ScienceLogic

Ansible Integrations

Ansible Synchronization PowerPack Version 1.0.0

Ansible Automation PowerPack Version 100

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Chapter

1

Introduction to the Ansible Synchronization PowerPack

Overview

This chapter describes how you can use the *Ansible* Synchronization PowerPack to automatically create SL1 events for Ansible Towers and Ansible CLI. The integration is unidirectional, from Ansible to SL1.

> **NOTE:** This Synchronization PowerPack is available with a ScienceLogic SL1 Standard solution. Contact your ScienceLogic Customer Success Manager or Customer Support to learn more.

> **NOTE:** The label "SyncPack" is used in place of "Synchronization PowerPack" in the PowerFlow user interface.

This chapter covers the following topics:

What is the Ansible Synchronization PowerPack?

The *Ansible* Synchronization PowerPack includes a configuration object, applications, and steps that bidirectionally sync data and job status between Ansible and SL1.

Prerequisites for this Synchronization PowerPack

This Synchronization PowerPack requires the following:

- *Base Steps Synchronization PowerPack* version 1.3.2 or later
- Administrator access to Ansible
- An Ansible playbook to communicate with Ansible

The following table lists the port access required by PowerFlow and this Synchronization PowerPack:

Source IP	PowerFlow Destination	PowerFlow Source Port	Destination Port	Requirement
PowerFlow	SL1 API	Any	TCP 443	SL1 API Access
PowerFlow	Ansible API	Any	TCP 443	Ansible API Access
PowerFlow	SL1 Database	Any	TCP 7706	SL1 Database Access

Contents of the Synchronization PowerPack

This section lists the contents of the *Ansible* Synchronization PowerPack.

PowerFlow Applications

- **Ansible Tower Job Status Update**. This application updates an associated SL1 event with Ansible Tower job information.
- **Call Playbook from Ansible CLI**. This application triggers a request to Ansible CLI to provision for data and to access devices.
- **Call Playbook from Ansible Tower**. This application triggers a request to Ansible Tower to provision for data and to access devices.
- **Clear SL1 Events**. This application clears SL1 events when an Ansible Tower or Ansible CLI is successfully provisioned.

For more information about how to configure these applications, see *Configuring Applications for the Ansible Synchronization PowerPack*.

Configuration Object

- **Sample Ansible Configuration**. This configuration object can be used as a template after the Synchronization PowerPack is installed on the PowerFlow system. The configuration object includes the following:

- Details for connecting to SL1, including the host, username, and password.

- Details for connecting to Ansible, including the username, password, URL, host name, and host name status.

- Details for connecting to Ansible Tower, including the template ID, credential ID, and inventory ID.

- Details for authentication, including SSH host name, username, password, RSA key, and PEM status.

- Details for connecting to Ansible Playbook.

- Details for populating SL1 events.

Steps

The following steps are included in this Synchronization PowerPack:

- Ansible Tower Provision
- Update Ansible Job Status to SL1
- Clear SL1 Event
- Create External Ticket
- Create Ansible Host
- Call Ansible Playbook
- Get Ansible Job Status
- Get SL1 Events
- Post Updates to SL1
- Real Job ID
- Update Ansible Job Details to SL1

Installing the Synchronization PowerPack

A Synchronization PowerPack file has the **.whl** file extension type. You can download the Synchronization PowerPack file from the ScienceLogic Support site.

Downloading the Synchronization PowerPack

To locate and download the Synchronization PowerPack:

1. Go to the [ScienceLogic Support Site](#).
2. Click the **[Product Downloads]** tab and select *PowerPack*.
3. In the **Search PowerPacks** field, search for the Synchronization PowerPack and select it from the search results. The **Release Version** page appears.

4. On the **[PowerPack Versions]** tab, click the name of the Synchronization PowerPack version that you want to install. The **Release File Details** page appears.

