



---

# Monitoring Cisco Viptela

Cisco: Viptela PowerPack version 103

---

# Table of Contents

<b>Introduction</b> .....	<b>3</b>
What is Cisco: Viptela? .....	4
What Does the Cisco: Viptela PowerPack Monitor? .....	4
Installing the Cisco: Viptela PowerPack .....	5
<b>Configuration and Discovery</b> .....	<b>6</b>
Prerequisite for Monitoring Cisco Viptela .....	6
Configuring a Credential for Cisco Viptela .....	6
Creating a Cisco Viptela Virtual Device .....	8
Aligning Dynamic Applications to the Virtual Device .....	8
Configuring the Device Template .....	9
Using the Device Template to Align Dynamic Applications to the Component Device .....	10
Viewing Information About the Cisco Viptela System .....	12
<b>Dashboards</b> .....	<b>14</b>
Cisco Viptela vEdge Dashboard .....	15
Cisco Viptela vManage Dashboard .....	16
Cisco Viptela vSmart and vBond Dashboard .....	17

---

# 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*:

<i>What is Cisco: Viptela?</i> .....	4
<i>What Does the Cisco: Viptela PowerPack Monitor?</i> .....	4
<i>Installing the Cisco: Viptela PowerPack</i> .....	5

**NOTE:** ScienceLogic provides this documentation for the convenience of ScienceLogic customers. Some of the configuration information contained herein pertains to third-party vendor software that is subject to change without notice to ScienceLogic. ScienceLogic makes every attempt to maintain accurate technical information and cannot be held responsible for defects or changes in third-party vendor software. There is no written or implied guarantee that information contained herein will work for all third-party variants. See the End User License Agreement (EULA) for more information.

---

## 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:
  - ASR1000 Series
  - ISR1000 Series
  - ISR4000 Series
  - 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

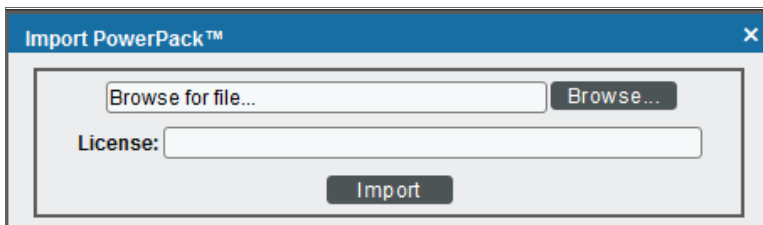
## Installing the Cisco: Viptela PowerPack

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 Support Site](#).
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:

<i>Prerequisite for Monitoring Cisco Viptela</i> .....	6
<i>Configuring a Credential for Cisco Viptela</i> .....	6
<i>Creating a Cisco Viptela Virtual Device</i> .....	8
<i>Aligning Dynamic Applications to the Virtual Device</i> .....	8
<i>Configuring the Device Template</i> .....	9
<i>Using the Device Template to Align Dynamic Applications to the Component Device</i> .....	10
<i>Viewing Information About the Cisco Viptela System</i> .....	12

---

### 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:

The screenshot shows the 'Edit SOAP/XML Credential #94' modal page. The window title is 'Credential Editor [94]'. The page is divided into several sections: 'Basic Settings' with fields for Profile Name (Viptela Credential Example), Content Encoding ([text/xml]), Method ([POST]), HTTP Version ([HTTP/1.1]), URL (https://URL:443), HTTP Auth User (<username>), HTTP Auth Password (masked), and Timeout (seconds) (10); 'Proxy Settings' with fields for Hostname/IP, Port (0), and User; 'CURL Options' with a list of options like CAINFO, CAPATH, etc., and arrows to add or remove them; 'Soap Options' with an Embedded Password [%P] field and four Embed Value [%1-%4] fields; and 'HTTP Headers' with a field containing %silo\_token=X-XSRF-TOKEN. Buttons for 'New', 'Reset', 'Save', and 'Save As' are visible.

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.

