Monitoring SL1 PowerFlow

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1

Introduction to the ScienceLogic: PowerFlow PowerPack

Overview

This manual describes how to monitor SL1 PowerFlow in SL1 using the "ScienceLogic: PowerFlow" PowerPack.

Use the following menu options to navigate the SL1 user interface:

- To view a pop-out list of menu options, click the menu icon (▤).
- To view a page containing all of the menu options, click the Advanced menu icon (⋯).

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This chapter covers the following topics:

What Does this PowerPack Monitor?

This PowerPack lets you configure SL1 to create an alert if an SL1 PowerFlow application fails.

The "ScienceLogic: PowerFlow" PowerPack includes the following features:

- The "REST: Performance Metrics Monitor (PowerFlow)" Dynamic Application, which monitors outgoing REST requests from SL1 to PowerFlow
- The "ScienceLogic: PowerFlow Healthcheck Configuration" Dynamic Application includes an Event Policy that generates a Major event when the state returned by the **healthcheck** action is "not okay" or "not skipped". This Dynamic Application runs every six hours by default and it does not work for single-node PowerFlow systems
- The "ScienceLogic: PowerFlow Queue Configuration" Dynamic Application, which monitors the status of the PowerFlow RabbitMQ service
- The "ScienceLogic: PowerFlow Workers Configuration" Dynamic Application, which monitors the status of the PowerFlow RabbitMQ workers
- Event Policies and corresponding alerts that are triggered when an application in PowerFlow fails
- A Device Class and a Device Template for PowerFlow
- Sample SOAP/XML and SSH/Key Credentials for connecting to PowerFlow
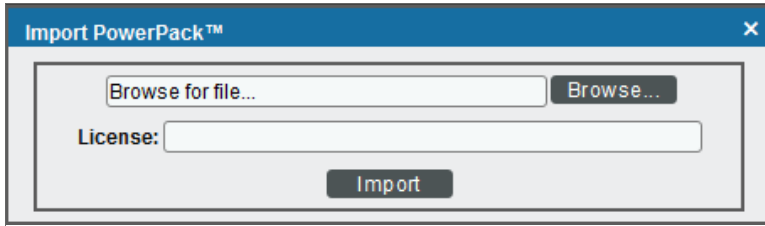
Installing the PowerPack

Before completing the steps in this section, you must import and install the latest version of the *ScienceLogic: PowerFlow* 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

Configuring Monitoring for SL1 PowerFlow

Overview

The following sections describe how to configure SL1 to monitor SL1 PowerFlow using the "ScienceLogic: PowerFlow" PowerPack:

This chapter covers the following topics:

Creating a SOAP/XML Credential for PowerFlow

The "ScienceLogic: PowerFlow" PowerPack monitors the status of the applications in your PowerFlow system. Based on the events generated by this PowerPack, you can diagnose why applications failed in PowerFlow.

> IMPORTANT: The "ScienceLogic: PowerFlow" PowerPack is the main PowerPack that you can use to monitor the critical health of a PowerFlow system.

To configure SL1 to monitor PowerFlow, you must first create a SOAP/XML credential. This credential allows the Dynamic Applications in the "ScienceLogic: PowerFlow" PowerPack to communicate with PowerFlow.

In addition, before you can run the Dynamic Applications in the "ScienceLogic: PowerFlow" PowerPack, you must manually align the Dynamic Applications from this PowerPack to your PowerFlow device in SL1. These steps are covered in detail below.

Configuring the PowerPack

To configure the PowerFlow PowerPack:

1. In SL1, make sure that you have already installed the "Linux Base" PowerPack, the "Docker" PowerPack, and the "ScienceLogic: PowerFlow" PowerPack on your SL1 system.

2. In SL1, navigate to the **Credentials** page (Manage > Credentials or System > Manage > Credentials in the classic user interface) and select the "ScienceLogic: PowerFlow Example" SOAP/XML credential. The **Edit Credential** page appears.

3. Complete the following fields, and keep the other fields at their default settings:

   - *Name*. Type a new name for the credential.

   - *URL*. Type the URL for your PowerFlow system.

   - *HTTP Auth User*. Type the PowerFlow administrator username.