5. Click the **[Download File]** button or click the name of the **.zip** file containing the **.whl** file for this Synchronization PowerPack to start downloading the file.

NOTE: After you download a Synchronization PowerPack, you can import it to your PowerFlow system using the PowerFlow user interface.

Importing the Synchronization PowerPack

To import a Synchronization PowerPack in the PowerFlow user interface:

1. On the **SyncPacks** page (⊙) of the PowerFlow user interface, click **[Import SyncPack]**. The **Import SyncPack** page appears.

2. Click **[Browse]** and select the **.whl** file for the Synchronization PowerPack you want to install. You can also drag and drop a **.whl** file to the **Import SyncPack** page.

3. Click **[Import]**. PowerFlow registers and uploads the Synchronization PowerPack. The Synchronization PowerPack is added to the **SyncPacks** page.

4. You will need to activate and install the Synchronization PowerPack in PowerFlow. For more information, see *Activating and Installing a Synchronization PowerPack*.

NOTE: You cannot edit the content package in a Synchronization PowerPack published by ScienceLogic. You must make a copy of a ScienceLogic Synchronization PowerPack and save your changes to the new Synchronization PowerPack to prevent overwriting any information in the original Synchronization PowerPack when upgrading.

Installing the Synchronization PowerPack

To activate and install a Synchronization PowerPack in the PowerFlow user interface:

1. On the **SyncPacks** page of the PowerFlow user interface, click the **[Actions]** button (⋮) for the Synchronization PowerPack you want to install and select *Activate & Install*. The **Activate & Install SyncPack** modal appears.

NOTE: If you try to activate and install a Synchronization PowerPack that is already activated and installed, you can choose to "force" installation across all the nodes in the PowerFlow system.

TIP: If you do not see the PowerPack that you want to install, click the Filter icon (⊤) on the **SyncPacks** page and select *Toggle Inactive SyncPacks* to see a list of the imported PowerPacks.

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2. Click **[Yes]** to confirm the activation and installation. When the Synchronization PowerPack is activated, the **SyncPacks** page displays a green check mark icon (✅) for that Synchronization PowerPack. If the activation or installation failed, then a red exclamation mark icon (❗) appears.

3. For more information about the activation and installation process, click the check mark icon (✅) or the exclamation mark icon (❗) in the **Activated** column for that Synchronization PowerPack. For a successful installation, the "Activate & Install SyncPack" application appears, and you can view the Step Log for the steps. For a failed installation, the **Error Logs** window appears.

4. If you have other versions of the same Synchronization PowerPack on your PowerFlow system, you can click the **[Actions]** button (⋮) for that Synchronization PowerPack and select *Change active version* to activate a different version other than the version that is currently running.

Chapter

2

Configuring Applications for the Ansible Synchronization PowerPack

Overview

This chapter describes how to set up the PowerFlow applications for the *Ansible* Synchronization PowerPack.

This chapter covers the following topics:

Creating and Aligning a Configuration Object in PowerFlow

A *configuration object* supplies the login credentials and other required information needed to execute the steps for a PowerFlow application. The **Configurations** page (⚙) of the PowerFlow user interface lists all available configuration objects for that system.

You can create as many configuration objects as you need. A PowerFlow application can only use one configuration object at a time, but you can use (or "align") the same configuration object with multiple applications.

To use this Synchronization PowerPack, you will need to use an existing configuration object in the PowerFlow user interface or create a new configuration object. Next, you need to align that configuration object to the relevant applications.

Creating a Configuration Object

For this Synchronization PowerPack, you should make a copy of the "Sample Ansible Configuration" configuration object, which is the sample configuration file that was installed with the *Ansible* Synchronization PowerPack.

> **TIP:** The "Sample Ansible Configuration" configuration object contains all of the required variables. Simply update the variables from that object to match your SL1 and Ansible settings.

