Config at Jul 30, 2024 21:04:04 +0 ~2 ~2
- Sync campus-pod02-leaf1b (1 action)
  - campus-pod02-leaf1b
    - Set Config to Running Config at Jul 30, 2024 21:04:04 +0 ~2 ~2
- Sync campus-pod02-leaf1c (1 action)
  - campus-pod02-leaf1c
    - Set Config to Running Config at Jul 30, 2024 21:04:04 +0 ~1 ~2

**Change Control Summary**

Root Execute **Parallel** **Series** **Diff Summary**

Last Edit Approval In Progress Completed

**Action Summary**

3 Config

**Device Status (3)** **Configuration Changes (3)**

campus-pod02-leaf1a	+0 ~2 ~2 <a href="#">View Diff</a>
campus-pod02-leaf1b	+0 ~2 ~2 <a href="#">View Diff</a>
campus-pod02-leaf1c	+0 ~1 ~2 <a href="#">View Diff</a>

- e. You'll be presented with one more opportunity to review the changes. Select **Execute Immediately** if not already toggled on and **Approve and Execute**

Review Change - Rollback "add-vlan202 (created by workspace)"

Update Config - common changes on 2 devices

**campus-pod02-leaf1a** campus-pod02-leaf1b

Designed Configuration      Running Configuration

Update Config - campus-pod02-leaf1c

Notes: Enter approval note

Execute immediately (toggle)      Cancel      Approve and Execute

- f. Monitor the change control for completion to ensure the added VLAN is cleaned up on all three switches.

Change Control

Rollback "add-vlan202 (created by...)

Name: Rollback "add-vlan202 (created by workspace)"      Description: --

Search actions

Change Control Stages (3 actions) ✓

- Sync campus-pod02-leaf1a (1 action) ✓
  - campus-pod02-leaf1a
    - Set Config to Running Config at Jul 30, 2024 21:04:04
- Sync campus-pod02-leaf1b (1 action) ✓
  - campus-pod02-leaf1b
    - Set Config to Running Config at Jul 30, 2024 21:04:04
- Sync campus-pod02-leaf1c (1 action) ✓
  - campus-pod02-leaf1c
    - Set Config to Running Config at Jul 30, 2024 21:04:04

Change Control Summary

Root Execute: Parallel

Last Edit: Approved

Action Summary: 100% Config

You have now successfully added a VLAN through Studios and then rolled back that change across all switches.

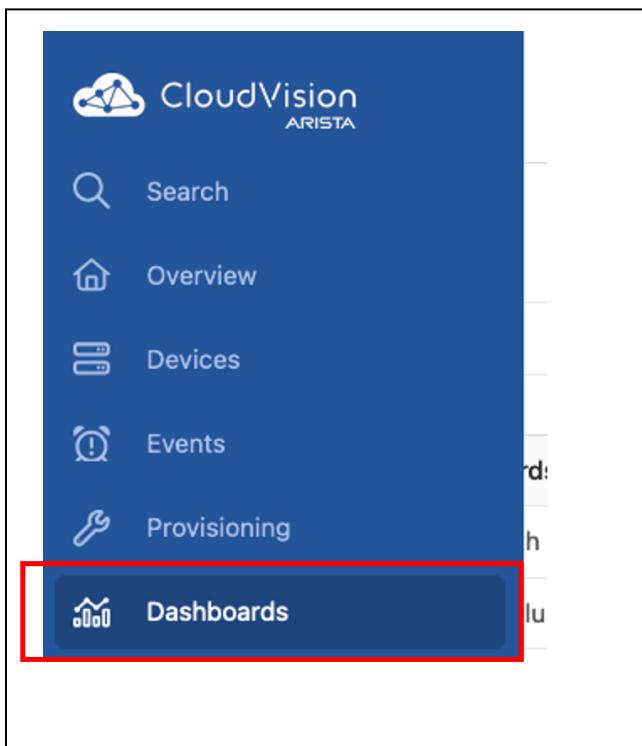
Lab section complete!

## 4. Dashboards (Built-in and Custom)

Dashboards are an important way to visualize commonly requested information. This lab section shows you how to navigate the built-in dashboards and customize your own.

### 1. Built in Dashboard: “Campus Health Overview”

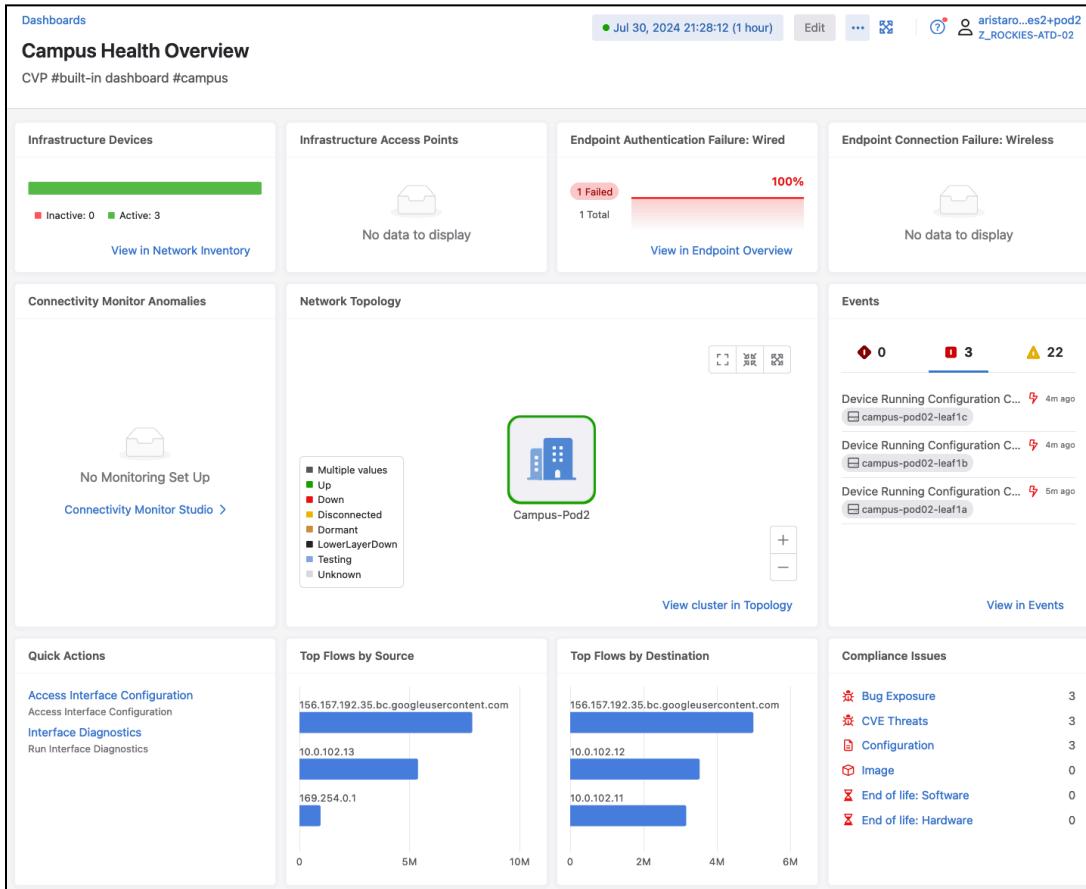
- Open the Dashboards Section to arrive at the Dashboards landing page.



