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## Monitoring Cisco HyperFlex

Cisco: HyperFlex PowerPack version 104

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# Chapter

# 1

## Introduction

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### Overview

This manual describes how to monitor Cisco HyperFlex data clusters in SL1 using the Dynamic Applications in the *Cisco: Hyperflex PowerPack*.

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

This chapter covers the following topics:

<a href="#">What Does the Cisco: HyperFlex PowerPack Monitor?</a> .....	3
<a href="#">Installing the Cisco: HyperFlex PowerPack</a> .....	4

**NOTE:** The *Cisco: Hyperflex PowerPack* supports only HyperFlex API version 4.5 and later.

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### What Does the Cisco: HyperFlex PowerPack Monitor?

To monitor HyperFlex data clusters using SL1, you must install the *Cisco: Hyperflex PowerPack*. This PowerPack enables you to discover, model, and collect data about HyperFlex data clusters.

The *Cisco: Hyperflex* PowerPack includes:

- An example credential you can use to create SOAP/XML credentials to connect to HyperFlex data clusters
- Dynamic Applications to discover and monitor HyperFlex data clusters
- A Device Class for HyperFlex data clusters
- Event Policies and corresponding alerts that are triggered when HyperFlex data clusters meet certain status criteria
- A Run Book Action and Policy to ensure that HyperFlex devices are classified to the appropriate Device Class

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## Installing the Cisco: HyperFlex PowerPack

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

**NOTE:** The *Cisco: Hyperflex* PowerPack supports only HyperFlex API version 4.5 and later.

**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.)

**IMPORTANT:** The minimum required MySQL version is 5.6.0.

To download and install the PowerPack:

1. Search for and download the PowerPack from the **PowerPacks** page (Product Downloads > PowerPacks & SyncPacks) at the [ScienceLogic Support Site](#).
2. In SL1, 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*.

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# Chapter

# 2

## Configuration and Discovery

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### Overview

The following sections describe how to configure and discover Cisco HyperFlex data clusters for monitoring by SL1 using the *Cisco: Hyperflex PowerPack*:

This chapter covers the following topics:

<i>Prerequisites for Monitoring Cisco HyperFlex</i> .....	6
<i>Creating a SOAP/XML Credential for Cisco HyperFlex</i> .....	7
<i>Discovering Cisco HyperFlex Devices</i> .....	9
<i>Troubleshooting Known Issues</i> .....	12

**NOTE:** The *Cisco: Hyperflex PowerPack* supports only HyperFlex API version 4.5 and later.

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### Prerequisites for Monitoring Cisco HyperFlex

To configure SL1 to monitor Cisco HyperFlex using the *Cisco: Hyperflex PowerPack*, you must have the following information about the HyperFlex data clusters that you want to monitor:

- The Hyperflex Cluster Management IP Address
- SNMP community strings for the voice mailboxes

# Creating a SOAP/XML Credential for Cisco HyperFlex

To configure SL1 to monitor Cisco HyperFlex, you must first create a SOAP/XML credential. This credential allows SL1 (specifically, the Dynamic Applications in the *Cisco: HyperFlex PowerPack*) to connect with HyperFlex devices. An example SOAP/XML credential that you can edit for your own use is included in the *Cisco: HyperFlex PowerPack*.

**NOTE:** If you are using an SL1 system prior to version 11.1.0, the new user interface does not include the **Duplicate** option for sample credential(s). ScienceLogic recommends that you use [the classic user interface and the Save As button](#) to create new credentials from sample credentials. This will prevent you from overwriting the sample credential(s).

To configure a SOAP/XML credential to access HyperFlex devices:

1. Go to the **Credentials** page (Manage > Credentials).
2. Locate the "Cisco: HyperFlex - Example" sample credential, click its **[Actions]** icon (☰) and select **Duplicate**. A copy of the credential appears.
3. Click the **[Actions]** icon (☰) for the "Cisco: HyperFlex - Example copy" credential copy and select **Edit**. The **Edit Credential** modal page appears:
4. Enter values in the following fields:

The screenshot shows the 'Edit Credential' modal page. The main form has the following fields:

- Name:** Cisco Hyperflex
- All Organizations:** Toggle is on (blue). Below it is a dropdown: 'Select the organizations the credential belongs to'
- Timeout (ms):** 30000
- Content Encoding:** text/xml
- Method:** POST
- HTTP Version:** http/1.1
- URL:** https://10.2.5.80:8088
- HTTP Auth User:** admin
- HTTP Auth Password:** [masked]
- Proxy Hostname/IP:** optional
- Proxy Port:** 0
- Proxy User:** optional
- Proxy Password:** [masked]
- Embedded Password (%P):** [masked]
- Embed Value [%1]:** [empty]
- Embed Value [%2]:** [empty]
- Embed Value [%3]:** [empty]
- Embed Value [%4]:** [empty]

On the right, the 'Credential Tester' panel includes:

- Select Credential Test:** dropdown
- Select Collector:** dropdown
- IP or Hostname to test:** text field
- Test Credential:** button
- Save & Close:** button at the bottom right of the modal

- **Name.** Enter a new name for the HyperFlex credential.
- **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.
- **Content Encoding.** Select *text/xml*.
- **Method.** Select *POST*.