   - *HTTP Auth Password*. Type the PowerFlow administrator password

   - *Embed Value [%1]*. Type "False".

4. Click the **[Save & Close]** button. You will use this new credential to manually align the following Dynamic Applications:

   - REST: Performance Metrics Monitor
   - ScienceLogic: PowerFlow Queue Configuration
   - ScienceLogic: PowerFlow Workers Configuration

5. Go to the **Devices** page, select the device representing your PowerFlow server, and click the **[Collections]** tab.

6. Click **[Edit]**, click **[Align Dynamic Application]**, and select *Choose Dynamic Application*. The **Choose Dynamic Application** window appears.

7. In the *Search* field, type the name of the first of the PowerFlow Dynamic Applications. Select the Dynamic Application and click **[Select]**.

8. Select *Choose Dynamic Application*. The **Choose Credential** window appears.

9. In the *Search* field, type the name of the credential you created in steps 2-4, select the new credential, and click **[Select]**. The **Align Dynamic Application** window appears.

10. Click **[Align Dynamic App]**. The Dynamic Application is added to the **[Collections]** tab.

11. Repeat steps 6-10 for each remaining Dynamic Application for this PowerPack, and click **[Save]** when you are done aligning Dynamic Applications.

Events Generated by the PowerPack

After you align the "ScienceLogic: PowerFlow Queue Configuration" Dynamic Application in SL1, that Dynamic Application will generate a Major event in SL1 if an application fails in PowerFlow:
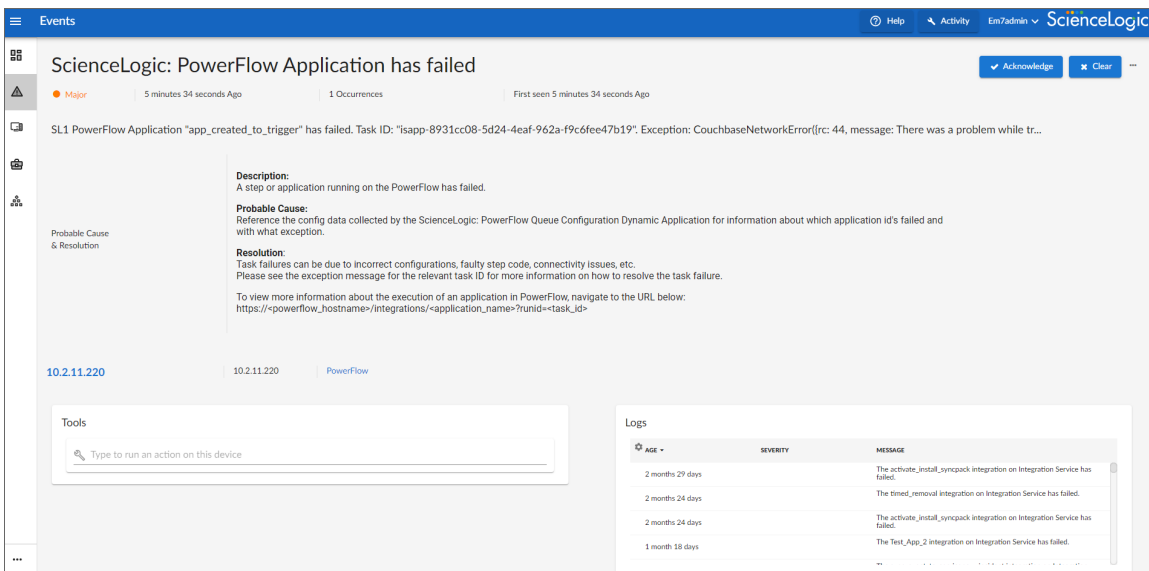
The related event policy includes the name of the application, the Task ID, and the traceback of the failure. You can use the application name to identify the application that failed in PowerFlow. You can use the Task ID to determine the exact execution of the application that failed, which you can then use for debugging purposes.

