



Skylar Compliance Automation PowerPack

Version 105

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Chapter

1

Introduction to the Skylar Compliance Automation PowerPack

Overview

This manual describes how to use the Skylar One automation policies, automation actions, and custom action types found in the "Skylar Compliance Automation" PowerPack. You can use this PowerPack to enrich Skylar One events for Skylar Compliance devices by automatically running diagnostic commands, and the command output is added to the Skylar One event log or associated incident.

This PowerPack requires the "Datacenter Automation Utilities" PowerPack, version 103 or later.

This chapter covers the following topics:

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What is the Skylar Compliance Automation PowerPack?

The "Skylar Compliance Automation" PowerPack includes automation policies that enrich Skylar One events for Skylar Compliance devices (for example, from the "Skylar Compliance" PowerPack) by automatically running diagnostic commands. The command output is added to the Skylar One event log or associated incident.

The Skylar Compliance run book actions are executed on the Skylar One All-In-One Appliance or Data Collector.

In addition to using the standard content, you can use the content in the "Skylar Compliance 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 Skylar Compliance Automation PowerPack

Before completing the steps in this manual, you must import and install the latest version of the "Skylar Compliance Automation" PowerPack.

IMPORTANT: You must install the "Datacenter Automation Utilities" PowerPack version 103 before using the "Skylar Compliance Automation" PowerPack.

TIP: By default, installing a new version of a PowerPack overwrites all content from a previous version of that PowerPack that has already been installed on the target system. You can use the **Enable Selective PowerPack Field Protection** setting in the **Behavior Settings** page (System > Settings > Behavior) to prevent new PowerPacks from overwriting local changes for some commonly customized fields. For more information, see the section on [Global Settings](#).

NOTE: For details on upgrading Skylar One, see the relevant [Skylar One Platform Release Notes](#).

To download and install the PowerPack:

1. Search for and download the PowerPack from the **PowerPacks** page at the [ScienceLogic Support Center](#) (Skylar One > PowerPacks, login required).
2. In Skylar One, go to the **PowerPacks** page (System > Manage > PowerPacks).

3. Click the **[Actions]** button and choose *Import PowerPack*. The **Import PowerPack** dialog box appears.
4. Click **[Browse]** and navigate to the PowerPack file from step 1.
5. Select the PowerPack file and click **[Import]**. The **PowerPack Installer** modal displays a list of the PowerPack contents.
6. Click **[Install]**. The PowerPack is added to the **PowerPacks** page.

NOTE: If you exit the **PowerPack Installer** modal without installing the imported PowerPack, the imported PowerPack will not appear in the **PowerPacks** page. However, the imported PowerPack will appear in the **Imported PowerPacks** modal. This page appears when you click the **[Actions]** menu and select *Install PowerPack*.

Downloading and Compiling the Skylar Compliance MIB Files

After installing the PowerPack, you will need to download the following MIB files from Skylar Compliance and compile the MIB files in Skylar One:

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

You can access the Skylar Compliance MIB files from your Skylar Compliance system.

To download the MIB files in Skylar Compliance:

1. In your Skylar Compliance system, go to the **Systems Settings** page (Administration > System Settings).
2. Click the **[SNMP]**tab and navigate to the **Download MIBs** field.
3. Click both of the MIB file names to download them to your local drive.

To compile the Skylar Compliance MIB files in Skylar One:

1. Go to the **MIB Compiler** page (System > Tools > MIB Compiler) and click the **[Import]** button.
2. 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.
3. Repeat steps 1-2 to upload the second MIB file.
4. You must compile both MIB files before Skylar One can use them. To compile a MIB, click its lightning bolt icon ().
5. To enable Skylar Compliance to send trap events to Skylar One, go to **Administration > System Settings > Logs/Alerts** in the Skylar Compliance user interface and change the following:
 - **SNMP Traps:** Check this checkbox.
 - **SNMP Server:** Enter the IP address of the Skylar One All-In-One or Data Collector.

