Monitoring Cisco Viptela

Cisco: Viptela PowerPack version 102

Table of Contents

Chapter 1

Introduction

Overview

This manual describes how to monitor Cisco Viptela devices in SL1 using the *Cisco Viptela* PowerPack.

The following sections provide an overview of Cisco Viptela devices and the *Cisco Viptela* PowerPack:

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What is Cisco Viptela?

Cisco Viptela provides a cloud-based, software-defined wide area networking (SD-WAN) solution. Cisco Viptela includes advanced routing, segmentation, and security capabilities for enterprise networks. Cisco Viptela's cloud-based network management and orchestration technologies help you deploy and manage the latest WAN architectures.

What Does the Cisco: Viptela PowerPack Monitor?

To monitor Cisco Viptela resources using the ScienceLogic platform, you must install the *Cisco Viptela*PowerPack. This PowerPack enables you to discover, model, and collect data about Viptela resources.

The *Cisco Viptela* PowerPack includes:

- Example credentials that you can use as templates to create SOAP/XML credentials to connect to Viptela
- The "Cisco: Viptela vManage Template" for aligning all dynamic applications to the root component device
- Dynamic Applications to discover, model, and monitor performance metrics or collect configuration data for the following Cisco Viptela resources:
    - vManage
    - vSmart Controller
    - vEdge Routers
    - vBond Orchestrator
- Device Classes for each type of Cisco Viptela device monitored:
    - vBond Orchestrator
    - vEdge
    - vEdge Cloud
    - vEdge 100
    - vEdge 1000
    - vEdge 5000
    - vEdge 2000
    - vEdge 100-B
    - vEdge 100-M
    - vEdge 100-WM
    - vEdge Container
    - vManage
    - vSmart Controller

- Event Policies and corresponding alerts that are triggered when Viptela resources meet certain status criteria
- Dashboards that display information about Cisco Viptela component devices

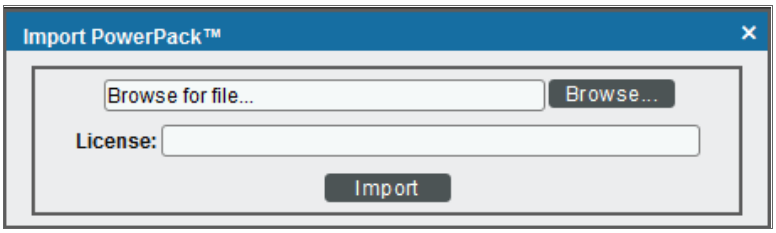
Installing the Cisco Viptela PowerPack

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

TIP: By default, installing a new version of a PowerPack overwrites all content from a previous version of 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 appears, click the **[Install]** button to install the PowerPack.

NOTE: If you exit the **PowerPack Installer** modal 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. This page appears when you click the **[Actions]** menu and select *Install PowerPack*.

Chapter 2

Configuration and Discovery

Overview

The following sections describe how to configure and discover Cisco Viptela resources for monitoring by SL1 using the *Cisco Viptela* PowerPack:

Prerequisite for Monitoring Cisco Viptela

To configure the SL1 system to monitor Cisco Viptela resources using the *Cisco Viptela* PowerPack, you must first know the credentials (username and password) for a user account that has access to the Cisco Viptela system. The user account must have read-all access.