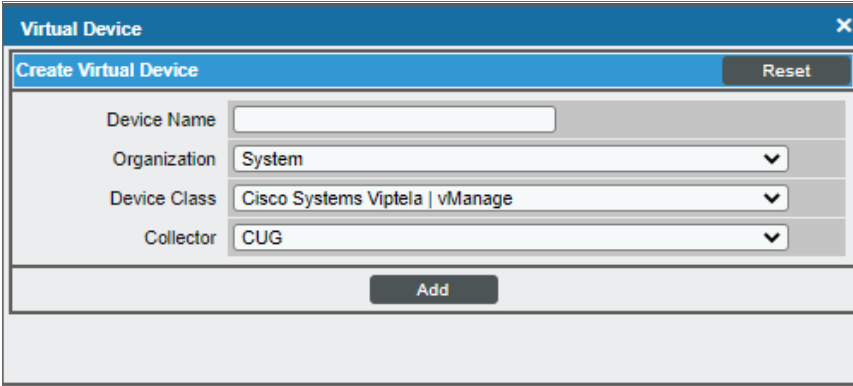
---

## 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:



The screenshot shows a modal window titled "Virtual Device" with a close button (X) in the top right corner. Inside the modal, there is a sub-header "Create Virtual Device" and a "Reset" button. Below this, there are four input fields: "Device Name" (a text box), "Organization" (a dropdown menu with "System" selected), "Device Class" (a dropdown menu with "Cisco Systems Viptela | vManage" selected), and "Collector" (a dropdown menu with "CUG" selected). At the bottom of the form is an "Add" button.

3. Complete the following fields:
  - **Device Name.** Type a name for the device.
  - **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.

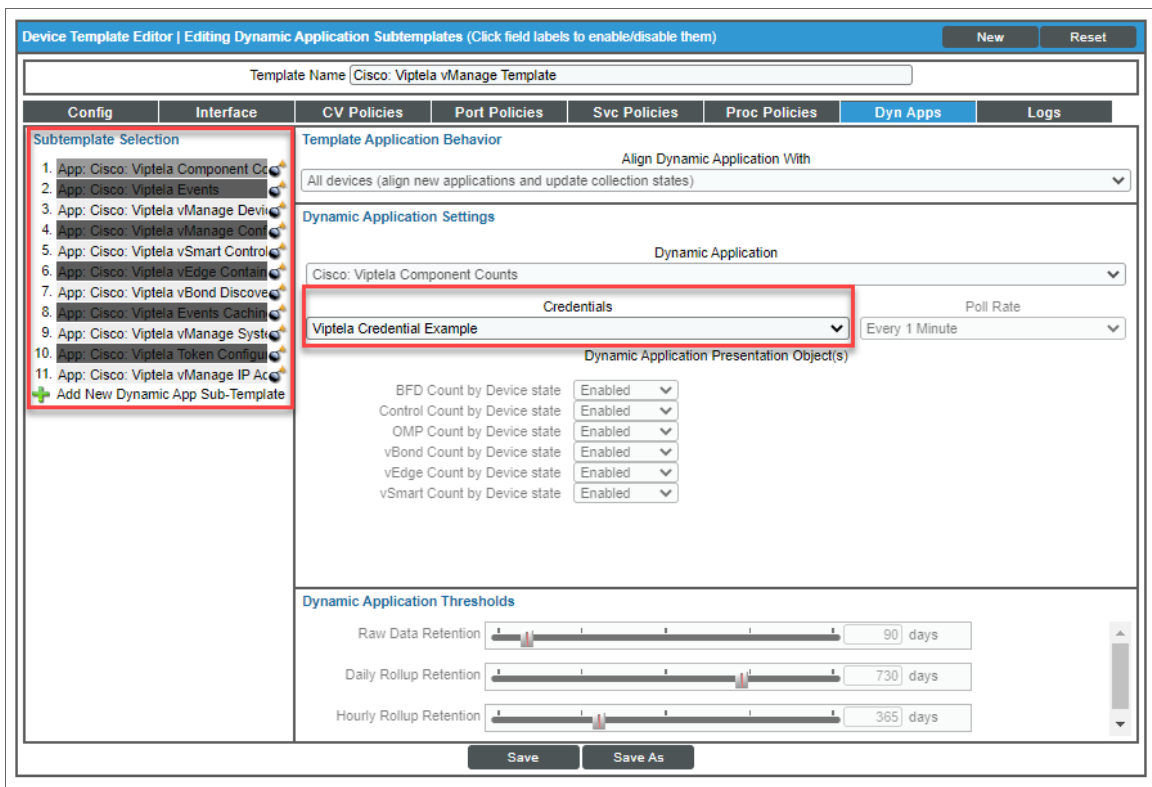


# Configuring the Device Template

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:



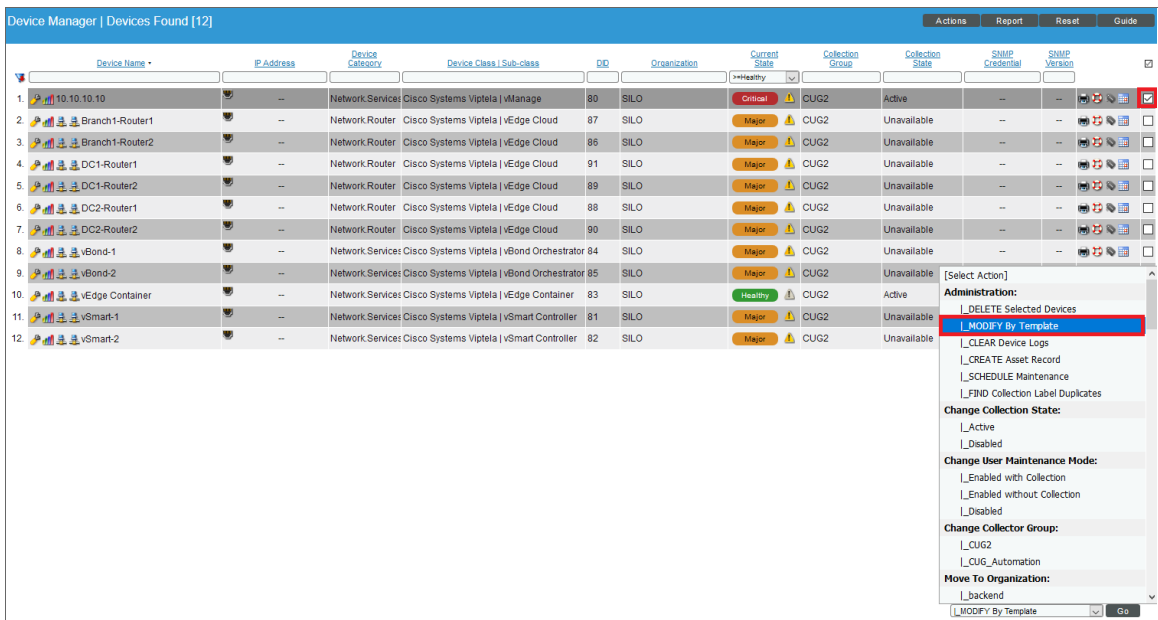
4. In the **Credentials** drop-down list, select the credential that you created for Viptela.
5. Click the next Dynamic Application listed in the **Subtemplate Selection** section on the left side of the page and then select the credential you created in the **Credentials** field.
6. Repeat step 5 until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



- 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:

The screenshot shows the 'Device Template Editor' interface. At the top, there's a title bar with 'Device Template Editor | Applying Template to Devices | Config Template: Settings (Click field labels to enable/disable them)' and a 'Reset' button. Below this, there's a 'Template' dropdown menu set to 'New / One-off Template', a 'Save When Applied & Confirmed' checkbox, and a 'Template Name' input field. A navigation bar contains tabs for 'Policies', 'Port Policies', 'Svc Policies', 'Proc Policies', 'Dyn Apps', and 'Logs'. The main content area is divided into several sections:

- Access & Availability:** Includes a 'Device' dropdown menu with 'Cisco: Viptela vManage Template' selected (highlighted in red). Other options include 'Cisco: CE Series', 'Cisco: UCS Standalone Template', 'Host Agent: Dynamic Applications', 'Support: Apply Applications', 'Support: Discovery Template', 'UCS Template', and 'VMware vSphere Template'. Below these are 'Coll. Type' (Standard), 'Critical Ping' (Disabled), and 'Event Mask' (Disabled).
- Device Retention & Basic Thresholds:** Features sliders for 'System Latency' (100 ms), 'Availability Packet Size' (56 bytes), 'Availability Ping Count' (1 pings), 'Daily Rollup Bandwidth Data' (730 days), 'Hourly Rollup Bandwidth Data' (120 days), 'Raw Performance Data' (7 days), and 'Daily Rollup Performance Data' (730 days).
- Interface Inventory Settings:** Includes 'Interface Inventory' and 'Maximum Allowed' fields.
- Device Preferences:** Contains checkboxes for 'Auto-Clear Events', 'Scan All IPs', 'Accept All Logs', 'Dynamic Discovery', 'Daily Port Scans', 'Preserve Hostname', 'Auto-Update', 'Disable Asset Update', and 'Bypass Interface Inventory'.

