



Restorepoint Integrations

Restorepoint PowerPack Version 101

Restorepoint Synchronization PowerPack Version 1.0.3

Restorepoint Automation PowerPack Version 101

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Chapter

3

Introduction

Overview

This manual describes how to use the *Restorepoint Synchronization PowerPack* to automatically add SL1 devices to Restorepoint when those devices are discovered in SL1 and how to use the automation policies, automation actions, and custom action types found in the *Restorepoint Automation PowerPack*.

These PowerPacks require a subscription to one of the following solutions:

- *Datacenter Automation Pack*
- ScienceLogic Advanced and Premium solutions
- ScienceLogic Standard solution

This chapter covers the following topics:

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Restorepoint Integrations

This manual describes content from the following PowerPack and Synchronization PowerPack versions:

- Restorepoint Synchronization PowerPack, version 1.0.3
- Restorepoint Automation PowerPack, version 101

Chapter

1

Introduction to the Restorepoint Synchronization PowerPack

Overview

This chapter describes how you can use the *Restorepoint Synchronization PowerPack* to automatically add SL1 devices to Restorepoint when those devices are discovered in SL1. The integration is uni-directional, from SL1 to Restorepoint.

This PowerPack requires a subscription to the following solution:

- ScienceLogic Standard solutions

NOTE: This version of the Synchronization PowerPack has been tested to sync up to 1,000 new devices at a time.

NOTE: After the 2.1.0 platform release, the *Integration Service* was rebranded as *SL1 PowerFlow*, and the *Automation Builder* was rebranded as *SL1 PowerFlow builder*.

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

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Prerequisites for this Synchronization PowerPack

This Synchronization PowerPack requires the following:

- A subscription to the SL1 Standard solution

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	Restorepoint API	Any	TCP 443	Restorepoint API Access
PowerFlow	SL1 Database	Any	TCP 7706	SL1 Database Access

PowerFlow Applications Included in the Synchronization PowerPack

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

PowerFlow Applications

- **Restorepoint: Onboard Device.** This application adds new devices and the associated elements to Restorepoint, including the domain and credential. The application gets details about how the device will be configured in Restorepoint, including the assigned agent and device type, from a mapping in the aligned configuration object.
- **Restorepoint: Sync Devices.** This application creates the Restorepoint custom attribute for the device and gets devices in the "Restorepoint" device group in SL1 and syncs them to Restorepoint by triggering the "Restorepoint: Onboard Device" application.

For more information about how to configure these applications, see [Configuring the Restorepoint Applications](#).

Configuration Object

- **Restorepoint Base Config.** 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 the SL1 API, including the URL, username, and password
 - Details for connecting to the Restorepoint API, including the URL, username, and password

- Details for connecting to the SL1 database, including the URL, username, and password
- A mapping between SL1 Device Class GUIDs and Restorepoint device types
- A default value for Restorepoint device types
- A mapping between SL1 collector appliance IDs and Restorepoint agents
- A default backup schedule for all new devices added to Restorepoint
- An option to add a custom link configuration to SL1

Steps

The following steps are included in this Synchronization PowerPack:

- Create Restorepoint Credential
- Restorepoint: Create Device
- Create Restorepoint Device
- Get Devices from SL1
- Select Devices from SL1
- Transfer Data

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.

WARNING: If you are *upgrading* to this version of the Synchronization PowerPack from a previous version, make a note of any settings you made on the **Configuration** pane of the various integration applications in this Synchronization PowerPack, as these settings are *not* retained when you upgrade.

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: Synchronization PowerPacks do not require a specific license. After you download a Synchronization PowerPack, you can import it to your PowerFlow system using the PowerFlow user interface.

NOTE: If you are installing or upgrading to the latest version of this Synchronization PowerPack in an offline deployment, see "Installing or Upgrading in an Offline Environment" in the Synchronization PowerPack release notes to ensure you install any external dependencies.

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.

TIP: You can also drag and drop a **.whl** file to the **SyncPacks** page.

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

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 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.

TIP: By default, the **SyncPacks** page displays only activated and installed PowerPacks. If you do not see the PowerPack that you want to install, click the Filter icon () on the **SyncPacks** page and select **Show All SyncPacks** to see a list of the uninstalled PowerPacks.

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.

TIP: While the Synchronization PowerPack is installing, you cannot click any of the options that appear when you click the **[Actions]** button (⋮).

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.

TIP: The most common error that occurs when installing a Synchronization PowerPack is that the Synchronization PowerPack dependencies are not installed. Review the "System Requirements" section of the release notes for that Synchronization PowerPack to ensure that you have installed all of the required applications for that Synchronization PowerPack. To view a list of additional PowerFlow and SL1 products that are required by the various Synchronization PowerPacks, see the SL1 PowerFlow Dependency Matrix.

Installing and Configuring the Restorepoint PowerPack

The following topics describe how to install and configure the *Restorepoint* PowerPack and the *Restorepoint* Synchronization PowerPack.

Installing the PowerPack

The *Restorepoint* PowerPack includes the following tools, which you will use with the *Restorepoint* Synchronization PowerPack:

- The "Restorepoint Connectivity" Dynamic Application, which tests SSH connectivity and indicates devices to be onboarded in Restorepoint.
- Event Policies for Restorepoint.
- A Device Class for Restorepoint devices.
- A Device Group called "Restorepoint Devices", which includes a dynamic rule that matches devices with aligned Dynamic Applications, including the "Restorepoint Connectivity" Dynamic Application.
- The Restorepoint MIB is embedded in the **Documentation** section of the PowerPack, and the MIB must be loaded before you can use the PowerPack. For more information, see [Downloading and Compiling the MIBs from the PowerPack](#).

To install the *Restorepoint* PowerPack:

1. Download the latest version of the PowerPack from the Customer Portal to a local computer.
2. In SL1, log in and go to the **PowerPack Manager** page (System > Manage > PowerPacks).
3. Click **[Actions]** and select *Import PowerPack*.
4. Click **[Browse]** and navigate to the PowerPack file from step 1.
5. Select the PowerPack file and click **[Import]**. The **PowerPack Installer** modal page displays a list of the PowerPack contents.
6. Click **[Install]**. After the installation is complete, the PowerPack appears on the **PowerPack Manager** page.

Downloading and Compiling the MIBs from the PowerPack

After installing the *Restorepoint* PowerPack, you will need to download and compile the following MIB files in SL1:

- **RESTOREPOINT-APPLIANCE-MIB.txt**
- **RESTOREPOINT-MIB.txt**

You can access the Restorepoint MIB files from the **Documentation** section of the *Restorepoint* PowerPack.

To download and compile the Restorepoint MIB files:

1. In SL1, go to the **PowerPacks** page (System > Manage > PowerPacks) and search for "Restorepoint".
2. Click the wrench icon () for the *Restorepoint* PowerPack and select the **Documentation** section from the **Editing** window.
3. Click the download icon () for both MIB files and download them to your local drive.
4. Go to the **MIB Compiler** page (System > Tools > MIB Compiler) and click the **[Import]** button.
5. In the **MIB Import** modal page, navigate to the location of the MIB file on your local computer and click the **[Import]** button. The new MIB file appears in the list of MIB files in the **MIB Compiler** page.
6. Repeat steps 4-5 to upload the second MIB file.
7. You must compile both MIB files before SL1 can use it. To compile a MIB, click its lightning bolt icon () .
8. To enable Restorepoint to send trap events to SL1, go to **Administration > System Settings > Logs/Alerts** in the Restorepoint user interface and change the following:
 - **SNMP Traps**: Check this checkbox.
 - **SNMP Server**: Enter the IP address of the SL1 All-In-One or Data Collector.

