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# Monitoring Cisco Unified Communications Ancillary Devices

Beta Version

Cisco: UC Ancillary PowerPack version 101, revision 2

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## Introduction

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### Overview

This manual describes how to monitor ancillary Cisco Unified Communications (UC) devices in the ScienceLogic platform using the *Cisco: UC Ancillary PowerPack*.

The following sections provide an overview of ancillary Cisco UC devices and the *Cisco: UC Ancillary PowerPack*:

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### What are Ancillary Cisco UC Devices?

The ScienceLogic platform enables you to monitor ancillary Cisco UC devices, including Cisco Unified Border Element (CUBE)-enabled devices and Cisco Emergency Responder.

**CUBE** is a Session Border Controller that extends Session Initiation Protocol-based voice and video connectivity between networks. It can run on a variety of Cisco routers or can be deployed virtually.

**Emergency Responder** supplements the emergency 9-1-1 functionality offered by Cisco Unified Communications Manager (CUCM) by helping CUCM pinpoint the location of emergency callers.

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## What Does the Cisco: UC Ancillary PowerPack Monitor?

To monitor ancillary UC devices using the ScienceLogic platform, you must install the *Cisco: UC Ancillary PowerPack*. The PowerPack includes:

- An example credential you can use as a template to create SSH/Key credentials to connect to the devices you want to monitor
- Dynamic Applications to discover, model, and monitor performance metrics and/or collect configuration data for ancillary UC devices
- Device Classes for each of the ancillary UC devices that the ScienceLogic platform monitors
- Event Policies that are triggered when ancillary UC devices meet certain status criteria
- A device dashboard that displays host resource and interface information about ancillary UC devices

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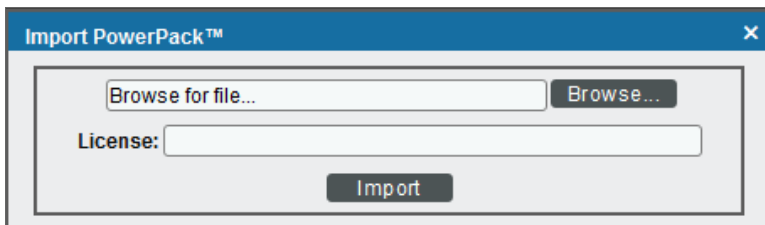
## Installing the Cisco: UC Ancillary PowerPack

Before completing the steps in this manual, you must import and install the latest version of the *Cisco: UC Ancillary PowerPack*.

**TIP:** By default, installing a new version of a PowerPack overwrites all content in that PowerPack that has already been installed on the target system. You can use the **Enable Selective PowerPack Field Protection** setting in the **Behavior Settings** page (System > Settings > Behavior) to prevent new PowerPacks from overwriting local changes for some commonly customized fields. (For more information, see the **System Administration** manual.)

To download and install a PowerPack:

1. Download the PowerPack from the [ScienceLogic Customer Portal](#).
2. Go to the **PowerPack Manager** page (System > Manage > PowerPacks).
3. In the **PowerPack Manager** page, click the **[Actions]** button, then select *Import PowerPack*.
4. The **Import PowerPack** dialog box appears:



5. Click the **[Browse]** button and navigate to the PowerPack file.
6. When the **PowerPack Installer** modal page appears, click the **[Install]** button to install the PowerPack.

**NOTE:** If you exit the **PowerPack Installer** modal page without installing the imported PowerPack, the imported PowerPack will not appear in the **PowerPack Manager** page. However, the imported PowerPack will appear in the **Imported PowerPacks** modal page. This page appears when you click the **[Actions]** menu and select *Install PowerPack*.