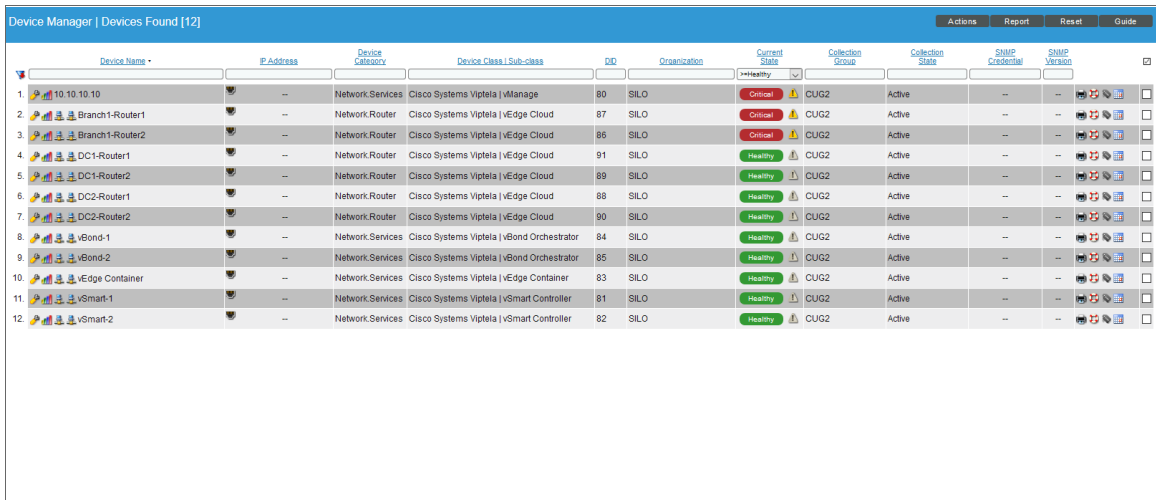
An 'Apply' button is located at the bottom center of the interface.

- 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.
- 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

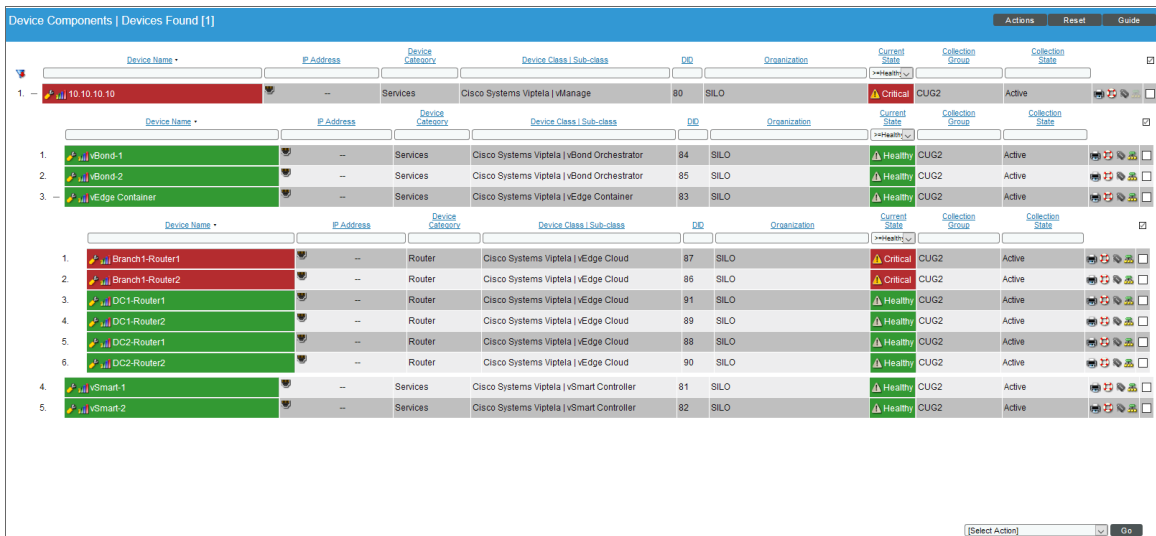
You can view all the devices, virtual devices, and component devices in the Cisco: Viptela system in the following places in the user interface:

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



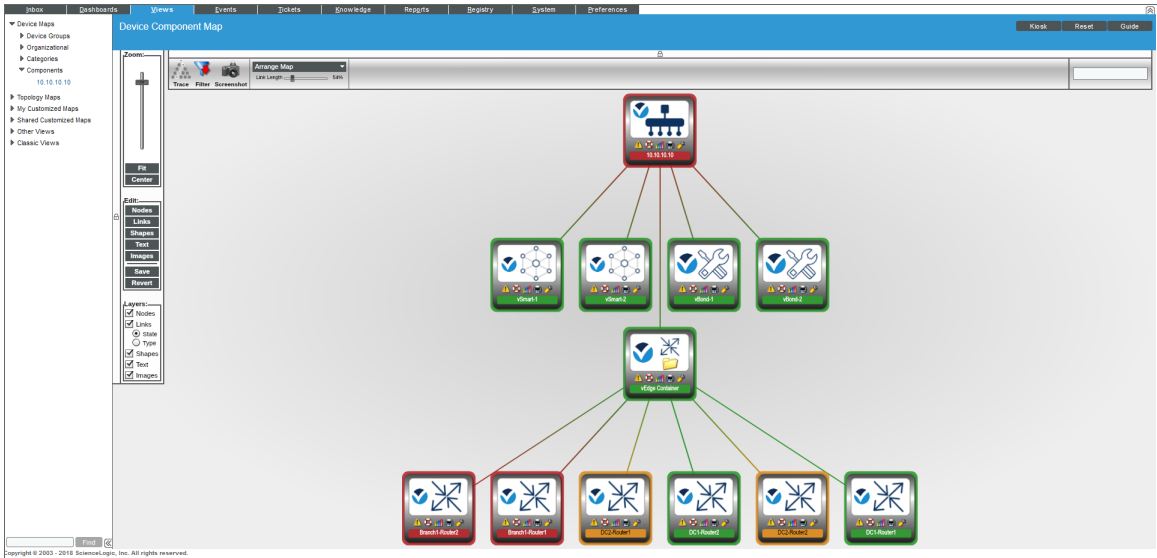
Device Name	IP Address	Device Category	Device Class   Sub-class	DD	Organization	Current State	Collection Group	Collection State	SNMP Credential	SNMP Version
10.10.10.10	--	Network.Services	Cisco Systems Viptela   vManage	80	SILO	Critical	CUG2	Active	--	--
Branch1-Router1	--	Network.Router	Cisco Systems Viptela   vEdge Cloud	87	SILO	Critical	CUG2	Active	--	--
Branch1-Router2	--	Network.Router	Cisco Systems Viptela   vEdge Cloud	86	SILO	Critical	CUG2	Active	--	--
DC1-Router1	--	Network.Router	Cisco Systems Viptela   vEdge Cloud	91	SILO	Healthy	CUG2	Active	--	--
DC1-Router2	--	Network.Router	Cisco Systems Viptela   vEdge Cloud	89	SILO	Healthy	CUG2	Active	--	--
DC2-Router1	--	Network.Router	Cisco Systems Viptela   vEdge Cloud	88	SILO	Healthy	CUG2	Active	--	--
DC2-Router2	--	Network.Router	Cisco Systems Viptela   vEdge Cloud	90	SILO	Healthy	CUG2	Active	--	--
vBond-1	--	Network.Services	Cisco Systems Viptela   vBond Orchestrator	84	SILO	Healthy	CUG2	Active	--	--
vBond-2	--	Network.Services	Cisco Systems Viptela   vBond Orchestrator	85	SILO	Healthy	CUG2	Active	--	--
vEdge Container	--	Network.Services	Cisco Systems Viptela   vEdge Container	83	SILO	Healthy	CUG2	Active	--	--
vSmart-1	--	Network.Services	Cisco Systems Viptela   vSmart Controller	81	SILO	Healthy	CUG2	Active	--	--
vSmart-2	--	Network.Services	Cisco Systems Viptela   vSmart Controller	82	SILO	Healthy	CUG2	Active	--	--