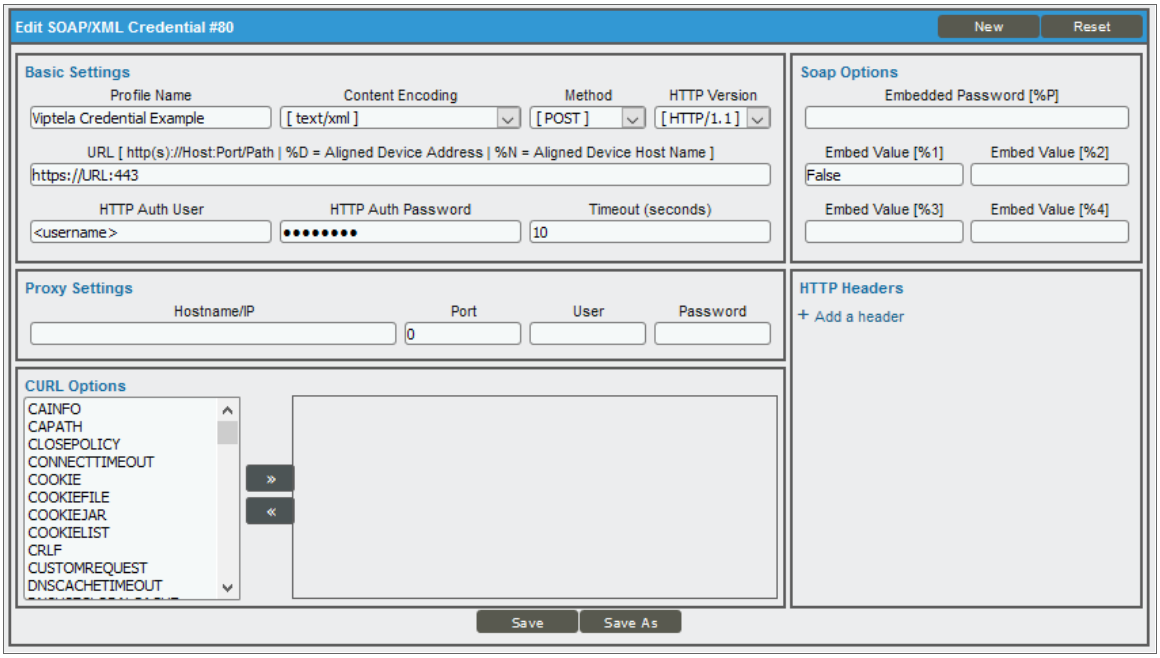
Configuring a Credential for Cisco Viptela

To configure SL1 to monitor Cisco Viptela devices, you must first create a SOAP/XML credential. This credential allows the Dynamic Applications in the *Cisco Viptela* PowerPack) to use your Cisco Viptela user account to retrieve information from the *Cisco Viptela* devices.

The PowerPack includes an example SOAP/XML credential that you can edit for your own use.

To configure a SOAP/XML credential to access Cisco Viptela:

1. Go to the **Credential Management** page (System > Manage > Credentials).
2. Locate the **Viptela Credential Example - SOAP/XML** credential, and then click its wrench icon ( ). The **Edit SOAP/XML Credential** modal page appears:



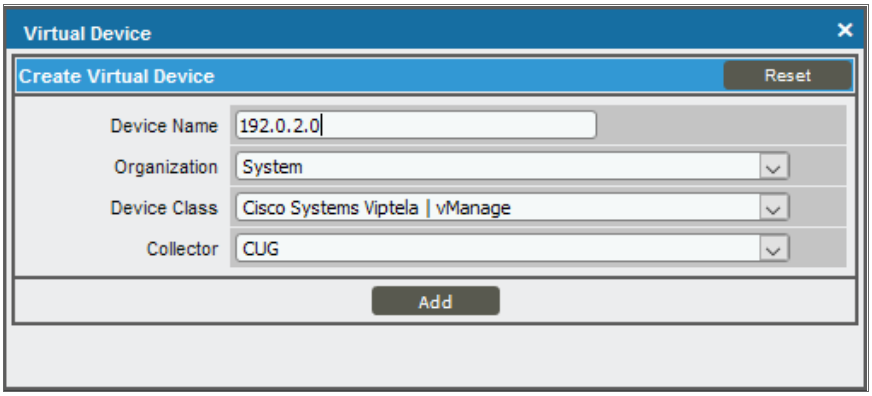
3. Complete the following fields:
   - ***Profile Name***. Type a name for the Cisco Viptela credential.
   - ***Content Encoding***. Select *text/xml*.
   - ***Method***. Select POST.
   - ***HTTP Version***. Select HTTP/1.1.
   - ***URL***. Type the URL and port for the Cisco Viptela system, using the following format: *https://URL:443*. For example, https://my.viptela.system:443.
   - ***HTTP Auth User***. Type the Cisco Viptela account username.
   - ***HTTP Auth Password***. Type the Cisco Viptela account password.
   - ***Timeout (seconds)***. Type "10".
4. For the remaining fields, use the default values, and then click the **[Save As]** button.