Configuring Applications for the Restorepoint Synchronization PowerPack

Overview

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

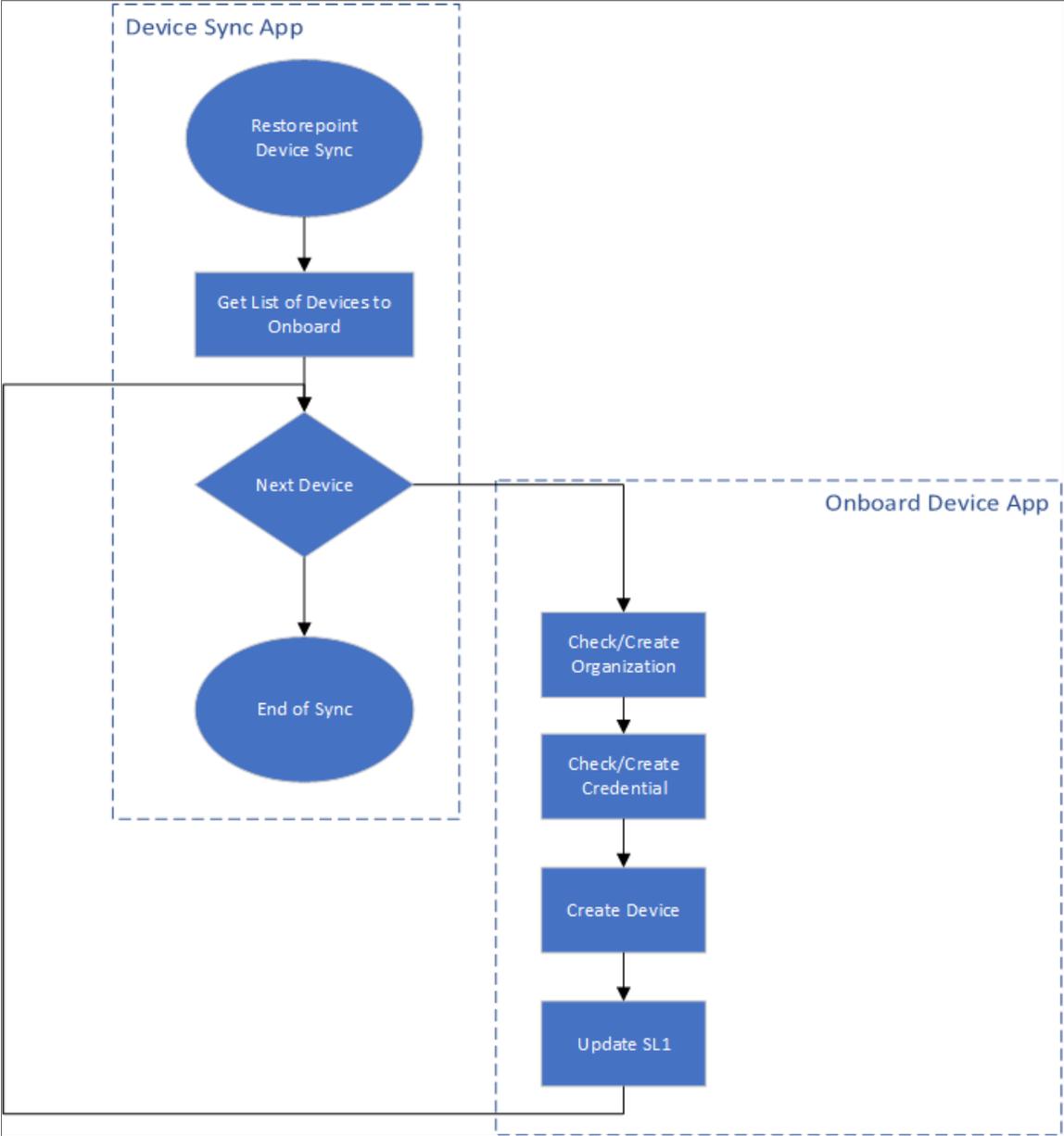
This chapter covers the following topics:

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Overview of Onboarding SL1 Devices to Restorepoint

You can configure the *Restorepoint* Synchronization PowerPack to automatically add SL1 devices to Restorepoint when those devices are discovered in SL1. The integration is uni-directional, from SL1 to Restorepoint.

The following workflow describes the process for adding SL1 devices to Restorepoint:



See the following topics for detailed steps that cover how to configure settings in SL1 and PowerFlow before you can enable these applications.

Creating an SSH Credential in SL1 for Devices

In SL1, create an SSH credential for the devices that you want to discover and add to Restorepoint. SL1 uses this credential to automatically align the "Restorepoint Connectivity" Dynamic Application, which is used when you discover a device and add it to Restorepoint.

NOTE: If needed, create a new organization in SL1 for the device you want to discover. For more information, see the *Creating and Editing Organizations* chapter in the **Organizations and Users** manual.

To create an SSH/Key credential:

1. Go to the **Credentials** page (Manage > Credentials or System > Manage > Credentials in the classic user interface).
2. Click the **[Create New]** button and then select *Create SSH/Key Credential*. The **Edit Credential** modal page appears.
3. Supply values in the following fields:
 - **Name**. Name of the credential. Can be any combination of alphanumeric characters.
 - **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.
 - **Timeout (ms)**. Time, in milliseconds, after which SL1 will stop trying to communicate with the device from which you want to retrieve data. The default is 1500.
 - **Hostname/IP**. Hostname or IP address of the device you want to discover.
 - You can include the variable **%D** in this field. SL1 will replace the variable with the IP address of the current device (device that is currently using the credential).
 - You can include the variable **%N** in this field. SL1 will replace the variable with hostname of the current device (device that is currently using the credential). If SL1 cannot determine the hostname, SL1 will replace the variable with the primary, management IP address for the current device.
 - **Port**. Port number associated with the data you want to retrieve. The default TCP port for SSH servers is 22.

NOTE: The protocol attribute of your device in Restorepoint is set based on the port specified in this credential. If the port is 23, the attribute is set to telnet/ftp. For all other ports, the attribute is set to ssh/ftp.

- **Username**. Username for an SSH or user account on the device to be monitored.
- **Password**. Password for an SSH user account on the device to be monitored.

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

4. Click **[Save]**.

Creating a Configuration Object in PowerFlow

For this Synchronization PowerPack, you can make a copy of the "Restorepoint Base Config" configuration object, which is the sample configuration file that was installed with the *Restorepoint* Synchronization PowerPack.

TIP: The "Base Config" configuration object contains all of the required variables. Simply update the variables from that object to match your SL1 and Restorepoint settings.

To create a configuration object based on the "Restorepoint Base Config" configuration object:

1. In the PowerFlow user interface, go to the **Configurations** page ().
2. Click the **[Actions]** button () for the "Restorepoint Base Config" configuration object and select *Edit*.
The **Configuration** pane appears:

Configurations isadmin ScienceLogic

Search

CONFIG NAME	VER	AUTHOR
IS - System Backup Configuration Example	1.0.0	ScienceLogi
IS - System Diagnostic Configuration Example	1.0.0	ScienceLogi
juanRDevice	1	Juan
juanrestor	1	Juan
myrsconfig	1.0.0	kp
powershellconfig	1	Juan
Restorepoint Base Config	1.0.0	ScienceLogi
Restorepoint Lab Configuration		
SSH Command Config	1.0.0	ScienceLogi

Restorepoint Base Config

Description: Base config for Restorepoint syncpack

Version: 1.0.0

Configuration Data Values

Name	Value	Encrypted	
sl1_url	https://<HOST_URL>	<input type="checkbox"/>	×
sl1_user	<SL1_USER>	<input type="checkbox"/>	×
sl1_password	SnbtZyiM6b1VuABtM3eXSpvdwE	<input checked="" type="checkbox"/>	×
sl1_db_host	<SL1_DB_HOST>	<input type="checkbox"/>	×
sl1_db_user	<SL1_DB_USER>	<input type="checkbox"/>	×
sl1_db_password	C72eRH24gQLCNABAdlMTu5qqz	<input checked="" type="checkbox"/>	×
restorepoint_url	https://<DOMAIN-URL>	<input type="checkbox"/>	×
restorepoint_user	<RESTOREPOINT_USER>	<input type="checkbox"/>	×
restorepoint_password	3fdOhBxK2JZOUkSDPS60kqBJrI	<input checked="" type="checkbox"/>	×
device_class_mapping	Toggle JSON to show JSON object	<input type="checkbox"/>	×
default_restorepoint_device_type	a10_agalaxy	<input type="checkbox"/>	×
collector_appliance_mapping	Toggle JSON to show JSON object	<input type="checkbox"/>	×
default_backup_interval	0 0 0 *****@0@@0@0	<input type="checkbox"/>	×
create_custom_link	0	<input type="checkbox"/>	×

Add Value

3. Click **[Copy as]**. The **Create Configuration** pane appears.
4. Complete the following fields:
 - **Friendly Name**. Name of the configuration object that will display on the **Configurations** page.
 - **Description**. A brief description of the configuration object.
 - **Author**. User or organization that created the configuration object.
 - **Version**. Version of the configuration object.
5. In the **Configuration Data** field, update the default variable definitions to match your PowerFlow configuration:

- **sl1_url**. The URL for your associated SL1 system.
- **sl1_user**. The username for your SL1 system.
- **sl1_password**. The password for your SL1 system.
- **sl1_db_host**. The URL for your associated SL1 database.
- **sl1_db_user**. The username for your SL1 database.
- **sl1_db_password**. The password for your SL1 database.
- **restorepoint_url**. The URL for your associated Restorepoint system.
- **restorepoint_user**. The username for your Restorepoint system.
- **restorepoint_password**. The password for your Restorepoint system.
- **default_restorepoint_device_type**. The default device type for your Restorepoint system.
- **default_backup_interval**. The default time for the Backup Interval for your Restorepoint device.