## Configuring Cisco UC Ancillary Devices for Monitoring

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### Overview

The following sections describe how to configure ancillary Cisco Unified Communications devices for monitoring by the ScienceLogic platform using the *Cisco: UC Ancillary PowerPack*:

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### Prerequisites for Monitoring Ancillary Cisco Unified Communications Devices

To configure the ScienceLogic platform to monitor ancillary Cisco Unified Communications (UC) devices using the *Cisco: UC Ancillary PowerPack*, you must have already properly installed and configured the ancillary Cisco UC devices that you want to monitor. You must also note the following information, as appropriate, for each of the ancillary UC devices you want to monitor:

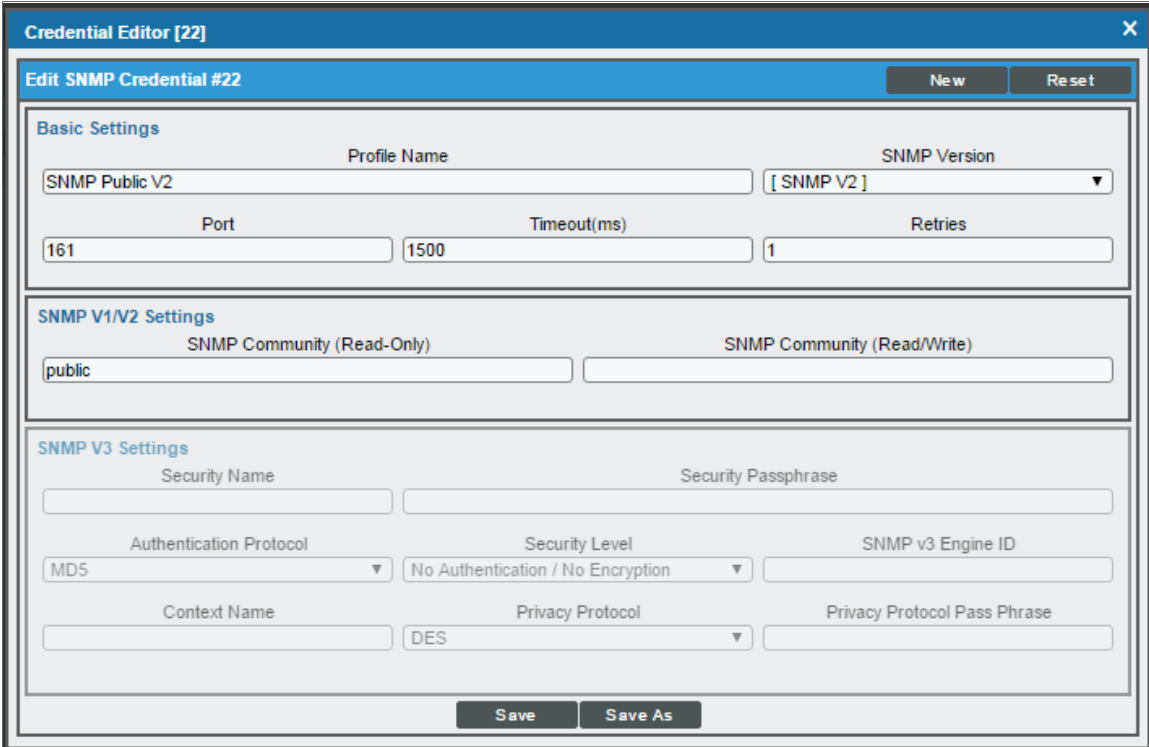
- SNMP community string
- Secure Shell (SSH) username and password to monitor Cisco voice components

## Creating an SNMP Credential

The ScienceLogic platform uses SNMP to collect information about the devices that can be monitored using the Dynamic Applications in the *Cisco: UC Ancillary PowerPack*. To monitor these devices, you must first define an SNMP credential that enables the ScienceLogic platform to communicate with the devices.

To configure an SNMP credential:

1. Go to the **Credential Management** page (System > Manage > Credentials).
2. Click **[Create]**.
3. In the drop-down list that appears, select *SNMP Credential*. The **Credential Editor** page appears:



The screenshot shows the 'Credential Editor [22]' window. At the top, it says 'Edit SNMP Credential #22' with 'New' and 'Reset' buttons. The form is divided into three sections: 'Basic Settings', 'SNMP V1/V2 Settings', and 'SNMP V3 Settings'. In 'Basic Settings', 'Profile Name' is 'SNMP Public V2', 'SNMP Version' is '[ SNMP V2 ]', 'Port' is '161', 'Timeout(ms)' is '1500', and 'Retries' is '1'. In 'SNMP V1/V2 Settings', 'SNMP Community (Read-Only)' is 'public'. In 'SNMP V3 Settings', 'Authentication Protocol' is 'MD5', 'Security Level' is 'No Authentication / No Encryption', and 'Privacy Protocol' is 'DES'. 'Save' and 'Save As' buttons are at the bottom.