To create a configuration object based on the "Sample Ansible Configuration" configuration object:

1. In the PowerFlow user interface, go to the **Configurations** page (⚙).

2. Click the **[Actions]** button (⋮) for the "Sample Ansible Configuration" configuration object and select *Edit*. The **Configuration** pane appears:

Configurations

isadmin ⌄ ScienceLogic

Q Search

CONFIG NAME   VE

AATest

Ansible Test Config   1.

Ansible_Tower_Config

config_elk   1.

ElasticSearch Logstash Kibana   1.
Configuration

IS - System Backup Configuration   1.
Example

PF - System Diagnostic Configuration   2.
Example

Base Jenkins Configuration   1.

new_testing

PF Check Connection Configuration   1.
Example

PF Control Tower Configuration   1.
Example

PF - RBA retry Configuration Example   1.

Restorepoint Base Config   1.

sample_ansible_config   1.

ServiceNow SyncPack   1.

Sample_ansible_config   ✕

Toggle JSON Editor

Description
sample_ansible_config

Version
1.0.0

Configuration Data Values

Name	Value		
sl1_host	10.64.229.154	☐ Encrypted	✕
sl1_password	ufpeOMOLuZ1evf/z+8ZbtNQ/Fp2	☑ Encrypted	✕
sl1_user	em7admin	☐ Encrypted	✕
ansible_username	admin	☐ Encrypted	✕
ansible_password	qORoViCKa2CHO/DbdeIpLtkcddl	☑ Encrypted	✕
ansible_url	https://3.109.157.8	☐ Encrypted	✕
template_id	7	☐ Encrypted	✕
host_name	dummy	☐ Encrypted	✕
playbook	hello_world.yml	☐ Encrypted	✕
inventory_id	19	☐ Encrypted	✕
credential_id	5	☐ Encrypted	✕
ssh_username	ec2-user	☐ Encrypted	✕
ssh_password	A5W/Oquo0Z9bHt/xjKDKfpxD3n	☑ Encrypted	✕
host_name_status	enabled	☐ Encrypted	✕
ssh_pem_status	enabled	☐ Encrypted	✕
ssh_pem	-----BEGIN RSA PRIVATE KEY-----\	☐ Encrypted	✕
ssh_host	3.109.157.8	☐ Encrypted	✕
add_template	Toggle JSON to show JSON object	☐ Encrypted	✕

Add Value

Copy as   Save

3. Click **[Copy as]**. The **Create Configuration** pane appears.

4. Complete the following fields:
    - *Friendly Name*. Type a name for the configuration object that will display on the **Configurations** page.
    - *Description*. Type a brief description of the configuration object.
    - *Author*. Type the user or organization that created the configuration object.
    - *Version*. Type a version of the configuration object.

5. In the **Configuration Data** field, update the default variable definitions to match your PowerFlow configuration:
    - *sl1_host*. Type the hostname or IP address of the SL1 system the alerts will synchronize with.
    - *sl1_password*. Type the password for your SL1 system.
    - *sl1_user*. Type the username for your SL1 system.
    - *ansible_url*. Enter the URL for your Ansible system.
    - *ansible_username*. Type the username for your Ansible system.
    - *ansible_password*. Type the password for your Ansible system.
    - *template_id*. Type the Ansible Tower template ID. This field is only required if you are monitoring an Ansible Tower.
    - *host_name*. Type the host name for your Ansible system.
    - *playbook*. Type the name of your Ansible playbook.
    - *inventory_id*. Type the Ansible Tower inventory ID. This field is only required if you are monitoring an Ansible Tower.
    - *credential_id*. Type the Ansible Tower credential ID. This field is only required if you are monitoring an Ansible Tower.
    - *ssh_username*. Type your SSH username.
    - *ssh_password*. Type your SSH password.
    - *host_name_status*. Toggle on (blue) to enter the host name status from the event details.
    - *ssh_pem_status*. Toggle on (blue) to enter the SSH status from the event details.
    - *ssh_pem*. Enter the RSA key for SSH connection and type "\n" before and after your RSA key.
    - *ssh_host*. Type your SSH host name.
    - *add_template*. Toggle the JSON editor to define a message for the description field in the SL1 event.