NOTE: The value for the `default_backup_interval` field uses the following format: `second minute hour * * * * @0@@0@0`.

- **create_custom_link**. The option to create a custom link from SL1 to Restorepoint.

NOTE: The `create_custom_link` feature is for future use. This field should always be set to its default value: `False/0`

6. The other optional values in the Configuration Data field require JSON code to edit their values. Click **[Toggle JSON Editor]** to show the JSON code.
7. In the **Configuration Data** field, be sure to include the required block of code to ensure that the applications aligned to this configuration object do not fail:

```
{
  "encrypted": false,
  "name": "sl1_db_host",
  "value": "${config.sl1_host}"
}
```

For example:

```
{
  "encrypted": false,
  "name": "sl1_db_host",
  "value": "10.2.11.42"
}
```

8. To create a configuration variable, define the following keys:
 - **encrypted**. Specifies whether the value will appear in plain text or encrypted in this JSON file. If you set this to "true", when the value is uploaded, PowerFlow encrypts the value of the variable. The plain text value cannot be retrieved again by an end user. The encryption key is unique to each PowerFlow system. The value is followed by a comma.
 - **name**. Specifies the name of the configuration file, without the JSON suffix. This value appears in the user interface. The value is surrounded by double-quotes and followed by a comma.
 - **value**. Specifies the value to assign to the variable. The value is surrounded by double-quotes and followed by a comma.
9. Click **[Save]**. You can now align this configuration object with one or more applications.

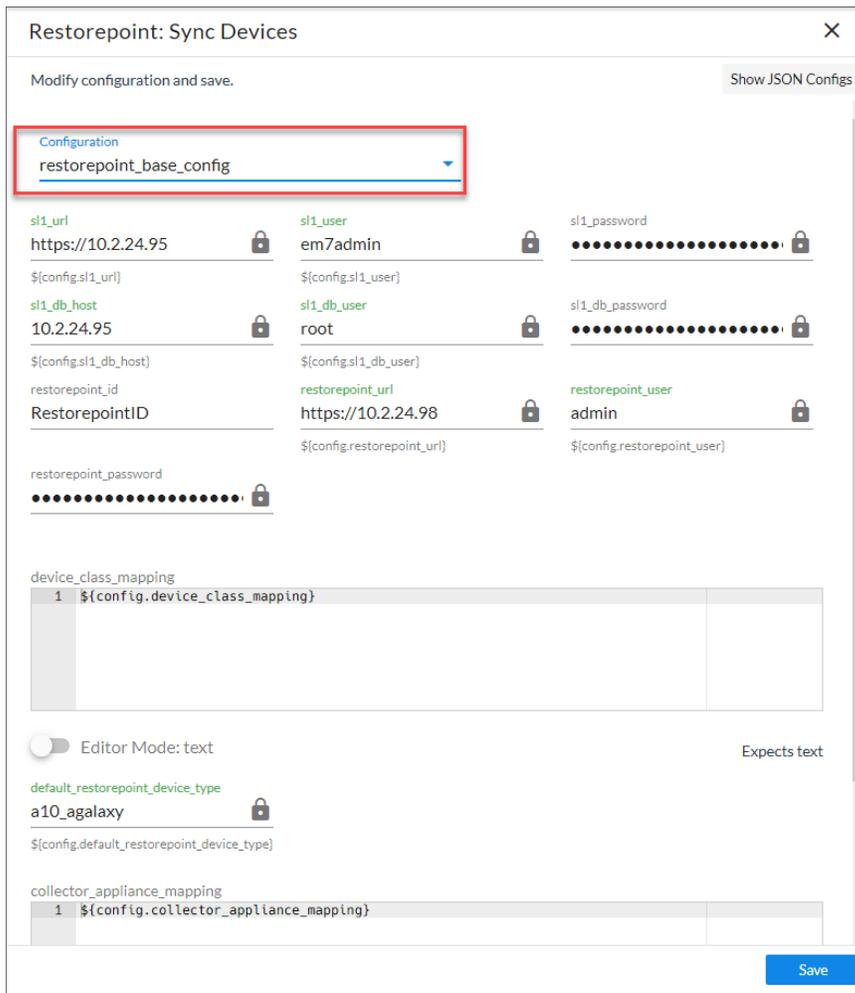
Configuring the Restorepoint Applications in PowerFlow

You can use this Synchronization PowerPack to automatically add an SL1 device, along with associated credential and organization details, to Restorepoint. You will need to align the Restorepoint applications with the relevant configuration object in PowerFlow, and, if needed, update any other fields on the **Configuration** pane for the applications.

To configure the applications in the PowerFlow user interface:

1. In the PowerFlow user interface, go to the **Applications** page and select the "Restorepoint: Sync Devices" application. This application gets the list of SL1 devices to add to Restorepoint.

2. Click the **[Configuration]** button (). The **Configuration** pane appears:



3. In the **Configuration** drop-down, select *the configuration object you created earlier*. The fields with a padlock icon () are updated with values from the configuration object.
4. Update any of the other fields that do not have a padlock icon, and then click **[Save]**.

TIP: You should schedule the "Device Sync" application to run on a regular basis to ensure that new SL1 devices are added to Restorepoint automatically. For more information, see [Scheduling Applications](#).

5. Go to the **Applications** page and select the "Restorepoint: Onboard Device" application.
6. In the **Configuration** drop-down, select the same configuration object from step 3 and click **[Save]**.

The next time you discover a device in SL1 and run the "Restorepoint: Sync Devices" application, any devices you discovered in SL1 that are aligned with the "Restorepoint Connectivity" Dynamic Application get added to Restorepoint. Those devices are also part of the Restorepoint Device Group. For more information, see [Discovering a Device in SL1 and Running the Sync Devices Application](#).

Discovering a Device in SL1 and Running the Sync Devices Application

The next time you discover a device in SL1 and run the "Restorepoint: Sync Devices" application, any devices you discovered in SL1 that are aligned with the "Restorepoint Connectivity" Dynamic Application get added to Restorepoint. Those devices are also part of the Restorepoint Device Group.

If you include the SSH or telnet credential you created earlier in a discovery session, the "Restorepoint Connectivity" Dynamic Application is automatically aligned. Optionally, you can manually align the Dynamic Application with your devices using the credential. Based on the Dynamic Application alignment, the device is also automatically included in a Restorepoint Device Group. For more information about discovering a device in SL1, see the *Discovery and Credentials* manual.

To run the "Restorepoint: Sync Devices" application:

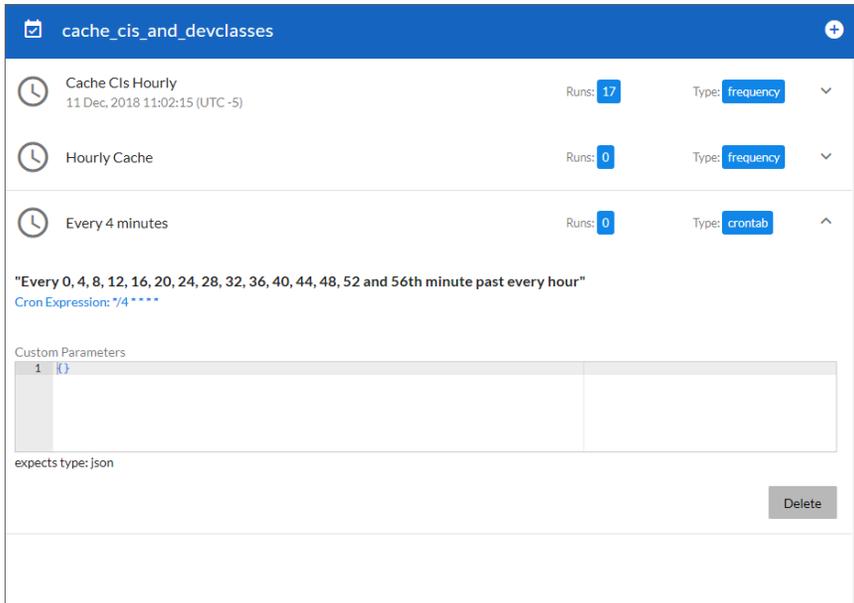
1. Go to the **Applications** page and select the "Restorepoint: Sync Devices" application.
2. Click the **[Run]** button (). The following actions occur:
 - If the SL1 organization exists as a domain in Restorepoint, the device is added to that domain. Otherwise a new domain is created in Restorepoint that maps to the SL1 organization.
 - If needed, a new credential is created in Restorepoint that maps to the new SL1 credential.
 - A new device is added in Restorepoint that maps to the new device in SL1:
 - The device is associated with the appropriate domain and credential.
 - The device is associated with an agent that maps to the SL1 Data Collector monitoring that device, using a pre-defined mapping from the "Restorepoint Base Config" configuration object.
 - The device is configured with a plugin that maps to the SL1 Device Class for that device, using a pre-defined mapping from the "Restorepoint Base Config" configuration object.