4. In the **Profile Name** field, type a name for the credential.
5. In the **SNMP Version** field, select *SNMP V2*.
6. In the **SNMP Community (Read Only)** field, type the community string for the device you want to monitor.
7. Optionally, supply values in the other fields in this page. In most cases, you can accept the default values for the other fields.
8. Click **[Save]**.

## Creating an SSH/Key Credential

To configure the ScienceLogic platform to monitor Cisco voice devices, you must first create an SSH/Key credential that allows the Dynamic Applications in the *Cisco: UC Ancillary PowerPack* to connect with these devices. An example SSH/Key credential that you can edit for your own use is included in the *Cisco: UC Ancillary PowerPack*.

To create an SSH/Key credential to access Cisco voice devices:

1. Go to the **Credential Management** page (System > Manage > Credentials).
2. Locate the **Cisco: Dial Peer - Example** credential, and then click its wrench icon (🔧). The **Edit SSH/Key Credential** modal page appears.
3. Type values in the following fields:

- **Credential Name.** Type a new name for the credential.
- **Hostname/IP.** Type "%D".
- **Port.** Type "22".
- **Username.** Type the administrator username used to connect to the dial peers via SSH.
- **Password.** Type the password used to connect to the dial peers via SSH.
- **Private Key (PEM Format).** Leave this field blank.



4. Click **[Save As]**.
5. When the confirmation message appears, click **[OK]**.

## Discovering Cisco UC Ancillary Devices

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### Overview

The following sections describe how to discover ancillary Cisco Unified Communications devices for monitoring by the ScienceLogic platform using the *Cisco: UC Ancillary PowerPack*:

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### Discovering Ancillary Cisco UC Devices

To create and run a discovery session that will discover ancillary Cisco UC devices, perform the following steps:

1. Go to the **Discovery Control Panel** page (System > Manage > Discovery).
2. In the **Discovery Control Panel**, click **[Create]**.

- The **Discovery Session Editor** page appears. In the **Discovery Session Editor** page, define values in the following fields:

The screenshot shows the 'Discovery Session Editor | Editing Session [5]' window. It is divided into several sections:

- Identification Information:** Name (CUBE sim 102), Description.
- IP and Credentials:** IP Address/Hostname Discovery List (10.2.10.102), Upload File, Browse for file..., SNMP Credentials (list including [SNMP Public V2]), Other Credentials (list including VMware Server, VMware: AMQP Broker, etc.), SSH/Key (list including Cisco: Dial Peer - sim).
- Detection and Scanning:** Initial Scan Level, Scan Throttle, Port Scan All IPs, Port Scan Timeout, Detection Method & Port (list including UDP: 161 SNMP, TCP: 1 - tcpmux, etc.), Interface Inventory Timeout (ms) (800000), Maximum Allowed Interfaces (10000), Bypass Interface Inventory.
- Basic Settings:** Discover Non-SNMP (checked), Model Devices (checked), DHCP, Duplication Protection (checked), Collection Server PID (4), Organization ([CUBE]), Add Devices to Device Group(s) (None Servers), Apply Device Template (Choose a Template).


Buttons at the bottom include Save, Save As, and Log All (checked).

- **IP Address/Hostname Discovery List.** Type the IP addresses for the devices you want to discover.
  - **SNMP Credentials.** Select the **SNMP credential** you created for the ancillary devices.
  - **Other Credentials.** Select the **SSH/Key credential** you created for the ancillary devices.
  - **Discover Non-SNMP.** Select this checkbox.
  - **Model Devices.** Select this checkbox.
- Optionally, you can enter values in the other fields on this page. For more information about the other fields on this page, see the **Discovery & Credentials** manual.
  - Click **[Save]** to save the discovery session, and then close the **Discovery Session Editor** window.
  - The discovery session you created appears at the top of the **Discovery Control Panel** page. Click its lightning bolt icon (⚡) to run the discovery session.
  - The **Discovery Session** window appears. When the ancillary devices are discovered, click the device icon (🖨️) to view the **Device Properties** page for each device.