6. Click **[Save]**. You can now align this configuration object with one or more applications.
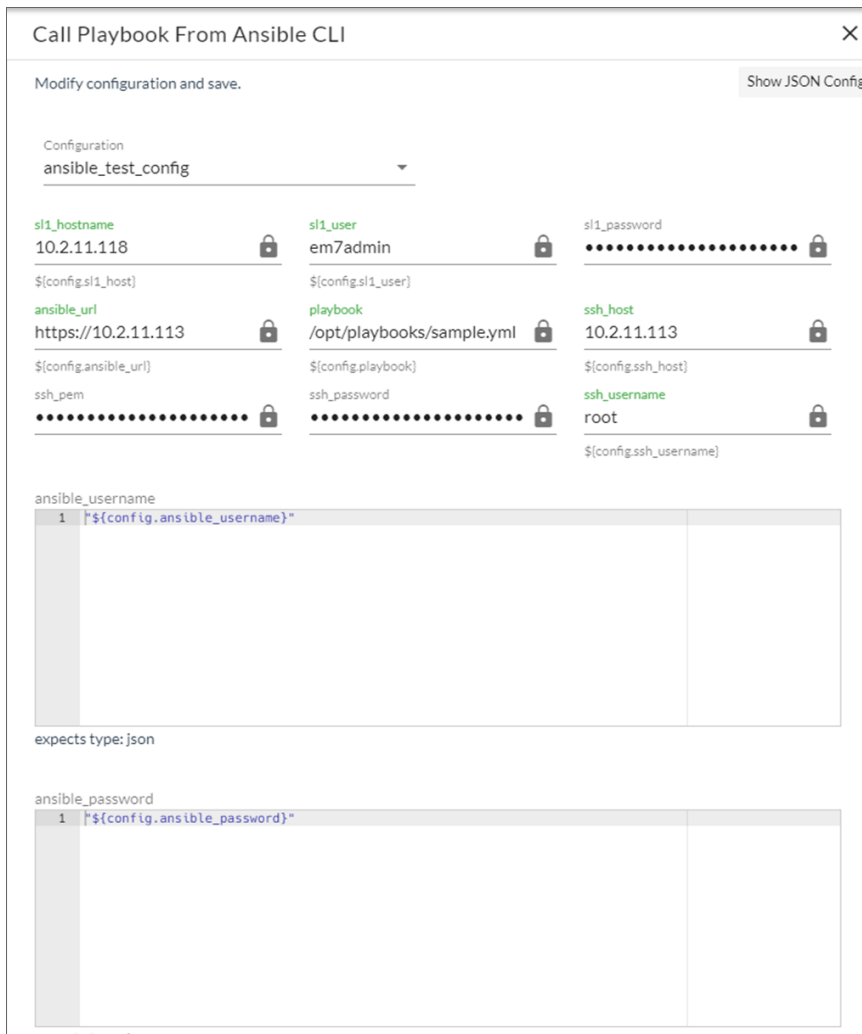

NOTE: For more information about the Ansible terms and concepts in this section, see the Ansible documentation.

Aligning a Configuration Object and Configuring PowerFlow Applications

With this Synchronization PowerPack, you can create SL1 events based on Ansible Towers and Commands. You will need to align the *Ansible* Synchronization PowerPack applications with the relevant configuration object in PowerFlow, and, if needed, update any other fields on the **Configuration** pane for the applications.

To align the configuration object with the relevant PowerFlow applications:

1. On the **Applications** page of the PowerFlow user interface, open one of the PowerFlow applications listed above and click **[Configure]** (⚙). The **Configurations** pane for that application appears:

2. From the *Configurations* drop-down, select the configuration object you want to use.

> **NOTE:** The values for **sl1_hostname** and the other parameters that appear in the **Configuration** pane with a padlock icon (🔒) are populated by the configuration object you aligned with the application. Do not modify these values. If you encounter an error, make sure your configuration object is configured properly.