- Select the built-in Campus Health Overview dashboard

Dashboards					
<a href="#">+ New Dashboard</a> <a href="#">Import</a> <a href="#">Export</a> <a href="#">User</a> aristaro...es2+pod2 Z_ROCKIES-ATD-02					
	<input type="checkbox"/> Dashboard Name	Labels	Last Opened	Last Updated On	Last Updated By
Built-In Dashboards					
<input type="checkbox"/>	Campus Health Overview <a href="#">X</a> <a href="#">i</a>	<a href="#">built-in</a> <a href="#">campus</a>	—	Jul 5, 2023 11:18:49	CVP Team
<input type="checkbox"/>	CloudVision Cluster Scale <a href="#">X</a> <a href="#">i</a>	<a href="#">built-in</a>	—	Jan 11, 2021 10:37:23	CVP Team
<input type="checkbox"/>	Device Health <a href="#">X</a> <a href="#">i</a>	<a href="#">built-in</a> <a href="#">power</a> <a href="#">fans</a> <a href="#">redundancy</a> <a href="#">storage</a>	—	Apr 1, 2022 14:38:22	CVP Team
<input type="checkbox"/>	Device Power Consumption <a href="#">X</a> <a href="#">i</a>	<a href="#">built-in</a> <a href="#">psu</a> <a href="#">watts</a> <a href="#">stats</a>	—	Jan 13, 2022 17:40:16	CVP Team

- c. You'll be presented with a curated selection of common campus related monitoring tools



**\*Note:** We will explore the Quick Actions interactive functions of this dashboard in another lab section.

- d. Feel free to explore the Campus Health dashboard briefly and then navigate back to the Dashboards landing page by selecting **Dashboards** in the upper left.

The screenshot shows the 'Dashboards' landing page with the 'Dashboards' tab highlighted in red. The main content area displays the 'Campus Health Overview' dashboard.

2. Built in Dashboard: “Device Health”

- a. Next, Select the **Device Health** dashboard

The screenshot shows the 'Dashboards' page with a search bar at the top. Below it is a section titled 'Built-In Dashboards' containing five items:

- Campus Health Overview
- CloudVision Cluster Scale
- Device Health** (highlighted with a red box)
- Device Power Consumption

- b. By default, this dashboard selects all devices. Change the dashboard to select only leaf1-c by changing from “device: \*” to device: match single device

The screenshot shows the 'Device Health' dashboard configuration. At the top, there is a search bar with the placeholder 'Enter device tags query'. Below it is a dropdown menu labeled 'device:' with two options: 'device: \*' (selected) and 'device:'. A tooltip indicates 'Match all devices' for the asterisk option and 'Match single device' for the 'device:' option.

On the left side, there are two panels: 'Storage Capacity' and 'Device - Path'. The 'Device - Path' panel lists two entries: 'campus-pod02-leaf1c (/mnt/flash)' and 'campus-pod02-leaf1a (/mnt/flash)'. The 'Storage Capacity' panel lists one entry: 'Access-Pod'.

At the bottom right, there is a table showing storage capacity details:

Device - Path	Storage Capacity	Last Update
campus-pod02-leaf1c	WTW22210368	All values
campus-pod02-leaf1b	WTW22210376	
<b>campus-pod02-leaf1c</b>	<b>WTW22190373</b>	

- c. Once you've selected an individual device, the dashboard will filter to results for only this device.

This screenshot shows the 'Device Health' dashboard for the device 'campus-pod02-leaf1c'. The top navigation bar includes a timestamp ('Jul 30, 2024 21:33:36 (1 hour)'), edit and export buttons, and a user profile ('aristaro...es2+pod2 Z\_ROCKIES-ATD-02'). Below the header, the dashboard title 'Device Health' and its description 'CVP #built-in dashboard #power #fans #redundancy #storage' are displayed. A search bar at the top right shows the query 'device: campus-pod02-leaf1c' with a result count of 'Found 1 device'. The main content area displays storage capacity data for various paths on the selected device.

- d. Navigate back to the Dashboards landing page by clicking Dashboards in upper left.

This screenshot shows the 'Dashboards' landing page. On the left is a sidebar with icons for cloud, search, home, edit, and others. The main area displays the 'Device Health' dashboard for the device 'campus-pod02-leaf1c'. The 'Dashboards' link in the sidebar is highlighted with a red box. The dashboard itself shows storage capacity data for various paths on the selected device.

3. Next, let's add a new customized dashboard.

- a. Click the **New Dashboard** button.

This screenshot shows the 'Dashboards' landing page. The top navigation bar includes a timestamp ('Jul 30, 2024 21:33:36 (1 hour)'), import and export buttons, and a user profile ('aristaro...es2+pod2 Z\_ROCKIES-ATD-02'). Below the header, the dashboard title 'Dashboards' and its description 'CVP #built-in dashboard' are displayed. A search bar at the top right is present. The main content area lists 'Built-In Dashboards' with four entries: 'Campus Health Overview', 'CloudVision Cluster Scale', 'Device Health', and 'Device Power Consumption'. A red box highlights the '+ New Dashboard' button in the top right corner of the dashboard list area.

- b. Provide a useful name for the Dashboard, such as “Pod-## Security and Performance”

Dashboards

Pod-02 Security and Performance

Enter description [🔗](#)

- c. Next, let's add a combination of visualizations which have both security and performance related metrics. First, click the drop down on the upper right and change from Metrics to **Summaries**

Done [...](#) Save [🔗](#) [🕒](#) [👤](#) aristar...es2+pod2 [🕒](#) Last save was moments ago

Metrics

Inputs

Layouts

**Summaries**

- i. Within the Summaries list, Click on, or drag the **Compliance** widget into the dashboard canvas

Summaries [▼](#)