Creating a Cisco Viptela Virtual Device

Because the Cisco Viptela service does not have a static IP address, you cannot discover a Cisco Viptela device using discovery. Instead, you must create a ***virtual device*** that represents the Cisco Viptela service. A virtual device is a user-defined container that represents a device or service that cannot be discovered by SL1. You can use the virtual device to store information gathered by policies or Dynamic Applications.

To create a virtual device that represents your Cisco Viptela service:

1. Go to the **Device Manager** page (Registry > Devices > Device Manager).
2. Click the **[Actions]** button and select *Create Virtual Device* from the menu. The **Virtual Device** modal page appears:



3. Complete the following fields:
   - ***Device Name***. Type the system IP address of the Cisco Viptela vManage device. The ScienceLogic API request uses this IP address instead of the device name.
   - ***Organization***. Select the organization for this device. The organization you associate with the device limits the users that will be able to view and edit the device. Typically, only members of the organization will be able to view and edit the device.
   - ***Device Class***. Select *Cisco Systems Viptela | vManage*.
   - ***Collector***. Select the collector group that will monitor the device.
4. Click **[Add]** to create the virtual device.

Aligning Dynamic Applications to the Virtual Device

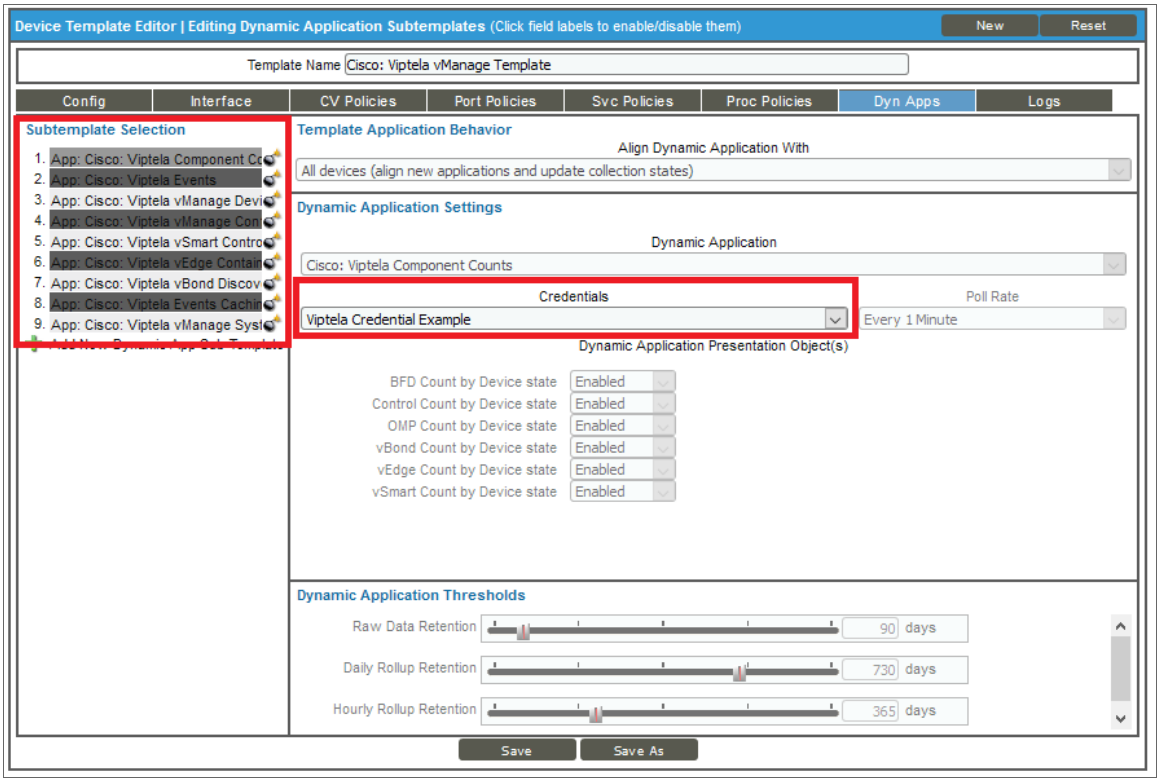
A ***device template*** allows you to save a device configuration and apply it to multiple devices. The *Cisco Viptela*PowerPack includes the "Cisco: Viptela vManage Template," which enables the SL1 to align all Dynamic Applications to the root component device.