3. Click **[Save]** to align that configuration with the application.
4. Repeat this process for the other PowerFlow applications.

Scheduling PowerFlow Applications

You can create one or more schedules for a single application in the PowerFlow user interface. When creating each schedule, you can specify the queue and the configuration file for that application.

To trigger some applications in this Synchronization PowerPack, you must schedule the application. If you want to use the following applications, you must schedule the application:

PowerFlow Application	Recommended Schedule Time
Ansible Tower Job Status Update	Every five minutes
Clear SL1 Events	Every 10 minutes

To schedule an application:

1. On the **Applications** page (▦), click the **[Schedule]** button for the application you want to schedule. The **Schedule** window appears, displaying any existing schedules for that application:
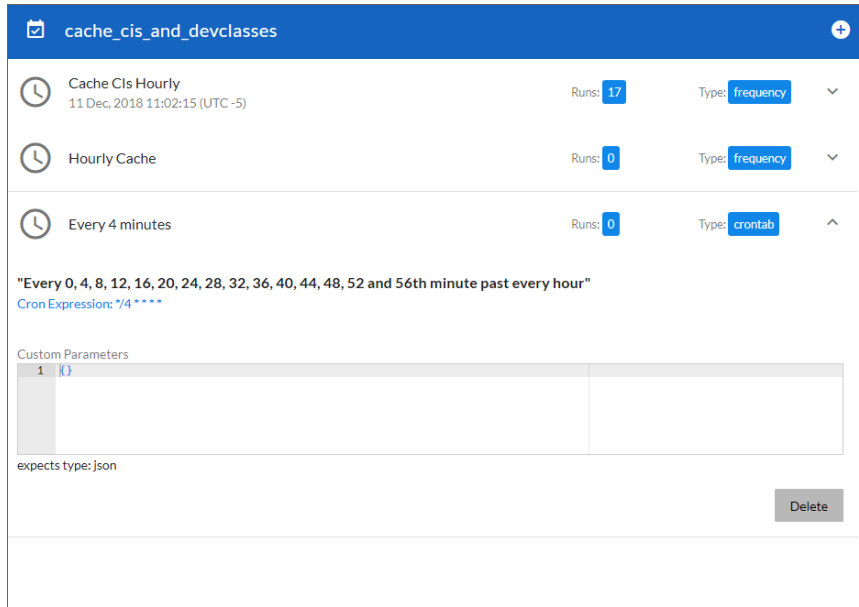
> **NOTE:** If you set up a schedule using a cron expression, the details of that schedule display in a more readable format in this list. For example, if you set up a cron expression of ***/4 * * * ***, the schedule on this window includes the cron expression along with an explanation of that expression: *"Every 0, 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, and 56th minute past every hour"*.

2. Select a schedule from the list to view the details for that schedule.

3. Click the + icon to create a schedule. A blank **Schedule** window appears:

4. In the **Schedule** window, complete the following fields:

   - *Schedule Name*. Type a name for the schedule.

   - *Switch to*. Use this toggle to switch between a cron expression and setting the frequency in seconds.

     ○ *Cron expression*. Select this option to schedule the application using a cron expression. If you select this option, you can create complicated schedules based on minutes, hours, the day of the month, the month, and the day of the week. As you update the cron expression, the **Schedule** window displays the results of the expression in more readable language, such as *Expression: "Every 0 and 30th minute past every hour on the 1 and 31st of every month"*, based on ***/30 * * /30 * ***.

     ○ *Frequency in seconds*. Type the number of seconds per interval that you want to run the application.

   - *Custom Parameters*. Type any JSON parameters you want to use for this schedule, such as information about a configuration file or mappings.