Change Control

Endpoints

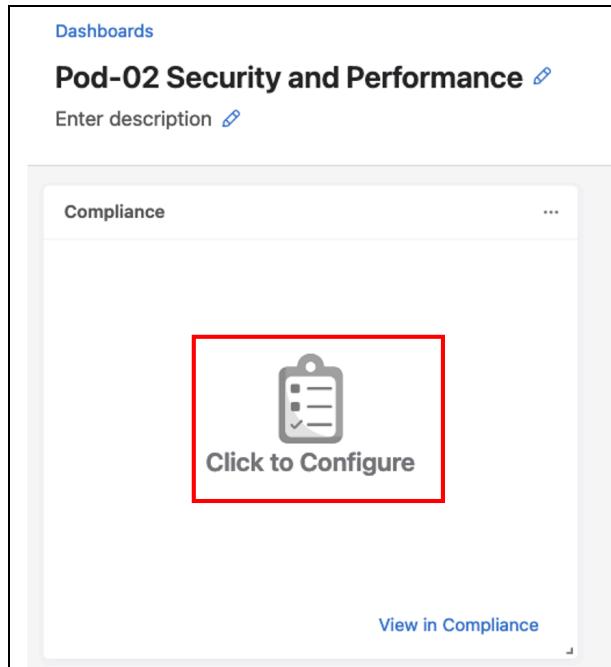
Connectivity

Events

Compliance

Display a donut graph for a compliance metric

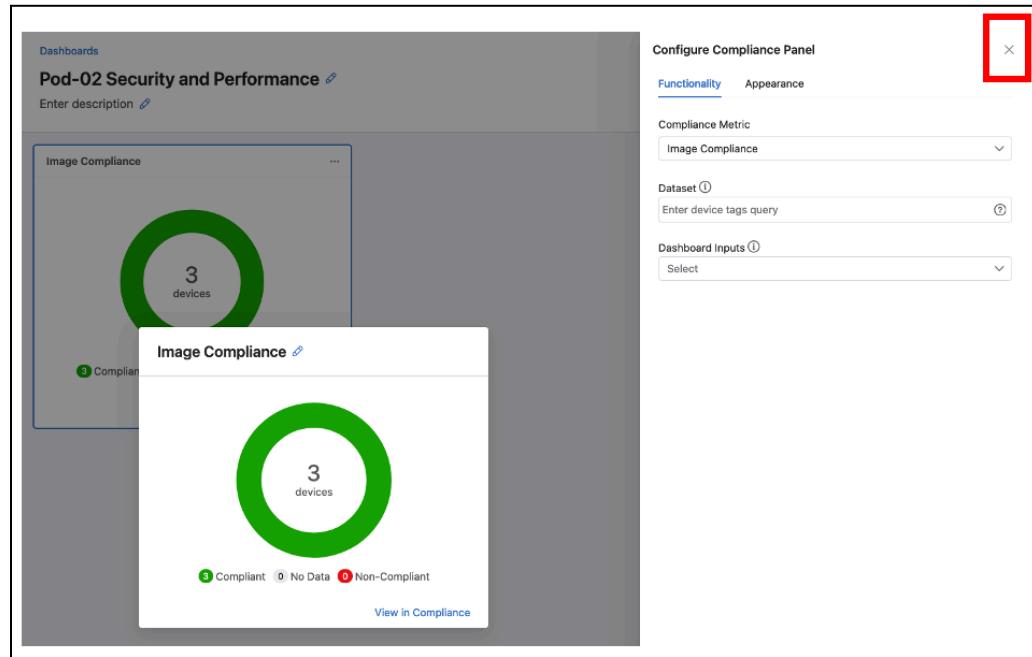
- ii. Within the Compliance tile now added to your dashboard, select the **Click to Configure** button



- iii. Within the right side menu bar, within Compliance Metric select **Image Compliance**

The screenshot shows the same dashboard as above, but the "Image Compliance" card is now selected, indicated by a blue border. To the right, a "Configure Compliance Panel" sidebar is open, showing tabs for "Functionality" and "Appearance". The "Functionality" tab is active, displaying a dropdown menu for "Compliance Metric" which has "Image Compliance" selected. A red box highlights this selection. Other sections in the sidebar include "Dataset" (with a query input field) and "Dashboard Inputs" (with a "Select" dropdown).

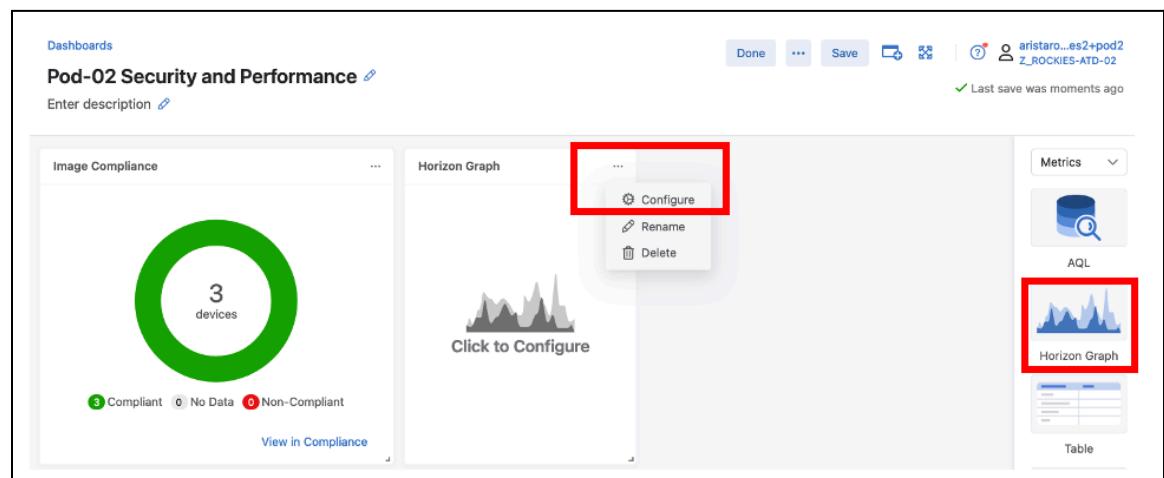
- iv. Dismiss the customization menu by clicking the X in upper right corner



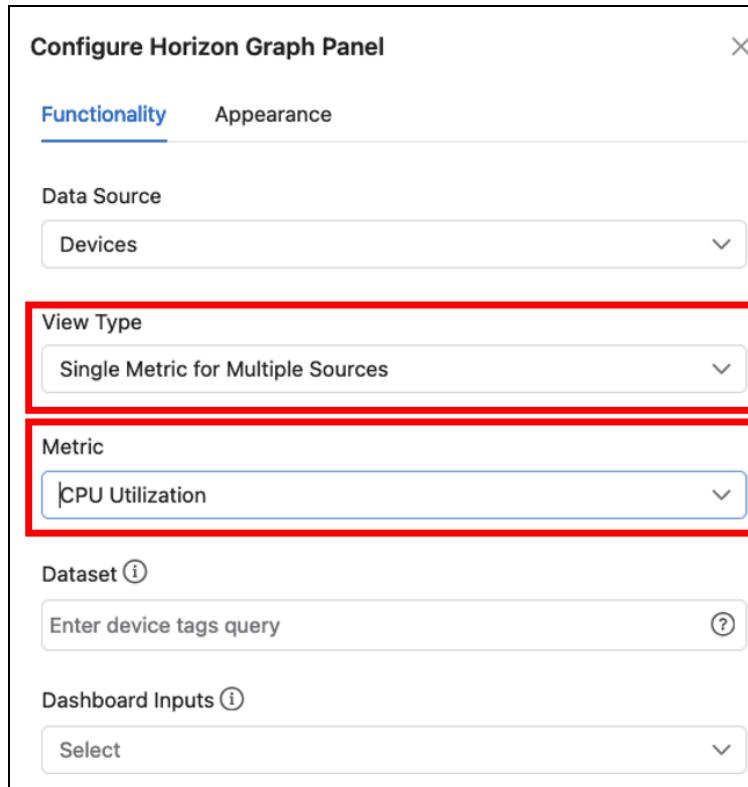
- v. Next, change the Summaries menu back to **Metrics**



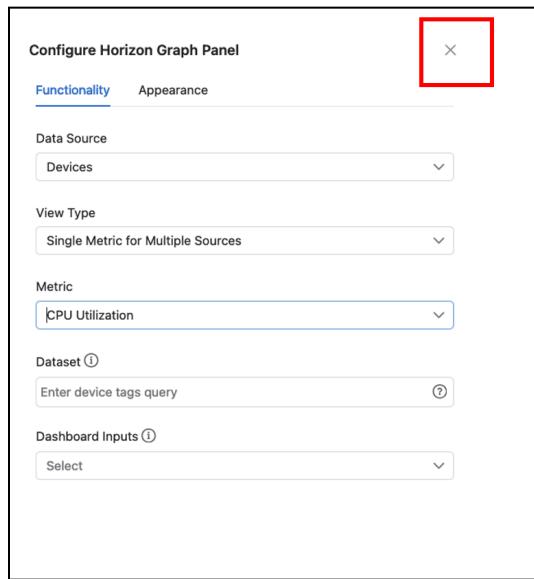
- vi. Within the Metrics menu, click **Horizon Graph** on the right side to add this tile to the canvas, then click the **three-dots ...** menu and click **Configure** to customize the Horizon Graph.