Configuring the Device Template

Before you can use the "Cisco: Viptela vManage Template," you need to configure the template so that each dynamic application in the template aligns with the *credential you created earlier*.

To configure the Viptela device template:

1. Go to the **Configuration Templates** page (Registry > Devices > Templates).
2. Locate the "Cisco: Viptela vManage Template" and click its wrench icon ( ). The **Device Template Editor** modal page appears.
3. Click the **[Dyn Apps]** tab. The **Editing Dynamic Application Subtemplates** page appears:



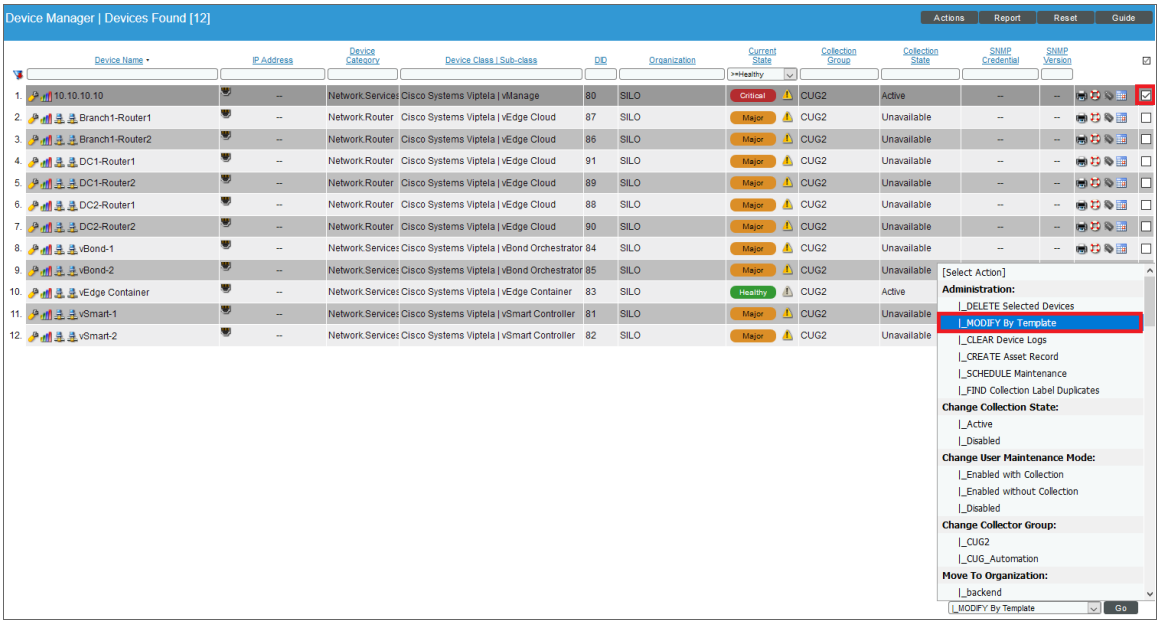
4. In the ***Credentials*** drop-down list, select the credential that you created for Viptela.
5. Click the next Dynamic Application listed in the **Subtemplate Selection** section on the left side of the page and then select the credential you created in the ***Credentials*** field.
6. Repeat step 5 until you have selected that credential in the ***Credentials*** field for all of the Dynamic Applications listed in the **Subtemplate Selection** section.
7. Click **[Save]**.