- 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 (+):



Device Name	IP Address	Device Category	Device Class   Sub-class	DD	Organization	Current State	Collection Group	Collection State
10.10.10.10	--	Services	Cisco Systems Viptela   vManage	80	SILO	Critical	CUG2	Active
1. vBond-1	--	Services	Cisco Systems Viptela   vBond Orchestrator	84	SILO	Healthy	CUG2	Active
2. vBond-2	--	Services	Cisco Systems Viptela   vBond Orchestrator	85	SILO	Healthy	CUG2	Active
3. vEdge Container	--	Services	Cisco Systems Viptela   vEdge Container	83	SILO	Healthy	CUG2	Active
1. Branch1-Router1	--	Router	Cisco Systems Viptela   vEdge Cloud	87	SILO	Critical	CUG2	Active
2. Branch1-Router2	--	Router	Cisco Systems Viptela   vEdge Cloud	86	SILO	Critical	CUG2	Active
3. DC1-Router1	--	Router	Cisco Systems Viptela   vEdge Cloud	91	SILO	Healthy	CUG2	Active
4. DC1-Router2	--	Router	Cisco Systems Viptela   vEdge Cloud	89	SILO	Healthy	CUG2	Active
5. DC2-Router1	--	Router	Cisco Systems Viptela   vEdge Cloud	88	SILO	Healthy	CUG2	Active
6. DC2-Router2	--	Router	Cisco Systems Viptela   vEdge Cloud	90	SILO	Healthy	CUG2	Active
4. vSmart-1	--	Services	Cisco Systems Viptela   vSmart Controller	81	SILO	Healthy	CUG2	Active
5. vSmart-2	--	Services	Cisco Systems Viptela   vSmart Controller	82	SILO	Healthy	CUG2	Active

- 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

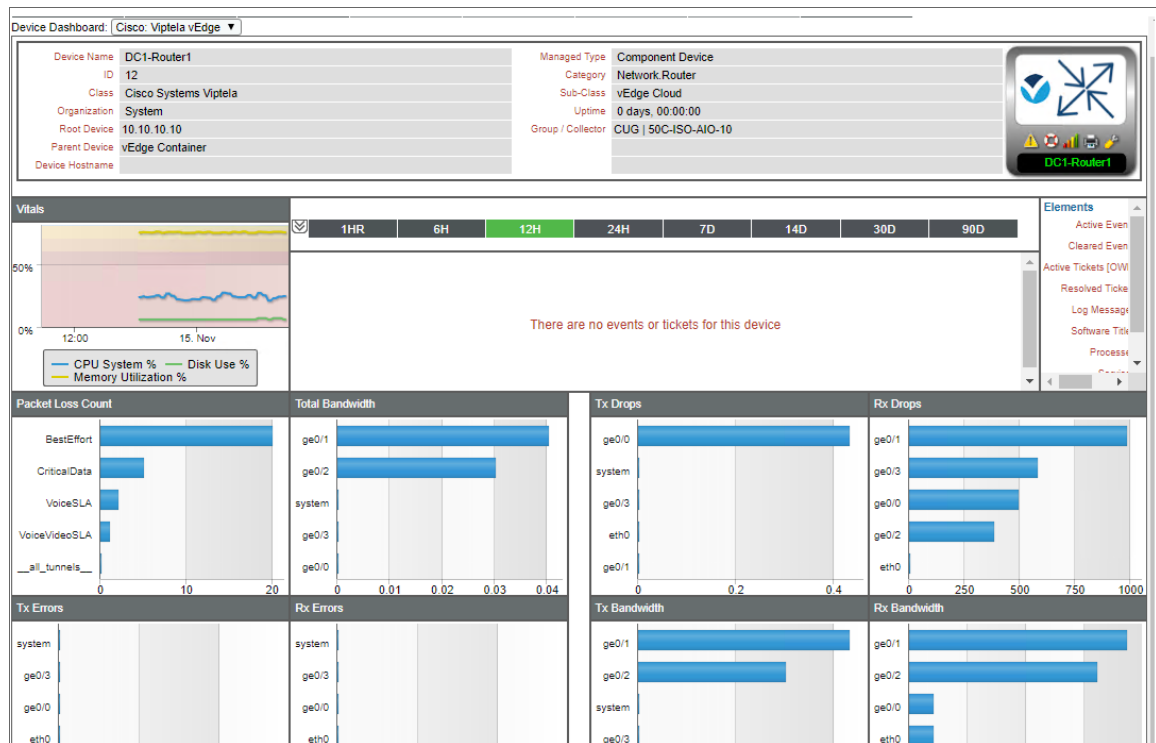
The *Cisco: Viptela* PowerPack contains dashboards that present data related to different aspects of a Cisco Viptela system.