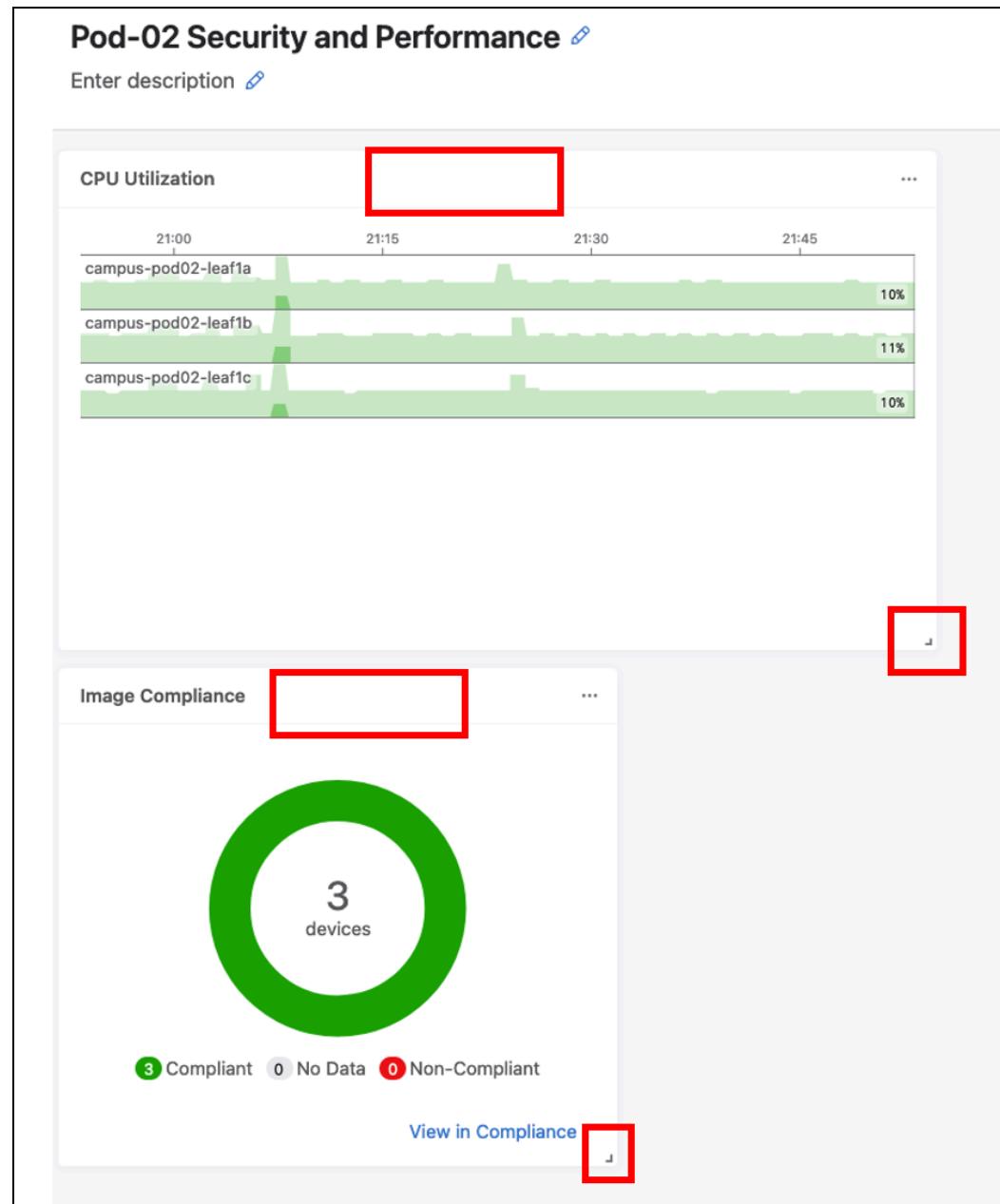
- vii. Within View Type, select **Single Metric for Multiple Sources**. Select Metric **CPU Utilization**.



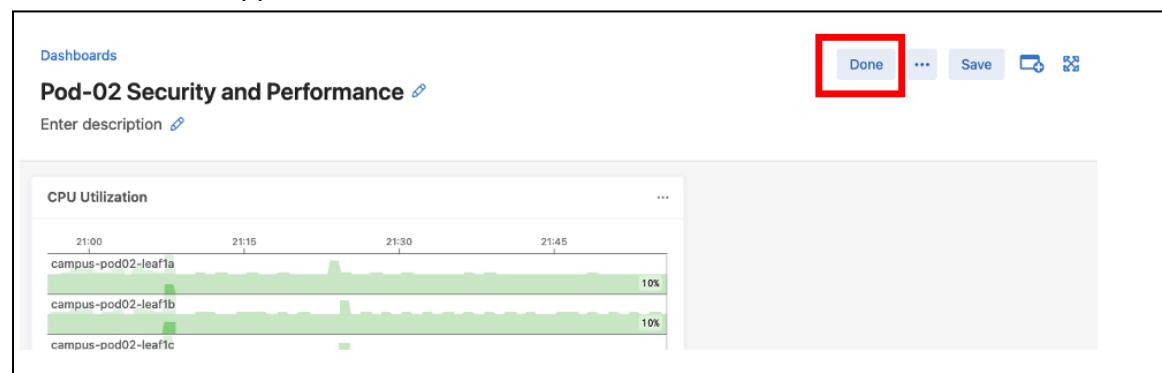
viii. Dismiss the customization menu with the X button in upper right



**\*Note:** You can drag the tiles around by the respective menu bars and resize each tile using the lower right corner handles.



