Monitoring IBM Spectrum Virtualize

IBM: Spectrum Virtualize PowerPack version 100

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Chapter 1

Introduction

Overview

This manual describes how to monitor IBM Spectrum Virtualize storage systems in Skylar One using the "IBM: Spectrum Virtualize" PowerPack.

The following sections provide an overview of IBM Spectrum Virtualize and the "IBM: Spectrum Virtualize" PowerPack:

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What is IBM Spectrum Virtualize

IBM Spectrum Virtualize is a large-scale storage system that allows for symmetric virtualization and data management across on-premises and cloud environments, and integrates with multiple other IBM systems.

What Does the IBM: Spectrum Virtualize PowerPack Monitor?

To monitor IBM Spectrum Virtualize systems using Skylar One, you must install the "IBM: Spectrum Virtualize" PowerPack. This PowerPack enables you to discover, model, and collect data about IBM Spectrum Virtualize systems.

The "IBM: Spectrum Virtualize" PowerPack includes:

- A universal credential you can use to connect to the IBM Spectrum Virtualize systems you want to monitor
- Dynamic Applications to discover, model, and monitor performance metrics and collect configuration data for IBM Spectrum Virtualize devices
- Device Classes for the clusters, storage pools, and managed disks thatSkylar One monitors
- Event Policies and corresponding alerts that are triggered when IBM Spectrum Virtualize devices meet certain status criteria

Installing the IBM: Spectrum Virtualize PowerPack

Before completing the steps in this manual, you must import and install the latest version of the "IBM: Spectrum Virtualize" 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 section on *Global Settings*.

NOTE: For details on upgrading Skylar One, see the relevant *Skylar One Platform Release Notes*.

To download and install the PowerPack:

1. Search for and download the PowerPack from the **PowerPacks** page at the ScienceLogic Support Center (Skylar One > PowerPacks, login required).
2. In Skylar One, go to the **PowerPacks** page (System > Manage > PowerPacks).
3. Click the **[Actions]** button and choose *Import PowerPack*. The **Import PowerPack** dialog box appears.
4. Click **[Browse]** and navigate to the PowerPack file from step 1.
5. Select the PowerPack file and click **[Import]**. The **PowerPack Installer** modal displays a list of the

PowerPack contents.

6. Click **[Install]**. The PowerPack is added to the **PowerPacks** page.

> **NOTE:** If you exit the **PowerPack Installer** modal without installing the imported PowerPack, the imported PowerPack will not appear in the **PowerPacks** 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 IBM Spectrum Virtualize systems for monitoring by Skylar One using the "IBM: Spectrum Virtualize" PowerPack:

This chapter covers the following topics:

Prerequisites for Monitoring IBM Spectrum Virtualize

To configure the Skylar One system to monitor IBM Spectrum Virtualize systems using the "IBM: Spectrum Virtualize" PowerPack, you must first have the following:

- Low Code Tools PowerPack version 104 or greater. This PowerPack is required for credentials to function correctly.

IBM: Spectrum Virtualize PowerPack Polling Frequency

The "IBM: Spectrum Virtualize" PowerPack communicates with the IBM Spectrum Virtualize system using REST API calls. IBM enforces rate limits (10 command requests per second, three authentication requests per second, and four active connections per cluster) to protect the API server.

When configured with a 300 second (five minute) polling interval, the PowerPack generates approximately 157 REST API calls per device per polling cycle. This equates to approximately 0.5 requests per second, executed sequentially.

This behavior remains well within IBM's documented rate limits. For longer polling intervals (10 or 15 minutes), the request rate is proportionally lower. For more information about the rate limits imposed by IBM, see the documentation for IBM API Connect.

Creating a Universal Credential for IBM Spectrum Virtualize

To configure Skylar One to monitor an IBM Spectrum Virtualize system, you must first create a credential. This credential allows the Dynamic Applications in the "IBM: Spectrum Virtualize" PowerPack to communicate with your IBM Spectrum Virtualize system.

The PowerPack includes an example universal credential that you can edit and save for your own use.

To create a universal credential:

1. Go to the **Credentials** page (Manage > Credentials).
2. Locate the "IBM: Spectrum Virtualize Credential v104" credential, then click its **[Actions]** icon ( ) and select *Duplicate* from the drop-down field. The "IBM: Spectrum Virtualize Credential v104" credential appears.
3. Click the **[Action]** icon ( ) for the "IBM: Spectrum Virtualize Credential v104" credential, then select *Edit*. The **Edit Credential** page appears.
4. Enter values in the following fields:
    - ***Name***. Enter a new name for the credential. This field is required.
    - ***All Organizations***. Toggle on (blue) to align the credential to all organizations, or toggle off (gray) and then select one or more specific organizations from the ***Select the organizations the credential belongs to*** drop-down field to align the credential with those specific organizations.
    - ***Timeout***. Enter the time, in milliseconds, after which Skylar One will stop trying to communicate with the IBM Spectrum Virtualize device. This field is required.
    - ***Authentication Type***. Keep the default. The default is *Token Authentication*.
    - ***Authenticator Override***. This field is only used when a custom authenticator is leveraging this credential type. Enter the name of the custom authenticator.
    - ***Username***. Enter the username associated with the IBM Spectrum Virtualizeadministrator account.
    - ***Password***. Enter the password associated with the IBM Spectrum Virtualize administrator account.
    - ***URL***. Enter the URL that should be used to retrieve device data.
    - ***Authentication Failure Retry Time***. Enter the time in seconds after which authentication should be retried after failure.