Using the Device Template to Align Dynamic Applications to the Component Device

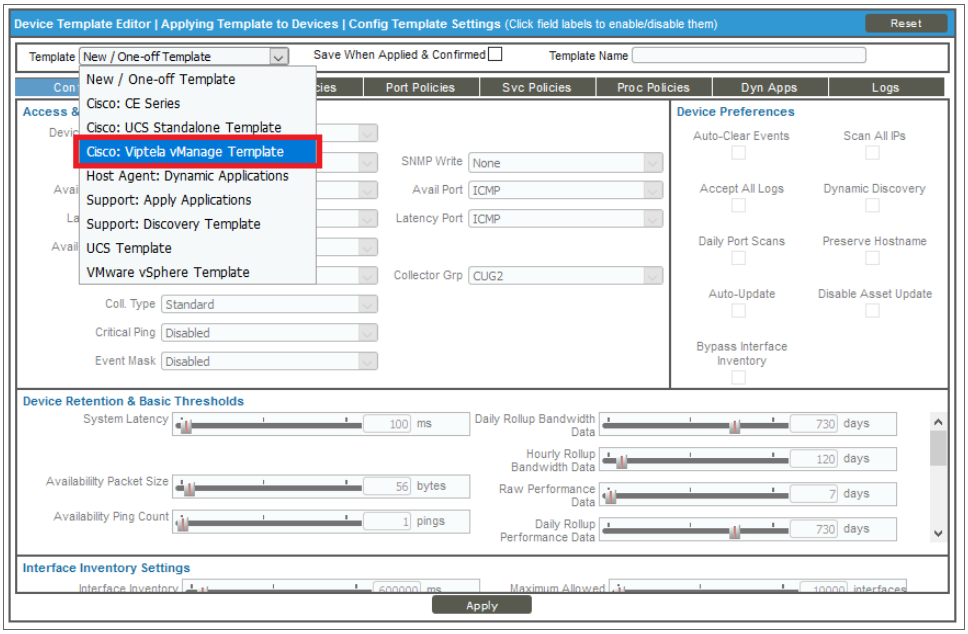
After you have configured the "Cisco: Viptela vManage Template" so that each dynamic application in the template aligns with the credential you created, you can use that template to align the Dynamic Applications to the root component device for Cisco Viptela.

To use the "Viptela vManage Template" to align Dynamic Applications:

1. Go to the **Device Manager** page (Registry > Devices > Device Manager.
2. On the **Device Manager** page, select the checkbox for the root component device.



3. In the ***Select Actions*** field, in the lower right, select the option *MODIFY by Template* and click the **[Go]** button. The **Device Template Editor** page appears:



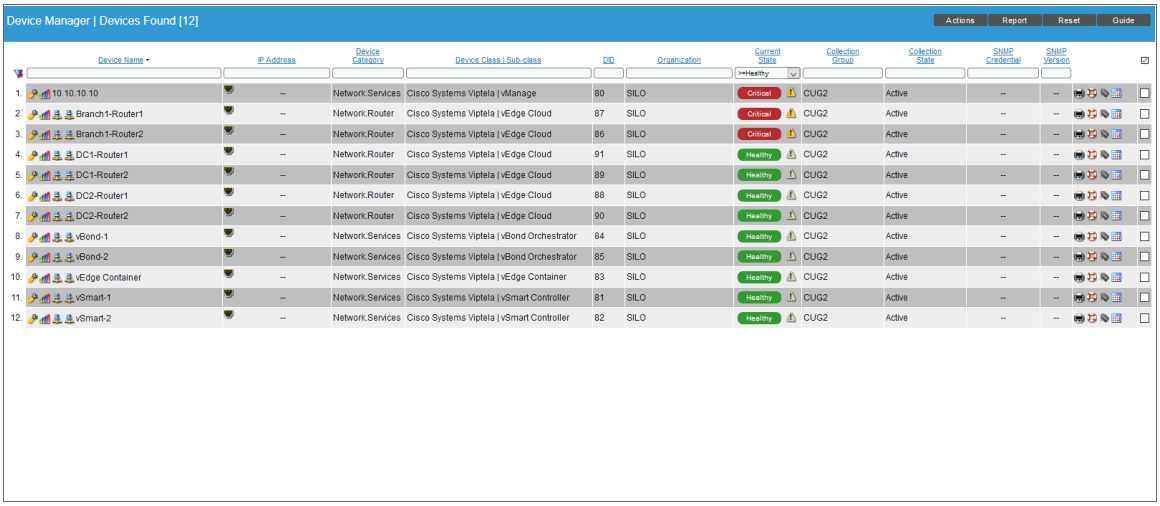
4. Complete the following fields:
   - In the ***Template*** drop-down list, select *Cisco: Viptela vManage Template*.
   - In the ***Credentials*** drop-down list, select the credential you created earlier.