5. Click **[Save Schedule]**. The schedule is added to the list of schedules on the initial **Schedule** window. Also, on the **Applications** page, the word "Scheduled" appears in the **Scheduled** column for this application, and the **[Schedule]** button contains a check mark:
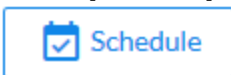
> **NOTE**: After you create a schedule, it continues to run until you delete it. Also, you cannot edit an existing schedule, but you can delete it and create a similar schedule if needed.

To view or delete an existing schedule:

1. On the **Applications** page, click the **[Schedule]** button for the application that contains a schedule you want to delete. The **Schedule** window appears.

2. Click the down arrow icon (∨) to view the details of an existing schedule:
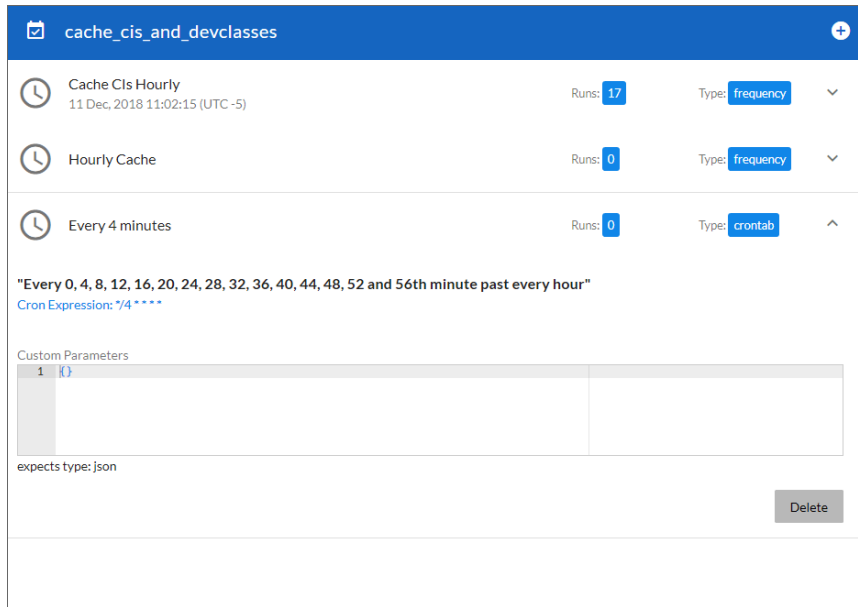
3. To delete the selected schedule, click **[Delete]**. The schedule is removed.

> **NOTE**: When either multiple SL1 instances or multiple Ansible instances are involved with PowerFlow, you should create an individual configuration object for each SL1 or Ansible instance. Next, create an individual schedule for each configuration object. Each schedule should use a configuration object that is specific to that single SL1 or Ansible instance. Creating copies of a PowerFlow application from a Synchronization PowerPack for the purpose of distinguishing between domains is not supported, and will result in issues on upgrades.

Chapter

3

Introduction to the Ansible Automation PowerPack

Overview

This chapter describes the Run Book Automation policies and Run Book Action policies found in the *Ansible Automation* PowerPack.

NOTE:	This PowerPack is available with a ScienceLogic SL1 Standard solution. Contact your ScienceLogic Customer Success Manager or Customer Support to learn more.

NOTE:	This PowerPack requires a subscription that includes CMDB/Inventory Workflow Automations.

This chapter covers the following topics:

What is the Ansible Automation PowerPack?

The *Ansible Automation* PowerPack includes automation policies and action policies that unidirectionally sync Towers and Commands from Ansible to SL1 events.

Installing the Ansible Automation PowerPack

Before completing the steps in this manual, you must import and install the latest version of the *Ansible Automation* PowerPack.

> IMPORTANT: You must install and configure the *Ansible* Synchronization PowerPack version 1.0.0 before using the *Ansible Automation* PowerPack.