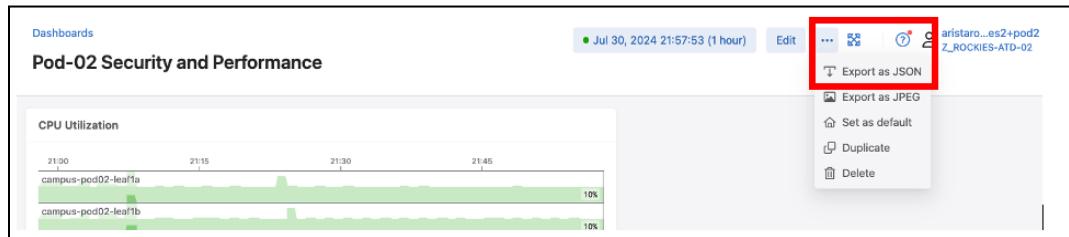
- ix. Save and completed the dashboard customization by clicking the Done button in upper menu bar



#### 4. Exporting and Importing Dashboards Sharing your Dashboard across Cloudvision systems!

##### a. Export a dashboard

- i. To share your dashboard - in the upper right corner, select the **three-dots ...** menu and click **Export as JSON**

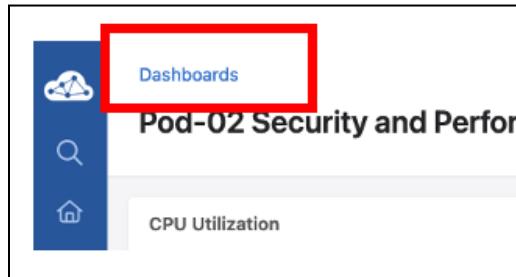


- ii. Click **Download** in the lower right corner. This will download a file you can share with others if they wish to use your customized dashboard.



b. Import a dashboard

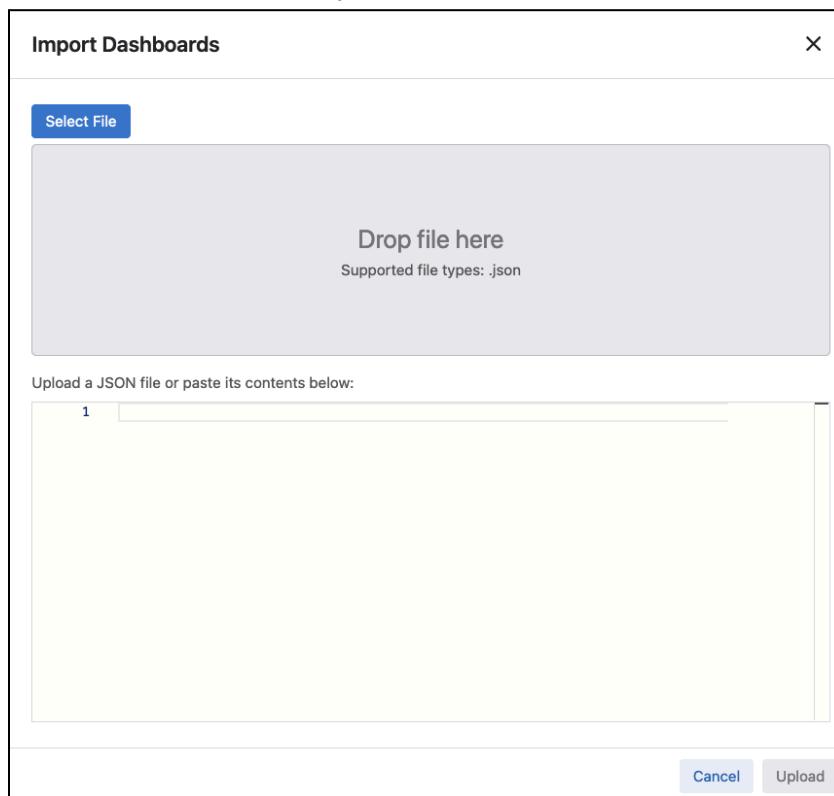
- i. Navigate back to the **Dashboards** landing page to view the import button



- ii. Click on **Import**



- iii. The import function is shown as reference only, it is not required to upload any file here. Alternatively you can use this function to share a dashboard customized with your lab partner. If you wish to import, click **Select File** and select the file you download in the previous step.



Lab section completed!

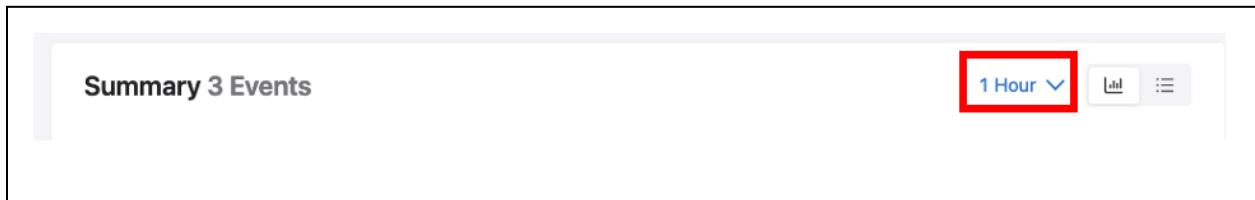
## 5. Events

In this section, we will explore the Events stream and the tools and filters to help process and manage critical errors versus informational data.

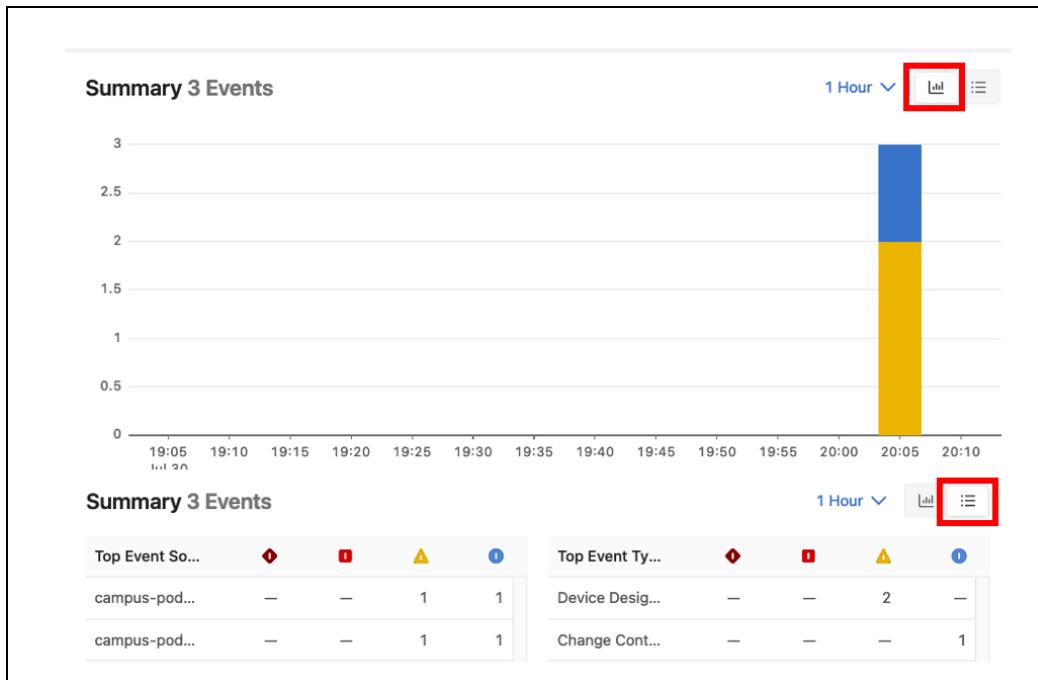
1. First Open the Events section from the menu bar:



2. Next, select a different timeframe for the summary visualization, click the current time selection and change this to **1-hour**



- a. You can also toggle between a bar graph and event count display



- Focusing on the Event List next, Note the Export button to download the current Event list as CSV. Notice you can download **All Events** or only **Selected**:

The screenshot shows the 'Event List' page. At the top right is a red-bordered 'Export' button with a dropdown arrow. On the left, there is a sidebar with a 'Export' button and a dropdown menu showing 'All Events' and 'Selected'. The main area displays a list of events. One event is expanded, showing multiple occurrences of 'Device Designed Config' from 'campus-pod02-leaf1b'.