5. Click the **[Apply]** button, and then click **[Confirm]** to align the Dynamic Applications to the root component device.

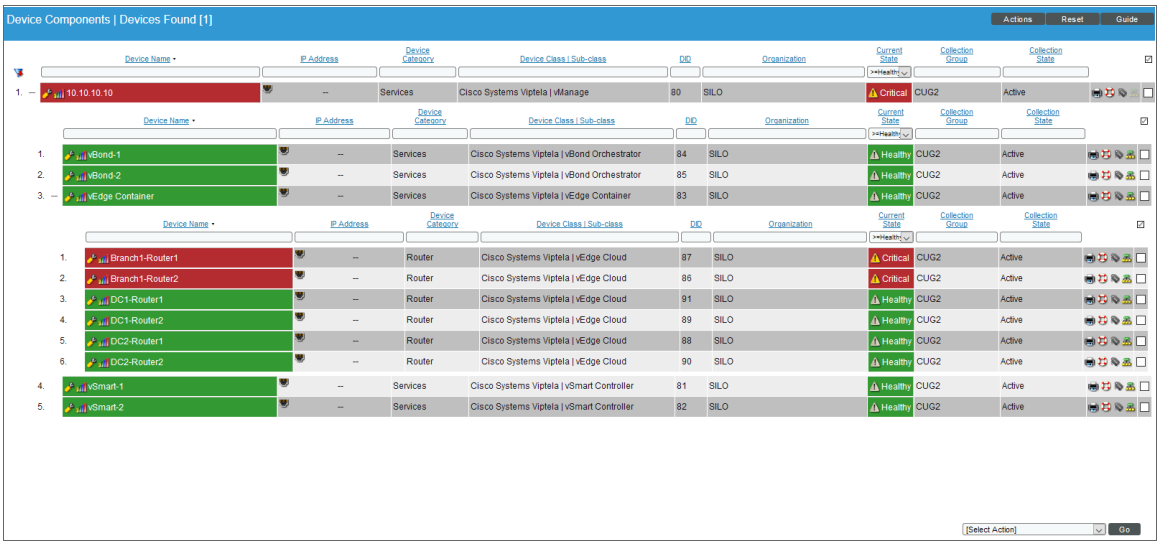
Viewing Information About the Cisco Viptela System

You can view all the devices, virtual devices, and component devices in the Cisco Viptela system in the following places in the user interface:

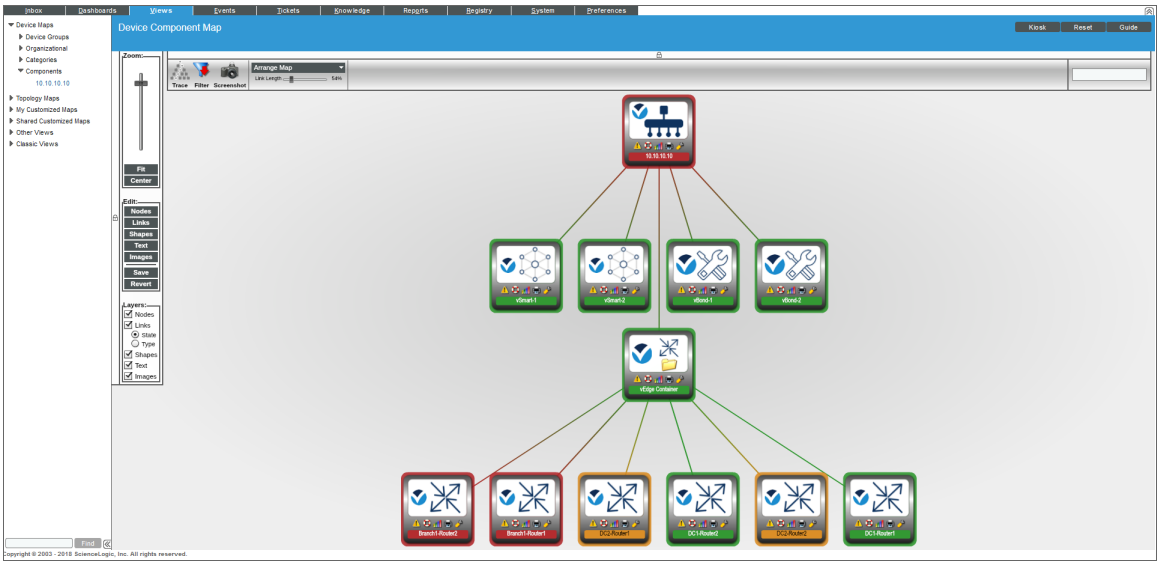
- All devices, virtual devices, and component devices appear in the **Device Manager** page (Registry > Devices > Device Manager).