Scheduling the Devices Sync Application

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 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:



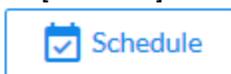
NOTE: If you set up a schedule using a cron expression, the details of that schedule display in a more readable format in this list. For example, if you set up a cron expression of `*/4 * * * *`, the schedule on this window includes the cron expression along with an explanation of that expression: "Every 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:

The screenshot shows a 'Schedule' window with the following fields and controls:

- Schedule Name:** A text input field.
- Switch to Cron Expression:** A toggle switch.
- Frequency:** A text input field with a unit of 'secs'.
- Custom Parameters:** A table with 3 rows and 2 columns. The first row contains '1', '[]'. The second row contains '2', '{}'. The third row contains '3', '[]'. Below the table, it says 'expects type: json'.
- Save Schedule:** A blue button at the bottom right.

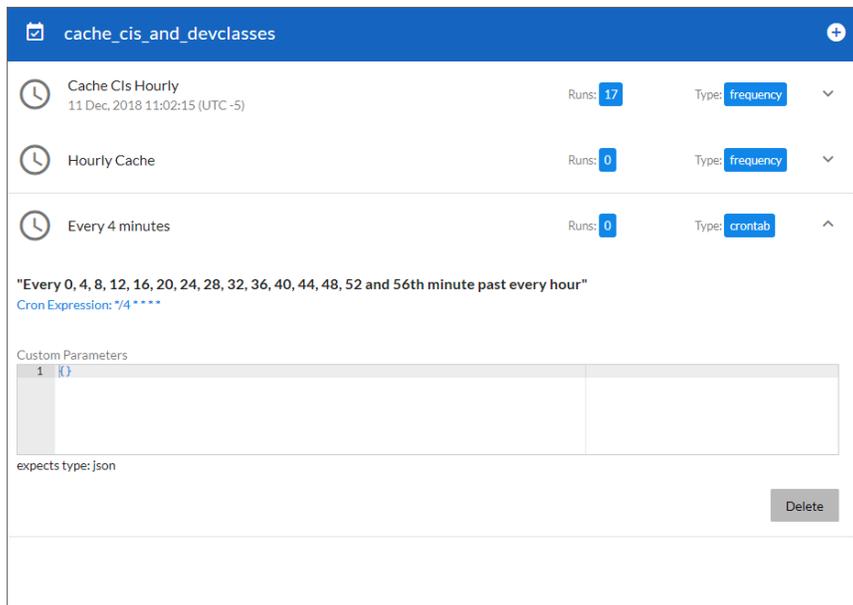
4. In the **Schedule** window, complete the following fields:
 - **Schedule Name.** Type a name for the schedule.
 - **Switch to.** Use this toggle to switch between a cron expression and setting the frequency in seconds.
 - **Cron expression.** Select this option to schedule the application using a 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.

Chapter

3

Introduction to the Restorepoint Automation PowerPack

Overview

This chapter describes how to use the automation policies, automation actions, and custom action types found in the *Restorepoint Automation PowerPack*.

This PowerPack requires a subscription to one of the following solutions:

- *Datacenter Automation Pack*
- ScienceLogic Advanced solutions

This chapter covers the following topics:

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What is the Restorepoint Automation PowerPack?

The *Restorepoint Automation* PowerPack includes automation policies that:

- Enrich SL1 events for devices managed by Restorepoint (for example, devices that have been synched using the *Restorepoint Synchronization* PowerPack) by automatically running diagnostic commands. The command output is added to the SL1 event log or associated incident.

The Restorepoint Automation actions are executed on the SL1 All-In-One Appliance or Database Server.

In addition to using the standard content, you can use the content in the *Restorepoint Automation* PowerPack to:

- Create your own automation policies that include the pre-defined actions that run different sets of diagnostic commands.
- Use the supplied "Restorepoint: Generic Action type" custom action type to configure your own automation action by supplying a set of commands.

Installing the Restorepoint Automation PowerPack

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

IMPORTANT: You must install the *Datacenter Automation Utilities* PowerPack version 103 before using the Restorepoint Automation PowerPack.

IMPORTANT: You must install and configure the *Restorepoint Synchronization* PowerPack version 1.0.1 and the *Restorepoint* PowerPack version 101 before using the Restorepoint Automation PowerPack.

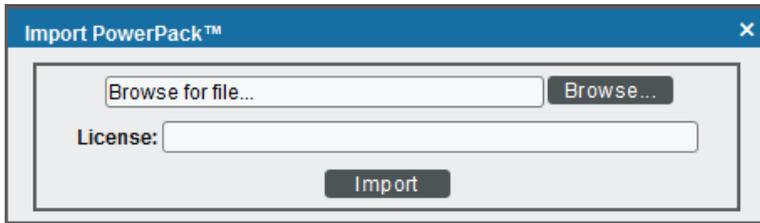
NOTE: The *Restorepoint Automation* PowerPack requires SL1 version 8.14.0 or later. For details on upgrading SL1, see the appropriate SL1 [Release Notes](#).

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](#).

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

4

Configuring Device Credentials

Overview

This chapter describes how to configure the credentials required by the automation actions in the *Restorepoint Automation PowerPack*.

This chapter covers the following topics:

<i>Creating a Credential</i>	27
<i>Aligning a Restorepoint Credential to the Restorepoint Automation Actions</i>	28

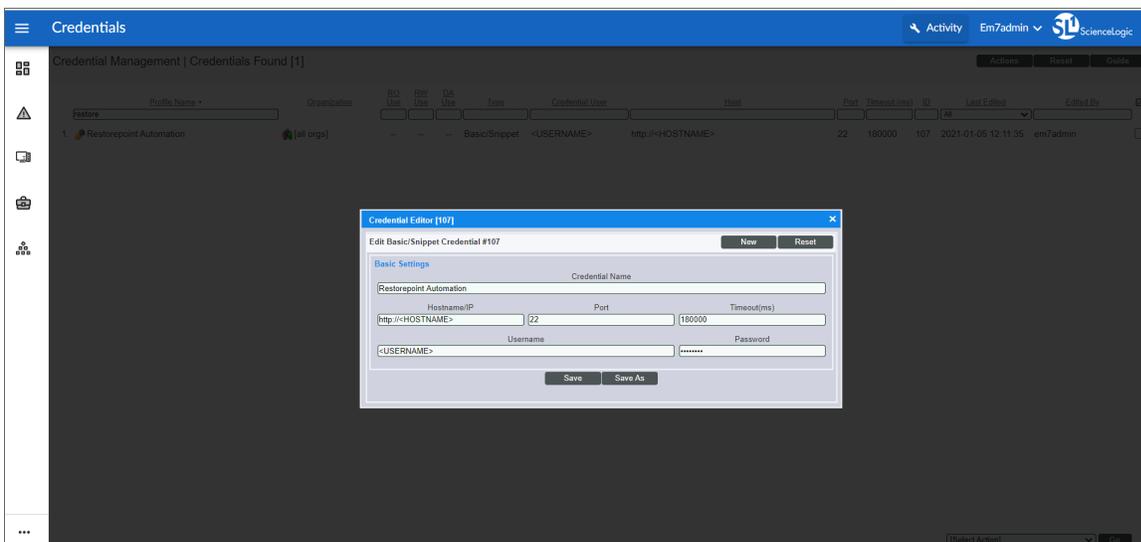
Creating a Credential

To use the automation actions in the PowerPack to collect data from a device, you must create a Restorepoint credential that includes the hostname/IP address, username, and password for your Restorepoint system. The *Restorepoint Automation* PowerPack includes a *Restorepoint Automation* credential template that you can use to create your own credential to communicate with your Restorepoint devices.

NOTE: The *Restorepoint Automation* PowerPack uses one credential for all devices in your Restorepoint system. Once you have created your Restorepoint Automation credential, you will need to modify the automation actions to update the credential ID parameter.