- Next, select the Gear icon to toggle Event List **Roll Up**. This setting combines repeated events into groups. Toggle this On and Off, watch the effect this has on the list of Events.

The screenshot shows the 'Event List' page with the 'Event List Settings' dialog open. A red box highlights the 'Roll Up' toggle switch, which is turned on. The description below it reads: 'Combine identical events into a single, expandable event'. The main event list shows two entries: 'Device Designed Config' from 'campus-pod02-leaf1b' occurring 13 times each.

5. Next, utilizing the **Event Filters** on the right pane is important to reduce the amount of data displayed.

The screenshot shows the 'Events' interface. On the left, there is a 'Summary 3 Events' chart and an 'Event List' table. On the right, there is a 'Event Filters' panel with various filtering options. A red box highlights the 'Event Filters' section.

**Event Filters**

- Starting Before
- Current Time
- Severity:
  - Critical
  - Error
  - Warning** (highlighted by a red box)
  - Info
- Description: Events with any text
- Type: Events of any type
- Source: Enter tags query
- Acknowledgement State: Unacknowledged
- Status: All

- a. **Toggle Off** the **Warning** and **Info** event Severity. Leave Critical and Error events selected.

The screenshot shows a zoomed-in view of the 'Event Filters' section. It includes fields for 'Starting Before', 'Current Time', and 'Severity'. The 'Severity' field contains four buttons: 'Critical', 'Error', 'Warning' (highlighted by a red box), and 'Info'.

- b. In the **Type** field, enter the string “**Unexpected Link Shutdown**” and any other interesting event types you are looking for, such as “Device clock out of Sync”

**Event Filters** [Reset Filters](#)

Starting Before  
[Current Time](#)

Severity  
 **Critical**  
  **Error**  
  **Warning**  
  **Info**

Description

Type  
 **Unexpected Link Shutdown** ×  
  **Device Clock Out of Sync** ×

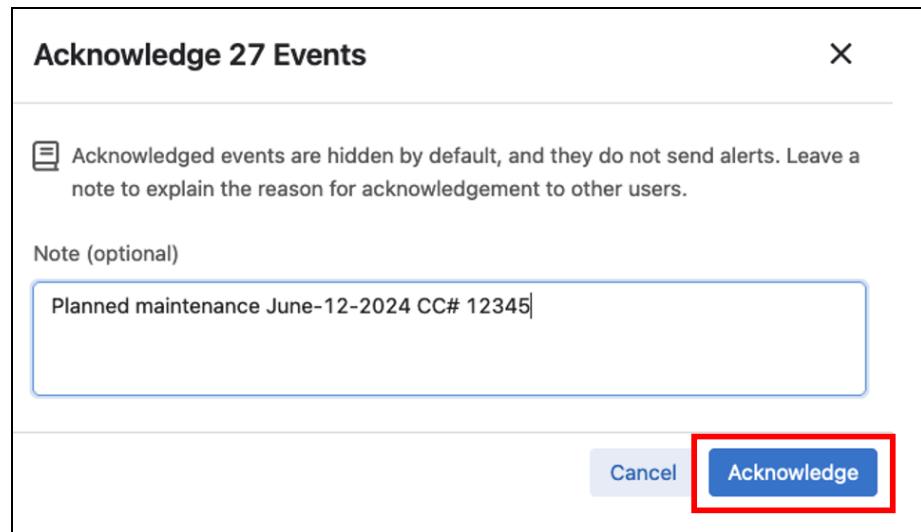
## 6. Acknowledge and Unacknowledging events

- To acknowledge from the filtered **event list**, select specific events and **Acknowledge** them.

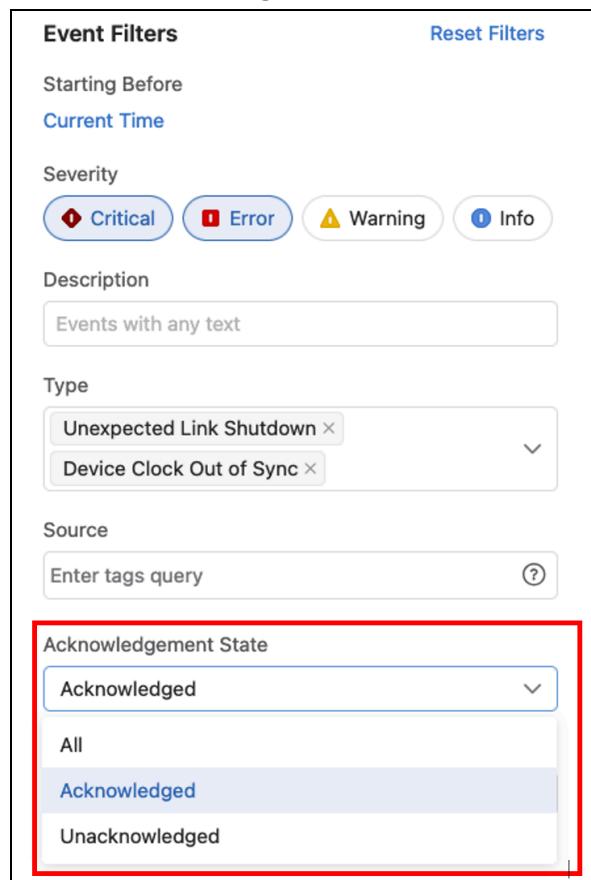
**Event List**  [Acknowledge 27](#) [Export](#) [⚙️](#)

<input type="checkbox"/> Name	Source	Start Time	Status
<input type="checkbox"/> > <b>Device Clock Out of Sync (48 Times)</b>	<input type="checkbox"/> campus-pod02-leaf1a	4d ago	● Lasted 30m
<input type="checkbox"/> > <b>Device Clock Out of Sync (55 Times)</b>	<input type="checkbox"/> campus-pod02-leaf1b	4d ago	● Lasted 30m
<input type="checkbox"/> > <b>Device Clock Out of Sync (17 Times)</b>	<input type="checkbox"/> campus-pod02-leaf1c	4d ago	● Lasted 28m
<input checked="" type="checkbox"/> > <b>Unexpected Link Shutd... (27 Times)</b>	<input type="checkbox"/> Ethernet11 on c...s-pod02-leaf1a <a href="#">+1</a>	4d ago	● Lasted 32m

- Adding a note is optional, select the **Acknowledge** button to mark these selected events.



- ii. Acknowledged events are not deleted from the event list, only flagged as acknowledged and can be referenced by changing the filtered **Acknowledgement State**. Click **Acknowledgement State** and select **Acknowledged**



- b. Un-acknowledging an event can be done in the same way, click the **box** to the left of the **Acknowledged** event, and click **Unacknowledge** at the top of the event list.