- The **Device Components** page (Registry > Devices > Device Components) displays a list of all root devices and component devices discovered by SL1 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 Cisco Viptela, find the Cisco Viptela root device and click its plus icon (+):



- The **Device Component Map** page (Classic Maps > 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. SL1 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 Cisco Viptela devices, go to the **Component Map** page and select the map from the list in the left NavBar. To learn more about the **Component Map** page, see the ***Views*** manual.



Chapter 3

Dashboards

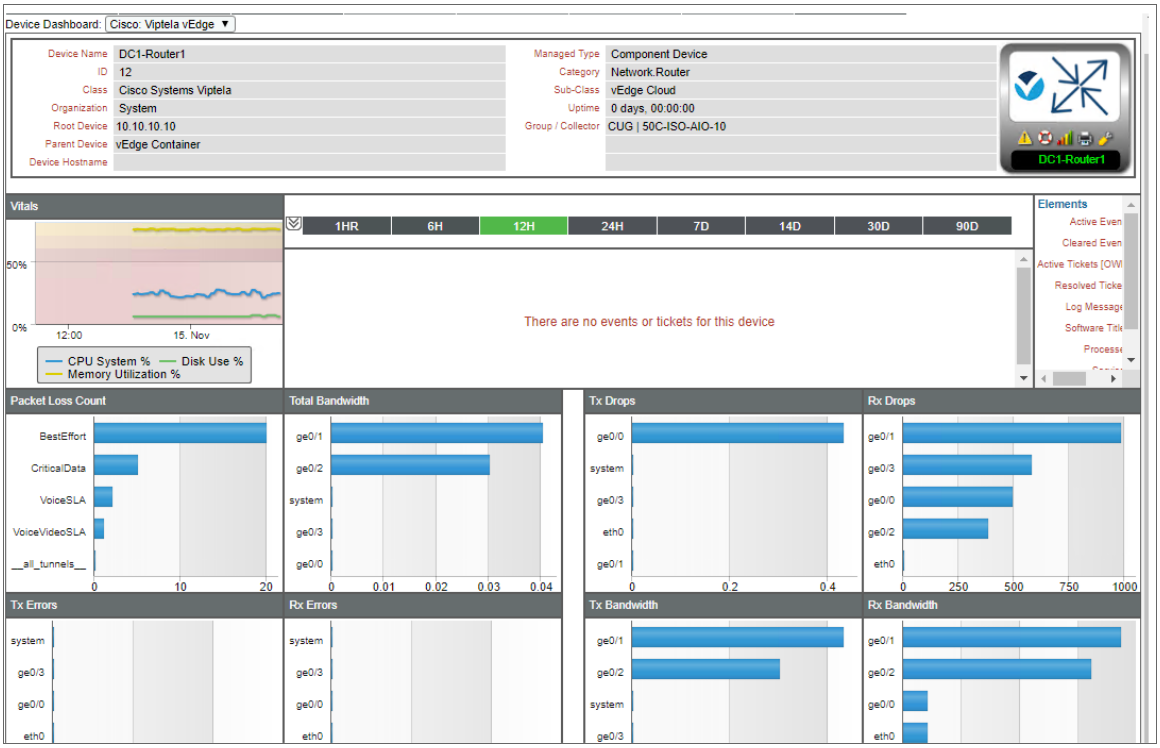
Overview

The *Cisco: Viptela* PowerPack contains dashboards that present data related to different aspects of a Cisco Viptela system.