To create a Restorepoint Automation credential:

1. Go to the **Credential Management** page (System > Manage > Credentials).
2. Locate the *Restorepoint Automation* sample credential and click the wrench icon (🔧). The **Credential Editor** modal page appears:



3. Enter values in the following fields:
 - **Credential Name.** Enter a new name for your Restorepoint credential.
 - **Hostname/IP.** Enter the URL for the Restorepoint device.
 - **Port.** Enter the port number associated with the data you want to retrieve. The TCP port for secure HTTP servers is 443.
 - **Timeout(ms).** Enter a timeout, in milliseconds, for the connection.

- **Username**. Enter the username for a user account on the Restorepoint device to be monitored.
 - **Password**. Enter the password for the user you entered in the **Username** field.
4. Click **[Save As]**.
 5. SL1 assigns the credential an ID number. Take note of the ID number that appears in the Credential Editor heading, as you will need this when [aligning a Restorepoint credential to the Restorepoint automation actions](#).

The screenshot shows a window titled "Credential Editor [235]". Inside, there's a sub-header "Edit Basic/Snippet Credential #235" with "New" and "Reset" buttons. The main area is labeled "Basic Settings" and contains the following fields:

- Credential Name:** Restorepoint Automation
- Hostname/IP:** http://<HOSTNAME>
- Port:** 22
- Timeout(ms):** 180000
- Username:** <USERNAME>
- Password:** [masked with dots]

At the bottom, there are "Save" and "Save As" buttons.

NOTE: You may also find the credential ID number on the **Credential Management** page under the "ID" column.

For more information about configuring credentials in SL1, see the *Discovery and Credentials* manual.

Aligning a Restorepoint Credential to the Restorepoint Automation Actions

Once you have created a Restorepoint credential that communicates with your Restorepoint devices, you must align the credential to the three default automation actions included in this PowerPack. The aligned credential will work with the automation policy that is installed by default in this PowerPack to provide a working configuration.

To align the credential to the automation actions:

1. Navigate to the **Action Policy Manager** page (Registry > Run Book > Actions).
2. Locate a Restorepoint automation action and click the wrench icon (🔧). The **Action Editor** modal page appears:

Policy Editor | Editing Action [63] Reset

Action Name Restorepoint: Difference between Last Two Backups	Action State [Enabled]
Description Show the difference between last two configuration backups for the triggered device	
Organization [System]	Action Type Restorepoint : Generic Action type (1.0)
Execution Environment [-- Default Environment]	Action Run Context [Database]
Input Parameters	
<pre> { "s11_credential_id": "", "max_log": "", "action": "recent_backups_diff" } </pre>	
Save Save As	

3. In the **Input Parameters** pane, add the credential ID to the "s11_credential_id" value. For example: "s11_credential_id": "235", .
4. Click **[Save]**.

Chapter

5

Restorepoint Automation Policies

Overview

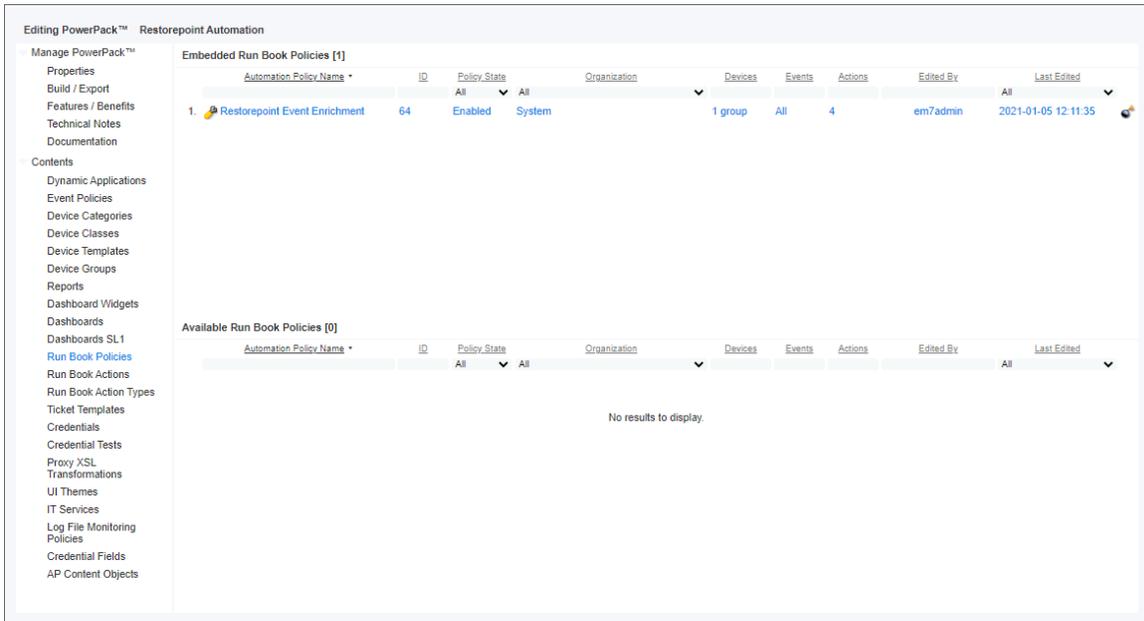
This chapter describes how to use the automation policies, automation actions, and custom action types found in the *Restorepoint Automation PowerPack*.

This chapter covers the following topics:

<i>Standard Automation Policies</i>	31
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Standard Automation Policies

The *Restorepoint Automation PowerPack* includes one standard automation policy and a "Restorepoint Devices" device group. This policy triggers three different automation actions that collect diagnostic data and formats an output. All of the automation actions use the custom action type "Restorepoint: Generic Action type", which is supplied in the PowerPack.



The following table shows the standard automation policy, the aligned events, the aligned device group, and the automation actions that run in response to the events:

Automation Policy Name	Aligned Events	Aligned Device Group	Automation Action
Restorepoint Event Enrichment	All events in your SL1 system are aligned to this policy	Restorepoint Devices	<ul style="list-style-type: none"> Restorepoint: Difference Between Last Two Backups Restorepoint: Link to Last Configuration Backup Restorepoint: Recent Logs

The following figure shows a file system usage threshold exceeded event with major criticality on the **Events** page. Click the **[Actions]** button (⋮) for an event, and select *View Automation Actions* to see the automation actions triggered by the event.

ORGANIZATION	SEVERITY	NAME	MESSAGE	AGE	TICKET ID	COUNT	EVENT NOTE	MASKED EVENTS	ACKNOWLEDGE	CLEAR
System	Healthy	bl-db	swap memory usage of 0% is below threshold of 20%	1 hour 11 minutes		1			✓ Acknowledge	✗ Clear
System	Healthy	SL1	SL1: Tree Maintenance Component Updates	1 hour 16 minutes		1			✓ Acknowledge	✗ Clear
Network	Major	10.64.172.187	Backup Error Message: Device2: nil device : unknown proto...	1 hour 25 minutes		1			✓ Acknowledge	✗ Clear
System	Major	csco26	Backup Error Message: SL1 Collector: Function won't comp...	1 hour 29 minutes		1			✓ Acknowledge	✗ Clear
System	Major	Restorepoint Appliance	Backup Error Message: Device1: Timeout. Failed 304 times ...	1 hour 58 minutes		1			✓ Acknowledge	✗ Clear
Network	Major	10.64.172.187	Backup Error Message: Device2: nil device : unknown proto...	2 hours 11 minutes		1			✓ Acknowledge	✗ Clear
System	Minor	System	EM7 minor event: Non-digits in oid with object id: 15995. d...	2 hours 11 minutes		1			View Event	✗ Clear
System	Major	csco26	Backup Error Message: SL1 Collector: Function won't comp...	2 hours 15 minutes		1			Edit Event Note	✗ Clear
System	Major	Restorepoint Appliance	Backup Error Message: Device1: Timeout. Failed 303 times ...	2 hours 46 minutes		1			Create Ticket	✗ Clear
Network	Major	10.64.172.187	Backup Error Message: Device2: nil device : unknown proto...	2 hours 57 minutes		1			View Automation Actions	✗ Clear
System	Major	csco26	Backup Error Message: SL1 Collector: Function won't comp...	3 hours 1 minute		1			View Event Policy	✗ Clear
System	Major	Restorepoint Appliance	Backup Error Message: Device1: Timeout. Failed 302 times ...	3 hours 34 minutes		1			Suppress Event for this Device	✗ Clear
Network	Major	10.64.172.187	Backup Error Message: Device2: nil device : unknown proto...	3 hours 43 minutes		1			✓ Acknowledge	✗ Clear
System	Major	csco26	Backup Error Message: SL1 Collector: Function won't comp...	3 hours 47 minutes		1			✓ Acknowledge	✗ Clear
System	Major	Restorepoint Appliance	Backup Error Message: Device1: Timeout. Failed 301 times ...	4 hours 22 minutes		1			✓ Acknowledge	✗ Clear
Network	Major	10.64.172.187	Backup Error Message: Device2: nil device : unknown proto...	4 hours 29 minutes		1			✓ Acknowledge	✗ Clear
System	Major	csco26	Backup Error Message: SL1 Collector: Function won't comp...	4 hours 33 minutes		1			✓ Acknowledge	✗ Clear
System	Major	Restorepoint Appliance	Backup Error Message: Device1: Timeout. Failed 300 times ...	5 hours 10 minutes		1			✓ Acknowledge	✗ Clear
Network	Major	10.64.172.187	Backup Error Message: Device2: nil device : unknown proto...	5 hours 15 minutes		1			✓ Acknowledge	✗ Clear
System	Major	csco26	Backup Error Message: SL1 Collector: Function won't comp...	5 hours 19 minutes		1			✓ Acknowledge	✗ Clear
System	Major	Restorepoint Appliance	Backup Error Message: Device1: Timeout. Failed 299 times ...	5 hours 58 minutes		1			✓ Acknowledge	✗ Clear