To view more information about the execution of an application in PowerFlow, navigate to the relevant page in PowerFlow by formatting the URL in the following manner:

```
https://<PowerFlow_hostname>/integrations/<application_
name>?runid=<task_id>
```

For example:

```
https://192.0.2.0/integrations/sync_credentials?runid=c7e157ae-5644-
4161-a241-59516feeadec
```

Configuring the SSH Credential

To use the "ScienceLogic: PowerFlow Healthcheck Configuration" Dynamic Application, which provides data to the **PowerFlow Control Tower** page, you must use an SSH credential. This PowerPack includes a sample SSH credential you can customize for your PowerFlow system.

To configure the SSH credential:

1. Go to the **Credentials** page (Manage > Credentials).

2. Locate and select the "ScienceLogic: PowerFlow SSH" credential. The **Edit Credential** modal page appears.

3. Complete the following fields, and keep the other fields at their default settings:

   - *Name*. Type a name for the credential.

   - *Organizations*. Select the organizations to which the credential will belong, or enable the *All Organizations* toggle to make the credential available to all organizations in SL1.

   - *Timeout (milliseconds)*. Type "2000" (2 seconds).

   - *Hostname/IP*. Type the IP address for the PowerFlow system. The default TCP port for SSH servers is 22.

   - *Username*. Type the username for the PowerFlow system.

   - *Password*. Type the password for the PowerFlow system.

   - *Private Key (PEM Format)*. Type the SSH private key that you want SL1 to use, in PEM format. Use RSA private key type.

NOTE: The private key can have a maximum of 64 characters per line. Therefore, you cannot use keys in the OpenSSH format, because that format uses 70 characters per line. When you attempt to save the credential, SL1 will validate that the private key entered is in the correct format. You will be able to save the credential only if the private key is correctly formatted.

NOTE: For PEM Keys with a Passphrase, you can use the *Password* field to set the Passphrase. A passphrase is not required.

NOTE: If a private key is needed, you must include the lines "BEGIN RSA PRIVATE KEY" and "END RSA PRIVATE KEY", in addition to all preceding and following dashes on those lines.

---

4. Click the **[Save & Close]** button. You will use this new credential to manually align the "ScienceLogic: PowerFlow Healthcheck Configuration" Dynamic Application.

Aligning the Dynamic Applications in this PowerPack

Before you can run the Dynamic Applications in the *ScienceLogic: PowerFlow* PowerPack, you must manually align the Dynamic Application from the PowerPack to your PowerFlow device in SL1.

First, use the SOAP/XML credential you just created to manually align the following Dynamic Applications:

- REST: Performance Metrics Monitor (PowerFlow)
- ScienceLogic: PowerFlow Queue Configuration
- ScienceLogic: PowerFlow Workers Configuration

Next, use the SSH credential you just created to manually align the "ScienceLogic: PowerFlow Healthcheck Configuration" Dynamic Application.

NOTE: If you are installing this PowerPack for the first time, you can use the "ScienceLogic: PowerFlow" Device Template from this PowerPack to quickly align all of the Dynamic Applications. For more information, see *Aligning Dynamic Applications with the Device Template*.

Manually Aligning the Dynamic Applications

If you are upgrading to version 106 of this PowerPack, you will need to manually align "REST: Performance Metrics Monitor(PowerFlow)" with the SOAP/XML credential and align "ScienceLogic: Healthcheck Configuration" with the SSH Credential.

To avoid having gaps for the new "REST: Performance Metrics Monitor (PowerFlow)" report, disable the collection for the old "REST: Performance Metrics Monitor" Dynamic Application. This allows only the new Dynamic Application to collect data.

To disable collection for the old Dynamic Application:

1. On the **Device Manager** page (Devices > Device Manager), locate the PowerFlow Virtual Device, and click the Edit icon (🔧).

2. On the **[Collections]** tab, select the old "REST: Performance Metrics Monitor" Dynamic Application and select *Disable All Collection Objects* from **Select Action** menu.

3. Click **[Go]**.

NOTE: To disable collection for the old "REST: Performance Metrics Monitor" Dynamic Application, you can also select **StopCollecting and Remove Data** to cease the collection of historical data.

To align the Dynamic Applications in this PowerPack:

1. Go to the **Devices** page and select the device representing your PowerFlow server. The **Device Investigator** page appears.