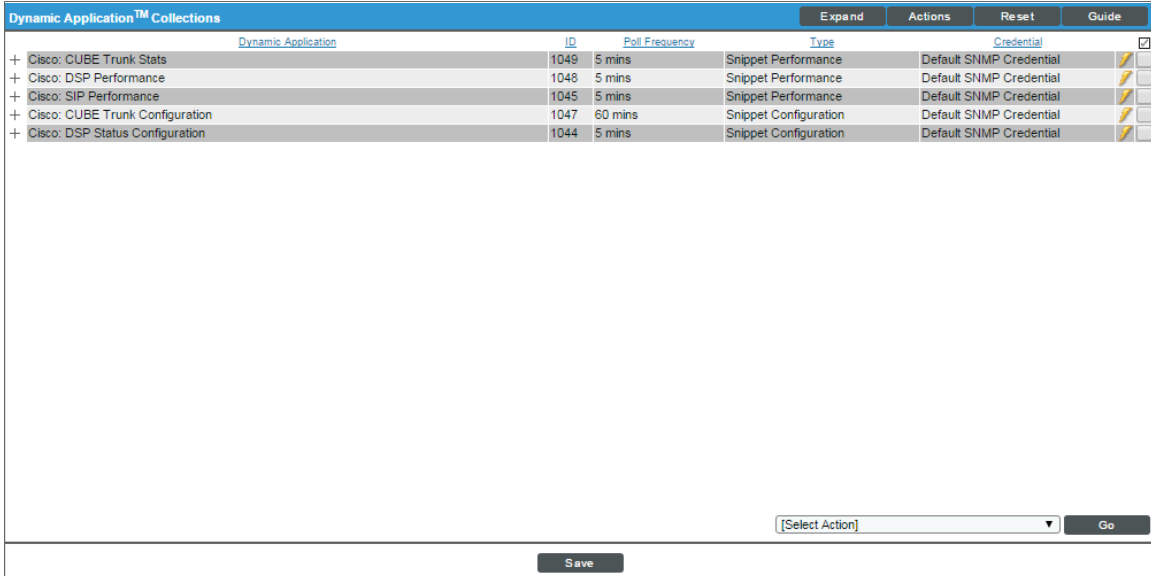
## Manually Aligning Dynamic Applications






When you run the discovery session for ancillary UC devices, the ScienceLogic platform automatically aligns the necessary Dynamic Applications to the devices.

To verify that the Dynamic Applications aligned to the devices correctly:

1. After discovery has completed, click the device icon () for any of the discovered devices. The **Device Properties** page appears.
2. From the **Device Properties** page, click the **[Collections]** tab. The **Dynamic Application Collections** page appears.
3. All applicable Dynamic Applications for the device are automatically aligned during discovery.

**NOTE:** It can take several minutes after the discovery session has completed for Dynamic Applications to appear in the **Dynamic Application Collections** page.



Dynamic Application™ Collections							Expand	Actions	Reset	Guide
	Dynamic Application	ID	Poll Frequency	Type	Credential					
+ Cisco: CUBE Trunk Stats		1049	5 mins	Snippet Performance	Default SNMP Credential					
+ Cisco: DSP Performance		1048	5 mins	Snippet Performance	Default SNMP Credential					
+ Cisco: SIP Performance		1045	5 mins	Snippet Performance	Default SNMP Credential					
+ Cisco: CUBE Trunk Configuration		1047	60 mins	Snippet Configuration	Default SNMP Credential					
+ Cisco: DSP Status Configuration		1044	5 mins	Snippet Configuration	Default SNMP Credential					

[Select Action] [Go]