The following sections describe each of these dashboards:

<i>Cisco Viptela vEdge Dashboard</i> .....	15
<i>Cisco Viptela vManage Dashboard</i> .....	16
<i>Cisco Viptela vSmart and vBond Dashboard</i> .....	17

# Cisco Viptela vEdge Dashboard

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

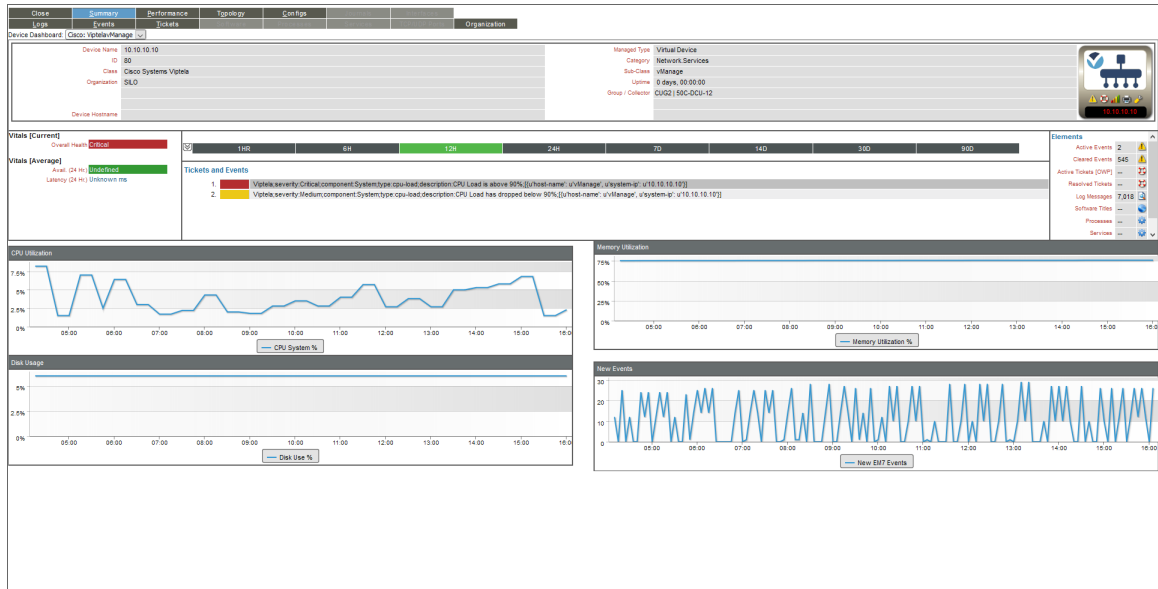


The Cisco: Viptela vEdge dashboard displays the following information:

- 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.



