



Monitoring Hitachi Data Systems

Beta Version

Hitachi Data Systems: VSP PowerPack version 102

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Introduction

Overview

This manual describes how to use the *Hitachi Data Systems: VSP PowerPack* to monitor Hitachi Virtual Storage Platform (VSP) storage arrays and their associated component devices with the ScienceLogic platform.

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What Does the Hitachi Data Systems: VSP PowerPack Monitor?

To monitor Hitachi VSP systems using the ScienceLogic platform, you must install the *Hitachi Data Systems: VSP PowerPack*. This PowerPack enables you to discover, model, and collect data about Hitachi VSP storage arrays and their component devices.

The *Hitachi Data Systems: VSP PowerPack* includes:

- An example credential you can use to create Basic/Snippet credentials to connect to the Hitachi VSP system
- Dynamic Applications to discover and monitor the VSP system
- Device Classes for each type of device in the VSP system monitored by the ScienceLogic platform
- Event Policies and corresponding alerts that are triggered when devices in the VSP system meet certain status criteria.

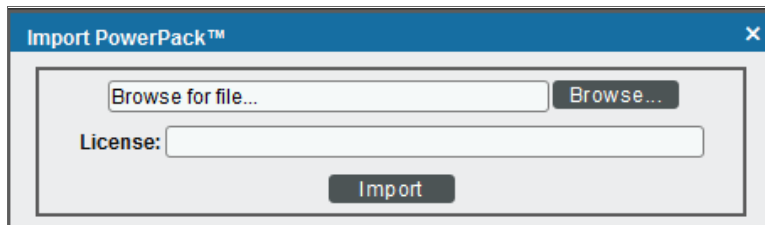
Installing the Hitachi Data Systems: VSP PowerPack

Before completing the steps in this manual, you must import and install the latest version of the *Hitachi Data Systems: VSP PowerPack*.

To download and install a 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.)

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*.

Monitoring Hitachi Virtual Storage Platform (VSP)

Overview

The following sections describe how to configure and discover Hitachi Virtual Storage Platform (VSP) systems for monitoring by the ScienceLogic platform using the *Hitachi Data Systems: VSP PowerPack*:

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Prerequisites

Before you can monitor Hitachi VSP storage arrays using the *Hitachi Data Systems: VSP PowerPack*, you must have the following information about an Hitachi SMI-S Provider that has already been properly installed and configured:

- IP address and port for the SMI-S Provider
- Username and password for a user with access to the SMI-S Provider

The SMI-S Provider will act as the root device during discovery by the ScienceLogic platform.

Creating a Credential for Hitachi VSP Systems

To configure the ScienceLogic platform to monitor Hitachi VSP systems, you must first create a Basic/Snippet credential. This credential allows the Dynamic Applications in the *Hitachi Data Systems: VSP PowerPack* to connect with an Hitachi SMI-S Provider. An example Basic/Snippet credential that you can edit for your own use is included in the *Hitachi Data Systems: VSP PowerPack*.

To create a Basic/Snippet credential to access an Hitachi SMI-S Provider:

1. Go to the **Credential Management** page (System > Manage > Credentials).
2. Locate the **HDS SMI-S Example** credential, then click its wrench icon (🔧). The **Edit Basic/Snippet Credential** modal page appears.
3. Enter values in the following fields:

The screenshot shows a window titled "Credential Editor [69]" with a sub-header "Edit Basic/Snippet Credential #69". It contains a "Basic Settings" section with the following fields: "Credential Name" (HDS SMI-S Example), "Hostname/IP" (%D), "Port" (5989), "Timeout(ms)" (30000), "Username" (PROVIDER_USERNAME), and "Password" (masked with dots). There are "New" and "Reset" buttons at the top right, and "Save" and "Save As" buttons at the bottom.

- **Credential Name.** Enter a new name for the Hitachi VSP credential.
 - **Hostname/IP.** Enter "%D".
 - **Port.** Enter "5989" for an HTTPS connection.
 - **Timeout.** Enter "30000".
 - **Username.** Enter the username for a user with access to the SMI-S Provider.
 - **Password.** Enter the password for the SMI-S Provider account username.
4. Click the **[Save As]** button.
 5. When the confirmation message appears, click **[OK]**.