Chapter

2

Skylar Compliance Automation Policies

Overview

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

This chapter covers the following topics:

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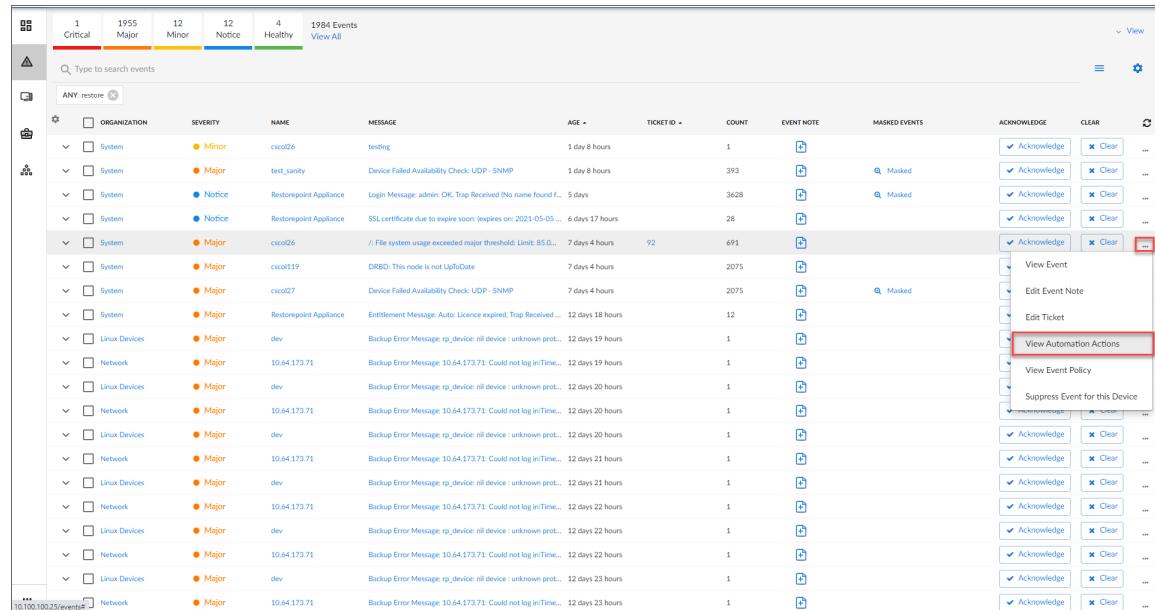
Standard Automation Policies

The "Skylar Compliance Automation" PowerPack includes one standard automation policy. 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, and the automation actions that run in response to the events:

Automation Policy Name	Aligned Events	Automation Actions
Restorepoint Event Enrichment	All events in your Skylar One system are aligned to this policy	<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.



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:

Ticket Editor | Active Ticket [92]

Actions New Reset Guide

Properties Logs **Automation** Message

Event Actions Log | For Event [136094]

2021-01-05 13:32:30 Refresh

```

Automation Policy Restrepoit Event Enrichment action Datacenter Automation Format Output as HTML ran Successfully
Message Snippet (50) executed without incident
Result:formatted_output: Enrichment\_Command\_Output

Command: Recent Logs from Restrepoit
Username:admin
Level:6
UserID:1
Action:Export Configurations
UserIPAddress:192.168.253.11
Dt:2021-01-05T06:54:07.659337419Z
DomainID:2
ObjectName:csc0126
ObjectID:9
ID:126413
Message:9-20201216112256.snmp.tgz
ObjectType:Device
userName:admin
Level:6
UserID:1
Action:Backup
UserIPAddress:192.168.253.11
Dt:2021-01-05T06:52:06.69440024Z
DomainID:2
ObjectName:csc0126
ObjectID:9
ID:126351
Message:Configuration changed to Version 2195
ObjectType:Device

Command: Last Backup Link
https://10.100.100.23#/viewconfig/2885

Command: Diff of Last Two Restrepoit Backups
NiceID:b3ef7c7ba7ff81b06a339290bb03d4d7 / 5158def262e9468750857844aa7871a / 0bc6ba7ea8d5627aeaaf6917c8289c14
Backupversion:2194
Schedule:@ * * * *
BID:2195
BackupfileID:2195
NiceSchedule:every hour, on the hour
Initiator:admin
Filename:9-202012300220200
FileID:f9cf1e9b0159a44faaf21d367b86f1fa / 2bb84a42eaba9b406dcf70ee22e42ecb / c995e74bcbff0212cf5d30d62b41f338
Lastseen:2021-01-05T06:52:06.671789355Z
BSchedule:Manual
Dt:2021-01-05T06:52:06Z
Size:89223384
ID:2885
MD5:snmpb3ef7c7ba7ff81b06a339290bb03d4d7ssh5158def262e9468750857844aa7871alogs0bc6ba7ea8d5627aeaaf6917c8289c14
}