2. Go to the **[Collections]** tab and click **[Edit]**.

3. Click the **[Align Dynamic App]** button. The **Align Dynamic Application** window appears.

4. Select *Choose Dynamic Application*. The **Choose Dynamic Application** window appears.

5. In the *Search* field, search for the "REST: Performance Metrics Monitor (PowerFlow)" Dynamic Application.

6. Select the Dynamic Application and click **[Select]**. The **Align Dynamic Application** window appears again.

7. Click the check mark (✅) next to *Use Device SNMP Credential* to de-select it, and then click *Choose Credential*. The **Choose Credential** window appears.

8. In the *Search* field, type the name of the SOAP/XML credential you created previously, select the credential, and click **[Select]**. The **Align Dynamic Application** window appears again.

9. Click the **[Align Dynamic App]** button. The Dynamic Application is added to the **[Collections]** tab.

10. If you have not already aligned the other two Dynamic Applications, repeat steps 3-9 for the "ScienceLogic: PowerFlow Queue" and "ScienceLogic: PowerFlow Workers Configuration" Dynamic Applications.

11. Finally, align the "ScienceLogic: PowerFlow Healthcheck Configuration" Dynamic Application with the "ScienceLogic: PowerFlow SSH" credential.

12. Click **[Save]**.

Aligning Dynamic Applications with the Device Template

If you are installing this PowerPack for the first time, you can use the "ScienceLogic: PowerFlow" Device Template from this PowerPack to quickly align all of the Dynamic Applications.

To use the Device Template to align the Dynamic Applications:

1. On the **Device Manager** page (Devices > Device Manager), locate the PowerFlow Virtual Device, and click the Edit icon (🔧). The **Device Properties** modal appears.

2. On the **[Collections]** tab, click the **[Actions]** button and select *Add Dynamic Application*. The **Dynamic Application** modal appears.

3. Select the "ScienceLogic: PowerFlow Healthcheck Configuration" Dynamic Application, select the previously saved PowerFlow SSH credential, and then click **[Save]**. The Dynamic Application is now aligned to the device.

4. Click the **[Actions]** button and select *Add Dynamic Application*.

5. Select the "REST: Performance Metrics Monitor (PowerFlow)" Dynamic Application, select the existing PowerFlow SOAP/XML credential, and then click **[Save]**.

6. Repeat step 5 for the "ScienceLogic: PowerFlow Queue Configuration" and "ScienceLogic: PowerFlow Workers Configuration" Dynamic Applications.

7. Click **[Save]** and close the **Device Properties** modal.

Configuring the "ScienceLogic: PowerFlow Healthcheck Configuration" Dynamic Application

The following default **powerflowcontrol** (pfctl) command is configured in the "Sciencelogic: PowerFlow Healtcheck Configuration" Dynamic Application:

```
pfctl --config "/tmp/creds.yaml" --json cluster-action --action
healthcheck
```

> **NOTE**: You must have Read permissions for the **creds.yaml** file.

The **healthcheck** action executes various commands to verify configurations, proxies, internal connectivity, queue cluster, database cluster, indexes, NTP settings, Docker versions on all clusters, and more. Any previously reported troubleshooting issues are addressed with the **healthcheck** action.

> **CAUTION:** The "Data Collection: SSH Collector" process must be configured with its Operating State as "disabled". If this process is enabled, the "ScienceLogic: PowerFlow Healthcheck Configuration" Dynamic Application will not be able to collect data.

> **NOTE**: Running this **pfctrl** command with the `--json` command might take a long time to return an output. If you do not see data collected, change the **`timeout settings`** in the PowerFlow SSH credential to more than 30 seconds.

> **NOTE**: Some "ScienceLogic: PowerFlow Healthcheck" Events might display as duplicates because of the way that the Healthcheck Configuration data is collected, and because of the way that the **healthcheck** action sends information to SL1.

Adding Credential Information Before Running the Dynamic Application

Before you can use the "ScienceLogic: PowerFlow Healthcheck Configuration" Dynamic Application, you must add credential information to a **/tmp/creds.yaml** file in the node running the Dynamic Application.