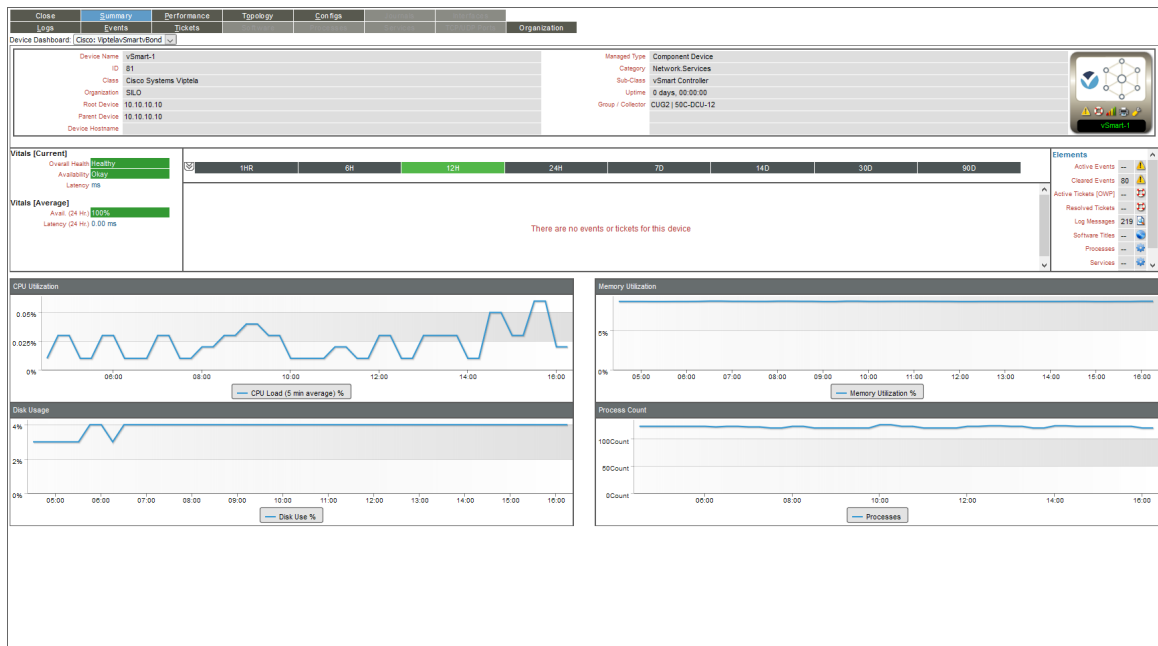
The Cisco Viptela vManage dashboard displays the following information:

- 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

© 2003 - 2021, ScienceLogic, Inc.

All rights reserved.

#### LIMITATION OF LIABILITY AND GENERAL DISCLAIMER

ALL INFORMATION AVAILABLE IN THIS GUIDE IS PROVIDED "AS IS," WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED. SCIENCELOGIC™ AND ITS SUPPLIERS DISCLAIM ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT.

Although ScienceLogic™ has attempted to provide accurate information on this Site, information on this Site may contain inadvertent technical inaccuracies or typographical errors, and ScienceLogic™ assumes no responsibility for the accuracy of the information. Information may be changed or updated without notice. ScienceLogic™ may also make improvements and / or changes in the products or services described in this Site at any time without notice.

#### Copyrights and Trademarks

ScienceLogic, the ScienceLogic logo, and EM7 are trademarks of ScienceLogic, Inc. in the United States, other countries, or both.

Below is a list of trademarks and service marks that should be credited to ScienceLogic, Inc. The ® and ™ symbols reflect the trademark registration status in the U.S. Patent and Trademark Office and may not be appropriate for materials to be distributed outside the United States.

- ScienceLogic™
- EM7™ and em7™
- Simplify IT™
- Dynamic Application™
- Relational Infrastructure Management™

The absence of a product or service name, slogan or logo from this list does not constitute a waiver of ScienceLogic's trademark or other intellectual property rights concerning that name, slogan, or logo.

Please note that laws concerning use of trademarks or product names vary by country. Always consult a local attorney for additional guidance.

#### Other

If any provision of this agreement shall be unlawful, void, or for any reason unenforceable, then that provision shall be deemed severable from this agreement and shall not affect the validity and enforceability of any remaining provisions. This is the entire agreement between the parties relating to the matters contained herein.

In the U.S. and other jurisdictions, trademark owners have a duty to police the use of their marks. Therefore, if you become aware of any improper use of ScienceLogic Trademarks, including infringement or counterfeiting by third parties, report them to Science Logic's legal department immediately. Report as much detail as possible about the misuse, including the name of the party, contact information, and copies or photographs of the potential misuse to: [legal@sciencelogic.com](mailto:legal@sciencelogic.com)



800-SCI-LOGIC (1-800-724-5644)

International: +1-703-354-1010