```

Save Resolve

To learn more about which commands are executed by default for a given automation action, see [Customizing 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.

Chapter

3

Creating and Customizing Automation Policies

Overview

This chapter describes how to create automation policies using the automation actions in the "Skylar Compliance Automation" PowerPack.

This chapter covers the following topics:

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Prerequisites

Before you create an automation policy using the automation actions in the "Skylar Compliance 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 "Skylar Compliance Automation" PowerPack, perform the following steps:

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

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

The screenshot shows the 'Automation Policy Editor | Creating New Automation Policy' window. At the top, there are dropdowns for 'Policy Name' (set to 'New Automation Policy'), 'Policy Type' (set to 'Active Events'), 'Policy State' (set to 'Enabled'), 'Policy Priority' (set to 'Default'), and 'Organization' (set to 'System'). Below these are sections for 'Criteria Logic', 'Match Logic', 'Match Syntax', 'Repeat Time', and 'Align With'. The 'Available Device Groups' list includes 'IPv4 Devices', 'IPv6 Devices', 'Linux Automation', 'Microsoft Hyper-V Automation', 'MOM VMWare Guests', 'NetFlow Devices', 'ScienceLogic Data Collectors', and 'Servers'. The 'Available Events' list shows several critical alerts, such as 'AKCP: AC Voltage sensor detects no current' and 'AKCP: DC Voltage sensor High Critical'. The 'Available Actions' list includes 'Send Email', 'SNMP Trap', 'Create Ticket', 'Create Ticket', 'Test-RBA', 'Snippet', and 'Snippet'. On the right, 'Aligned Device Groups' contains 'Restorepoint Devices'. 'Aligned Events' contains '(All events)'. 'Aligned Actions' contains a list of four actions: 1. Restorepoint : Generic Action type [114]; Restorepoint: Diff, 2. Restorepoint : Generic Action type [114]; Restorepoint: Lin, 3. Restorepoint : Generic Action type [114]; Restorepoint: Rev, 4. Format HTTP Action Output [108]; Datacenter Automation. At the bottom is a 'Save' button.

3. 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 "Skylar Compliance 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 run book 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.

NOTE: 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 "Skylar Compliance Automation" PowerPack:

Automation Policy Editor | Creating New Automation Policy

Policy Name: Restorepoint: Run Recent Logs

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

Match Logic: Text search

Match Syntax:

Repeat Time: Only once

Align With: Device Groups

Support Availability Test:

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

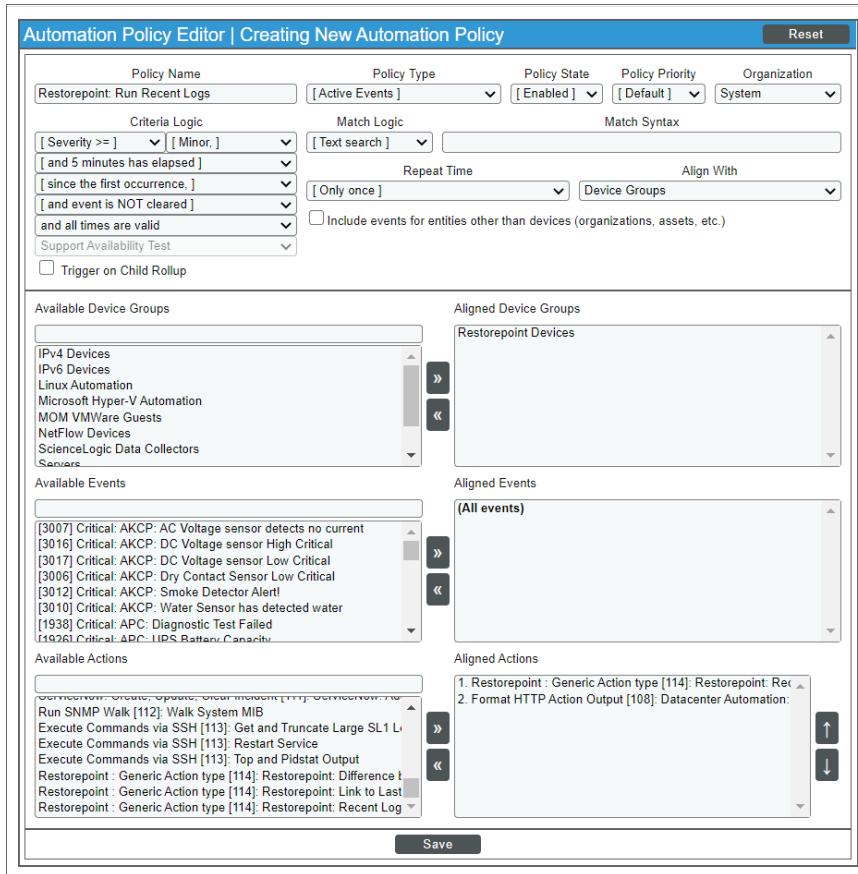
Available Events: (All events)

Aligned Events: (All events)

Available Actions: 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, Restorepoint : Generic Action type [114], Restorepoint: Difference t, Restorepoint : Generic Action type [114], Restorepoint: Link to Last, Restorepoint : Generic Action type [114], Restorepoint: Recent Log

Aligned Actions: 1. Restorepoint : Generic Action type [114]: Restorepoint: Rec, 2. Format HTTP Action Output [108]: Datacenter Automation:

Save



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 Skylar OneEvents 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).

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

The screenshot shows the 'Automation Policy Editor | Editing Automation Policy [450]' interface. The policy is named 'Restorepoint Event Enrichment'. The 'Policy Type' is set to 'Active Events', 'Policy State' to 'Enabled', 'Policy Priority' to 'Default', and 'Organization' to 'System'. The 'Criteria Logic' section contains several conditions: 'Severity >= Minor', 'and no time has elapsed', 'since the first occurrence.', 'and event is NOT cleared', and 'and all times are valid'. The 'Match Logic' is set to 'Text search'. The 'Match Syntax' and 'Repeat Time' are set to 'Only once'. The 'Align With' section includes 'Device Groups' and a checkbox for 'Include events for entities other than devices (organizations, assets, etc.)'. The 'Available Device Groups' section lists 'MOM VMWare Guests', 'NetFlow Devices', 'ScienceLogic Data Collectors', 'Servers', 'VMware Virtual Machines', and 'Windows Automation'. The 'Aligned Device Groups' section contains 'Restorepoint Devices'. The 'Available Events' section lists several critical events, including 'AKCP: AC Voltage sensor detects no current', 'AKCP: DC Voltage sensor High Critical', 'AKCP: DC Voltage sensor Low Critical', 'AKCP: Dry Contact Sensor Low Critical', 'AKCP: Smoke Detector Alert!', 'AKCP: Water Sensor has detected water', and 'Diagnostic Test Failed'. The 'Aligned Events' section contains '(All events)'. The 'Available Actions' section lists 'Send Email', 'SNMP Trap', 'Create Ticket', 'Test-RBA', 'Snippet', and 'Snippet API'. The 'Aligned Actions' section contains a list of four actions: '1. Restorepoint : Generic Action type [114]: Restorepoint', '2. Restorepoint : Generic Action type [114]: Restorepoint', '3. Restorepoint : Generic Action type [114]: Restorepoint', and '4. Snippet [5]: Datacenter Automation: Format Output as'. At the bottom are 'Save' and 'Save As' buttons.