For example, if your PowerFlow system uses a three-node configuration, the **creds.yaml** file must contain credential information in the following format (this example displays the three different credential configurations you can use):

```
hosts:
```

```
10.2.11.101:

  user: useradmin

  password: passw0rd123

  key_file: /Users/fred.jones/test_ca/user

  passphrase: passphrase456

10.2.11.102:

  user: useradmin

  key_file: /Users/fred.jones/Code/Python/IS4/is_servicecontrol/testkey

10.2.11.103:

  user: useradmin

  password: passw0rd123
```
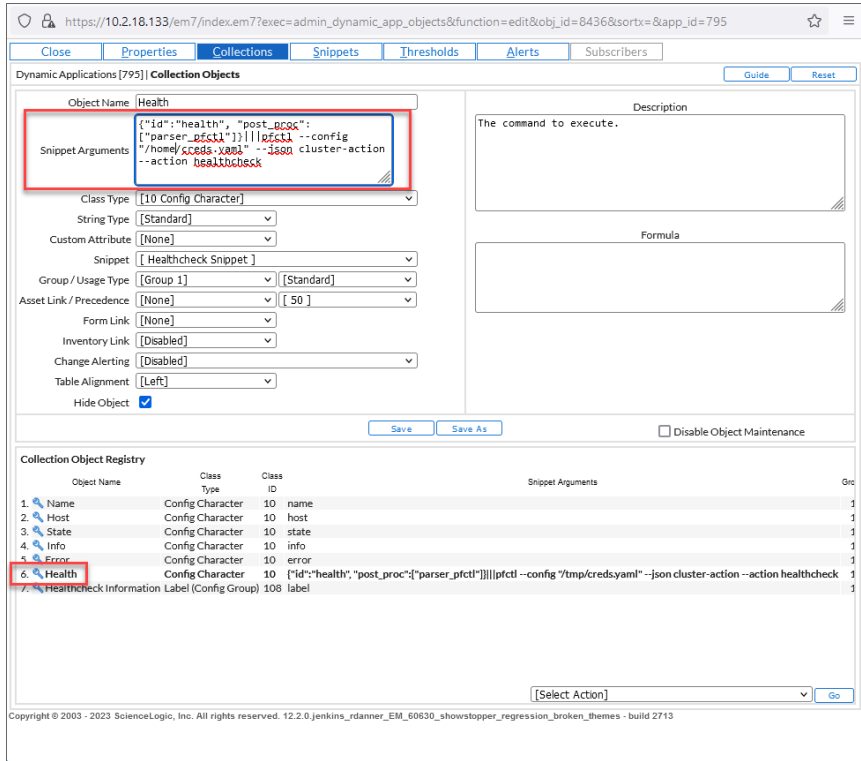
Moving the creds.yaml File

If you place the **creds.yaml** file in a path other than a **/tmp/creds.yaml** file, you must update the path in the *Snippet Arguments* field of the "Health" collection object:

1. On the Dynamic Applications page (System > Manage > Dynamic Applications), Locate the "ScienceLogic: PowerFlow Healthcheck Configuration" Dynamic Application, and then click its wrench icon ( ).

2. Go to the **[Collections]** tab.

3. Locate the "Health" collection object, and then click its wrench icon ( ). The fields at the top of the modal are updated with details about that object.

4. In the **Snippet Arguments** field, replace the path in the command to use the new path. For example:

```
{"id":"health", "post_proc":["parser_pfctl"]}|||pfctl --config
"/home/creds.yaml" --json cluster-action --action healthcheck
```


Running the pfctl Command Without a creds.yaml File

Alternately, you can enter the credentials details directly into the **pfctl** command, and you will not need a **creds.yaml** file. The following command shows the format for this situation:

```
pfctl --host <host> <username>:<password> --host <host>
<username>:<password> --host <host> <username>:<password> --json cluster-
action --action healthcheck
```

The following example shows what the command looks like when you replace the fields in *<brackets>*, above, with actual values:

```
pfctl --host 10.2.11.101 useradmin:passw0rd123 --host 10.2.11.102
useradmin:passw0rd123 --host 10.2.11.103 useradmin:passw0rd123 --json
cluster-action --action healthcheck
```

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Other

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