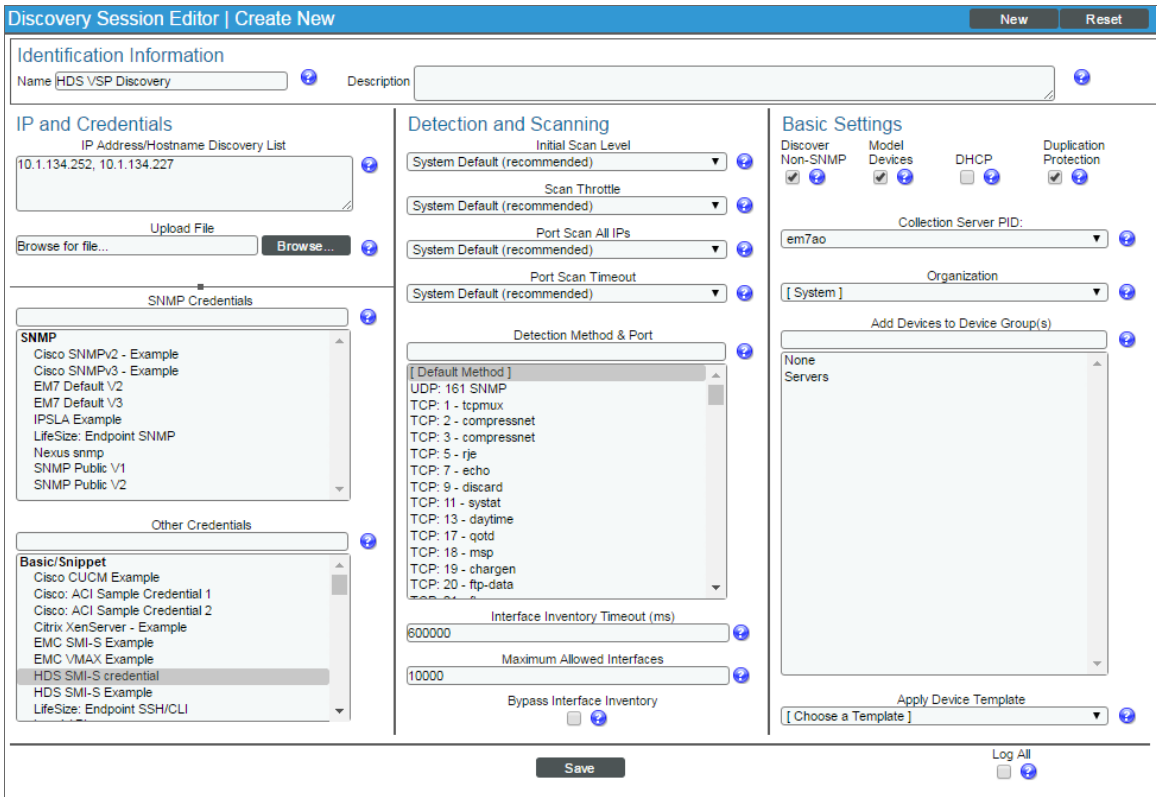
Discovering Hitachi VSP Devices

To model and monitor your Hitachi VSP system, you must first run a discovery session to discover the Hitachi SMI-S Provider. The ScienceLogic platform will use the Hitachi SMI-S Provider as the root device for monitoring the VSP system.

The discovery session will discover the SMI-S Provider as a pingable device using *the Basic/Snippet credential that you created*. You must then manually align the "HDS: VSP Array Discovery" Dynamic Application to the SMI-S Provider pingable device. When you do so, the ScienceLogic platform will discover, model, and monitor the remaining component devices in your VSP system.