Event List				
<input checked="" type="checkbox"/> Name	Source	Ack	Start Time	Status
<input checked="" type="checkbox"/> > <span style="color: red;">!</span> Unexpected Li... (19 Times) <span style="border: 1px solid #ccc; padding: 2px;">2 Sources</span>		<input checked="" type="checkbox"/> aristarockie...	4d ago	<span style="color: green;">●</span> Lasted 32m

### Events and filtering lab section complete!

The next section will show you how to customize the notifications (e.g. email, chat, SNMP, Syslog, etc) that the events generate.

## 6. Customize Notifications

In this lab, you will configure CloudVision to send an email alert to an email address using the built-in “**SendGrid**” email service.

1. Configure “**SendGrid**” email service.

- a. After logging in to CloudVision, click on the “**Events**” menu option.



- b. Click on the “**Notifications**” button in the top right of the screen.



- c. Check the system status for the “**Config back-end**” and “**Relay back-end**”.

**Note:** Before receivers and notifications are configured, the status will be “Unknown”.

The screenshot shows the 'Notification Configuration' interface under the 'Events' section. The left sidebar has tabs for Status, Format, Platforms, Receivers (which is selected), and Rules. The main area is titled 'Notification System Status' and contains two boxes: 'Config back-end: Unknown' (with a note about not reporting state yet) and 'Relay back-end: Unknown' (with a note about not reporting state yet). Below these are sections for 'Test Notification Sender' and 'Past Test Notifications'.

- d. Now, configure the SendGrid receiver by clicking on “Receivers” in the menu, then click on the **“Add Receiver”** button.
- i. Name the receiver **“SendGrid for Campus ATD”**, then click the **“Add Configuration”** button and select **“SendGrid”** from the menu options.

The screenshot shows the 'Notification Receivers' configuration page. The left sidebar has tabs for Status, Format, Platforms, Receivers (selected), and Rules. The main area is titled 'Notification Receivers' and contains a table for receiver configurations. One row is highlighted with a red box, showing 'Receiver Name: SendGrid for Campus ATD' and 'Configuration: Must contain at least one configuration'. Below this is a 'SendGrid' row. Other options like 'Email', 'SMTP', and 'Messaging Services' are listed.

- ii. Type in a valid email address that you can receive emails at during this lab and check the **“Send notification when events are resolved”** checkbox. Click the **“Save”** button in the upper right hand side of the screen to save your new receiver.

The screenshot shows the 'Notification Configuration' page. On the left sidebar, there are icons for Events, Status, Format, Platforms, Receivers (which is selected and highlighted in blue), and Rules. The main content area has a title 'Notification Receivers' with a sub-instruction: 'Set up receivers to create a pool of persons or teams that you can assign to receive event notifications. You can configure each receiver to get notifications via one or more of the platforms that you've configured for use.' Below this, there's a section for 'SendGrid Configuration' with a 'Recipient Email' field containing 'youremail@yourdomain.com'. A checkbox labeled 'Send notification when events are resolved' is checked. At the bottom of this section are buttons for '+ Add Configuration' and 'Delete Receiver'. At the top right of the page, there are buttons for 'Save' (highlighted with a red box) and 'Discard', along with user information for 'Matt Pelican'.

- iii. Once you are happy with receiver's configuration, click the **Save** button at the top of the screen
2. Next, configure a "Rule" to use the new receiver. Click on the "**Rules**" menu option, then click "**Add Rule**"

The screenshot shows the 'Notification Configuration' page again. The sidebar icons are the same as before. The 'Rules' option is highlighted with a red box. The main content area is mostly empty, indicating no rules have been configured yet.

- a. Configure "**Rule Conditions**" for this rule. Click on the "**+ Device**" button, then choose your leaf1c switch from the "**Device**" drop down box.

## Notification Rules

Create custom rules to determine which events are sent as notifications to [your receivers](#). Rules are processed in the sequence that you order them.

1 Rule Conditions ⓘ

Add Conditions [+ Device](#) [+ Device Tags](#) [+ Event Type](#) [+ Interface Tags](#) [+ Rule Labels](#) [+ Severity](#)

Receiver

No Receiver

4 Rule Conditions ⓘ

Device campus-pod01-leaf1c × |  
campus-pod01-leaf1a  
campus-pod01-leaf1b

Add Conditions

Receiver campus-pod01-leaf1c  
POD-01-FL1 ⓘ ↗

No Receiver

- b. Now click on the “**+ Event Type**” button.

## Notification Rules

Create custom rules to determine which events are sent as notifications to [your receivers](#). Rules are processed in the sequence that you order them.

1 Rule Conditions ⓘ

Add Conditions [+ Device](#) [+ Device Tags](#) [+ Event Type](#) [+ Interface Tags](#) [+ Rule Labels](#) [+ Severity](#)

Receiver

No Receiver

- c. Add “**Event Types**” by choosing them from the drop down box as shown in the image below:

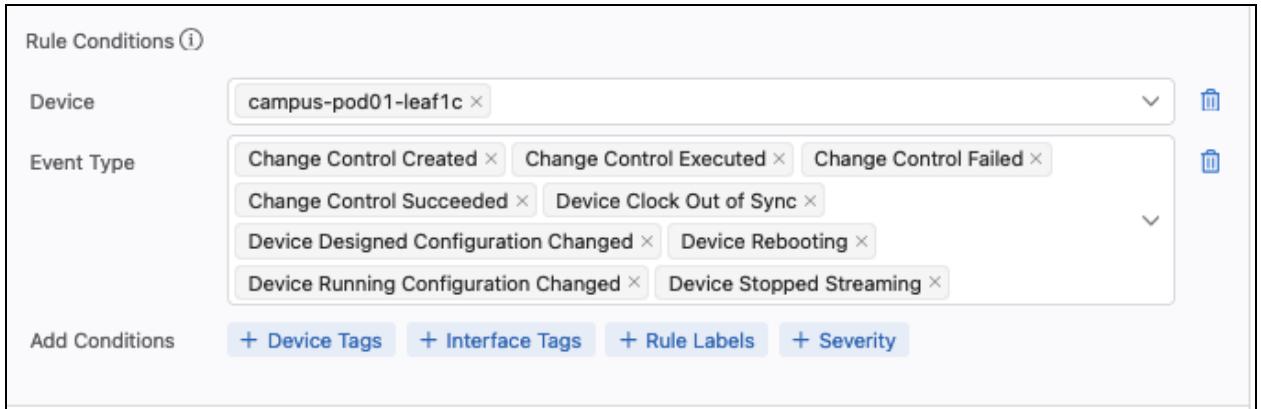
Rule Conditions ⓘ

Device: campus-pod01-leaf1c

Event Type:

- Change Control Created ×
- Change Control Executed ×
- Change Control Failed ×
- Change Control Succeeded ×
- Device Clock Out of Sync ×
- Device Designed Configuration Changed ×
- Device Rebooting ×
- Device Running Configuration Changed ×
- Device Stopped Streaming ×

Add Conditions: + Device Tags, + Interface Tags, + Rule Labels, + Severity



- d. Select all of the severity options by clicking on the “+ Severity” button and choosing the options from the drop down box.
- e. Next, choose your new “SendGrid for Campus ATD” receiver from the “Receiver” dropdown box, select the “Continue Checking Rules” box, and save your changes by clicking on the “Save” button.