The following sections describe each of these dashboards:

Cisco Viptela vEdge Dashboard

The *Cisco: Viptela* PowerPack includes a dashboard that provides summary information for vEdge Router component devices.



The Cisco: Viptela vEdge dashboard displays the following information:

- Vitals: CPU system percentage, disk use percentage, and memory utilization percentage
- Packet loss count
- Total bandwidth by interface
- Tx drops by interface
- Rx drops by interface
- Tx errors by interface
- Rx errors by interface
- Tx bandwidth by interface
- Rx bandwidth by interface

Cisco Viptela vManage Dashboard

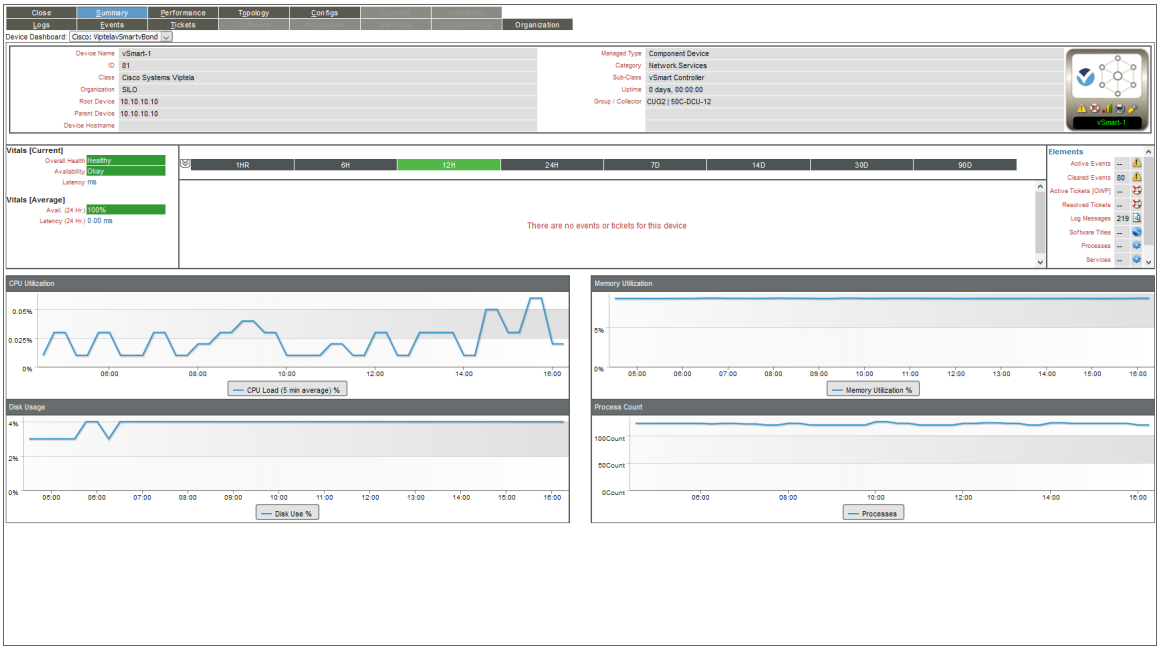
The *Cisco: Viptela* PowerPack includes a dashboard that provides summary information for vManage component devices.

The Cisco: Viptela vManage dashboard displays the following information:

- CPU utilization
- Memory utilization
- Disk usage
- New event counts

Cisco Viptela vSmart and vBond Dashboard

The *Cisco: Viptela* PowerPack includes a dashboard that provides summary information for vSmart and vBond component devices.



The Cisco: Viptela vSmartvBond dashboard displays the following information:

- CPU utilization
- Memory utilization
- Disk usage
- Process counts

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