To discover the Hitachi VSP system that you want to monitor, perform the following steps:

1. Go to the **Discovery Control Panel** page (System > Manage > Discovery).
2. In the **Discovery Control Panel**, click the **[Create]** button.
3. The **Discovery Session Editor** page appears. On this page, define values in the following fields:



- **IP Address Discovery List.** Enter the IP address for the SMI-S Provider.
 - **Other Credentials.** Select the Basic/Snippet credential you created for the SMI-S Provider.
 - **Discover Non-SNMP.** Select this checkbox.
 - **Model Devices.** Select this checkbox.
4. 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.
 5. Click the **[Save]** button to save the discovery session and then close the **Discovery Session Editor** window.
 6. 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.

7. The **Discovery Session** window appears. When the SMI-S Provider is discovered, click its device icon (🖨️) to view the **Device Properties** page for the SMI-S Provider.
8. From the **Device Properties** page for the SMI-S Provider, click the **[Collections]** tab. The **Dynamic Application Collections** page appears.
9. Click the **[Actions]** button and then select *Add Dynamic Application* from the menu. The **Dynamic Application Alignment** page appears:

The screenshot shows the 'Dynamic Application Alignment' window. The left pane, titled 'Dynamic Applications', shows a list of applications for 'HDS: VSP'. Under 'Snippet Configuration', 'HDS: VSP Array Discovery' is selected. Under 'Snippet Performance', 'HDS: VSP Array Capacity Stats' and 'HDS: VSP Array Stats' are listed. The right pane, titled 'Credentials', shows a list of credentials. Under 'Basic/Snippet', 'HDS SMI-S credential' is selected. Other credentials include 'Cisco CUCM Example', 'Cisco: ACI Sample Credential 1', 'Citrix XenServer - Example', 'EMC SMI-S Example', 'EMC VMAX Example', 'HDS SMI-S Example', 'LifeSize: Endpoint SSH/CLI', 'Local API', 'NetApp 7-mode', 'Nexus netconf', 'Polycom DMA CDR Example', 'Windows HyperV - Example', 'Windows WMI - Example', 'Windows WMI - Restart Services', and 'WMI SQL Default'. Under 'SSH/Key', 'Azure Classic Credential SSH' is listed. Under 'PowerShell', 'Exchange PowerShell', 'Lync 2010 Credentials - Example', and 'Windows PowerShell - Example' are listed. A 'Save' button is at the bottom center.

10. In the **Dynamic Applications** field, select *HDS: VSP Array Discovery*.
11. In the **Credentials** field, select the Basic/Snippet credential you configured for the SMI-S Provider.
12. Click the **[Save]** button.

- The "HDS: VSP Array Discovery" Dynamic Application appears on the **Dynamic Application Collections** page and begins auto-aligning the other Dynamic Applications in the *Hitachi Data Systems: VSP PowerPack* to the SMI-S Provider and discovering the other component devices in the VSP system.

The screenshot displays the Nagios XI interface for a device named 'hds-vsp'. At the top, there are navigation tabs: Close, Properties, Thresholds, Collections (selected), Monitors, Schedule, Logs, Toolbox, Interfaces, Relationships, Tickets, Redirects, Notes, and Attributes. Below these tabs, the device details are shown in a grid format:

Device Name	hds-vsp	Managed Type	Physical Device
IP Address / ID	10.1.134.252 3546	Category	Pingable
Class	Ping	Sub-Class	ICMP
Organization	System	Uptime	0 days, 00:00:00
Collection Mode	Unavailable	Collection Time	2016-11-29 20:02:00
Description		Group / Collector	CUG1 KNT-Patch2-CU1-65
Device Hostname			

On the right side of the device details, there is a 'Ping Device' button with a green status indicator and a small 'hds-vsp' icon below it.

Below the device details is the 'Dynamic Application™ Collections' section. It features a table with columns for ID, Poll Frequency, Type, and Credential. A single entry is visible:

ID	Poll Frequency	Type	Credential
1293	5 mins	Snippet Configuration	HDS


At the bottom of the interface, there is a '[Select Action]' dropdown menu, a 'Go' button, and a 'Save' button.