> NOTE: The *Ansible Automation* PowerPack requires SL1 version 11.1.0 or later. For details on upgrading SL1, see the appropriate SL1 Release Notes.

> 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 at https://support.sciencelogic.com/s/powerpacks.
2. 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*.

Chapter

4

Configuring Action Policy Credentials

Overview

This chapter describes how to configure the credential required by the action policies in *Ansible Automation PowerPack*.

This chapter covers the following topics:

Creating a SOAP/XML Credential to Access SL1 PowerFlow

After you have integrated your Ansible and PowerFlow systems, you must create a SOAP/XML credential so that the action policies included in the PowerPack can access your PowerFlow system. The *Ansible Automation* PowerPack includes a template for a SOAP/XML credential that you can edit for use with your SL1 PowerFlow system.

> **NOTE**: If you are on an SL1 system prior to version 11.1.0, you will not be able to duplicate the sample credential. It is recommended that you create your new credentials using *the SL1 classic user interface* so you do not overwrite the sample credential(s).

To create a SOAP/XML credential:

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

4. Locate the **PowerFlow Ansible** sample credential, then click its **[Actions]** icon (⋯) and select **Duplicate**. A copy of the credential, called **PowerFlow Ansible copy** appears.

5. Supply values in the following fields:

    - *Name*. Type a new name for the 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 **What organization manages this service?** drop-down field to align the credential with those specific organizations.

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

    - *HTTP Auth User*. Type the username for your PowerFlow system.

    - *HTTP Auth Password*. Type the password for your PowerFlow system.

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

5. SL1 assigns the credential an ID number. Take note of the ID number for the new credential on the Credentials page, in the ID column. You will need the ID number when editing the input parameters of the automation actions included in the *Ansible* PowerPack.

Creating a SOAP/XML Credential to Access SL1 PowerFlow in the Classic User Interface

To create a SOAP/XML credential:

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

2. Locate the **PowerFlow Ansible** sample credential and click its wrench icon (🔧). The **Credential Editor** modal window appears.

3. Supply values in the following fields:

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

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

- *HTTP Auth User*. Type the username for your PowerFlow user account.

- *HTTP Auth Password*. Type the password for your PowerFlow user account.

4. Click the **[Save As]** button to save the new SOAP/XML credential.

5. SL1 assigns the credential an ID number. Take note of the ID number for the new credential on the Credentials page in the ID column or at the top of the **Credential Editor** modal. You will need the ID number when editing the input parameters of the automation actions included in the *Ansible Automation* PowerPack.

Chapter

5

Enabling Ansible Event Policies

Overview

This chapter describes how to enable the event policies found in the *Ansible Automation* PowerPack.

This chapter covers the following topics:

Enabling Event Policies

The *Ansible Automation* PowerPack includes two standard API event policies that you can enable to trigger the events detected by the applications included in the *Ansible* Synchronization PowerPack and it's associated automation action policy.

To enable the event policies:

1. Go to the **Event Policies** page (Events > Event Policies).

2. Click the Actions menu (•••) for the event policy and select *Edit*.

3. In the **Event Policy Editor** page, click on the **Enable Event Policy** toggle to enable the event policy.

4. Click **[Save]**.

Enabling Event Policies in the SL1 Classic User Interface

To enable the event policies in the SL1 classic user interface:

1. Go to the **Event Policy Manager** page (Registry > Events > Event Manager).

2. Click the wrench icon ( ) for the event policy.

3. In the **Operational State** field, select *Enabled*.

4. Click **[Save]**.

Chapter

6

Configuring the Ansible Action Policies

Overview

This chapter describes how to edit the action policies included in the *Ansible Automation* PowerPack so that the action policies can communicate with your SL1 PowerFlow system.