The results shown for this event, in the **Event Actions Log**, include the executed automation policy (shown at the top of the following figure), along with the automation actions (commands). Results for each command are also displayed. The following figure shows an example of this output:

Event Actions Log For Event [167503]		Refresh	Guide
2021-03-01 14:06:34			
Automation Policy Restorepoint Event Enrichment action Datacenter Automation: Format Output as HTML ran Successfully			
Message: Snippet (557) executed without incident			
Result: {formatted_output: 'EnrichmentCommand Output'			
Command: Recent Logs from Restorepoint			
UserName:Auto, Action:Backup, Dt:2021-03-01T14:01:10.519616867Z, Message:Version 5			
UserName:Auto, Action:Backup, Dt:2021-03-01T14:00:45.516075877Z, Message:Started			
UserName:Auto, Action:Backup, Dt:2021-03-01T13:01:11.527920692Z, Message:Version 5			
UserName:Auto, Action:Backup, Dt:2021-03-01T13:00:45.514732167Z, Message:Started			
UserName:Auto, Action:Backup, Dt:2021-03-01T12:01:11.076132052Z, Message:Version 5			
UserName:Auto, Action:Backup, Dt:2021-03-01T12:00:45.51377585Z, Message:Started			
UserName:Auto, Action:Backup, Dt:2021-03-01T11:01:10.355008506Z, Message:Version 5			
UserName:Auto, Action:Backup, Dt:2021-03-01T11:00:45.515095109Z, Message:Started			
UserName:Auto, Action:Backup, Dt:2021-03-01T10:01:11.148938966Z, Message:Version 5			
UserName:Auto, Action:Backup, Dt:2021-03-01T10:00:45.51954914Z, Message:Started			
Command: Last configuration changes, between 2021-02-24T22:46:49Z and 2021-03-01T14:01:10Z			
running: snmp-server user public read_all v2c			
snmp-server view all i included			
Line references: 32 and 32			
Current: snmp-server community public RO			
Previous: snmp-server community public RW			
snmp-server location Mordor			
control-plane			
}			
2021-03-01 14:06:28			
Automation Policy Restorepoint Event Enrichment action Restorepoint: Link to Last Configuration Backup ran Successfully			
Message: CustomActionType (543) executed without incident			
Result: Restorepoint Last Backup Link: https://10.2.11.16/#viewconfig/114'			
2021-03-01 14:06:26			
Automation Policy Restorepoint Event Enrichment action Restorepoint: Difference between Last Two Backups ran Successfully			
Message: CustomActionType (544) executed without incident			
Result: {command_list_out: [{"Last configuration changes, between 2021-02-24T22:46:49Z and 2021-03-01T14:01:10Z, 'running: snmp-server user public read_all v2c\nsnmp-server view all i included\nLine references: 32 and 32\nCurrent: snmp-server community public RO\n\n\nPrevious: snmp-server community public RW\n\nsnmp-server location Mordor\n\ncontrol-plane\n\n'}]}			
2021-03-01 14:06:24			
Automation Policy Restorepoint Event Enrichment action Restorepoint: Recent Logs ran Successfully			
Message: CustomActionType (542) executed without incident			
Result: {command_list_out: [{"Recent Logs from Restorepoint, 'UserName:Auto, Action:Backup, Dt:2021-03-01T14:01:10.519616867Z, Message:Version 5\nUserName:Auto, Action:Backup, Dt:2021-03-01T14:00:45.516075877Z, Message:Started\nUserName:Auto, Action:Backup, Dt:2021-03-01T13:01:11.527920692Z, Message:Version 5\nUserName:Auto, Action:Backup, Dt:2021-03-01T13:00:45.514732167Z, Message:Started\nUserName:Auto, Action:Backup, Dt:2021-03-01T12:01:11.076132052Z, Message:Version 5\nUserName:Auto, Action:Backup, Dt:2021-03-01T12:00:45.51377585Z, Message:Started\nUserName:Auto, Action:Backup, Dt:2021-03-01T11:01:10.355008506Z, Message:Version 5\nUserName:Auto, Action:Backup, Dt:2021-03-01T11:00:45.515095109Z, Message:Started\nUserName:Auto, Action:Backup, Dt:2021-03-01T10:01:11.148938966Z, Message:Version 5\nUserName:Auto, Action:Backup, Dt:2021-03-01T10:00:45.51954914Z, Message:Started"}]}			

To learn more about which commands are executed by default for a given automation action, see [Customizing Restorepoint Actions](#).

TIP: Although you can edit the automation policies described in this section, it is a best practice to use "Save As" to create a new automation policy, rather than to customize the standard automation policies.

Creating and Customizing Automation Policies

Overview

This chapter describes how to create automation policies using the automation actions in the *Restorepoint Automation PowerPack*.

NOTE: The steps in this chapter are optional. The Restorepoint Automation PowerPack includes an automation policy that is installed by default. The default automation policy runs all automation actions in the PowerPack for all Minor, Major, and Critical events on devices that are in the "Restorepoint Devices" device group.

This chapter covers the following topics:

<i>Prerequisites</i>	35
<i>Creating an Automation Policy</i>	35
<i>Example Automation Configuration</i>	38
<i>Customizing an Automation Policy</i>	39
<i>Removing an Automation Policy from a PowerPack</i>	41

Prerequisites

Before you create an automation policy using the automation actions in the *Restorepoint Automation* PowerPack, you must determine:

- Which set of commands you want to run on a monitored device when an event occurs. There are three automation actions in the PowerPack that run the "Restorepoint: Generic Action type" action type with different commands and output formats. You can also create your own automation actions using the custom action type supplied in the PowerPack.
- The event criteria you want to use to determine when the automation actions will trigger, or the set of rules that an event must match before the automation is executed. This can include matching only specific event policies, event severity, associated devices, and so on. For a description of all the options that are available in Automation Policies, see the *Run Book Automation* manual.

Creating an Automation Policy

To create an automation policy that uses the automation actions in the *Restorepoint Automation* PowerPack, perform the following steps:

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

- Click **[Create]**. The **Automation Policy Editor** page appears.

The screenshot shows the 'Automation Policy Editor | Creating New Automation Policy' interface. The form is divided into several sections:

- Policy Name:** 'New Automation Policy'
- Policy Type:** '[Active Events]'
- Policy State:** '[Enabled]'
- Policy Priority:** '[Default]'
- Organization:** 'System'
- Criteria Logic:** '[Severity >=]', '[Minor,]', '[and 5 minutes has elapsed]', '[since the first occurrence,]', '[and event is NOT cleared]', 'and all times are valid', 'Support Availability Test'
- Match Logic:** '[Text search]'
- Match Syntax:** (Empty)
- Repeat Time:** '[Only once]'
- Align With:** 'Device Groups'
- Include events for entities other than devices (organizations, assets, etc.)
- Trigger on Child Rollup
- Available Device Groups:** IPv4 Devices, IPv6 Devices, Linux Automation, Microsoft Hyper-V Automation, MOM VMWare Guests, NetFlow Devices, ScienceLogic Data Collectors, Sensors
- Aligned Device Groups:** Restorepoint Devices
- Available Events:** [3007] Critical: AKCP: AC Voltage sensor detects no current, [3016] Critical: AKCP: DC Voltage sensor High Critical, [3017] Critical: AKCP: DC Voltage sensor Low Critical, [3006] Critical: AKCP: Dry Contact Sensor Low Critical, [3012] Critical: AKCP: Smoke Detector Alert!, [3010] Critical: AKCP: Water Sensor has detected water, [1938] Critical: APC: Diagnostic Test Failed, [4001] Critical: APC: UPS Battery Capacity
- Aligned Events:** (All events)
- Available Actions:** Send Email [0]: Email for devices in 'ALL' Organization, SNMP Trap [1]: RBA Base Pack: Send Trap, SNMP Trap [1]: SL1 Event Trap, Create Ticket [2]: RBA Base Pack: Create Ticket, Create Ticket [2]: Test-RBA, Snippet [5]: All Output Test, Snippet [5]: API VeloCloud initial disable, Snippet [5]: Automation Utilities: Calculate Memory Size for Each...
- Aligned Actions:** 1. Restorepoint : Generic Action type [114]: Restorepoint: Diff, 2. Restorepoint : Generic Action type [114]: Restorepoint: Lin, 3. Restorepoint : Generic Action type [114]: Restorepoint: Re, 4. Format HTTP Action Output [108]: Datacenter Automation:

A 'Save' button is located at the bottom center of the form.