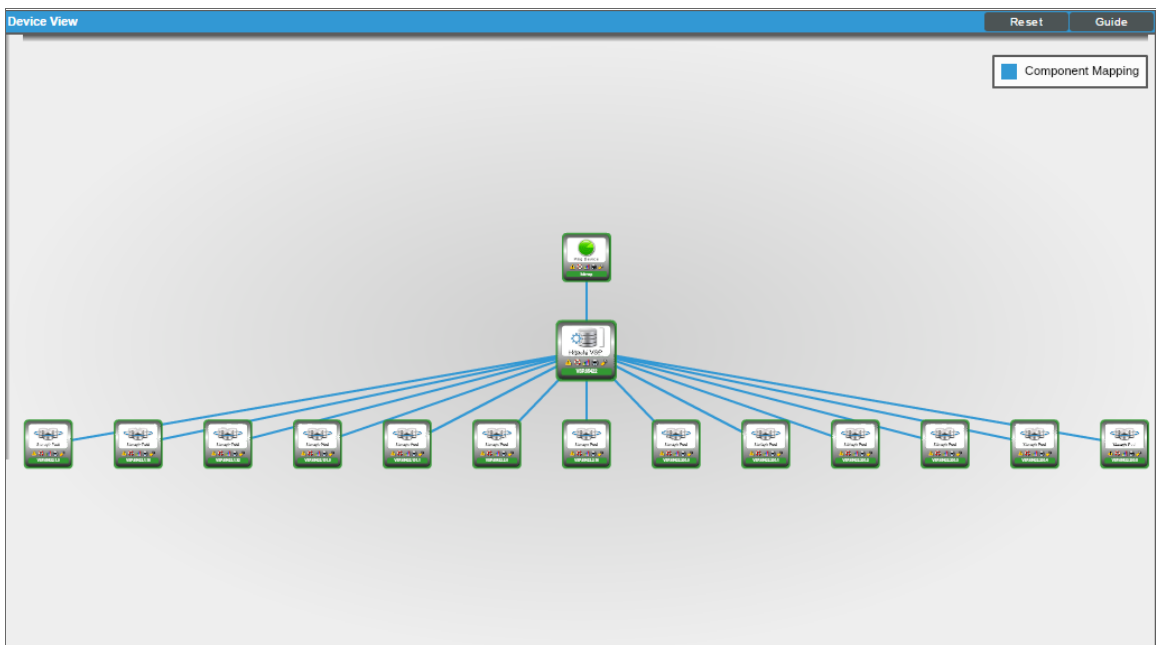
NOTE: It might take several minutes after manually aligning the discovery Dynamic Application for the ScienceLogic platform to discover and model the remaining component devices in the VSP system.

Viewing Hitachi VSP Devices

When the ScienceLogic platform discovers your Hitachi VSP system, the platform will create component devices that represent each component in your VSP system.

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

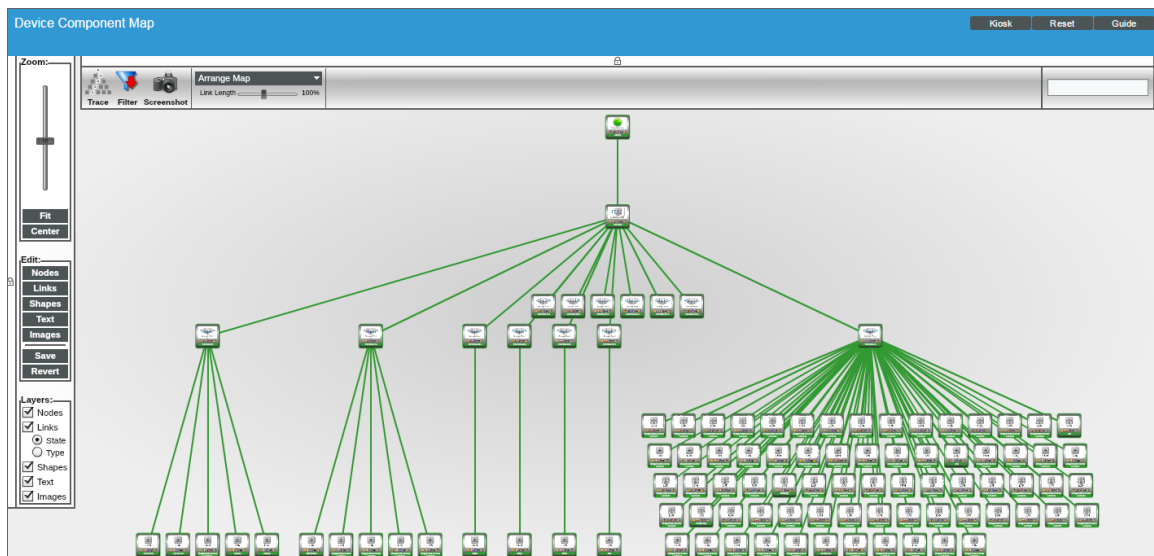
- The **Device View** modal page (click the bar-graph icon  for a device, then click the **Topology** tab) displays a map of the selected device and all of the devices with which it has parent-child relationships. Double-clicking any of the devices reloads the page and makes the selected device the primary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