- **HTTP Version.** Select *HTTP/1.1*.
- **URL.** Enter the IP address of your HyperFlex cluster.
- **HTTP Auth User:** Use the login credentials for the HyperFlex REST API Explorer:
  - For users with *HyperFlex Data Platform 3.0* and prior versions, type "root"
  - For users with *Hyperflex Data Platform 3.5* and later versions, type "admin"
- **HTTP Auth Password:**
  - For users with *HyperFlex Data Platform 3.0* and prior versions, enter the password for "root"
  - For users with *HyperFlex Data Platform 3.5* and later versions, enter the HyperFlex administrator user's password
- **Proxy Hostname/IP.** Leave this field blank.
- **Proxy Port.** Keep the default value.
- **Proxy User.** Enter the SSH username for the HyperFlex device(s).
- **Proxy Password.** Enter the SSH password for the HyperFlex device(s).

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

## Creating a SOAP/XML Credential for Cisco HyperFlex in the SL1 Classic User Interface

To configure SL1 to monitor Cisco HyperFlex, you must first create a SOAP/XML credential. This credential allows SL1 (specifically, the Dynamic Applications in the *Cisco: HyperFlex PowerPack*) to connect with HyperFlex devices. An example SOAP/XML credential that you can edit for your own use is included in the *Cisco: HyperFlex PowerPack*.

To configure a SOAP/XML credential to access HyperFlex devices:

1. Go to the **Credential Management** page (System > Manage > Credentials).
2. Locate the sample credential included in the *Cisco: HyperFlex PowerPack*, called **Cisco: HyperFlex - Example**, then click its wrench icon (.
3. Enter values in the following fields:

### **Basic Settings**

- **Profile Name.** Enter a new name for the HyperFlex credential.
- **Content Encoding.** Select *text/xml*.
- **Method.** Select *POST*.
- **HTTP Version.** Select *HTTP/1.1*.
- **URL.** Enter the IP address of your HyperFlex cluster.
- **HTTP Auth User:** Use the login credentials for the HyperFlex REST API Explorer:

- For users with HyperFlex Data Platform 3.0 and prior versions, type "root"
- For users with Hyperflex Data Platform 3.5 and later versions, type "admin"
- **HTTP Auth Password:**
  - For users with HyperFlex Data Platform 3.0 and prior versions, enter the password for "root"
  - For users with HyperFlex Data Platform 3.5 and later versions, enter the HyperFlex administrator user's password

### **Proxy Settings**

- **Hostname/IP.** Leave this field blank.
- **Port.** Keep the default value.
- **User.** Enter the SSH username for the HyperFlex device(s).
- **Password.** Enter the SSH password for the HyperFlex device(s).

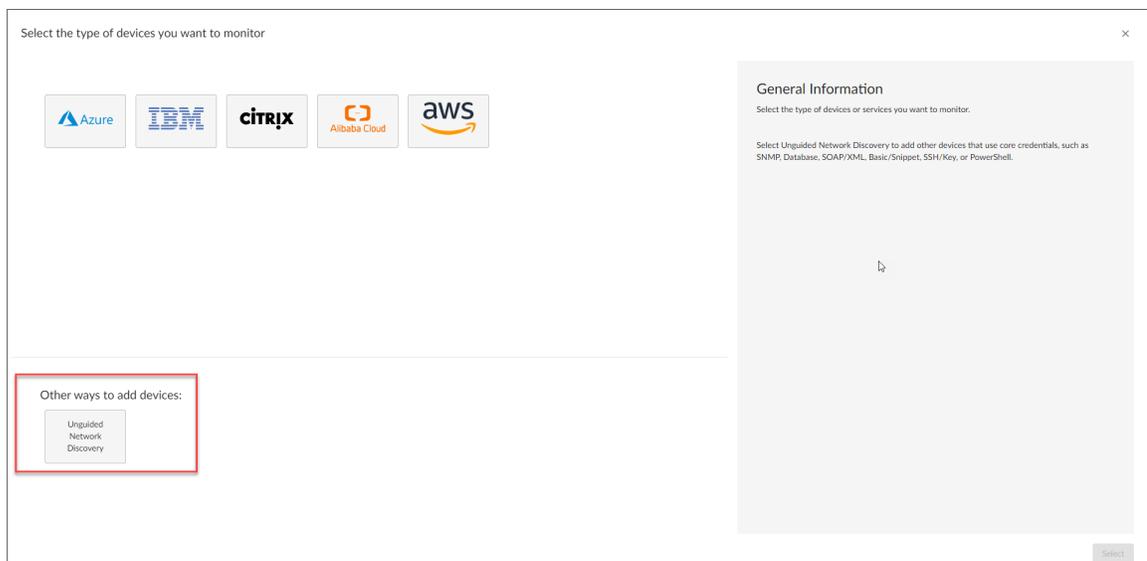
4. Click **[Save As]**.
5. In the confirmation message, click **[OK]**.

