Monitoring Skylar Automation

ScienceLogic: Skylar Automation PowerPack version 109

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Chapter 1

Introduction to the ScienceLogic: Skylar AutomationPowerPack

Overview

This manual describes how to monitor Skylar Automation (formerly PowerFlow) in Skylar One (formerly SL1) using the "ScienceLogic: Skylar Automation" PowerPack.

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This chapter covers the following topics:

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What Does this PowerPack Monitor?

This PowerPack lets you configure Skylar One to create an alert if a Skylar Automation application fails.

The "ScienceLogic: Skylar Automation" PowerPack includes the following features:

- The "ScienceLogic: Skylar Automation 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 Skylar Automation systems
- The "ScienceLogic: Skylar Automation Queue Configuration" Dynamic Application, which monitors the status of the Skylar Automation RabbitMQ service
- The "ScienceLogic: Skylar Automation Workers Configuration" Dynamic Application, which monitors the status of the Skylar Automation RabbitMQ workers
- Event Policies and corresponding alerts that are triggered when an application in Skylar Automation fails
- A Device Class and a Device Template for Skylar Automation
- Sample SOAP/XML and SSH/Key Credentials for connecting to Skylar Automation

Installing the PowerPack

Before completing the steps in this section, you must import and install the latest version of the "ScienceLogic: Skylar Automation" 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 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 **PowerPack Manager** page (System > Manage > PowerPacks).
3. In the **PowerPack Manager** page, click the **[Actions]** button, then select *Import PowerPack*. The **Import PowerPack** dialog box appears.
4. Click the **[Browse]** button and navigate to the PowerPack file.
5. 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*.

Upgrading the PowerPack to Version 107 or Later

As of version 107 of this PowerPack, several items were removed from the pack and may no longer function. If you are upgrading from a previous release to version 107 or later, ScienceLogic recommends manually deleting them from your Skylar One system.

- The following items were removed from the PowerPack:
    - Dashboards:
        - REST Discovery Initiation
    - Dashboard widgets:
        - REST Discovery Initiation
        - REST Discovery Log Widget
    - Run book action policies:
        - REST Discovery: Phase 0 - Device Creation
        - REST Discovery: Phase I - Collection Test Lookup
        - REST Discovery: Phase II Credential Check
        - REST Discovery: Phase III - Apply template
    - Run book automation policies:
        - REST Discovery - Application Alignment
        - REST Discovery - Device Creation
    - Execution environments:
        - silo_rba_discovery
        - silo_logs
    - Event policies:
        - REST Device Discovery
    - Dynamic Applications:
        - REST: Performance Metrics Monitor
        - REST: Performance Metrics Monitor (PowerFlow)

Chapter 2

Configuring Monitoring for Skylar Automation

Overview

This section describes how to configure Skylar One to monitor Skylar Automation (formerly PowerFlow) using the "ScienceLogic: Skylar Automation" PowerPack.

This chapter covers the following topics:

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Creating a SOAP/XML Credential for Skylar Automation (PowerFlow)

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

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

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

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

Configuring the PowerPack

To configure the Skylar Automation PowerPack:

1. In Skylar One, make sure that you have already installed the "Linux Base Pack" PowerPack, the "Docker" PowerPack, and the "ScienceLogic: Skylar Automation" PowerPack on your Skylar One system.
2. In Skylar One, navigate to the **Credentials** page (Manage > Credentials or System > Manage > Credentials in the classic user interface) and select the "ScienceLogic: Skylar Automation 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 Skylar Automation system.
    - ***HTTP Auth User***. Type the Skylar Automation administrator username.
    - ***HTTP Auth Password***. Type the Skylar Automation administrator password

NOTE: If you upgrade the PowerPack to version 107 or later, be sure to remove the "False" value in the ***Embed Value [%1]*** field. If this field has the "False" value populated, it will trigger a Snippet Framework error.

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

- ScienceLogic: Skylar Automation Queue Configuration
- ScienceLogic: Skylar Automation Workers Configuration

5. Go to the **Devices** page, select the device representing your Skylar Automation 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 Skylar Automation 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: Skylar Automation Queue Configuration" Dynamic Application in Skylar One, that Dynamic Application will generate a Major event in Skylar One if an application fails in Skylar Automation.