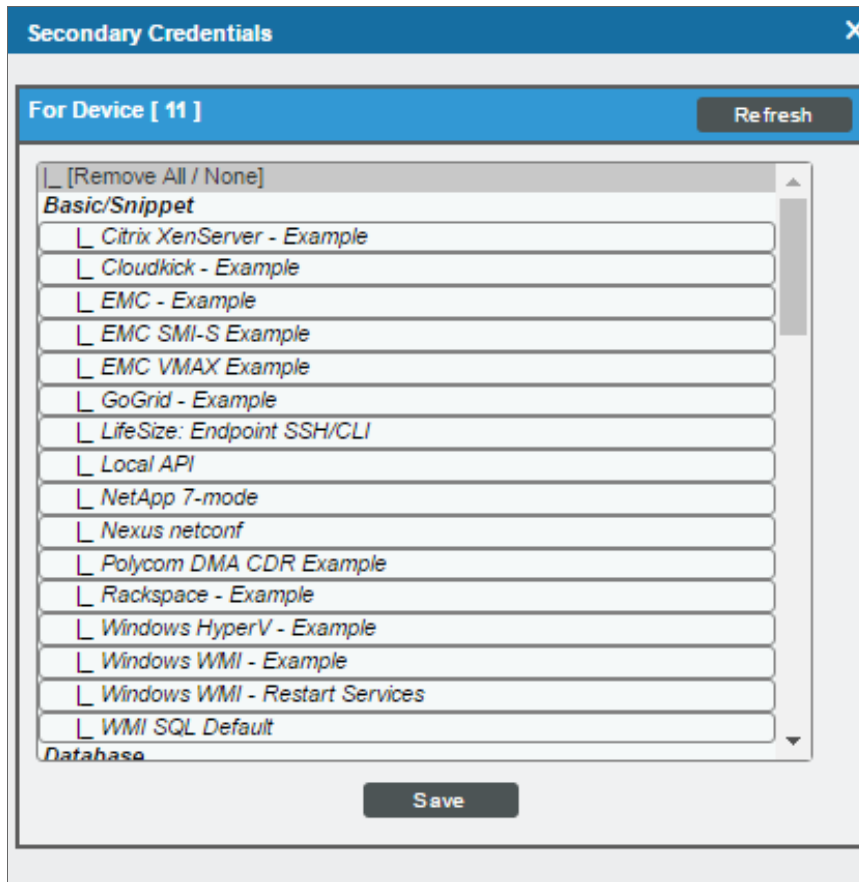
Save

If the "Cisco: Dial Peer Voice Summary" or "Cisco: Active Voice Call Legs Performance" Dynamic Applications do not automatically align to the router that serves as the root device for your ancillary UC components, you might need to manually align the SSH/Key credential to the router and then run discovery again.


To manually align the SSH/Key credential to the router:

1. From the **Device Properties** page (Registry > Devices > wrench icon), click the **[Actions]** button, and then select *Secondary Credentials* from the menu.

2. Select the *SSH/Key credential* you created for the ancillary devices.



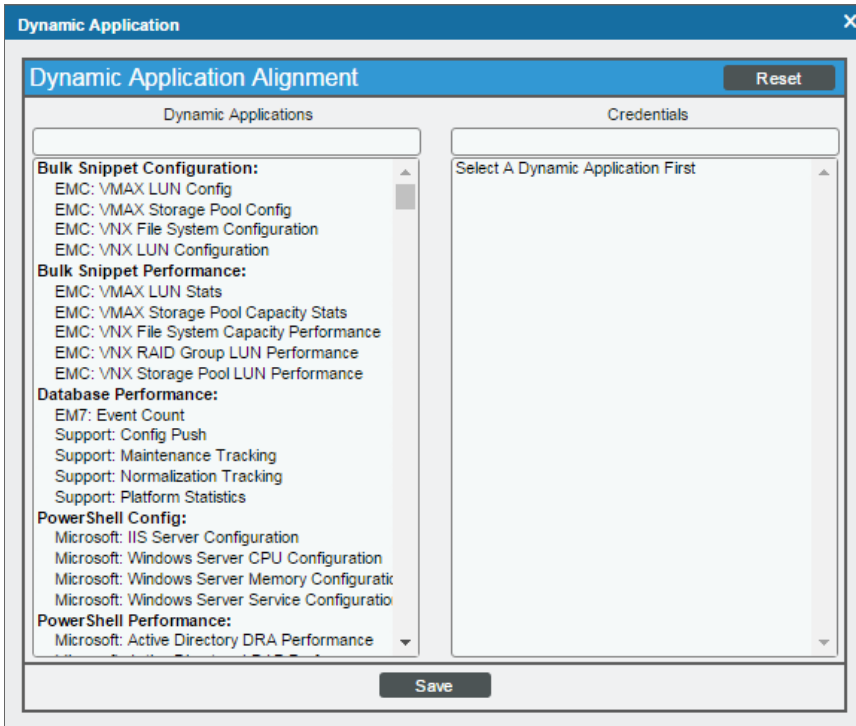
**NOTE:** If there are other credentials (for example, an SNMP credential) already aligned to the device, hold the <Ctrl> or <Command> key when selecting the SSH/Key credential to keep the other credentials aligned to the device as well.