3. 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 "Skylar Compliance Automation" PowerPack. You should see "Skylar Compliance" 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.

NOTE: 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 the "Skylar Compliance 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 "Skylar Compliance Automations" 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 Policies** 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.

Chapter

4

Configuring Device Credentials

Overview

This chapter describes how to configure the credentials required by the automation actions in the "Skylar Compliance (formerly Restorepoint) Automation" PowerPack.

This chapter covers the following topics:

<i>Creating a Credential</i>	18
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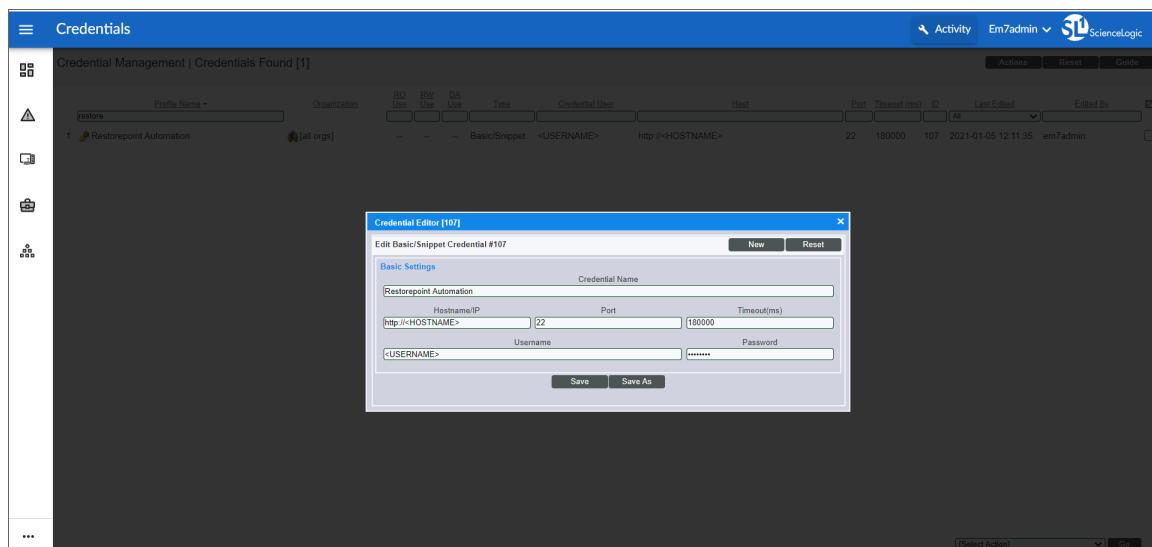
Creating a Credential

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

NOTE: The "Skylar Compliance" PowerPack uses one credential for all devices in your Skylar Compliance system. After 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 *RestorepointAutomation* 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 Skylar Compliance credential.
- ***Hostname/IP***. Enter the URL for the Skylar Compliance device.
- ***Port***. Enter the port number associated with the data you want to retrieve. The default TCP port for SSH servers is 22.
- ***Timeout(ms)***. Enter a timeout, in milliseconds, for the connection.
- ***Username***. Enter the username for a user account on the Skylar Compliance device to be monitored.
- ***Password***. Enter the password for the user you entered in the ***Username*** field.

4. Click **[Save As]**.

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

Chapter

5

Customizing Skylar Compliance Actions

Overview

This manual describes how to customize the automation actions embedded in the "Skylar Compliance 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 "Skylar Compliance 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. 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 "Skylar Compliance Automation" PowerPack 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 Skylar One to Skylar Compliance. The automation actions share formatting actions with the *Datacenter Automation Pack*, so the output can be sent to Skylar Compliance using the same customization steps.