- Complete the following required fields:
 - Policy Name.** Enter a name for the automation policy.
 - Policy Type.** Select whether the automation policy will match events that are active, match when events are cleared, or run on a scheduled basis. Typically, you would select *Active Events* in this field.
 - Policy State.** Specifies whether the policy will be evaluated against the events in the system. If you want this policy to begin matching events immediately, select *Enabled*.
 - Policy Priority.** Specifies whether the policy is high-priority or default priority. These options determine how the policy is queued.

- **Organization**. Select one or more organizations to associate with the automation policy. The automation policy will execute only for devices in the selected organizations (that also match the other criteria in the policy). To configure a policy to execute for all organizations, select *System* without specifying individual devices to align to.
- **Align With**. Select *Device Groups*.
- **Aligned Device Groups**. The "Restorepoint Devices" device group needs to be aligned. To add the device group to the **Aligned Device Groups** field, select the "Restorepoint Devices" device group in the **Available Device Groups** field and click the right arrow (> >).
- **Aligned Actions**. This field includes the actions from the *Restorepoint Automation PowerPack*. To add an action to the **Aligned Actions** field, select the action in the **Available Actions** field and click the right arrow (> >). To re-order the actions in the **Aligned Actions** field, select an action and use the up arrow or down arrow buttons to change that action's position in the sequence.

NOTE: You must have at least two Aligned Actions: one that runs the automation action and one that provides the output format. The actions providing the output formats are contained in the *Datacenter Automation Utilities PowerPack*, which is a prerequisite for running automations in this PowerPack. If you are selecting the "Difference Between Last Two Logs" or the "Restorepoint Recent Logs" collection actions, you may want to include the "Format Output as HTML" automation action, found in the *Datacenter Automation Utilities PowerPack*, in your automation policy.

4. Optionally, supply values in the other fields on this page to refine when the automation will trigger.
5. Click **[Save]**.

NOTE: You can also modify one of the automation policies included with this PowerPack. Best practice is to use the **[Save As]** option to create a new, renamed automation policy, instead of customizing the standard automation policies. For more information, see [Customizing an Automation Policy](#).

NOTE: If you modify one of the included automation policies and save it with the original name, the customizations in that policy will be overwritten when you upgrade the PowerPack unless you remove the association between the automation policy and the PowerPack before upgrading.

Example Automation Configuration

The following is an example of an automation policy that uses the automation actions in the *Restorepoint Automation PowerPack*:

The screenshot shows the 'Automation Policy Editor | Creating New Automation Policy' interface. The policy is named 'Restorepoint: Run Recent Logs' and is of type '[Active Events]'. It is set to be '[Enabled]' with a priority of '[Default]' and belongs to the 'System' organization. The criteria logic is configured as: '[Severity >=]' with a value of '[Minor.]', followed by '[and 5 minutes has elapsed]', '[since the first occurrence.]', '[and event is NOT cleared]', and 'and all times are valid'. The match logic is '[Text search]' and the match syntax is empty. The repeat time is '[Only once]' and it aligns with 'Device Groups'. There is an unchecked checkbox for 'Include events for entities other than devices (organizations, assets, etc.)' and another unchecked checkbox for 'Trigger on Child Rollup'. The available device groups include IPv4 Devices, IPv6 Devices, Linux Automation, Microsoft Hyper-V Automation, MOM VMWare Guests, NetFlow Devices, ScienceLogic Data Collectors, and Servers. The aligned device groups are 'Restorepoint Devices'. The available events list includes various critical alerts such as 'AC Voltage sensor detects no current', 'DC Voltage sensor High Critical', 'DC Voltage sensor Low Critical', 'Dry Contact Sensor Low Critical', 'Smoke Detector Alert!', 'Water Sensor has detected water', 'Diagnostic Test Failed', and 'UPS Battery Capacity'. The aligned events are '(All events)'. The available actions include 'Run SNMP Walk [112]: Walk System MIB', 'Execute Commands via SSH [113]: Get and Truncate Large SL1 L...', 'Execute Commands via SSH [113]: Restart Service', 'Execute Commands via SSH [113]: Top and Pidstat Output', and several 'Restorepoint : Generic Action type [114]: Restorepoint: Difference t...', 'Restorepoint : Generic Action type [114]: Restorepoint: Link to Last', and 'Restorepoint : Generic Action type [114]: Restorepoint: Recent Log'. The aligned actions are '1. Restorepoint : Generic Action type [114]: Restorepoint: Rec...' and '2. Format HTTP Action Output [108]: Datacenter Automation:'. A 'Save' button is located at the bottom.

The policy uses the following settings:

- **Policy Name.** The policy is named "Restorepoint: Run Recent Logs".
- **Policy Type.** The policy runs when an event is in an active state. *Active Events* is selected in this field.
- **Policy State.** *Enabled* is selected in this field. This policy is active and ready to use.

- **Organization**. The policy executes for the System organization.
- **Criteria Logic**. The policy is configured to execute immediately when an event matches these criteria: "Severity >= Notice, and no time has elapsed since the first occurrence, and event is NOT cleared, and all times are valid".
- **Aligned With**. The policy is configured to align with devices in the selected device group.
- **Aligned Device Groups**. The policy is configured to trigger for devices in the "Restorepoint Devices" device group.
- **Aligned Events**. The policy is configured to trigger for All events.
- **Aligned Actions**. The automation includes the following actions. This action allows you to view the output of the diagnostic commands in the Automation Log, accessed through the **SL 1 Events** page:
 - Restorepoint: Generic Action type [114]: Restorepoint: Recent Logs
 - Format HTTP Action Output [108]: Datacenter Automation: Format JSON as simple HTML

Customizing an Automation Policy

To customize an automation policy:

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

- Search for the *Restorepoint Automation* automation policy you want to edit and click the wrench icon () for that policy . The **Automation Policy Editor** page appears:

- Complete the following fields as needed:

- **Policy Name.** Type a new name for the automation policy to avoid overwriting the default policy.
- **Policy Type.** Select whether the automation policy will match events that are active, match when events are cleared, or run on a scheduled basis. Typically, you would select *Active Events* in this field.
- **Policy State.** Specifies whether the policy will be evaluated against the events in the system. If you want this policy to begin matching events immediately, select *Enabled*.

- **Policy Priority.** Specifies whether the policy is high-priority or default priority. These options determine how the policy is queued.
- **Organization.** Select the organization that will use this policy.
- **Aligned Actions.** This field includes the actions from the Restorepoint Automation PowerPack. You should see "Restorepoint" actions in this field. To add an action to the **Aligned Actions** field, select the action in the **Available Actions** field and click the right arrow (>>). To re-order the actions in the **Aligned Actions** field, select an action and use the up arrow or down arrow buttons to change that action's position in the sequence.

NOTE: You must have two Aligned Actions: one that runs the diagnostic or remediation commands and one that provides the output format. The actions providing the output formats are contained in the *Datacenter Automation Utilities* PowerPack, which is a prerequisite for running Restorepoint automations. If you are selecting the "Difference Between Last Two Logs" or the "Restorepoint Recent Logs" collection actions, you may want to include the "Format Output as HTML" automation action, found in the *Datacenter Automation Utilities* PowerPack, in your automation policy.

4. Optionally, supply values in the other fields on the **Automation Policy Editor** page to refine when the automation will trigger.
5. Click [Save As].