3. Click [**Save**].
4. Close the **Device Properties** page and go to the **Discovery Control Panel** page (System > Manage > Discovery).
5. Locate the discovery session for ancillary UC devices and click its lightning bolt icon (  ) to re-run the discovery session.

If any of the other Dynamic Applications did not automatically align to a device during discovery, you can align them manually to the device.

To manually align a Dynamic Application to a device:

1. From the **Dynamic Application Collections** page (Registry > Devices > wrench icon > Collections), click the **[Action]** button and then select *Add Dynamic Application*. The **Dynamic Application Alignment** page appears:




2. In the **Dynamic Applications** field, select the Dynamic Application you want to align.
3. In the **Credentials** field, select one or more of the [credentials you created for the ancillary UC devices](#).
4. Click **[Save]**.
5. Repeat steps 1-4 for any other unaligned Dynamic Applications.

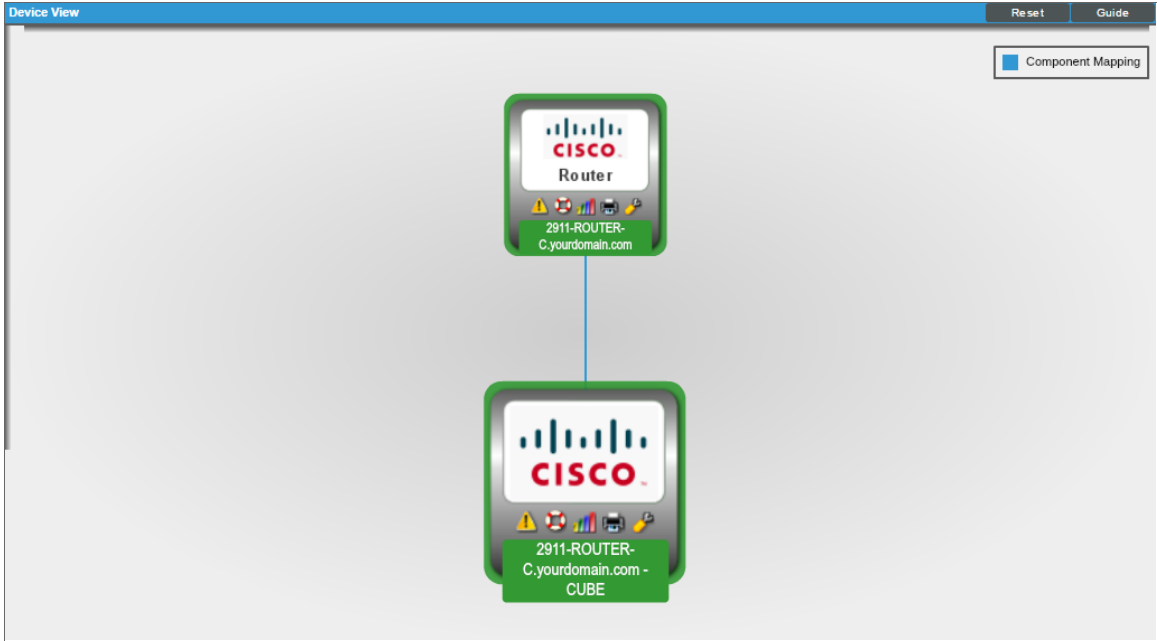
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## Viewing Ancillary Cisco UC Devices

When the ScienceLogic platform discovers your ancillary UC devices, the platform creates component devices that represent each component in your ancillary UC system.