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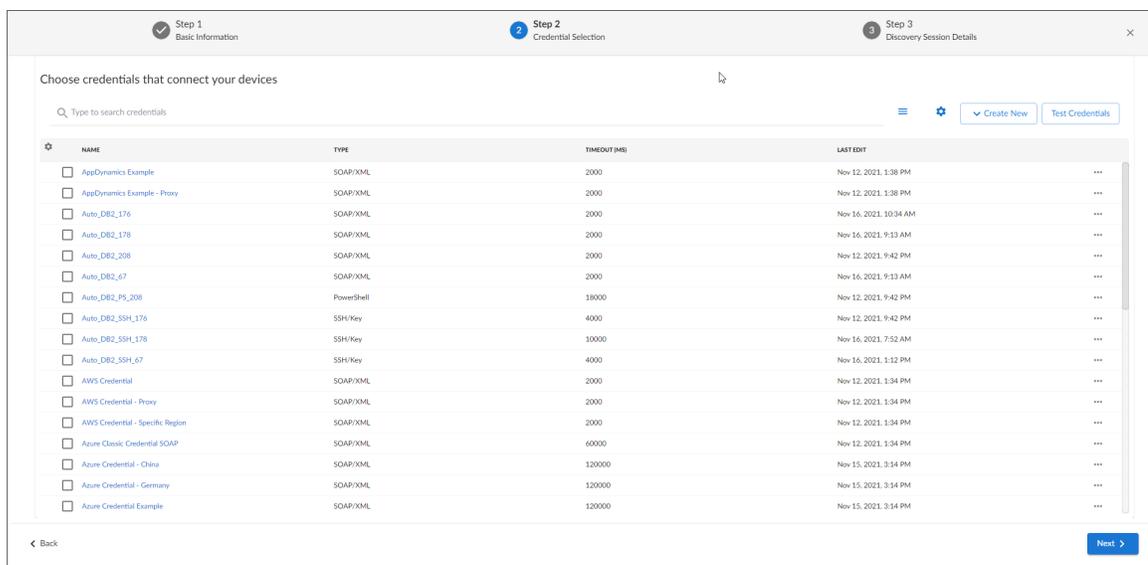
## Discovering Cisco HyperFlex Devices

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

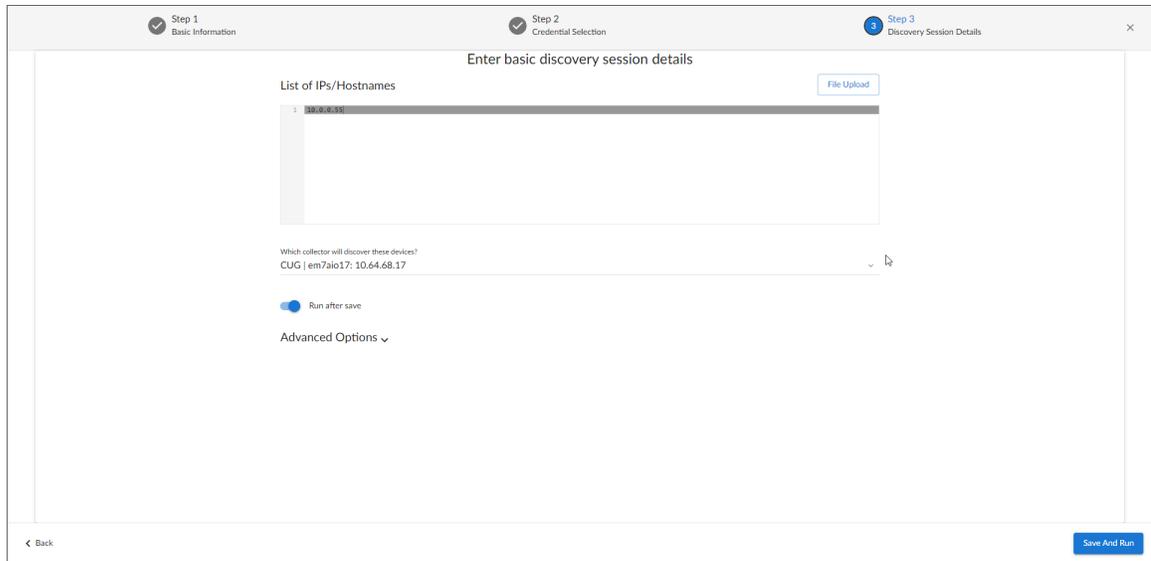
1. On the **Devices** page (📄) or the **Discovery Sessions** page (Devices > Discovery Sessions), click the **[Add Devices]** button. The **Select** page appears:



2. Click the **[Unguided Network Discovery]** button. Additional information about the requirements for discovery appears in the **General Information** pane to the right.
3. Click **[Select]**. The **Add Devices** page appears.
4. Complete the following fields:
  - **Name**. Type a unique name for this discovery session. This name is displayed in the list of discovery sessions on the **[Discovery Sessions]** tab.
  - **Description**. Optional. Type a short description of the discovery session. You can use the text in this description to search for the discovery session on the **[Discovery Sessions]** tab.
  - **Select the organization to add discovered devices to**. Select the name of the organization to which you want to add the discovered devices
5. Click **[Next]**. The **Credentials** page of the **Add Devices** wizard appears:



6. On the **Credentials** page, select the **SOAP/XML credential that you created for Cisco HyperFlex**.
7. Click **[Next]**. The **Discovery Session Details** page of the **Add Devices** wizard appears:



8. Complete the following fields:
  - **List of IPs/Hostnames.** Type the IP address(es) for the Cisco HyperFlex device(s) you want to discover.
  - **Which collector will monitor these devices?** Required. Select an existing collector to monitor the discovered devices.
  - **Run after save.** Select this option to run this discovery session as soon as you save the session.
    - In the **Advanced options** section, click the down arrow icon (▼) to complete the following fields:
      - **Discover Non-SNMP.** Enable this setting.
9. Click **[Save and Run]** if you enabled the Run after save setting, or **[Save and Close]** to save the discovery session. The **Discovery Sessions** page (Devices > Discovery Sessions) displays the new discovery session.
10. If you selected the **Run after save** option on this page, the discovery session runs, and the **Discovery Logs** page displays any relevant log messages. If the discovery session locates and adds any devices, the **Discovery Logs** page includes a link to the **Device Investigator** page for the discovered device.

## Discovering Cisco HyperFlex Devices in the SL1 Classic User Interface

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

1. Go to the **Discovery Control Panel** page (System > Manage > Classic Discovery).
2. Click the **[Create]** button to create a new discovery session. The **Discovery Session Editor** page appears.
3. Enter values in the following fields:
  - **IP Address Discovery List.** Enter the IP address(es) for the Cisco HyperFlex device(s) you want to discover.
  - **SNMP Credential.** Do not select a credential in this field.
  - **Other Credentials.** Select the [SOAP/XML credential that you created for Cisco HyperFlex](#).

- **Discover Non-SNMP**. Select this checkbox.
4. You can enter values in the other fields on this page, but are not required to and can simply accept the default values. For more information about the other fields on this page, see the **Discovery and Credentials** manual.
  5. Click **[Save]** 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.
  8. When the Cisco HyperFlex data cluster is discovered, click its device icon (🖥️) to view its **Device Properties** page.

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## Troubleshooting Known Issues

The following known issues affect version 104 of the *Cisco: Hyperflex* PowerPack:

- This PowerPack is designed for Hyperflex clusters with HX appliance types. UCS appliance types are not fully supported. While overall collection will work when these types exist in the environment, some Dynamic Applications might not function correctly.
- When upgrading the PowerPack directly from version 102 to 104, or from version 102 to 103 to 104, the "Cisco: Hyperflex Device Class Realignment" run book action policy may display an event error and fail to assign a device class to a device. To work around this issue, delete the event from the **[Events]** tab in the Device Summary. The run book action policy will execute and assign the corresponding device class in the next collection cycle.
- The "Cisco: Hyperflex Service Configuration" Dynamic Application will stop collecting data when the "/rest/services" endpoint is deprecated.
- In SL1 version 8.10.0, the following Minor events are displayed for the "Cisco: Hyperflex Resiliency Stats" Dynamic Application:

```
78:StorageProcl: Non-digits in oid with object id: 18882, did:4 in
dynamic app:1625 when updating performance value (val:NA)
```

```
78:StorageProcl: Non-digits in oid with object id: 18876, did:4 in
dynamic app:1625 when updating performance value (val:NA)
```

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