- ***Token Retrieval Endpoint***. Only complete this field if the token should be retrieved from a different API.
- ***Token Key***. Enter the key value in the JSON device response that contains the token value to extract.
- ***Authorization Header***. Enter the authorization header for the API.
- ***Bearer Token Format***. Formulate how the bearer token should be configured and sent. The typical format is "Bearer {}" but varies per API.

NOTE: {} must be included so that the token is inserted properly.

5. Click **[Save & Close]**.

Discovering IBM Spectrum Virtualize Devices

If you are using the default Skylar One user interface (AP2), you can use the guided discovery framework process in Skylar One to guide you through a variety of existing discovery types. This process, which is also called "guided discovery", lets you choose a discovery type based on the type of devices you want to monitor. The guided discovery workflow includes an option for IBM Spectrum Virtualize.

To run a guided discovery:

1. On the **Devices** page ( ) or the **Discovery Sessions** page (Devices > Discovery Sessions), click the **[Add Devices]** button. The **Select** page appears.
2. Select the **[IBM]** button. Additional options for *IBM Cloud Guided Discovery* and *IBM Spectrum Virtualize* appear on the **Select the type of devices you want to monitor** page. Select *IBM Spectrum Virtualize*.
3. Click **[Select]**. The **Credential Selection** page appears.

NOTE: During the guided discovery process, you cannot click **[Next]** until the required fields are filled on the page, nor can you skip to future steps. However, you can revisit previous steps that you have already completed.

4. On the **Credential Selection** page of the guided discovery process, select the IBM Spectrum Virtualize *universal credential* that you configured, and then click **[Next]**. The **Root Device Details** page appears.
5. Complete the following fields:
   - ***Root Device Name***. Type the name of the root device for the IBM Spectrum Virtualize root device you want to monitor.
   - ***Select the organization to add discovered devices to***. Select the name of the organization to which you want to add the discovered device.
   - ***Collector Group Name***. Select an existing collector group to communicate with the discovered device. This field is required.

6. Click **[Next]**. Skylar One creates the IBM Spectrum Virtualize root device with the appropriate device class assigned to it and aligns the relevant Dynamic Applications. The **Final Summary** page appears.
7. Click **[Close]**.

NOTE: The results of a guided discovery do not display on the **Discovery Sessions** page (Devices > Discovery Sessions).

Discovering IBM Spectrum Virtualize Devices in the Skylar One Classic User Interface

If you want to discover IBM Spectrum Virtualize Devices in the Skylar One Classic User Interface, you can not use guided discovery, and must first create a virtual device for your IBM Spectrum Virtualize system and then manually align Dynamic Applications to the virtual device.

Creating an IBM Spectrum Virtualize Virtual Device

A virtual device is a user-defined container that represents a device or service that cannot be discovered by Skylar One. You can use the virtual device to store information gathered by policies or Dynamic Applications.

NOTE: You must use this method if you are using the classic Skylar One user interface. You can also use this method if you are using the default Skylar One user interface (AP2) but prefer to not use *guided discovery*.

To create a virtual device that represents your IBM Spectrum Virtualize system:

1. Go to the **Device Manager** page (Devices > Classic Devices, or Registry > Devices > Device Manager in the classic user interface).
2. Click **[Actions]** and select *Create Virtual Device* from the menu. The **Virtual Device** modal page appears.
3. Enter values in the following fields:
    - ***Device Name***. Enter 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 *IBM Spectrum Virtualize Cluster [Virtual Device]*.
    - ***Collector***. Select the collector group that will monitor the device.
4. Click **[Add]** to create the virtual device.

Aligning the Dynamic Applications

To align the IBM Spectrum VirtualizeDynamic Applications:

1. After discovery has completed, click the device icon for the IBM Spectrum Virtualize device ( ). From the **Device Properties** page for the IBM Spectrum Virtualize device, click the **[Collections]** tab. The **Dynamic Application Collections** page appears.

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

2. Click the **[Action]** button and then select *Add Dynamic Application*. The **Dynamic Application Alignment** page appears.
3. In the ***Dynamic Applications*** field, select the required "Discovery" Dynamic Application depending on the monitoring scope. For example, if you want to discover Nodes, select "IBM: Spectrum Virtualize Host Discovery".
4. In the ***Credentials*** field, select the credential you created previously.
5. Click the **[Save]** button.
6. Repeat steps 1-5 for the other discovery Dynamic Applications as necessary, followed by the corresponding configuration Dynamic Applications, such as "IBM: Spectrum Virtualize Host Configuration".

Viewing IBM Spectrum Virtualize Component Devices

In addition to the **Device Manager** page (Devices > Classic Devices, or Registry > Devices > Device Manager in the classic user interface), you can view the IBM Spectrum Virtualize 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 a particular device and all of the devices with which it has parent-child relationships. Double-clicking any of the devices listed reloads the page to make the selected device the primary device.
- The **Device Components** page (Devices > Device Components) displays a list of all root devices and component devices discovered by Skylar One 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 an IBM Spectrum Virtualize system, find the IBM Spectrum Virtualize device and click its plus icon (**+**).

- The **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. Skylar One 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 an IBM Spectrum Virtualize system, 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.

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