In addition to the **Device Manager** page, you can view component devices in the following places in the user interface:

- The **Device View** modal page (click the bar-graph icon  for a device, and then click the **Topology** tab) displays a map of the selected device and all of the devices with which it has parent-child relationships. Double-clicking any of the devices reloads the page with the selected device as the primary device:



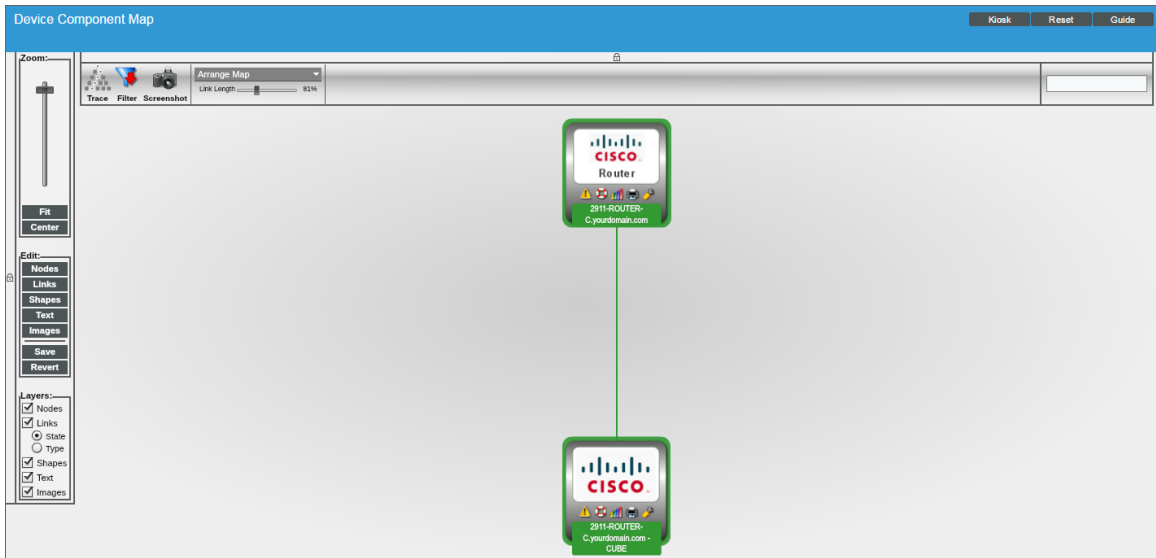
- The **Device Components** page (Registry > Devices > Device Components) displays a list of all root devices and component devices discovered by the ScienceLogic platform, in an indented view, so you can easily view the hierarchy and relationships between child devices, parent devices, and root devices. To view the component devices associated with your ancillary UC devices, find a device cluster and click its plus icon (+):

Device Components | Devices Found [2]

	Device Name *	IP Address	Device Category	Device Class   Sub-class	DIID	Organization	Current State	Collection Group	Collection State	
1.	+ 2911-ROUTER-B.ccasdemo.com	172.16.255.21	Router	Cisco Systems   Cisco 2921	1	CUBE	Major	CUG2	Active	
2.	- 2911-ROUTER-C.yourdomain.com	172.16.255.22	Router	Cisco Systems   Cisco 2921	2	CUBE	Healthy	CUG2	Active	
1.	+ 2911-ROUTER-C.yourdomain.com - CUBE	--	Gateway	Cisco Systems   CUBE	4	CUBE	Healthy	CUG2	Active	

[Select Action] Go

- The **Component Map** page (Views > Device Maps > Components) allows you to view devices by root node and view the relationships between root nodes, parent components, and child components in a map. This makes it easy to visualize and manage root nodes and their components. The ScienceLogic platform automatically updates the **Component Map** as new component devices are discovered. The platform also updates each map with the latest status and event information. To view the map for your ancillary UC devices, go to the **Component Map** page and select a map from the list in the left NavBar. To learn more about the **Component Map** page, see the **Views** manual.



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