Removing an Automation Policy from a PowerPack

After you have customized a policy from a *Restorepoint Automation* PowerPack, you might want to remove that policy from that PowerPack to prevent your changes from being overwritten if you update the PowerPack later. If you have the license key with author's privileges for a PowerPack or if you have owner or administrator privileges with your license key, you can remove content from a PowerPack.

To remove content from a PowerPack:

1. Go to the **PowerPack Manager** page (System > Manage > PowerPacks).
2. Find the *Restorepoint Automation* PowerPack. Click its wrench icon (.
3. In the **PowerPack Properties** page, in the navigation bar on the left side, click **Run Book Policies**.
4. In the **Embedded Run Book Polices** pane, locate the policy you updated, and click the bomb icon () for that policy. The policy will be removed from the PowerPack and will now appear in the bottom pane.

Customizing Restorepoint Actions

Overview

This manual describes how to customize the automation actions embedded in the *Restorepoint Automation* PowerPack to create automation actions to meet your organization's specific requirements.

For more information about creating automation policies using custom action types, see [Creating and Customizing Automation Policies](#).

This chapter covers the following topics:

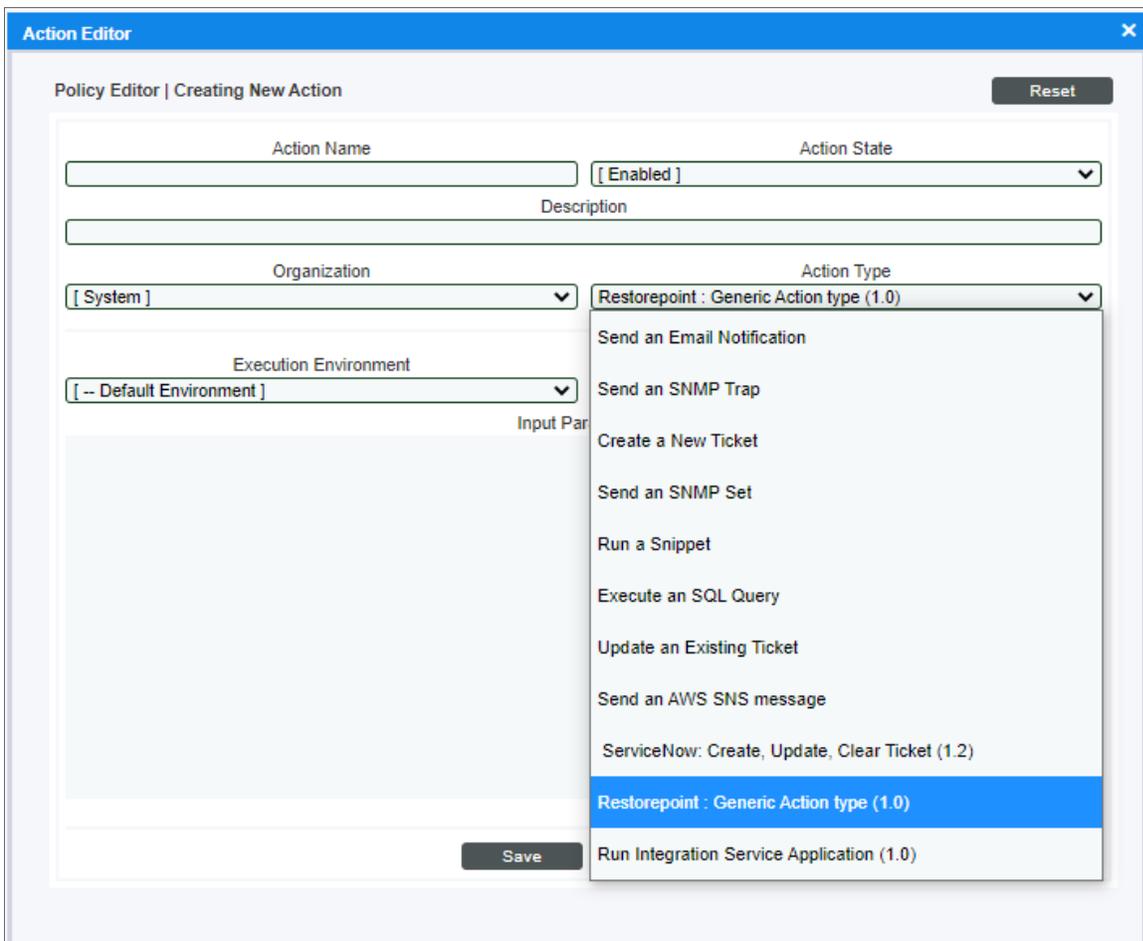
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Creating a Custom Action Policy

You can use the "Restorepoint: Generic Action type" action type included with the *Restorepoint Automation PowerPack* to create custom automation actions that you can then use to build custom automation policies.

To create a custom action policy using the "Restorepoint: Generic Action type" action type:

1. Navigate to the **Action Policy Manager** page (Registry > Run Book > Actions).
2. In the **Action Policy Manager** page, click the **[Create]** button.
3. The **Action Policy Editor** modal appears.



4. In the **Action Policy Editor** page, supply a value in each field.
 - **Action Name**. Specify the name for the action policy.
 - **Action State**. Specifies whether the policy can be executed by an automation policy (enabled) or cannot be executed (disabled).
 - **Description**. Allows you to enter a detailed description of the action.
 - **Organization**. Organization to associate with the action policy.
 - **Action Type**. Type of action that will be executed. Select the "Restorepoint: Generic Action type" action type (highlighted in the figure above).
 - **Execution Environment**. Select from the list of available Execution Environments. The default execution environment is *System*.
 - **Action Run Context**. Select *Database* or *Collector* as the context in which the action policy will run.
 - **Input Parameters**. A JSON structure that specifies each input parameter. Each parameter definition includes its name, data type, and whether the input is optional or required for this Custom Action Type. For more information about the available input parameters, see the table in [Creating a New Restorepoint Automation Action](#).

NOTE: Input parameters must be defined as a JSON structure, even if only one parameter is defined.

5. Click **[Save]**. If you are modifying an existing action policy, click **[Save As]**. Supply a new value in the **Action Name** field, and save the current action policy, including any edits, as a new policy.

Customizing Automation Actions

The *Restorepoint AutomationPowerPack* includes 3 automation actions that use the "Restorepoint: Generic Action type" action type to request diagnostic information or remediate an issue. You can specify the host and the options in a JSON structure that you enter in the **Input Parameters** field in the **Action Policy Editor** modal.

NOTE: The Run Book automations only work against devices that have the Restorepoint ID custom attribute, which is automatically set when a device is synchronized from SL1 to Restorepoint. The automation actions share formatting actions with the *Datacenter Automation Pack*, so the output can be sent to Restorepoint using the same customization steps.

Policy Editor | Editing Action [63] Reset

Action Name: Restorepoint: Difference between Last Two Backups Action State: [Enabled]

Description: Show the difference between last two configuration backups for the triggered device

Organization: [System] Action Type: Restorepoint : Generic Action type (1.0)

Execution Environment: [-- Default Environment] Action Run Context: [Database]

Input Parameters

```

{
  "s11_credential_id": "",
  "max_log": "",
  "action": "recent_backups_diff"
}

```

Save Save As

The following automation actions that use the "Restorepoint: Generic Action type" action type are included in the *Restorepoint Automation* PowerPack. Compare the commands run with the example in the image above. For more information about input parameter fields, see the table in [Creating a New Restorepoint Automation Action](#).

Action Name	Description
Restorepoint Recent Logs	Collects the last number of logs for the device associated with the triggering event. The number of logs is configurable.
Link to Configuration Backup	Creates a link to the Restorepoint UI that displays the last configuration backup from the device associated with the triggering event.
Difference between Last Two Backups	Collects the difference between the last two configuration backups for the device associated with the triggering event

Creating a New Restorepoint Automation Action

You can create a new automation action or you can also use the existing automation actions in the PowerPack as a template by using the **[Save As]** option.

The automation actions accept the following parameters in JSON:

Parameter	Input type	Description
sl1_credential_id	integer	The ID of the credential to use when running the command. The credential connects to the Restorepoint API to gather data. For more information on finding your SL1 credential ID, see the chapter Configuring Device Credentials .
max_log	integer	The number of log entries to collect from Restorepoint. This parameter only applies to the "get_logs" action setting.
action	string	The data to collect from Restorepoint. There are three support values for this parameter: <ul style="list-style-type: none"> • get_logs: The most recent logs associated with the Restorepoint device. The number of logs is configurable with the max_log parameter. • last_backup_link: The URL of the last backup performed in Restorepoint for the selected device. • recent_backups_diff: The difference between the last two backups performed in Restorepoint for the selected device.

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