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 Skylar Automation. 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 Skylar Automation, navigate to the relevant page in Skylar Automation by formatting the URL in the following manner:

```
https://<Skylar Automation_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: Skylar Automation Healthcheck Configuration" Dynamic Application, which provides data to the **Skylar Automation Control Tower** page, you must use an SSH credential. This PowerPack includes a sample SSH credential you can customize for your Skylar Automation system.

To configure the SSH credential:

1. Go to the **Credentials** page (Manage > Credentials).
2. Locate and select the "ScienceLogic: Skylar Automation 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 Skylar One.
    - ***Timeout (milliseconds)***. Specify a timeout value greater than 30000 (30 seconds).
    - ***Hostname/IP***. Type the IP address for the Skylar Automation system. The default TCP port for SSH servers is 22.
    - ***Username***. Type the username for the Skylar Automation system.
    - ***Password***. Type the password for the Skylar Automation system.
    - ***Private Key (PEM Format)***. Type the SSH private key that you want Skylar One 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, Skylar One validates that the private key entered is in the correct format. You can 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: Skylar Automation Healthcheck Configuration" Dynamic Application.

Aligning the Dynamic Applications in this PowerPack

Before you can run the Dynamic Applications in the "ScienceLogic: Skylar Automation" PowerPack, you must manually align the Dynamic Application from the PowerPack to your Skylar Automation device in Skylar One.

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

- ScienceLogic: Skylar Automation Queue Configuration
- ScienceLogic: Skylar Automation Workers Configuration

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

NOTE: If you are installing this PowerPack for the first time, you can use the "ScienceLogic: Skylar Automation" 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 "ScienceLogic: Skylar Automation Healthcheck Configuration" with the SSH Credential.

To align the Dynamic Applications in this PowerPack:

1. Go to the **Devices** page and select the device representing your Skylar Automation 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 "ScienceLogic: Skylar Automation Queue Configuration)" 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 "ScienceLogic: Skylar Automation Workers Configuration" Dynamic Application, repeat steps 3-9.
11. Finally, align the "ScienceLogic: Skylar Automation Healthcheck Configuration" Dynamic Application with the "ScienceLogic: Skylar Automation SSH" credential.
12. Click **[Save]**.

NOTE: The "Disable Object Maintenance" property was checked by default for each collection object of the "ScienceLogic: Skylar Automation Queue Configuration)" Dynamic Application because when a healthy Skylar Automation system does not have any data collected for the collection objects, it would stop collection and be disabled automatically without this checkbox selected.

Aligning Dynamic Applications with the Device Template

If you are installing this PowerPack for the first time, you can use the "ScienceLogic: Skylar Automation" 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 > Classic Devices, or Registry > Devices > Device Manager in the classic SL1 user interface), locate the Skylar Automation Virtual Device, and click the edit icon (). The **Device Properties** modal appears.
2. On the **[Collections]** tab, click the actions icon and select *Add Dynamic Application*. The **Dynamic Application** modal appears.
3. Select the "ScienceLogic: Skylar Automation Healthcheck Configuration" Dynamic Application, select the previously saved Skylar Automation SSH credential, and then click **[Save]**. The Dynamic Application is now aligned to the device.
4. Click the actions icon and select *Add Dynamic Application*.
5. Select the "ScienceLogic: Skylar Automation Queue Configuration" Dynamic Application, select the existing Skylar Automation SOAP/XML credential, and then click **[Save]**.
6. Repeat step 5 for the "ScienceLogic: Skylar Automation Workers Configuration" Dynamic Application.
7. Click **[Save]** and close the **Device Properties** modal.

Configuring the ScienceLogic: Skylar Automation Queue Configuration Dynamic Application

The "ScienceLogic: Skylar Automation Queue Configuration" Dynamic Application has a poll frequency of 15 minutes by default, and the time stamp check for start and end date of the API call is set in the "Queue Config" snippet. Because of this, if you change the poll frequency for this Dynamic Application, you must also change the value in the "Queue Config" snippet so that the timestamp for "Start" in API calls matches the last polling time.

To change the value in the snippet code:

1. Go to the **Dynamic Applications Manager** page (System > Manage > Applications).
2. Type "ScienceLogic: Skylar Automation Queue Configuration" in the ***Dynamic Application Name*** column.
3. Click the wrench icon () and then select the **[Snippets]** tab. The **Snippet Editor & Registry** page appears.
4. Click the wrench icon () next to ***Queue Config***.
5. Look for `'START_TIME': int(time.time() - (15*60)),` and change `15` to the new poll frequency value.
6. Click the **[Save]** button.

Configuring the "ScienceLogic: Skylar Automation Healthcheck Configuration" Dynamic Application

The following default **skylarautomationcontrol** (skyautoctl) command is configured in the "Sciencelogic: Skylar Automation Healtcheck Configuration" Dynamic Application:

```
skyautoctl --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: Skylar Automation 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 Skylar Automation SSH credential to more than 30 seconds.

NOTE: Some "ScienceLogic: Skylar Automation 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 Skylar One.

Adding Credential Information Before Running the Dynamic Application

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

NOTE: Make sure that all hosts authenticate using an SSH key file instead of plain text passwords.

For example, if your Skylar Automation system uses a three-node configuration, the **creds.yaml** file must contain credential information in the following format:

```
hosts:
  10.2.11.101:
    user: useradmin
    key_file: /Users/fred.jones/test_ca/user
    # Note : For keys that have a passphrase to authenticate, add:
    # passphrase: <Passphrase Text>

  10.2.11.102:
    user: useradmin
    key_file: /Users/fred.jones/test_ca/user

  10.2.11.103:
    user: useradmin
    key_file: /Users/fred.jones/test_ca/user
```

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 Manager** page (System > Manage > Applications), Locate the "ScienceLogic: Skylar Automation 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 skyautoctl Command Without a creds.yaml File

Alternately, you can enter the credentials details directly into the **skyautoctl** command, and you will not need a **creds.yaml** file.

WARNING: This credential option is insecure and should be used only for debugging purposes. Logging produced during execution of the Dynamic Application includes the SSH command invocation. Because of this, credentials provided directly in the command will also be visible in the log output.

The following command shows the format for this situation:

```
skyautoctl --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:

```
skyautoctl --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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