Policy Editor | Editing Action [63]

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:

```
{
  "sl1_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 PowerPack. Compare the commands run with the example in the image above.

Action Name	Description	Commands Run
Restorepoint Recent Logs	Collects the last number of logs for the device associated with the triggering event. The number of logs is configurable.	<ul style="list-style-type: none"> sl1_credential_id max_log action
Link to Configuration Backup	Creates a link to the Skylar Compliance user interface that displays the last configuration backup from the device associated with the triggering event.	<ul style="list-style-type: none"> sl1_credential_id action
Difference between Last Two Backups	Collects the difference between the last two configuration backups for the device associated with the triggering event.	<ul style="list-style-type: none"> sl1_credential_id action

TIP: For more information about substitution variables, see [Appendix A: Run Book Variables](#).

Creating a New Skylar Compliance 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 Skylar Compliance API to gather data.
max_log	integer	The number of log entries to collect from Skylar Compliance.
action	string	The data to collect from Skylar Compliance. There are three support values for this parameter: <ul style="list-style-type: none">• get_logs: The most recent logs associated with the Skylar Compliance device. The number of logs is configurable with the max_log parameter.• last_backup_link: The URL of the last backup performed in Skylar Compliance for the selected device.• recent_backups_diff: The difference between the last two backups performed in Skylar Compliance for the selected device.

Using Substitution Values. The command input can contain substitution values that match the keys in EM7_VALUES.

TIP: For more information about substitution variables, see [Appendix A: Run Book Variables](#).

For a description of all options that are available in Automation Policies, see the **Run Book Automation** manual.

Appendix

A

Run Book Variables

Overview

This appendix defines the different variables you can use when creating an action policy.

Use the following menu options to navigate the Skylar One user interface:

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

This appendix covers the following topics:

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Run Book Variables

You can include variables when creating an action policy. These variables are listed in the table below.

- In an action policy of type ***Send an Email Notification***, you can include one or more of these variables in the fields ***Email Subject*** and ***Email Body***.
- In an action policy of type ***Send an SNMP Trap***, you can include one or more of these variables in the ***Trap OID*** field, ***Varbind OID*** field, and the ***Varbind Value*** field.
- In an action policy of type ***Create a New Ticket***, you can include one or more of these variables in the ***Description*** field or the ***Note*** field of the related Ticket Template.
- In an action policy of type ***Send an SNMP Set***, you can include one or more of these variables in the ***SNMP OID*** field and the ***SNMP Value*** field.
- In an action policy of type ***Run A Snippet***, you can access variables from the global dictionary ***EM7_VALUES***.
- In a policy of type ***Execute an SQL Query***, you can include one or more of these variables in the ***SQL Query*** field.

Variable	Source	Description
%A	Account	Username
%a	Entity	IP address
%F	Dynamic Alert	Alert ID for a Dynamic Application Alert
%g	Asset	Asset serial
%h	Asset	Device ID associated with the asset
%l (uppercase "eye")	Dynamic Alert	For events with a source of "dynamic", this variable contains the index value from SNMP. For events with a source of "syslog" or "trap", this variable contains the value that matches the <i>Identifier Pattern</i> field in the event definition.
%i (lowercase "eye")	Asset	Asset Location
%K	Asset	Asset Floor
%k	Asset	Asset Room
%L	Dynamic Alert	Value returned by the label variable in a Dynamic Application Alert.
%m	Automation	Automation policy note
%N	Action	Automation action name
%n	Automation	Automation policy name