This chapter covers the following topics:

Editing the Ansible Action Policies

The *Ansible Automation* PowerPack includes two action policies that use the "Run Integration Service Application" action type to trigger the PowerFlow application that collects data from Ansible. You can specify the credential ID in a JSON structure that you enter in the **Input Parameters** field in the **Action Policy Editor** modal.

To edit the action policies included in the PowerPack:

1. Go to the **Action Policy Manager** page (Registry > Run Book > Actions).

2. Locate the action policy that you want to use, and then click its wrench icon (🔧). The **Editing Action** page appears:

3. In the **Input Parameters** field, change the values of the following parameters:

   - **credential_id**. Change the value to the credential ID that you noted earlier when *creating a credential for your PowerFlow system*. This parameter is required.
   - **include_event**. Leave the value as "true".

- *application_name*. Leave the default application value.

- *params*. Leave the default parameter value.

4. Click **[Save]**.

Chapter

7

Ansible Automation Policies

Overview

This chapter describes the automation policies found in the *Ansible Automation* PowerPack.

This chapter covers the following topics:

Standard Automation Policies

The *Ansible Automation* PowerPack includes two standard automation policies that you can enable, shown in the following figure.
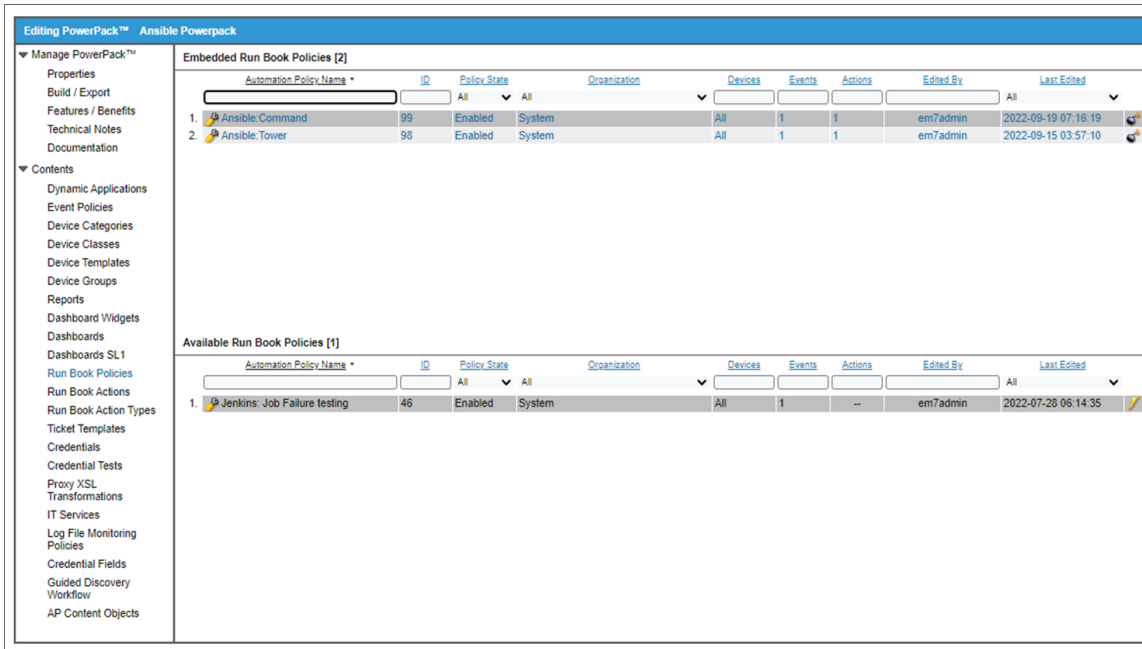
These policies update the SL1 event with the state of the associated Ansible Command or Tower. The following table shows the automation policy, its aligned events, and the automation action that runs in response to the events.

Automation Policy Name	Aligned Events	Automation Action
Ansible: Command	Ansible-Comman	Ansible: Command
Ansible: Tower	Ansible-Tower	Ansible: Tower

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