Rule Conditions ⓘ

Device: campus-pod01-leaf1c

Event Type:

- Change Control Created ×
- Change Control Executed ×
- Change Control Failed ×
- Change Control Succeeded ×
- Device Clock Out of Sync ×
- Device Designed Configuration Changed ×
- Device Rebooting ×
- Device Running Configuration Changed ×
- Device Stopped Streaming ×

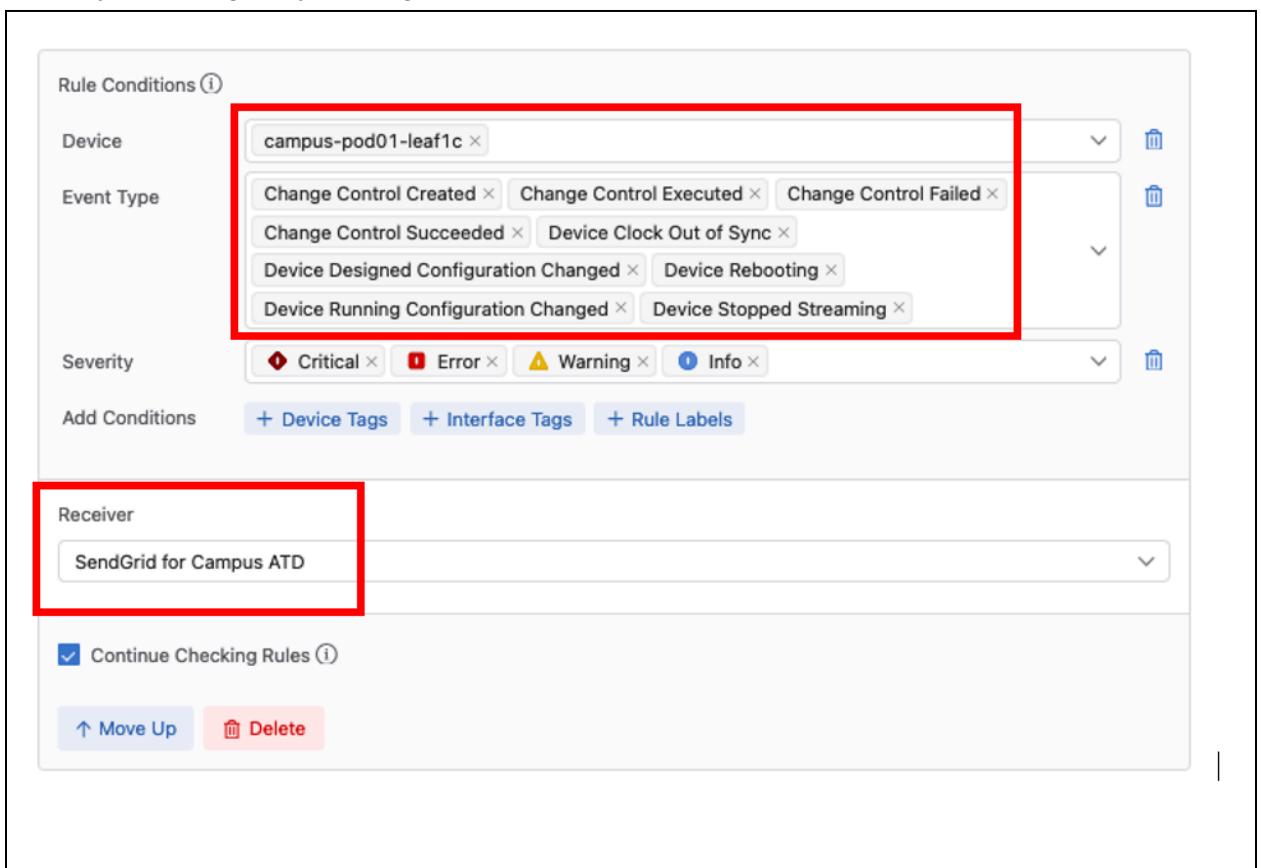
Severity: Critical, Error, Warning, Info

Add Conditions: + Device Tags, + Interface Tags, + Rule Labels

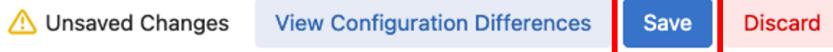
Receiver: SendGrid for Campus ATD

Continue Checking Rules ⓘ

↑ Move Up, ⚡ Delete



Make sure to save your changes in this screen with the Save button along the top of your screen.

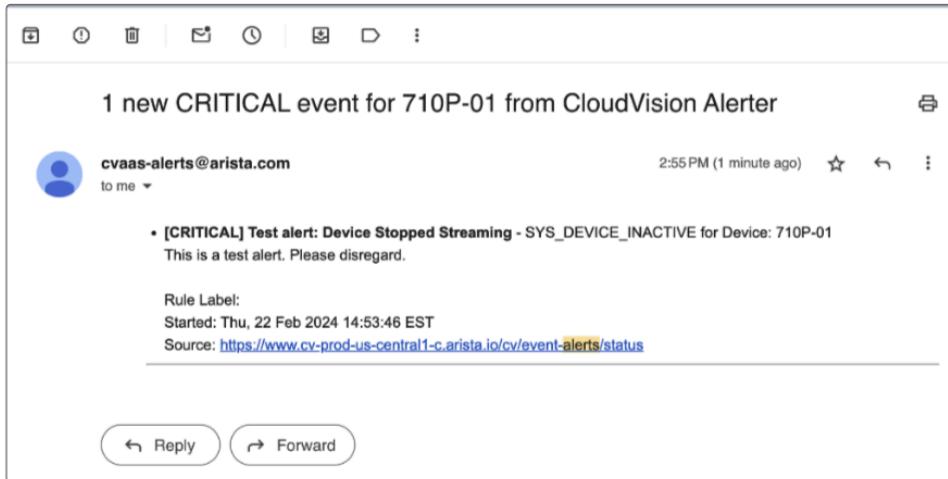


3. Now test your new receiver and rule.

- a. Click on the "**Status**" menu option. Configure the "**Test Notification Sender**" by changing the "**Event Type**" to be "**Device Stopped Streaming**" and selecting your **leaf1c** from the "**Device**" drop down box. Click the "**Send Test Notification**" button.

The screenshot shows the "Notification System Status" page. On the left, a sidebar lists "Status", "Settings", "Platforms", "Receivers", "Rules", and "Output Templates". The main area is titled "Notification System Status" and contains a sub-section "Test Notification Sender".  
**Status:** Config back-end: **OK** (Last updated 26 seconds ago)  
**Test Notification Sender:**  
**Severity:** Critical  
**Event Type:** Device Stopped Streaming (highlighted with a red box)  
**Device:** campus-pod01-leaf1c (highlighted with a red box)  
**Interface:** Select  
**Rule Label:** (empty input field)  
**Send Test Notification** (blue button)

- b. After a minute or two, you should receive the email alert at the email address you configured in the Receiver.



Congratulations, you've completed the "**Event Notification Lab**" !

## END OF LAB GUIDE