%P	Asset	Asset plate
%p	Asset	Asset panel
%Q	Asset	Asset punch
%q	Asset	Asset zone

Variable	Source	Description
%T	Dynamic Alert	Value returned by the Threshold function in a Dynamic Application Alert.
%U	Asset	Asset rack
%u	Asset	Asset shelf
%v	Asset	Asset tag
%W	Asset	Asset make
%w	Asset	Asset model
%V	Dynamic Alert	Value returned by the Result function in a Dynamic Application Alert.
%_category_id	Entity	Device category ID associated with the entity in the event.
%_category_name	Entity	Device category name associated with the entity in the event.
%_class_id	Entity	Device class ID associated with the entity in the event.
%_class_name	Entity	Device class description associated with the entity in the event.
%_parent_id	Entity	For component devices, the device ID of the parent device.
%_parent_name	Entity	For component devices, the name of the parent device.
%_root_id	Entity	For component devices, the device ID of the root device.
%_root_name	Entity	For component devices, the name of the root device.
%_service_investigator_url	Entity	The URL of the Business Service Investigator page for the event that triggered the automation (for run book actions that run against events aligned with business services).
%1 (one)	Event	<p>Entity type. Possible values are:</p> <ul style="list-style-type: none"> • 0. Organization • 1. Device • 2. Asset • 4. IP Network • 5. Interface • 6. Vendor • 7. Account • 8. Virtual Interface • 9. Device Group • 10. IT Service • 11. Ticket
%2	Event	<p>Sub-entity type.</p> <p>Possible values for organizations are:</p> <ul style="list-style-type: none"> • 9. News feed

Variable	Source	Description
		<p>Possible values for devices are:</p> <ul style="list-style-type: none"> • 1. CPU • 2. Disk • 3. File System • 4. Memory • 5. Swap • 6. Component • 7. Interface • 9. Process • 10. Port • 11. Service • 12. Content • 13. Email
%4	Event	Text string of the user name that cleared the event.
%5	Event	Date/time when event was deleted.
%6	Event	Date/time when event became active.
%7	Event	Event severity (1-5), for compatibility with previous versions of Skylar One. 1=critical, 2=major, 3=minor, 4=notify, 5=healthy.
NOTE: When referring to an event, %7 represents severity (for previous versions of Skylar One). When referring to a ticket, %7 represents the subject line of an email used to create a ticket.		
%c	Event	Event counter
%d	Event	Date/time when last event occurred.
%D	Event	Date/time of first event occurrence.
%e	Event	Event ID
%H	Event	URL link to event
%M	Event	Event message
%s	Event	severity (0 - 4). 0=healthy, 1=notify, 2=minor, 3=major, 4=critical.
%S	Event	Severity (HEALTHY - CRITICAL)
%_user_note	Event	Current note about the event that is displayed on the Events page.
%x	Event	Entity ID
%X	Event	Entity name
%y	Event	Sub-entity ID

Variable	Source	Description
%Y	Event	Sub-entity name
%Z	Event	Event source (Syslog - Group)
%z	Event	Event source (1 - 8)
%_ext_ticket_ref	Event	For events associated with an external Ticket ID, this variable contains the external Ticket ID.
%3	Event Policy	Event policy ID
%E	Event Policy	External ID from event policy
%f	Event Policy	Specifies whether event is stateful, that is, has an associated event that will clear the current event. 1 (one)=stateful; 0 (zero)=not stateful.
%G	Event Policy	External Category
%R	Event Policy	Event policy cause/action text
%_event_policy_name	Event Policy	Name of the event policy that triggered the event.
%B	Organization	Organization billing ID
%b	Organization	Impacted organization
%C	Organization	Organization CRM ID
%o (lowercase "oh")	Organization	Organization ID
%O (uppercase "oh")	Organization	Organization name
%r	System	Unique ID / name for the current Skylar One system
%7	Ticket	Subject of email used to create a ticket. If you specify this variable in a ticket template, Skylar One will use the subject line of the email in the ticket description or note text when Skylar One creates the ticket.
NOTE: When referring to a ticket, %7 represents the subject line of an Email used to create a ticket. When referring to an event, %7 represents severity (for previous versions of Skylar One).		
%t	Ticket	Ticket ID
%J	Ticket	Description field from the Skylar One ticket.

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