Device Name	IP Address	Device Category	Device Class Sub-class	DIID	Organization	Current State	Collection Group	Collection State
hds-vsp	10.1.134.252	Array	Hitachi Data Systems VSP Storage System	3547	System	Healthy	CUG1	Active
VSP65422	--	Array	Hitachi Data Systems VSP Storage System	3548	System	Healthy	CUG1	Active
VSP65422.1.0	--	Pool	Hitachi Data Systems VSP Storage Pool	3560	System	Healthy	CUG1	Active
bfr-smis-0002	--	LUN	Hitachi Data Systems VSP LUN	3622	System	Healthy	CUG1	Active
bfr-smis-0004	--	LUN	Hitachi Data Systems VSP LUN	3641	System	Healthy	CUG1	Active
IntelliMagic	--	LUN	Hitachi Data Systems VSP LUN	3610	System	Healthy	CUG1	Active
Pvol	--	LUN	Hitachi Data Systems VSP LUN	3590	System	Healthy	CUG1	Active
StorageVolume\VSP.65422.00.00.00	--	LUN	Hitachi Data Systems VSP LUN	3600	System	Healthy	CUG1	Active
StorageVolume\VSP.65422.00.00.01	--	LUN	Hitachi Data Systems VSP LUN	3596	System	Healthy	CUG1	Active
StorageVolume\VSP.65422.00.00.03	--	LUN	Hitachi Data Systems VSP LUN	3602	System	Healthy	CUG1	Active
StorageVolume\VSP.65422.00.00.08	--	LUN	Hitachi Data Systems VSP LUN	3615	System	Healthy	CUG1	Active
StorageVolume\VSP.65422.00.00.0e	--	LUN	Hitachi Data Systems VSP LUN	3617	System	Healthy	CUG1	Active
StorageVolume\VSP.65422.00.00.13	--	LUN	Hitachi Data Systems VSP LUN	3619	System	Healthy	CUG1	Active
StorageVolume\VSP.65422.00.00.15	--	LUN	Hitachi Data Systems VSP LUN	3598	System	Healthy	CUG1	Active
StorageVolume\VSP.65422.00.00.16	--	LUN	Hitachi Data Systems VSP LUN	3599	System	Healthy	CUG1	Active
StorageVolume\VSP.65422.00.00.1f	--	LUN	Hitachi Data Systems VSP LUN	3637	System	Healthy	CUG1	Active
StorageVolume\VSP.65422.00.00.25	--	LUN	Hitachi Data Systems VSP LUN	3638	System	Healthy	CUG1	Active
StorageVolume\VSP.65422.00.00.27	--	LUN	Hitachi Data Systems VSP LUN	3597	System	Healthy	CUG1	Active

- The **Device 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 **Device 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 VSP system, go to the **Device Component Map** page and select the map from the list in the left NavBar. To learn more about the **Device Component Map** page, see the **Views** manual.



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